Prepared for:

DREXEL CHEMICAL COMPANY
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Cordele, GA 31015

FIFTH SEMIANNUAL VRP PROGRESS REPORT DREXEL CHEMICAL COMPANY Cordele, Georgia

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December, 2013

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EPS

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EPS

PROFESSIONAL GEOLOGIST CERTIFICATION

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Kirk Kessler GA000685

Printed Name and GA PE/PG Number

12/18/2013

Date

Signature and Stamp

1 INTRODUCTION

Drexel Chemical Company (Drexel) submitted a Voluntary Remediation Program (VRP) Application (which the EPD refers to as the Voluntary Investigation and Remediation Plan, (VIRP) in February 2011. In a letter dated April 28, 2011, the Georgia Environmental Protection Division (EPD) accepted Drexel as a participant into the VRP. Pursuant to the conditions of the acceptance letter, this document is the Fifth Semiannual Progress Report (Progress Report) for the Drexel Site. The schedule presented in the acceptance letter specified that this report should be due by October 28, 2013. However, EPD granted a 60-day extension for submission of this progress report in an e-mail dated October 1, 2013.

The Drexel facility is located at 120 Cape Road, Cordele, Crisp County, Georgia (Facility). The Facility is a Pesticide Blending Facility, which is located approximately four miles east of downtown Cordele in a primarily agricultural and wooded area. The Drexel Facility (as originally accepted into the VRP) is approximately 6.89 acres, which consists of two parcels owned by Drexel. With the Second Progress Report (submitted in April, 2012), Drexel requested that other property bordering the facility and owned by Drexel be added to the VRP. Additionally, on August 29, 2012 Drexel and CSX Transportation (CSX) submitted a request to include the CSX property bordering the facility to the north, to be added as an eligible property in the VRP. In a letter dated December 5, 2012, the EPD accepted the CSX and additional Drexel parcels into the VRP. For discussion purposes, these properties will be referred to as "Drexel Facility," "CSX," and "Drexel Additional Property" and are jointly referred to as the "Site." Figure 1 shows the locations of these properties.

This Progress Report summarizes (by task) what actions have been taken since the previous Progress Report (April 2013), presents the expected upcoming activities and the final remediation plan.

2 VRP PROJECT MANAGEMENT

2.1 Professional Geologist Oversight

This Progress Report includes certification by the Professional Geologist (Kirk Kessler) specified in the VIRP. Appendix A contains a monthly summary of hours invoiced and description of services provided.

2.2 Milestone Schedule

An updated projected milestone schedule has been attached as Figure 2.

2.3 Conceptual Site Model

The Conceptual Site Model (CSM) has been revised to include the results of recent sampling and is included as Appendix B.

3 WELL ABANDONMENT AND MONITORING WELL INSTALLATION

3.1 Actions Completed

3.1.1 Overview

As described in the Third Progress Report, Drexel abandoned the two unused production wells (PW-1 and PW-2) at the facility in August 2012. The Third Progress Report also described Drexel's plans to install a horizontal delineation well east of the Drexel Facility and a vertical delineation well in the proximity of the Railcar Unloading Area. Drexel installed the horizontal well (BW-5, described further below). However, after considering the EPD's letter dated December 5, 2012 and further discussions with the EPD, Drexel decided to install the vertical delineation well (BW-6, described further below) in the proximity of former PW-1. The locations of these wells are shown on Figure 3. Monitoring well construction diagrams are included in Appendix C.

3.1.2 Installation of BW-5

EPS and Southern Sonic Solutions installed a horizontal delineation[1] well (BW-5) on January 23, 2013 using sonic drilling techniques. BW-5 was installed east of the Drexel Facility on the edge of a cotton field owned by Drexel as shown on Figure 3. The boring was advanced to 171.5 ft using a 4"x6" sonic drill bit. Temporary override casings were used to prevent cross contamination. A 10" temporary override casing was used to 55ft, an 8" override casing to 85ft and a 7" override casing to 130ft. A 2-inch Schedule 40 PVC monitoring well was installed to a depth of 170 ft (similar to BW-1). A thirty-foot 0.01-inch slotted screen was installed from 140 to 170 ft. A granular sand filter pack was installed above and below the screen. A bentonite pellet seal, consisting of 5 ft of bentonite pellets, was placed above the filter pack and allowed to hydrate prior to pressure grouting the bentonite/cement grout in the well annulus.

Once the annular grout had cured, the well was completed as a 4-inch stick-up vault with a 3-foot by 3-foot by 4-inch concrete well pad. The well was developed more than 24 hours after the installation of the well pad in accordance with SESDGUID-101-R0 (USEPA, 2008). The well was developed until it was free of visible sediment, and the pH, turbidity, and specific conductivity had stabilized.

EPS collected samples from this well during the March 2013 and September 2013 groundwater sampling events. 1,2-Dibromoethane (EDB) was detected in BW-5 in the March sample at 0.06

[1] Horizontal delineation has been achieved upgradient (to the north and west) with well BW-3, and to the south with BW-2 and BW-4. However, with the sometimes easterly component of the groundwater flow, delineation to the east has not been fully demonstrated.

µg/L and in the September sample at 0.1 micrograms per liter (µg/L), which is slightly above the Residential RRS (0.09 µg/L). From a practical standpoint, this well provides for adequate horizontal delineation. However, because the concentration is close to the Residential RRS, groundwater from this well will continue to be monitored for EDB during future sampling events.

3.1.3 Installation of BW-6

Drexel selected a multi-level sampling design for BW-6 in order to monitor the conditions at a similar elevation to PW-1 while also obtaining vertical delineation by sampling deeper intervals. Flexible Liner Underground Technologies, Ltd. was selected to design and manufacture a FLUTe™ multilevel groundwater sampler for the Facility. A description of the FLUTe™ design is presented in Appendix C. The FLUTe™ design is an accurate, effective, efficient and cost effective way to obtain groundwater samples at multiple depths in one location. The use of FLUTe™ wells has been increasing steadily over the last few years and FLUTe™ wells have been used by various federal and state agencies.

The FLUTe™ multilevel groundwater sampler was installed into a 3-inch rigid casing and screen from ground surface to 400 ft bgs. The rigid casing and screen was installed by Southern Sonic Solutions (now Terra Sonic International) using sonic drilling techniques. An 8-inch PVC outer casing was installed to 120 ft bgs with a 10-inch temporary override casing in order to seal the overburden from the target aquifer. The 8-inch PVC was tremmie grouted to the surface. Once the 8-inch outer casing was set, a 6-inch borehole was advanced from 120 ft bgs to 400 ft bgs with a standard a 6"-4" sonic head and rods. The 3-inch casing and screen was then installed with screened intervals of 180-190ft bgs (BW-6-1), 280-290ft bgs (BW-6-2), and 380-390 ft bgs (BW-6-3). The annular space surrounding each screen interval is bracketed with approximately 20 ft of sand capped with a bentonite layer. The remaining annular space was sealed with Portland grout. A diagram of well final well construction is provided in Appendix C.

EPS collected samples from this well on July 1, 2013. The laboratory report is included in Appendix D. The results are shown below:

Sample	EDB Concentration (µg/L)	Depth to Groundwater (ft)
BW-6-1	0.21	147.52
BW-6-2	<0.003	144.58
BW-6-3	<0.003	143.17

These groundwater results demonstrate vertical delineation of EDB. In addition, the FLUTe™ system demonstrated an upward vertical groundwater gradient limiting the likelihood of any downward transport of contaminants under current aquifer flow conditions.

3.2 Upcoming Actions

BW-5 provides a practical horizontal delineation of groundwater and BW-6 provides vertical delineation of groundwater. BW-5 will be monitored for EDB in the next semi-annual groundwater sampling event as the results are close to the residential RRS. Additionally, as indicated in the VIRP, the PW-1 replacement (BW-6-1) will also be sampled as part of the semi-annual groundwater sampling events.

4 SEMIANNUAL GROUNDWATER SAMPLING

4.1 Actions Completed

The Drexel VIRP specifies that semiannual groundwater sampling will be conducted for a period of at least three years. The wells specified in the VIRP to be sampled include the four monitoring wells (BW-1, BW-2, BW-3, BW-4), the new monitoring well (near PW-1, called BW-6-1), and the nearest offsite downgradient drinking water well (Aiken residence). As described more fully in the Fourth Progress Report, since power has been turned off at the Aiken property, well "D" is now being used instead of the Aiken residence as the Point of Exposure well. EPS conducted the fifth groundwater sampling event the second week of September, 2013. Monitoring wells BW-1 to BW-4 were sampled during this event, along with the newly installed well BW-5 and Well D. BW-6-1 was not sampled during this event as it was recently sampled in July, 2013.

4.1.1 Methods

Well purging was performed using low stress purging techniques with Grundfos submersible pumps connected to Teflon-lined polyethylene tubing. For each well purged, water quality and geochemical parameters were recorded during purging and recorded on Monitoring Well Sampling Forms (in Appendix E).

Disposable sampling equipment (bailers, tubing, gloves, etc.) was utilized during sample collection. Groundwater samples were collected from the tubing. VOC samples were collected using weighted disposable bailers. Bailers were carefully lowered into the wells to minimize disturbance of the water column. The samples were collected in laboratory supplied containers.

Samples were placed in coolers with ice and sent via overnight delivery to ALS Environmental for the following analyses: total metals (Method 200.7 and 200.8), EDB and DBCP (Method 504.1), pesticides and PCB aroclors (Method 508.1), organophosphorus pesticides (Method 8270D), chlorinated herbicides (Method 515.4), volatile organic compounds (VOC, Method 8260), semivolatile organic compounds (SVOC, Method 525.2), carbamates and carbamoyloximes (Method 531.1).

During the first semiannual sampling event in August 2011, the VOC sample vials contained no air headspace at the time of sample collection. However, when the laboratory received the samples some air headspace was observed in the vials. Some amount of particulate matter was noted during sampling. It is probable that the particulate matter was limestone, which dissolved in the presence of the hydrochloric acid preservative present in the VOC vial. Therefore, during the second and subsequent semiannual sampling events, VOC samples were collected in unpreserved sample vials and analyzed using Method 8260 to meet hold time requirements for

unpreserved samples. In future sampling events VOC samples will be unpreserved and analyzed using Method 8260.

4.1.2 Results

4.1.2.1 Potentiometric Surface

The depth to water was determined for each well sampled. Groundwater elevations were calculated and a potentiometric surface was developed and shown on Figure 3. Historically, the potentiometric surface across the Drexel Facility has been relatively flat. In this sampling event the direction of groundwater flow appears to be to the southeast.

4.1.2.2 Results

The results from the September 2013 sampling event (along with the results of the July 2013 sampling of BW-6) have been added to historical data summary tables (Tables 1 and 2). The data are compared to the Residential RRS. The only constituent that is consistently above the Residential RRS is EDB, with concentrations similar to past sampling events (0.19 µg/L in well BW-1 and 0.1 µg/L in BW-5). During this event, the concentrations for chromium and lead were also above the Residential RRS in BW-2. However, these results are likely an anomaly as all previous results were one to two orders of magnitude lower in concentration. This may be due to high turbidity readings during the sampling of this well. The laboratory data report is included on a CD in Appendix D.

4.2 Upcoming Actions

The next sampling event is scheduled for February/March 2014, which will be the last of the semi-annual sampling events specified in the VIRP. Groundwater sampling beyond this event is described in the Remediation Plan (Section 9).

5 GROUNDWATER TREATABILITY STUDY

5.1 Actions Completed

A pilot scale treatability study for removal of dissolved EDB in groundwater was completed in July 2013 at monitoring well BW-1. The technology selected for evaluation was granular activated carbon (GAC) based on a review of available EDB removal technologies. GAC is an absorption-based technology with the primary design parameters being the groundwater residence time within the GAC vessel (empty-bed contact time or EBCT) and maximum carbon loading rate. The theoretical empty-bed contact time for EDB is 15 minutes and the carbon loading rate is 0.64 pounds (lbs) EDB per 100 lbs GAC. The EBCT evaluated during the treatability study ranged from 19 to 24 minutes based on the maximum groundwater flow rate attainable from BW-1 (flow rate limited to approximately 1 to 1.3 gallons per minute by capacity of deployable pump in 2-inch well).

Performance of the GAC was assessed by monitoring groundwater EDB concentrations in the influent and effluent of the GAC vessel. In total, four influent and eight effluent samples were collected. Influent EDB concentrations ranged from 0.22 to 0.26 µg/L with an average of 0.25 µg/L. All treated effluent samples were non-detect with a Method Reporting Limit (MRL) of less than 0.01 µg/L and a Method Detection Limit (MDL) of 0.003 µg/L. (The laboratory report is included in Appendix D.) As a point of comparison, the Residential RRS for EDB is nine times the MRL at 0.09 µg/L. This validates that the GAC system under the tested parameters is a feasible groundwater treatment option.

5.2 Upcoming Actions

The next step will be to install and operate a groundwater pump and treat system per the Remediation Plan (Section 9).

6 ADDITIONAL CHARACTERIZATION: RAIL LINE

6.1 Actions Completed

6.1.1 Overview

At the request of CSX, EPS conducted an additional soil characterization sampling event for the purposes of assessing the conditions directly under the CSX rail line. These results do not impact soil delineation, which was demonstrated in the Fourth Progress Report.

6.1.2 Boring Summary

EM Services advanced borings DB-8, DB-9, DB-10, DB-11, DB-12, DB-13 and DB-14 using a track mounted GeoProbe direct push drill rig. The locations are shown on Figure 4. Soil samples were collected every 4-ft using a Macro-Core MC5 soil sampler with single-use disposable liners and soil lithology was recorded. These boreholes were completed by tremmie grouting using "neat" grout.

The drill rigs and drilling tools and accessories were decontaminated prior to starting the work and between borings. The sampler drive shoe was decontaminated between borings by brush washing in a phosphate-free detergent wash and rinsing with distilled water. Augers were decontaminated between borings by washing with a phosphate-free detergent and a steam pressure washer. Disposable gloves were worn during sampling and discarded after each sample was collected to minimize the potential of cross-contamination.

The boring logs are presented in Appendix C. A summary of the conditions noted in each boring is as follows:

- DB-8: Advanced to 47 ft bgs, where auger refusal occurred. No staining and no significant odors noted.
- DB-9: Advanced to 60 ft bgs, where auger refusal occurred. No staining and no significant odors noted.
- DB-10: Advanced to 52 ft bgs, where auger refusal occurred. No staining and no significant odors noted.
- DB-11: Advanced to 10 ft bgs. No staining and no significant odors noted.
- DB-12: Advanced to 10 ft bgs. No staining and no significant odors noted.
- DB-13: Advanced to 60ft bgs. No staining and no significant odors noted.
- DB-14: Advanced to 10ft bgs. No staining or odors noted.

6.1.3 Results

Specific depth intervals were sampled and analyzed for specific constituents. EPS collected soil samples for chemical analysis from the liner. Samples were collected in unpreserved glass jars for organophosphorus pesticides and chlorinated pesticides. EPS collected samples for VOC analysis using EPA Method 5035 by using a syringe to place similar portions into three, 40-millileter glass vials: one preserved with methanol and two preserved with sodium bisulfate. EPS placed the samples in appropriate sample containers provided by the analytical laboratory, placed them on ice in a cooler, logged them under standard chain-of-custody procedures, and delivered the samples to Analytical Environmental Services, Inc. in Norcross, Georgia for analysis.

The results are summarized on Table 3 and compared to the Residential RRS. No concentrations exceeded the Residential RRS in the 0-2ft interval. There were a few minor exceedances in the 6ft and 10ft samples. In the deep samples, the only constituent that exceeded its RRS is EDB, but the concentrations are all below the RRS based only on direct contact with soil (see Section 9 for more information). These results do not impact soil delineation, which was presented in the Fourth Progress Report.

7 ECOLOGICAL EVALUATION

7.1 Actions Completed

EPS submitted a Revised Screening Level Ecological Risk Assessment (SLERA) Steps 1 & 2 and Problem Formulation Step 3 Report to the EPD in January, 2012 and Ecological Remedial Goals (RGs) on September 11, 2012. The EPD approved the SLERA and RGs in a letter dated December 5, 2012. On December 21, 2012, EPS submitted an Ecological Remediation Plan. The areas to be addressed based on ecological concerns are shown on Figure 5. CSX does not permit excavation of soil within twelve feet of the centerline of the main rail line. This area is referred to as the "no-cut zone" and no remedial action is planned within the "no-cut zone." Thus, the ecological areas shown on Figure 5 are outside the "no-cut zone."

7.2 Upcoming Actions

The Ecological Remediation Plan is incorporated into the overall Remediation Plan (Section 9).

8 HUMAN HEALTH EVALUATION

8.1 Introduction

The VRP incorporates the concept of exposure domains within which representative concentrations of constituents can be derived from the site characterization data. Although the VRP Act defines the representative concentration as an "average concentration," the 95% upper confidence limit (UCL) on the average concentration is more typically used in risk assessment to address potential uncertainties in the site characterization data and to ensure that exposures are not underestimated. The USEPA has developed a software tool called ProUCL specifically for computing these 95% UCL values (USEPA, 2007). However, the statistical models used for computing 95% UCL values are all based on the assumption that site data were generated following a random or systematic sampling strategy. In many cases, including the Drexel site, environmental samples are collected using a biased strategy in which many more samples are collected from areas of known or suspected contamination than from areas without contamination. In these situations, the USEPA acknowledges that it is appropriate to compensate for the sampling bias when computing the mean and the 95% UCL of the mean to avoid overestimating these parameters (USEPA, 2011).

Approaches for compensating for sampling bias typically involve the use of geospatial software tools that can interpolate concentrations such that all areas within an exposure domain contribute equally to the calculated representative concentration. By correlating distance and direction to the specific constituent concentrations being interpolated, interpolation determines how the constituent concentration at sampled points can be used to estimate the concentration across areas not sampled. Therefore, we used an approach that integrates the spatial interpolations[2] with the robust statistical models of ProUCL (referred to herein as the interpolation/area-average approach). This approach was used with the soils data as part of the development of the final remediation plan. Refer to Appendix F for an example of the geospatial analysis of toxaphene at various depth intervals at the Site.

8.2 Exposure Domains and Depth Intervals

Five exposure domains were designated to encompass the areas where the soil condition exceeds the RRS (see Figure 6). On the Drexel Facility, the soil condition exceeding RRS is limited to the northern half of the facility (the process area of the Site); therefore, the exposure domains on the Drexel Facility address only the northern half of the property (Figure 6). Three exposure domains were established for soils outside the Drexel facility: 1) CSX, which encompasses the facility rail spur area and extending north across the CSX rail line), 2) North Drainage Swale that is in the low-lying area adjacent to the CSX rail on the north side of the track, and 3) South Drainage Swale that is in the low-lying area adjacent to the CSX rail on the south side of the

[2] Using the nearest neighbor method in ArcGIS 3D Analyst.

track. Each exposure domain is about 1-1.5 acre in surface area and configured to separate the different areas of impact within unique exposure domains (e.g. the sources and impacts in the swales are different than from the rail car unloading area). The approximate 1-1.5-acre dimension of the exposure domains is appropriate for potential future use scenarios for the property including the potential for residential use (residences in this agricultural area are commonly on one or more acres of land).

Many of the sampled locations contain multiple samples with depth. Therefore the vertical dimension was segregated in order to separate data into unique layers for interpolation, considering also such factors as exposure (e.g. surface soils defined as 0-2ft and the exposure of typical construction workers is generally limited to 10-15ft), data density within a given layer, and break-points in concentrations (e.g., most exceedances are observed in depths shallower than 15ft). Considering these factors, the soils data set was segregated into the following depth intervals:

- 0-2ft
- 2-5ft
- 5-15ft
- Deeper than 15ft

The data used for the area-averaging analysis is shown in Table 4. Soil matrix results from samples collected within the surface impoundments were not included in the area-averaging analysis as the surface impoundments are self-contained concrete basins and are undergoing a separate remedial action (see Section 9.2).

8.3 Screening

A screening process was used to determine which constituents needed to be evaluated further. Table 5 shows some general statistics for each detected constituent in each depth interval for each exposure domain. The maximum concentration observed is compared to the Residential RRS. This comparison (shown in Table 5) shows that a number of constituents in each exposure domain (except the North Swale) have maximum concentrations higher than the Residential RRS. Thus, these constituents were carried forward in the evaluation.

Although there are numerous constituents where at least one sample exceeds the RRS, there are a few "primary" constituents that stand out in terms of frequency and magnitude of RRS exceedences. Thus, the iterative modeling exercise initially focused upon the primary constituents in honing in on the appropriate remediation plan, after which the plan was checked against all other constituents where the RRS is exceeded.

8.4 Determination of Areas Requiring Further Action

An iterative process was used to determine areas of the site that require further action. A small-sized grid of 10ft by 10ft was applied in the analysis. This grid dimension is sufficiently small given the lateral distance between sampled points on the Site, such that the sample results are not

averaged downward in concentration in the interpolation analysis. For the primary constituents, various model runs were conducted to determine the specific dimensions of areas of the site that needed to be addressed. In other words, if certain areas of the site were addressed (i.e., soil excavation), the resulting post-remediation condition (i.e. area-average concentration) would be below the Residential RRS. Next, other constituents were also evaluated using the process to ensure that the areas to be remediated were sufficient to address all constituents. An example of the interpolation and area-average technique for toxaphene is presented in Appendix F.

Figures 7 through 9 show the results of the interpolation/area-averaging method for the primary constituents in each depth interval. The areas requiring further action (remedial action areas) based on this iterative process (and including the ecological remediation areas), are outlined on each figure.

8.5 Post-Remedial Action Condition

8.5.1 Shallow Soils (< 15 ft)

After the remedial action areas were determined based on the interpolation and area-averaging approach, the post-remedial action condition was assessed for all constituents that had a pre-remedial action maximum concentration above the Residential RRS (from Table 5), more than one detect, and a frequency of detection greater than 10%. Figure 12 shows the combined remedial action areas and also shows for a 2:1 sloped excavation, where the start of slope would begin in the areas where shoring would not be required. Based on these excavation footprints, it was determined which existing soil samples would be removed during excavation. These samples to be excavated are shaded gray in Table 4.

Table 6 shows a comparison between the Residential RRS, pre-remediation maximum concentration and post-remediation values. Two post-remediation values are shown. The first is maximum concentration outside of the remedial action areas (based on actual analytical data of soil borings outside the remedial action footprint). For those constituents that have a post-remediation maximum concentration in excess of the Residential RRS, the interpolated area-average is also shown. This area-average is the 95% UCL of the interpolated data outside the remedial action areas. This area-average is conservative as 1) it does not include any data for clean fill material that would be in place after the remedial action, and 2) it does not account for the soil that will be excavated in order to slope down to the excavation areas. Table 6 shows that all constituents meet the Residential RRS in all shallow (<15 ft) depth ranges and all exposure domains based on the interpolation and area-averaging technique. Thus, after remedial action is complete, the shallow soils (< 15ft) can be certified to the Residential RRS.

8.5.2 Deep Soils (> 15 ft)

Table 6 shows that EDB is the only constituent that exceeds the Residential RRS at depths greater than 15 ft. Figure 10 shows the locations of the EDB samples. Despite the concentrations being higher than the Residential RRS, the concentrations at depth are still protective of human health as will be demonstrated in this section. The Residential RRS is based

on the higher of the Type 1 RRS and the Type 2 RRS, which for EDB is the Type 1 RRS[3]. The Hazardous Site Response Act (HSRA) Rules state that the Type 1 RRS "poses no significant risk on the basis of standardized exposure assumptions and defined risk levels for residential properties." RRS are determined based on a decision matrix, the purpose for which is to develop standards that are protective of humans in contact with both soil and groundwater. Constituents present in soil may leach into the groundwater. Thus, a component of the decision matrix for soil RRS is groundwater protection. The Type 1 soil RRS is determined based on the lessor of concentrations based on two considerations:

1) protection of groundwater: concentrations which will not cause contamination of groundwater
2) direct-contact: concentrations which are unlikely to result in any noncancer toxic effect or excess cancer risk to humans in direct contact with the soil

For EDB, these concentrations based on these considerations are:

1) protection of groundwater: 0.01 milligrams per kilogram (mg/kg)
2) direct-contact: 0.5 mg/kg

Thus, the Type 1 RRS (and Residential RRS) is set as the lower of these two concentrations, which is 0.01 mg/kg for protection of groundwater. Table 6 shows a comparison of the EDB RRS based on protection of groundwater and direct-contact with soils. The interpolated area-average concentrations (0.03 mg/kg for the CSX domain, and 0.02 mg/kg for the Drexel East domain), are above the protection of groundwater RRS (0.01 mg/kg), but well below the direct-contact RRS (0.5 mg/kg). Thus, the concentrations of EDB in soil are protective of human health based on the residential scenario. However, it is unlikely that any residents (or industrial/construction workers for that matter) would ever reasonably come into contact with the soils at these depths (15-60 ft). Thus, the deep soils (> 15ft) can be certified for Residential RRS based on direct contact.

The only remaining consideration for deep soils is protection of groundwater, which will be addressed by implementation of a groundwater pump and treat system on Drexel's property and an environmental covenant restricting groundwater usage (see Section 9). The pump and treat system will capture whatever may be leaching and will operate until groundwater is in compliance with groundwater RRSs. Once groundwater meets the Residential RRS, the deep soils would be certified for protection of groundwater on the basis of an empirical site-specific demonstration of soil leaching, i.e., the site groundwater underlying the soil meets the RRS (from which the leaching-based RRS is derived).

[3] RRS calculations are presented in *Technical Memorandum Revision 2: Development of Soil- and Groundwater-based Risk Reduction Standards*, EPS July 2010.

9 FINAL REMEDIATION PLAN

9.1 Overview

The final remediation plan consists of four elements: 1) former surface impoundment remediation, 2) rail line and drainage swale remediation, 3) groundwater remediation and monitoring, and 4) uniform environmental covenants.

The VRP approach allows for the use of engineering controls (such as concrete or asphalt covered soils) or institutional controls to interrupt exposure pathways. The majority of this Site is covered with some form of exposure barrier (buildings on concrete slab, concrete apron surrounding buildings, and rock ballast and rail along the spur area) that makes current exposure to the soils an incomplete pathway. Nevertheless, Drexel has decided to address impacted soil without the use of either engineering or institutional controls.

9.2 Former Surface Impoundment Remediation

Figure 11 shows the locations of the former surface impoundments and Table 7 displays the analytical data for borings in and under the surface impoundments. Drexel is removing four of the former surface impoundments (where the site characterization demonstrated the presence of bottom sludges/stained soil and soil sample results in excess of RRS values). A remediation contractor (A&D) began this remediation in mid-November, 2013. The remedial action consists of the following:

- Surface impoundment #5: Removal of the concrete surface impoundment structure, excavation of soils contained within the structure, and soils beneath the structure to an estimated total depth of 15 ft.
- Surface impoundment #9: The surface impoundment structure was removed in earlier remedial action at the site. This remedial work will consist of excavation of the soils in the former surface impoundment area and soils below the former impoundment to an estimated total depth of 10 ft.
- Surface impoundment #15: Removal of the concrete surface impoundment structure and excavation of soils contained within the structure. The total depth is approximately 7 ft.
- Surface impoundment #20: Removal of the concrete surface impoundment structure and excavation of soils contained within the structure. The total depth is approximately 7 ft.

At the request of the EPD, confirmation samples will be collected at each of these SIs. Three sidewall samples located approximately half way down the excavation slope and three base of excavation samples will be collected. The samples will be analyzed for metals and pesticides. The confirmation sampling results will be included as a part of a revised area-averaging analysis for the Drexel West Domain.

Figure 11 shows the locations of the former surface impoundments that will be removed. It is estimated that 2,300 cubic yards of soil will be excavated. The excavated material will be temporarily stock-piled on-site in approximately 500 cubic yard piles. Representative samples of the material will be collected and analyzed to determine whether the material may be disposed of as hazardous or non-hazardous. The material will then be transported to the appropriate disposal facility. The excavation areas will be backfilled with stone and the concrete slab will be replaced to restore the facility operational infrastructure.

9.3 Rail Line and Drainage Swale Remediation

The selected remedial option for soils in the rail line and drainage swales is excavation. Figures 7 through 9 show the footprint of the excavation areas for the 0-2ft, 2-5ft, and 5-15ft depth intervals. Figure 12 shows all excavation areas in one figure. No confirmation samples will be collected as the remediation is based upon area-averaging of interpolated concentrations across the domains.

In preparation for this remedial action, a portion of the rail spur will be removed, a temporary access road will be built on CSX property north of the rail line, and shoring (see Figure 12) will be installed both north and south of the rail line and may be installed on the northeast corner of the middle warehouse building.

Drexel will request bids from multiple remediation contractors to conduct this work. The contractor will propose the most efficient manner to conduct this remedial work. A shoring plan will be developed and submitted to CSX for their approval prior to commencement of the remedial work.

The excavated soils will be stock-piled on-site and representative samples will be analyzed to determine whether the soil can be disposed of as non-hazardous. The excavated soils will be transported to the appropriate disposal facility. The excavation areas will be back-filled with either soil or stone. Where concrete was removed prior to remedial action, the concrete will be replaced to restore the facility operational infrastructure.

9.4 Groundwater Remediation and Monitoring

9.4.1 Groundwater Pump-and-Treat

9.4.1.1 Overview

In July 2013, EPS performed a treatability study to assess the performance of granular activated carbon (GAC) for the removal of dissolved EDB for a proposed groundwater pump & treat (P&T) system (see Section 5). GAC was selected for evaluation based on a review of available EDB remediation technologies for groundwater. GAC is an absorption-based technology with the primary design parameters being the groundwater residence time within the GAC vessel (empty-bed contact time or EBCT) and maximum carbon loading rate. The theoretical empty-bed contact time for EDB is 15 minutes and the carbon loading rate is 0.64 pounds (lbs) EDB per

100 lbs GAC. The EBCT evaluated during the treatability study ranged from 19 to 24 minutes based on the maximum groundwater flow rate attainable from monitoring well BW-1. The flow rate was limited to ~1 to 1.3 gallons per minute (gpm) by pump capacity.

A full scale P&T system for remediation of groundwater to meet Site process water needs (maximum of 785 gallon per day) is proposed based on the outcome of the pilot study. General specifications of the proposed P&T system are provided below based on Site process water needs and GAC vessel options.

9.4.1.2 Pump Rate

The facility requires at peak demand approximately 800 gallons of process water per a day. Process water is stored in an on-site 30,000 gallon tank. To meet Site process water requirements a pump rate of 3 to 4 gpm is proposed, replacing peak demand water usage in 3.5 to 4.5 hours.

9.4.1.3 Extraction Well

The groundwater extraction well will be located between BW-1 and PW-1 as shown on Figure 13. The extraction well will be constructed of a 4" or 6" Schedule 40 PVC and extend to a depth of 200 ft below ground surface (ft-bgs). The total depth of the extraction well is based on the vertical delineation data obtained from BW-6-1, which reported EDB at 180-190 ft-bgs, with two deeper intervals reporting non-detect. The screened portion of the extraction well is proposed to span an interval from 140-200 ft-bgs. This interval is selected to bracket the current screen intervals of both BW-1 (140-170 ft-bgs) and BW-6-1. The extraction well will be outfitted with a Grundfos Refi-Flo3™ or equivalent pump for withdraw of groundwater.

BW-1 is in the soil excavation area. Drexel intends to maintain the integrity of this well during the soil remedial activities. If that is not possible, the well will be plugged/abandoned and a replacement well for BW-1 (BW-1R) will be installed at the current location of BW-1.

9.4.1.4 GAC

The P&T GAC vessel will be specified to have a minimum EBCT of 19 minutes at 4 gpm unless a reduced EBCT is demonstrated consistent with the pilot scale evaluation. The specific EBCT requires a GAC vessel with a bed volume of 10.2 cubic feet, equal to approximately 300 pounds (lbs) of GAC (27 lbs GAC/ft^3). At the theoretical loading rate of 0.64 lbs of EBD per 100 lbs GAC, the system is modeled to have an EBD capacity of 1.92 lbs EDB (a lesser quantity will be realized due to adsorption of non-target compounds). The modeled lifetime of a vessel comprised of 300 lbs GAC is in excess of 100 years based on a loading rate of 900 µg/day (800 gallons per day at 0.3 µg/L).

9.4.1.5 Overview System Configuration

The P&T system will be configured with two GAC vessels in series, a primary vessel and secondary vessel, with the secondary vessel acting to capture any EDB in the event breakthrough or failure occurs in the primary vessel. Treated water will be stored in the on-site 30,000 storage tank for on-demand use. Excess water will be discharged through the facility's outfall.

9.4.1.6 Operational Period

The groundwater pump-and-treat system will continue operating until the groundwater from the extraction well meets the EDB Residential RRS (0.09 µg/L). Groundwater from the extraction well and the effluent of the GAC system will be analyzed for EDB only on the following schedule:

- Weekly for a month, then
- Biweekly for two months, then
- Monthly for nine months, then
- Semi-annually

9.4.2 Groundwater Monitoring

Semi-annual groundwater monitoring will cease after the February/March 2014 sampling event. Once the soil remediation has been completed, the groundwater treatment system will be installed. Once the groundwater treatment system is operational, a new groundwater monitoring program will begin. This program will consist of the following:

- Semi-annual monitoring:
  - Extraction well (EW-1)
  - Analyzed for EDB.
- Annual monitoring:
  - BW-1, BW-2, BW-5, BW-6-1, and Well D.
  - Analyzed for EDB.

The groundwater monitoring will continue until the groundwater meets the Residential RRS (0.09 µg/L).

9.5 Uniform Environmental Covenants

As the groundwater on-site cannot currently be used for drinking water, uniform environmental covenants (UEC) will be placed on the CSX property and the Drexel Facility property. Once the groundwater meets the Residential RRS, the UECs will be lifted from the properties.

9.6 Certification

After completion of the soil remedial action, the shallow soils (from 0-15 ft below the surface) will be certified to the Residential RRS. Additionally, the deep soils (deeper than 15 ft) for all constituents except EDB will be certified to the Residential. EDB in deep soils will be certified to the direct-contact Residential RRS for EDB with controls (groundwater pump-and-treat and UEC) for protection of groundwater.

The Point of Exposure (POE) well for the site (Well D) does not have any RRS exceedances. However, on-site wells have exceedances of EDB that are being addressed by a pump-and-treat system and UEC. Thus, it is anticipated that groundwater will be certified to the Residential RRS with controls until such time as the groundwater meets the Residential RRS.

9.7 Cost Estimate for Implementation of Remediation Plan

The estimated costs for implementing the Remediation Plan are presented below. The costs for the rail line/swale remediation and pump and treat system were estimated using RACER (remedial action cost engineering and requirements) software.

Element	**Estimated Cost**
Surface Impoundment Remediation	$1,012,000
Rail line / Swale Remediation	$1,800,000
Groundwater Pump and Treat	
Installation	$350,000
Operation/Maintenance	$26,000/year
Groundwater Monitoring	$25,000/year
Uniform Environmental Covenants	$20,000
Administrative/Consulting/Reporting	$200,000
Total Upfront Costs	$3,382,000
Total Annual Cost	$51,000
Total Cost	**$3,892,000**
Assuming 10 years Pump& Treat	

10 REFERENCES

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EPS. 2012c. Ecological Remediation Plan. December.

TABLES

Table 1 Groundwater Analytical Results: Inorganics above the Detection Limit

Location	Date Sampled	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Lead (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Zinc (µg/L)
Type 1 RRS		**6**	**10**	**2000**	**4**	**5**	**100**	**1300**	**15**	**100**	**50**	**100**	**2**	**2000**
Residential RRS		**6**	**10**	**3100**	**30**	**8**	**100**	**1300**	**15**	**310**	**80**	**100**	**2**	**4700**
BW-1	11/16/2005	<0.2	0.67	160	0.11	0.21	6.8	1.2	0.54	7.4	0.17J	NA	0.46	NA
BW-1	4/27/2006	<0.2	0.96	270	0.11	0.18	25	2	1	16	0.14J	<0.05	0.26	8
BW-1	6/30/2010	0.03J	0.74	160	0.6	1.58	13.5	2.72	3.65	17.8	0.4J	0.053	0.146	7.01
BW-1	8/10/2011	<0.02	0.15J	80.2	0.014J	0.018J	2.23	0.29*	0.07	1.48	<0.3	<0.004	0.046	0.29J
BW-1 (Dup)	8/10/2011	<0.02	0.18J	80.6	0.01J	0.015J	2.35	0.22*	0.079	1.55	0.4J	<0.004	0.046	0.32J
BW-1	2/15/2012	<0.02	0.28J	90.2	0.161	0.328	4.9	1.5	1.04	1.81	0.4J	0.02J	0.083	3.16
BW-1	8/9/2012	0.012J	<0.1	73.1	0.011J	0.029	5.05	1.05	0.102	3.34	<0.3	0.034	0.038	2
BW-1	3/7/2013	<0.02	0.16J	80.7	0.053	0.11	3.84	0.72	0.426	2.56	0.3J	<0.004	0.045	1.71
BW-1 (Dup)	3/7/2013	<0.02	0.22J	81.7	0.059	0.14	4.57	0.8	0.482	3.04	0.6J	<0.004	0.046	1.98
BW-1	9/12/2013	<0.01	0.12J	87.9	0.026	0.082	3.79	0.57	0.153	1.57	<0.4	0.062	0.049	1.85
BW-1	9/12/2013	<0.01	0.1J	90.6	0.019J	0.052	3.63	0.59	0.114	1.54	<0.4	0.041	0.052	1.47
BW-2	11/16/2005	<0.2	0.42	57	0.33	0.094J	13	3.1	1.2	9.7	0.1J	NA	0.049J	NA
BW-2 (Dup)	11/16/2005	<0.2	0.42	56	0.24	0.083J	20	3.3	0.94	13	<0.1	NA	<0.04	NA
BW-2	4/27/2006	<0.2	0.71	75	0.39	0.16	20	3.3	1.8	10	<0.1	<0.05	0.068J	12B
BW-2	6/30/2010	<0.02	0.18J	76.1	0.146	0.051	1.83	0.67	0.522	1.52	<0.3	0.006J	0.022	1.86
BW-2	8/9/2011	<0.02	0.13J	73.4	0.234	0.072	6.1	0.89*	0.748	4.01	<0.3	0.007J	0.026	1.42
BW-2	2/15/2012	<0.02	0.09J	72.1	0.028	0.013J	2.92	0.43	0.21	1.22	<0.3	0.007J	0.012J	0.72
BW-2 (Dup)	2/15/2012	0.03J	0.17J	72.5	0.027	0.012J	2.96	0.47	0.182	1.14	0.4J	0.006J	0.01J	1.47
BW-2	8/9/2012	0.067	0.1J	78.3	0.296	0.113	20.5	3.81	1.07	12.7	<0.3	0.163	0.035	5.1
BW-2	3/5/2013	<0.02	0.2J	77.5	0.079	0.028	7.53	1.36	0.319	4.96	0.5J	0.01J	0.018J	1.96
BW-2	9/11/2013	0.02J	6.02	226	3.97	1.72	**144**	14.1	**15.5**	94.3	10.5	4.04	0.313	23
BW-3	11/16/2005	<0.2	0.91	120	0.78	0.56	21	3.5	3.1	9.6	0.12J	NA	0.12J	NA
BW-3	4/27/2006	<0.2	0.47	120	0.18	0.24	29	4.5	1.3	16	<0.1	<0.05	<0.04	11
BW-3	7/1/2010	<0.02	0.2J	120	0.175	0.22	2.62	0.81	0.532	3.18	0.3J	0.016J	0.023	1.9
BW-3	8/10/2011	<0.02	0.14J	104	0.054	0.051	7.63	0.44*	0.122	5.27	<0.3	0.005J	0.012J	0.43J
BW-3 (Dup)	8/10/2011	<0.02	0.14J	104	0.056	0.047	7.91	0.33	0.125	5.25	<0.3	<0.004	0.009J	0.44J
BW-3	2/14/2012	0.1	<0.07	107	0.056	0.029	4.47	0.55	0.368	2.24	<0.3	0.023	0.009J	0.88
BW-3	8/10/2012	0.015J	<0.1	107	0.055	0.049	7.15	0.54	0.188	5.31	<0.3	0.031	0.01J	0.9
BW-3	3/6/2013	<0.02	0.14J	109	0.044	0.033	3.54	1.8	0.102	1.69	<0.3	0.007J	0.009J	2.64
BW-3	9/10/2013	<0.01	0.09J	118	0.031	<0.005	1.46	0.63	0.045	0.37	<0.4	<0.005	0.003J	1.04
BW-4	6/30/2010	0.03J	0.28J	91.7	0.127	0.145	4.17	1.06	0.88	3.02	<0.3	0.008J	0.03	7.96
BW-4 (Dup)	6/30/2010	0.03J	0.26J	87.2	0.076	0.074	2.51	0.67	0.457	2.26	0.4J	0.012J	0.023	4.33
BW-4	8/9/2011	<0.02	0.17J	80.6	0.018J	0.017J	11.9	0.28*	0.088	4.93	0.4J	0.006J	0.014J	1.18
BW-4 (Dup)	8/9/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BW-4	2/14/2012	0.06	0.08J	88.7	0.013J	0.008J	2.41	0.58	0.455	1.59	<0.3	0.006J	0.01J	1.61
BW-4	8/9/2012	0.026J	<0.1	90.2	0.057	0.048	5.73	0.8	0.453	3.78	<0.3	0.033	0.018J	3.6
BW-4 (Dup)	8/9/2012	0.022J	0.1J	89.4	0.063	0.049	7.11	0.82	0.457	5.43	<0.3	0.025	0.013J	3.8
BW-4	3/5/2013	<0.02	0.14J	95.6	0.015J	0.015J	6.07	1.6	0.094	4.19	0.3J	0.009J	0.007J	2.54
BW-4	9/11/2013	<0.01	0.09J	95.6	0.027	0.013J	2.27	0.8	0.123	0.7	<0.4	<0.005	<0.002	1.95
BW-5	3/7/2013	0.09	0.22J	82.8	0.009J	0.049	5.88	2.89	0.31	3.61	0.4J	0.006J	0.057	134
D	3/6/2013	<0.02	0.27J	96.7	0.272	0.01J	5.75	1.66	0.48	4.4	1.3	<0.004	0.025	18.1
D	9/10/2013	<0.01	0.39J	101	0.082	0.006J	1.66	0.66	0.14	0.66	1	<0.005	0.005J	13

Table 1 Groundwater Analytical Results: Inorganics above the Detection Limit

Location	Date Sampled	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Lead (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Zinc (µg/L)
Type 1 RRS		**6**	**10**	**2000**	**4**	**5**	**100**	**1300**	**15**	**100**	**50**	**100**	**2**	**2000**
Residential RRS		**6**	**10**	**3100**	**30**	**8**	**100**	**1300**	**15**	**310**	**80**	**100**	**2**	**4700**
PW-1	10/5/2000	NA	<20	82.8	NA	<10	<10	NA	<10	NA	<20	<10	NA	140
PW-1	11/22/2000	NA	<20	29.8	NA	<10	<10	NA	<10	NA	<20	<10	NA	NA
PW-1	7/22/2003	<3	<5	97	<2	<2.5	<25	BDL	BDL	<40	<25	NA	<1	130
PW-1	11/16/2005	<0.2	0.34	100	<0.03	<0.02	4.7	5.8	1.7	2.3	7.1	NA	0.056J	NA
PW-1	6/30/2010	0.04J	0.45J	126	0.007J	0.028	1.98	2.33	0.058	1.2	7.7	0.014J	0.052	59.9
PW-1	8/10/2011	<0.02	0.36J	102	0.016J	0.013J	7.17	3.48*	0.82	4.2	2.7	<0.004	0.036	11.8
PW-1 (Dup)	8/10/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PW-1	2/15/2012	0.11	0.56	120	0.011J	0.01J	2.8	2.04	0.318	0.54	9.2	0.012J	0.065	12.6
PW-2	10/5/2000	NA	<20	112	NA	<10	<10	NA	<10	NA	<20	<10	NA	<20
PW-2	7/31/2003	<2	<2	110	<3	<5	<16	<12	<1	30	<2	<12	<1	13
PW-2	11/16/2005	<0.2	0.62	85	0.27	0.077J	14	110	**20**	11	4.1	NA	0.2	NA
PW-2	6/30/2010	<0.02	0.19J	119	0.038	0.009J	0.74	1.87	0.582	2.02	0.6J	0.015J	0.074	37.4
PW-AIKEN	8/11/2003	<3	<5	68	<2	<2.5	<25	BDL	BDL	<40	<25	NA	<1	<50
PW-AIKEN	5/3/2005	<0.2	0.15J	77	<0.03	<0.02	1.2	21	0.64	0.24	0.21J	<0.05	0.13J	23
PW-AIKEN	4/27/2006	<0.2	0.44	140	<0.03	<0.02	3.7	5	0.62	0.12J	9.4	<0.05	0.052J	11B
PW-AIKEN	7/1/2010	0.03J	0.37J	121	0.004J	<0.003	0.6	3.79	0.657	1.66	1.4	0.005J	0.068	3.71
PW-AIKEN	8/10/2011	0.04J	0.66	130	0.013J	0.005J	3.2	2.08*	0.294	0.77	8	<0.004	0.046	3.17
PW-Farrow1	5/3/2005	<0.2	0.2	110	<0.03	0.05J	0.82J	0.95	0.52	0.065J	0.22J	<0.05	<0.04	82
PW-Farrow1	4/27/2006	<0.2	0.19J	110	0.03J	0.093J	1.1	8.7	1.4	0.21	0.3J	<0.05	0.056J	140B
PW-Farrow1	6/30/2010	<0.02	0.19J	98.1	0.013J	0.084	0.61	1.7	0.719	0.82	0.4J	0.006J	0.013J	173
PW-Farrow2 (Dup)	5/3/2005	<0.2	0.67	110	<0.03	0.036J	1.3	2.4	0.24J	0.15J	18	<0.05	0.23	90
PW-Farrow2	5/3/2005	<0.2	0.69	110	<0.03	0.032J	1.4	15	1.3	0.19J	17	<0.05	0.25	95
PW-Farrow2	4/26/2006	<0.2	0.78	150	<0.03	0.079J	1.9	11	5.7	0.23	23	<0.05	0.33	130B
PW-Farrow2	6/30/2010	0.08	1.58	142	0.011J	0.075	3.39	13.1	8.94	1.18	23.8	0.019J	0.277	185
PW-SANDERS	8/11/2003	<3	<5	170	<2	<2.5	<25	BDL	BDL	<40	<25	NA	<1	<50
PW-SANDERS	5/4/2005	<0.2	0.15J	190	<0.03	0.054J	1.2	1.1	0.29J	<0.059	<0.1	<0.05	<0.04	56
PW-Scoggins	5/3/2005	<0.2	0.13J	150	<0.03	<0.02	1.1	1.8	0.32	0.13J	0.14J	<0.05	<0.04	190
PW-Scoggins	4/27/2006	<0.2	0.081J	160	<0.03	<0.02	1	67	12	0.33	0.14J	<0.05	<0.04	440
PW-Scoggins	6/30/2010	<0.02	0.08J	171	0.012J	0.01J	1.01	6.4	1.56	1.12	<0.3	0.009J	0.011J	441
PW-STEWART	7/23/1985	<3	<5	100	<2	<2.5	<25	BDL	2.5	<40	<25	NA	<1	110
PW-STEWART	8/11/2003	<0.2	0.17J	110	<0.03	<0.02	1.2	0.43J	0.86	0.11J	<0.1	<0.05	0.12J	91
PW-STEWART	5/4/2005	<0.0002	0.00017 J	0.11	<0.00003	<0.00002	0.0012	0.00043 J	0.00086	0.00011 J	<0.0001	<0.00005	0.00012 J	0.091

BDL - below detection limit; detection limit not available

Dup - duplicate sample

NA - not analyzed

Bold: Above Residential RRS

Qualifiers:

J The associated numerical value is an estimated quantity.

B Analyte present in the blank and the sample.

* Spike recovery is equal to or outside the control criteria used.

P > 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)

D Analytes analyzed at a secondary dilution.

E Reported value is estimated because of the presence of interference.

EPS

Table 2 Groundwater Analytical Results: Organic Constituents above the Detection Limit

		Herbicide	Pesticides		SVOCs		VOCs					
Location	Date Sampled	Dinoseb (DNBP) (µg/L)	gamma-BHC (Lindane) (µg/L)	Heptachlor epoxide (µg/L)	1,4-Dichlorobenzene (µg/L)	bis(2-Ethylhexyl) phthalate (µg/L)	1,2-Dibromo-3-chloropropane (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	Carbon tetrachloride (µg/L)	Toluene (µg/L)
Type 1 RRS		**7**	**0.2**	**0.2**	**75**	**6**	**2***	**0.05**	**5***	**5**	**5**	**1000**
Residential RRS		**20**	**0.8**	**0.2**	**75**	**60**	**2***	**0.09**	**5***	**5**	**6**	**1000**
BW-1	11/16/2005	<0.39	<0.13	<0.11	<0.23	2.3	<0.0024	<0.002	<0.24	<0.24	<0.24	<0.22
BW-1	4/27/2006	<0.39	<0.12	<0.1	<0.23	<1	<0.0021	<0.0018	<0.24	<0.24	<0.24	<0.22
BW-1	6/30/2010	<0.048	<0.00041	<0.0006	<0.05	0.08J	<0.0036	0.039	<0.038	<0.057	0.25J	0.15J
BW-1	8/10/2011	<0.048	<0.00041	0.0053J	<0.05	0.28J	<0.0036	**0.37**	<0.038	0.13J	0.35J	<0.05
BW-1 (Dup)	8/10/2011	NA	<0.00041	0.00091JP	<0.05	0.11J	<0.0036	**0.38**	<0.038	0.15J	0.39J	<0.05
BW-1	2/15/2012	<0.048	<0.00041	<0.0006	<0.05	0.28J	<0.0036	**0.33**	<0.038	0.19J	0.49J	<0.05
BW-1	8/9/2012	<0.048	<0.00041	<0.0006	<0.05	0.31J	<0.0036	**0.48**	<0.038	0.22J	0.55	0.05J
BW-1	3/7/2013	<0.048	<0.00041	<0.0006	<0.12	0.21J	<0.0036	**0.42**	<0.08	0.22J	0.43J	<0.054
BW-1 (Dup)	3/7/2013	<0.048	<0.00041	<0.0006	<0.12	0.18J	<0.0036	**0.46**	<0.08	0.25J	0.44J	<0.054
BW-1	9/12/2013	<0.048	<0.00041	<0.00049	<0.12	0.19J	<0.0036	**0.19**	<0.08	0.12J	0.2J	0.08J
BW-1	9/12/2013	<0.048	<0.00041	<0.00049	<0.12	0.16J	<0.0036	**0.19**	<0.08	0.11J	0.21J	0.09J
BW-2	11/16/2005	<0.39	<0.12	<0.1	<0.23	<1	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
BW-2 (Dup)	11/16/2005	<0.4	<0.13	<0.11	<0.23	<1.1	<0.0024	<0.0021	<0.24	<0.24	<0.24	<0.22
BW-2	4/27/2006	<0.4	<0.12	<0.1	<0.23	<1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
BW-2	6/30/2010	<0.048	0.0021JP	<0.0006	<0.05	0.069J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-2	8/9/2011	<0.048	<0.0012i	0.0057JPD	<0.05	0.095J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-2	2/15/2012	<0.048	0.0035JP	0.17D	0.06J	0.14J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-2 (Dup)	2/15/2012	<0.048	0.0034JP	<0.067i	0.05J	0.24J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-2	8/9/2012	<0.048	<0.00066i	0.061JD	0.05J	0.26J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-2	3/5/2013	<0.048	<0.0037	0.051P	<0.12	0.16J	<0.0036	<0.003	<0.08	<0.095	<0.096	<0.054
BW-2	9/11/2013	<0.048	<0.00041	<0.00049	<0.12	0.19J	<0.0036	<0.003	<0.08	<0.095	<0.096	0.14J
BW-3	11/16/2005	<0.4	<0.12	<0.1	<0.23	<1	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
BW-3	4/27/2006	<0.4	<0.12	<0.1	<0.23	<1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
BW-3	7/1/2010	<0.048	0.00097J	<0.0006	<0.05	<0.06	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-3	8/10/2011	<0.048	<0.00041	0.051	<0.05	0.091J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-3	2/14/2012	<0.048	<0.00041	<0.0029i	<0.05	0.43J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-3	8/10/2012	<0.048	<0.00041	<0.0006	<0.05	0.14J	NA**	NA**	<0.038	<0.057	<0.039	<0.05
BW-3	3/6/2013	<0.048	<0.00041	0.0073J	<0.12	0.12J	<0.0036	<0.003	<0.08	<0.095	<0.096	<0.054
BW-3	9/10/2013	<0.048	<0.00041	<0.00049	<0.12	0.13J	<0.0036	<0.003	<0.08	<0.095	<0.096	0.1J
BW-4	6/30/2010	<0.048	<0.00041	<0.008i	<0.05	0.43J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-4 (Dup)	6/30/2010	<0.048	<0.00041	<0.0006	<0.05	0.35J	<0.0036	<0.003	<0.038	<0.057	<0.039	0.05J
BW-4	8/9/2011	<0.048	<0.00041	0.0056J	<0.05	0.089J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-4	2/14/2012	<0.048	<0.00041	<0.00094i	<0.05	0.14J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-4	8/9/2012	<0.048	<0.00041	<0.072i	<0.05	0.19J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
BW-4 (Dup)	8/9/2012	<0.048	<0.00041	<0.086i	<0.05	0.22J	<0.0036	<0.003	<0.038	<0.057	<0.039	0.06J
BW-4	3/5/2013	<0.048	<0.00041	0.0032J	<0.12	0.14J	<0.0036	<0.003	<0.08	<0.095	<0.096	<0.054
BW-4	9/11/2013	<0.048	<0.00041	<0.00049	<0.12	0.14J	<0.0036	<0.003	<0.08	<0.095	<0.096	0.08J
BW-5	3/7/2013	0.11J	0.0097JP	0.016	<0.12	0.38J	0.082	0.06	<0.08	<0.095	<0.096	0.37J
BW-5	9/12/2013							**0.1**				
BW-6-1	7/1/2013							**0.21**				
BW-6-2	7/1/2013							<0.003				
BW-6-3	7/1/2013							<0.003				
BW-6-3 (Dup)	7/1/2013							<0.003				
D	3/6/2013	<0.048	<0.00041	0.015	<0.12	0.21J	<0.0036	<0.003	<0.08	<0.095	<0.096	0.32J
D	9/10/2013	<0.048	<0.00041	<0.00049	<0.12	0.25J	<0.0036	<0.003	<0.08	<0.095	<0.096	0.6

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Table 2 Groundwater Analytical Results: Organic Constituents above the Detection Limit

		Herbicide	Pesticides		SVOCs		VOCs					
Location	Date Sampled	Dinoseb (DNBP) (µg/L)	gamma-BHC (Lindane) (µg/L)	Heptachlor epoxide (µg/L)	1,4-Dichlorobenzene (µg/L)	bis(2-Ethylhexyl) phthalate (µg/L)	1,2-Dibromo-3-chloropropane (µg/L)	1,2-Dibromoethane (µg/L)	1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	Carbon tetrachloride (µg/L)	Toluene (µg/L)
Type 1 RRS		**7**	**0.2**	**0.2**	**75**	**6**	**2***	**0.05**	**5***	**5**	**5**	**1000**
Residential RRS		**20**	**0.8**	**0.2**	**75**	**60**	**2***	**0.09**	**5***	**5**	**6**	**1000**
PW-1	10/5/2000	<0.5	<0.05	<0.05	<10	<10	NA	<5	<5	<5	<5	<5
PW-1	11/22/2000	<0.5	<0.05	<0.05	<10	<10	NA	NA	<5	<5	<5	<5
PW-1	7/22/2003	<0.88	<0.1	<0.1	<0.5	<4	<0.5	**0.131**	<0.5	<0.5	<0.5	<0.5
PW-1	7/31/2003	NA	NA	NA	NA	NA	NA	**0.13**	NA	NA	NA	NA
PW-1	8/7/2003	NA	NA	NA	NA	NA	<0.012	**0.213**	NA	NA	NA	NA
PW-1 (150 ft)	5/5/2005	NA	NA	NA	NA	NA	NA	0.0082J	NA	NA	NA	NA
PW-1 (190 ft)	5/5/2005	NA	NA	NA	NA	NA	NA	<0.0021	NA	NA	NA	NA
PW-1	11/16/2005	1.1J	<0.13	<0.11	<0.23	<1.1	<0.0025	**0.29**	<0.24	<0.24	0.29J	<0.22
PW-1	6/30/2010	1.6	0.0037JP	<0.045i	<0.05	0.16J	<0.0036	**0.11**	0.26J	0.12J	0.21J	<0.05
PW-1	8/10/2011	3.7	0.0071J	<0.012i	<0.05	0.14J	0.023	**1.4D**	0.53	0.35J	0.46J	<0.05
PW-1	2/15/2012	0.63	0.0042J	<0.0006	<0.05	0.15J	0.0047J	**0.14**	0.41J	0.14J	0.2J	<0.05
PW-2	10/5/2000	<0.5	<0.05	<0.05	<10	<10	NA	<5	<5	<5	<5	<5
PW-2	7/31/2003	<0.1	<0.01	<0.005	<0.2	<0.1	<0.02	0.074	<0.2	<0.2	<0.2	<0.2
PW-2	8/7/2003	NA	NA	NA	NA	NA	<0.012	0.053	NA	NA	NA	NA
PW-2 (190 ft)	5/5/2005	NA	NA	NA	NA	NA	NA	<0.0021	NA	NA	NA	NA
PW-2 (235 ft)	5/5/2005	NA	NA	NA	NA	NA	NA	<0.0021	NA	NA	NA	NA
PW-2	11/16/2005	<0.39	<0.13	<0.11	<0.23	7.5	0.05	0.02	<0.24	<0.24	<0.24	35
PW-2	6/30/2010	<0.048	0.0037J	<0.0086i	<0.05	0.11J	0.046	0.012	<0.038	<0.057	<0.039	<0.05
PW-AIKEN	8/11/2003	<0.88	<0.1	<0.1	<0.5	<4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PW-AIKEN	5/3/2005	<0.38	<0.12	<0.099	<0.23	<0.99	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-AIKEN	4/27/2006	<0.4	<0.12	<0.1	<0.23	<1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
PW-AIKEN	7/1/2010	<0.048	<0.00041	<0.0006	<0.05	0.43J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
PW-AIKEN	8/10/2011	<0.048	<0.00041	0.0028J	<0.05	0.15J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
PW-Farrow1	5/3/2005	<0.38	<0.12	<0.1	<0.23	<1	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-Farrow1	4/27/2006	<0.4	<0.12	<0.1	<0.23	<1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
PW-Farrow1	6/30/2010	<0.048	<0.00041	<0.0006	<0.05	<0.06	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
PW-Farrow2 (Dup)	5/3/2005	<0.38	<0.12	<0.1	<0.23	<1	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-Farrow2	5/3/2005	<0.38	<0.12	<0.1	<0.23	<1	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-Farrow2	4/26/2006	<0.38	<0.13	<0.11	<0.23	<1.1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
PW-Farrow2	6/30/2010	<0.048	<0.00041	<0.0006	<0.05	<0.06	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
PW-SANDERS	8/11/2003	<0.88	<0.1	<0.1	<0.5	<4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PW-SANDERS	5/4/2005	<0.38	<0.12	<0.099	<0.23	<0.99	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-Scoggins	5/3/2005	<0.4	<0.12	<0.099	<0.23	<0.99	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22
PW-Scoggins	4/27/2006	<0.4	<0.12	<0.1	<0.23	<1	<0.0022	<0.0018	<0.24	<0.24	<0.24	<0.22
PW-Scoggins	6/30/2010	<0.048	<0.00044	<0.00064	<0.05	0.098J	<0.0036	<0.003	<0.038	<0.057	<0.039	<0.05
PW-STEWART	8/11/2003	<0.88	<0.1	<0.1	<0.5	<4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PW-STEWART	5/4/2005	<0.38	<0.12	<0.099	<0.23	<0.99	<0.0025	<0.0021	<0.24	<0.24	<0.24	<0.22

Dup - duplicate sample

* RRS not calculated, HSRA Type 1 Groundwater criteria value shown.

NA - not analyzed

NA** - not analyzed due to laboratory error

Bold: Above Residential RRS

Qualifiers:

J The associated numerical value is an estimated quantity.

B Analyte present in the blank and the sample.

* Spike recovery is equal to or outside the control criteria used.

P > 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)

D Analytes analyzed at a secondary dilution.

E Reported value is estimated because of the presence of interference.

EPS

Table 3 Rail Line Soil Analytical Results

Boring	Date Sampled	Sample Depth (ft)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDT (mg/kg)	Chlordane (mg/kg)	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Heptachlor (mg/kg)	o-Xylene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**0.01/0.5***	**19**	**20**	**9.2**	**26**	**10**	**1.65**	**0.67**	**20**	**10.88**
DB-8	8/21/2013	2		<0.0037	<0.0037	<0.037	<0.0019	<0.0037	<0.0037	<0.0019		<0.19
DB-8	8/21/2013	6		<0.0038	<0.0038	<0.038	<0.0019	<0.0038	<0.0038	<0.0019		<0.19
DB-8	8/21/2013	10		0.059	0.4	0.71	0.06900001	0.09	0.09200001	0.01		**11**
DB-8 (Dup)	8/21/2013	10		0.052	0.46	0.7	0.051	0.052	0.049	0.0048		5
DB-8	8/21/2013	20	<0.0026	<0.0038	<0.0038	<0.038	<0.0019	<0.0038	<0.0038	<0.0019	<0.0026	<0.19
DB-8	8/21/2013	40	<0.003	<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002	<0.003	<0.2
DB-8	8/21/2013	47	<0.0036	0.011	0.014	<0.045	<0.0023	<0.0045	<0.0045	<0.0023	<0.0036	<0.23
DB-9	8/22/2013	2		0.0067	0.1	<0.041	<0.0021	0.0062	0.0042	<0.0021		0.44
DB-9	8/22/2013	6		9.9	4.3	**17**	2.3	0.68	<0.38	<0.19		**58**
DB-9	8/22/2013	10		<0.39	3.3	5.6	0.47	0.49	0.47	0.23		**36**
DB-9	8/22/2013	20	<0.0031	<0.0041	<0.0041	<0.041	<0.002	<0.0041	<0.0041	<0.002	4	<0.2
DB-9	8/22/2013	40	**0.2**	<0.0038	<0.0038	<0.038	<0.0019	<0.0038	<0.0038	<0.0019	2.8	<0.19
DB-9	8/22/2013	60	0.096	<0.0038	<0.0038	<0.038	<0.0019	<0.0038	<0.0038	<0.0019	1.3	<0.19
DB-10	8/22/2013	2		0.058	<0.0037	0.5	<0.0019	<0.019	<0.019	<0.0019		<0.19
DB-10	8/22/2013	6		1.2	0.48	4.8	<0.038	<0.076	<0.076	<0.038		7.6
DB-10	8/22/2013	10		0.039	0.019	0.19	0.018	0.015	<0.0039	<0.002		0.46
DB-10	8/22/2013	20	<0.0023	<0.0037	<0.0037	<0.037	<0.0019	<0.0037	<0.0037	<0.0019	2.6	<0.19
DB-10 (Dup)	8/22/2013	20	<0.0026	<0.0037	<0.0037	<0.037	<0.0019	<0.0037	<0.0037	<0.0019	2.4	<0.19
DB-10	8/22/2013	40	<0.0032	<0.0045	<0.0045	<0.045	<0.0022	<0.0045	<0.0045	<0.0022	<0.0032	<0.22
DB-10	8/22/2013	52	<0.0028	<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002	<0.0028	<0.2
DB-11	8/21/2013	2		<0.0037	<0.0037	<0.037	<0.0019	<0.0037	<0.0037	<0.0019		<0.19
DB-11	8/21/2013	6		3.1	8	**19**	2.9	0.97	<0.4	<0.2		**55**
DB-11	8/21/2013	10		0.011	0.008	0.087	0.0064	0.0057	<0.0042	<0.0021		<0.21
DB-12	8/21/2013	2		<0.0038	0.005	<0.038	<0.0019	<0.0038	<0.0038	<0.0019		<0.19
DB-12	8/21/2013	6		<0.0039	<0.0039	<0.039	<0.002	<0.0039	<0.0039	<0.002		<0.2
DB-12	8/21/2013	10		<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002		<0.2
DB-13	8/20/2013	2		0.086	0.14	0.11	0.019	0.014	0.0063	<0.0019		0.53
DB-13	8/20/2013	6		<0.0039	<0.0039	<0.039	<0.002	<0.0039	<0.0039	<0.002		<0.2
DB-13	8/20/2013	10		<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002		<0.2
DB-13	8/20/2013	20	<0.0031	<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002	0.0058	<0.2
DB-13	8/20/2013	40	**0.02**	<0.0038	<0.0038	<0.038	<0.0019	<0.0038	<0.0038	<0.0019	2.6	<0.19
DB-13	8/20/2013	60	**0.015**	<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002	0.058	<0.2
DB-14	8/21/2013	2		<0.0037	<0.0037	<0.037	<0.0019	<0.0037	<0.0037	<0.0019		<0.19
DB-14	8/21/2013	6		<0.004	<0.004	<0.04	<0.002	<0.004	<0.004	<0.002		<0.2
DB-14	8/21/2013	10		<0.0041	<0.0041	<0.041	<0.0021	<0.0041	<0.0041	<0.0021		<0.21

Bold: Exceeds Residential RRS

* Residential RRS: protection of groundwater / direct contact to soil

EPS

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	0.00202	190	31	660.0001	ND	14	3.3	20	0.062	ND	ND	41.959999	ND	9.700001	470	ND	2	21	3.8	2
Maximum Post-Remedial Action			ND	ND	1.5	0.89	0.15	ND	ND	ND	20	ND	ND	ND	0.5	ND	ND	200	ND	ND	ND	ND	ND
B105	10/19/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B105	10/19/2000	0	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	20	<0.001	<0.02		0.42	<0.001		200			<0.02		
B22	11/2/1998	0			<0.00333	<0.00333	<0.00333				2.38				<0.00166								
B23	11/2/1998	0			<0.00333	<0.00333	<0.00333				<1				<0.00166								
B24	11/2/1998	0			<0.00333	<0.00333	<0.00333				1.55				<0.00166								
B25	11/2/1998	0			<0.00333	<0.00333	<0.00333				3.9				<0.00166								
B45	6/28/2000	0			<0.0033	<0.0033	0.013				<4.87				<0.033								
B45	1/20/1999	0			**166.5**	<6.66	**21.98**				1.82				**41.96**								
B45	1/20/1999	1			**69.33**	7.33	**42.62**				1.38				**22.64**								
B47	1/20/1999	0			0.38	0.1	0.15				2.29				0.18								
B47	1/20/1999	1			0.028	0.004	<0.00333				<1.01				0.03								
B49	1/20/1999	0			0.37	0.04	0.3				<0.99				0.13								
B49	1/20/1999	1			3.23	0.5	5.93				<0.99				1.5								
B59	1/19/1999	0			<0.00333	0.008	<0.00333				<0.98				<0.00166								
B61	1/19/1999	0			<0.00333	<0.00333	<0.00333				<1.02				<0.00166								
B61	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.95				<0.00166								
B63	2/5/1999	0			<0.00333	0.003	<0.00333				<1				<0.00166								
B63	2/5/1999	1			<0.00333	<0.00333	<0.00333				<-0.96				<0.00166								
B92	10/18/2000	0	<0.001	<0.001	<0.0037	<0.0037	<0.0037	<0.33	<0.0019	<0.0019	1.4	<0.001	<0.0019		<0.19	<0.001	<0.013	2.6	<0.013	<0.013	<0.0037	<0.013	<0.013
B93	10/18/2000	0	<0.001	<0.001	<0.0038	<0.0038	<0.0038	<0.33	<0.0019	<0.0019	1	<0.001	<0.0019		<0.19	<0.001	<0.013	2.9	<0.013	<0.013	<0.0038	<0.013	<0.013
B94	10/18/2000	0	<0.001	<0.001	<0.0037	0.004	0.0052	<0.33	<0.0019	<0.0019	1.2	<0.001	<0.0019		<0.19	<0.001	<0.013	3.8	<0.013	<0.013	<0.0037	<0.013	<0.013
B95	10/18/2000	0	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.01	<0.01	1.4	<0.001	<0.01		<1	<0.001	<0.013	3.8	<0.013	<0.013	<0.02	<0.013	<0.013
BHS-29	6/30/2006	0-2	<0.004	0.00202J	3.6P	2P	**37**		<0.079	<0.29		<0.0013	<0.27		**37**	<0.001					<0.2		
BHS-30	6/30/2006	0-2	<0.004	<0.0021	<0.00033	0.008	0.01		<0.00016	<0.00058		<0.0013	<0.00052		<0.0033	<0.001					<0.00039		
DB-10	8/22/2013	2			0.058		<0.0037								0.5								
DB-11	8/21/2013	2			<0.0037		<0.0037								<0.037								
DB-12	8/21/2013	2			<0.0038		0.005								<0.038								
DB-13	8/20/2013	2			0.086		0.14								0.11								
DB-14	8/21/2013	2			<0.0037		<0.0037								<0.037								
DB-3	11/27/2012	0.5		<0.0034	<0.004	<0.004	<0.004		<0.002	<0.002		<0.0034	<0.002			<0.0034	<0.0166		<0.0166	<0.0166	<0.004		<0.0332
DB-4	11/28/2012	0.5		<0.21	0.58	<0.047	0.14		<0.023	<0.023		<0.21	<0.023			<0.21	<0.0166		<0.0166	<0.0166	<0.047		<0.0332
DB-5	11/29/2012	0.5		<0.0045	**25**	<4.7	6.2		<2.3	<2.3		<0.0045	<2.3			<0.0045	<0.0166		<0.0166	<0.0166	<4.7		<0.0332
DB-8	8/21/2013	2			<0.0037		<0.0037								<0.037								
DB-9	8/22/2013	2			0.0067		0.1								<0.041								
DC-RS3	6/28/2000	2			<0.0033	<0.0033	<0.0033				4.63				<0.033								
GP05-2004	6/3/2004	0		<0.21	0.0051	<3.85E-03	0.0042NC		<1.93E-03	<1.93E-03		<0.21	<1.93E-03			<0.21	<0.038		<0.38	<0.038	<3.85E-03	<7.7E-02	<7.7E-02
HA-1	3/7/1995	0-0.5			0.15	<0.02	<0.02						<0.01		0.43								
PFR3	4/15/2004	0-0.5		<0.0048	**23**	<0.86	**25**		<0.432	<0.432	16.2	<0.0048	<0.432	<1.8		<0.0048	1.4	57	<4	<0.4	<0.86	<0.8	<0.8
PFR4	4/15/2004	0-0.5			<0.72	<0.72	<0.72		<0.362	<0.362	<5.2		<0.362	<2.6			0.97	35.7	<3.7	<0.37	<0.72	**1.1**	<0.73
PFR4	4/15/2004	1-1.5		<0.0041	12	<0.786	4.8		<0.394	<0.394	5.6	0.062	<0.394	<2.4		<0.0041	<0.37	19.4	<3.7	<0.37	<0.786	<0.73	**2**
PFR6	4/15/2004	0-0.5		<0.0039	<0.0367	<0.0367	0.045		<0.0018	<0.0018	<3.4	<0.0039	<0.0018	<1.7		<0.0039	<0.36	27.7	<3.6	**2P**	<0.0037	<0.72	<0.72
PFR7	4/15/2004	0-0.5		<0.0038	<0.0041	<0.0412	0.044		<0.0021	<0.0021	<3.6	<0.0038	<0.0021	<1.8		<0.0038	<0.41	47.6	<4.1	<0.41	<0.0041	**3.8**	<0.81
PFR7	4/15/2004	1-1.5		<0.004	0.028	0.0097	0.074		<0.002	<0.002	5.4	<0.004	<0.002	<1.7		<0.004	<0.04	6.9	<0.4	<0.04	<0.004	8.00E-02	<8.0E-02
SS-1	7/21/2003	0	<0.0055	<0.0055	2.2	<1.1	8.9	<5.6	<1.1	<1.1	<8	<0.0055	<1.1	<0.5	<50	<0.0055	<5	200			<1.1		
SS-1-060630	6/30/2006	0	<0.023	<0.012	1.5	0.89P	<0.031	<0.47	<0.016	<0.06	20	<7.3E-03	<0.054	<1.1	<0.34	<0.0059		85B	<0.033		<0.04	<0.05	
SS-3	7/21/2003	0	<0.0092	<0.0092	<1.3	<3	1.4	<6.3	<1.3	<1.3	<8	0.015	<1.3	<0.5	<50	<0.0092	9.7TIE	470			<1.3		
SS-GOLD-D	8/29/1996	1.25-1.75			**190E**	**31E,J**	**660E**		**14E,J**	**3.3E,J**	<7.6		<7.1								**21E,J**		

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			160	170.000015	79	140	61.000004	8.400001	0.012	60	4.5	0.082	ND	ND	ND	16	ND	ND	ND	ND	5600.00049
Maximum Post-Remedial Action			0.001	0.0062	0.0042	ND	ND	0.0015	ND	ND	0.00902	ND	ND	ND	ND	0.0027	ND	ND	ND	ND	0.44000003
B105	10/19/2000	0										<0.013	<0.013	<0.013			<0.013				
B105	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001				<0.33			<0.33		<0.001	<0.4
B22	11/2/1998	0								<0.00166											<0.1665
B23	11/2/1998	0								<0.00166											<0.1665
B24	11/2/1998	0								<0.00166											<0.1665
B25	11/2/1998	0								<0.00166											<0.1665
B45	6/28/2000	0								<0.0017											<0.17
B45	1/20/1999	0								<3.33											<333
B45	1/20/1999	1								<3.33											<333
B47	1/20/1999	0								<0.0333											<3.33
B47	1/20/1999	1								<0.00166											<0.1665
B49	1/20/1999	0								<0.0333											<3.33
B49	1/20/1999	1								<0.1665											<16.65
B59	1/19/1999	0								<0.00166											<0.1665
B61	1/19/1999	0								<0.00166											<0.1665
B61	1/19/1999	1								<0.00166											<0.1665
B63	2/5/1999	0								<0.00166											<0.1665
B63	2/5/1999	1								<0.00166											<0.1665
B92	10/18/2000	0	<0.0019	<0.0037	<0.0037	<0.0037	<0.0037	<0.001	<0.0019	<0.0019	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.19
B93	10/18/2000	0	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.001	<0.0019	<0.0019	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.038
B94	10/18/2000	0	<0.0019	<0.0037	<0.0037	<0.0037	<0.0037	<0.001	<0.0019	<0.0019	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.19
B95	10/18/2000	0	<0.01	<0.02	<0.02	<0.02	<0.02	<0.001	<0.01	<0.01	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<1
BHS-29	6/30/2006	0-2	2.8	2.8P	<0.21	<0.18	<0.37	0.04488	<0.079	0.13P	0.00625J					0.1848				<0.0012	**30P**
BHS-30	6/30/2006	0-2	0.001J	0.00057J P	0.0025J P	<0.00035	<7.2E-04	0.0015J	<0.00016	<0.00035	<0.0015					0.0027J				<0.0013	<0.013
DB-10	8/22/2013	2	<0.0019	<0.019	<0.019					<0.0019											<0.19
DB-11	8/21/2013	2	<0.0019	<0.0037	<0.0037					<0.0019											<0.19
DB-12	8/21/2013	2	<0.0019	<0.0038	<0.0038					<0.0019											<0.19
DB-13	8/20/2013	2	0.019	0.014	0.0063					<0.0019											0.53
DB-14	8/21/2013	2	<0.0019	<0.0037	<0.0037					<0.0019											<0.19
DB-3	11/27/2012	0.5	<0.002	<0.004	<0.004	<0.004	<0.004	<0.0034	<0.002	<0.002	<0.0034	<0.0166	<0.0332	<0.0166		<0.0034	<0.0332			<0.0034	<0.2
DB-4	11/28/2012	0.5	<0.023	<0.047	<0.047	<0.047	<0.047	2.7	<0.023	<0.023	0.21J	<0.0166	<0.0332	<0.0166		5	<0.0332			<0.21	2.6
DB-5	11/29/2012	0.5	<2.3	<4.7	<4.7	<4.7	<4.7	<0.0045	<2.3	<2.3	<0.0045	<0.0166	<0.0332	<0.0166		<0.0045	<0.0332			<0.0045	<230
DB-8	8/21/2013	2	<0.0019	<0.0037	<0.0037					<0.0019											<0.19
DB-9	8/22/2013	2	<0.0021	0.0062	0.0042					<0.0021											0.44
DC-RS3	6/28/2000	2								<0.0017											<0.17
GP05-2004	6/3/2004	0	0.0065	0.0044	<3.85E-03	<3.85E-03	<3.85E-03	<0.21	<3.85E-03	<1.93E-03	4.5	0.082	<0.02	<7.7E-02		3.6	<0.038			<0.21	<0.19
HA-1	3/7/1995	0-0.5								<0.01											<0.4
PFR3	4/15/2004	0-0.5	5.9	<0.86	<0.86	<0.86	<0.86	<0.0048	<0.86	**1.6**	<0.0048	<0.4	<0.21	<0.8		<0.0048	<0.4		<3.7	<0.0048	**220**
PFR4	4/15/2004	0-0.5	2.3	<0.72	<0.72	<0.72	<0.72		<0.72	<0.362		<0.37	<0.19	<0.73			<0.37		<5.2		<36.2
PFR4	4/15/2004	1-1.5	2.7	<0.786	<0.786	<0.786	<0.786	8.4	<0.786	<0.394	0.13	<0.37	<0.19	<0.73		16	<0.37		<4.8	<0.0041	**80**
PFR6	4/15/2004	0-0.5	1.6	<0.0037	<0.0037	<0.0037	<0.0037	<0.0039	0.012	<0.0018	<0.0039	<0.36	<0.18	<0.72		<0.0039	<0.36		<3.4	<0.0039	0.44
PFR7	4/15/2004	0-0.5	0.55	0.36	<0.0412	<0.0041	<0.0041	<0.0038	0.0062	<0.0021	<0.0038	<0.41	<0.21	<0.81		<0.0038	<0.41		<3.6	<0.0038	<0.207
PFR7	4/15/2004	1-1.5	0.022	0.015	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.004	<0.04	<0.02	<8.0E-02		<0.004	<0.04		<3.3	<0.004	<0.202
SS-1	7/21/2003	0	**70D1**	**55D2**	**9.4**	<2.7	<1.1	<0.0055	<1	<1.1	<0.0055				<1.1	<0.0055		<5.6	<19	<0.0055	<130
SS-1-060630	6/30/2006	0	<0.018	<0.031	<0.042	<0.037	<0.074	<0.0074	<0.016	<0.037	9.02E-03J	<0.034	<0.057		<2	<0.012	<0.039	<0.056	<4.6	<0.0072	<1.4
SS-3	7/21/2003	0	20D	**38D**	**67D**	<6.3	<1.3	<0.0092	<1	<1.3	<0.0092				<1.3	<0.0092		<6.3	<19	<0.0092	<130
SS-GOLD-D	8/29/1996	1.25-1.75	**160E**	**170E**	**79E**	**140E**	**61E,J**		<3	**60E**											**5600**

EPS

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			ND	ND	140	17	220	ND	7.6	2.2	4.17	ND	3.1	ND	420.00003	ND	ND	4.7	ND	ND	25	ND	3.4
Maximum Post-Remedial Action			ND	ND	27.2	2.2	8.3	ND	ND	ND	4.17	ND	ND	ND	7.0599999	ND	ND	4.7	ND	ND	ND	ND	ND
B22	11/2/1998	5			0.0053	<0.00333	<0.00333				<1				0.022								
B23	11/2/1998	5			**27.2**	2.2	8.3				3.06				7.06								
B24	11/2/1998	5			<0.00333	<0.00333	0.011				4.17				0.01								
B25	11/2/1998	5			<0.00333	<0.00333	<0.00333				3.04				<0.00166								
B5	9/28/1998	5			<0.01	<0.01	<0.02				2				<0.1								
B59	1/19/1999	3			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B7	9/29/1998	5			<0.01	<0.01	<0.02				1.8				<0.1								
B92	10/18/2000	5	<0.001	<0.001	<0.0046	<0.0046	<0.0046	<0.33	<0.0024	<0.0024	2.4	<0.001	<0.0024		0.56	<0.001	<0.013	3.4	<0.013	<0.013	<0.0046	<0.013	<0.013
B93	10/18/2000	5	<0.001	<0.001	<0.0038	<0.0038	<0.0038	<0.33	<0.002	<0.002	0.86	<0.001	<0.002		<0.2	<0.001	<0.013	2.5	<0.013	<0.013	<0.0038	<0.013	<0.013
B94	10/18/2000	5	<0.001	<0.001	<0.004	<0.004	<0.004	<0.33	<0.0021	<0.0021	0.7	<0.001	<0.0021		<0.21	<0.001	<0.013	2.3	<0.013	<0.013	<0.004	<0.013	<0.013
B95	10/18/2000	5	<0.001	<0.001	<0.0039	<0.0039	<0.0039	<0.33	<0.002	<0.002	3	<0.001	<0.002		<0.2	<0.001	<0.013	4.7	<0.013	<0.013	<0.0039	<0.013	<0.013
BHS-29	6/30/2006	3-5	<0.22	<0.12	15	3.1PJ	**39**		0.58P	<0.59		<0.071	0.3P		**60**	<0.057					<0.4		
BHS-30	6/30/2006	3-5	<0.0025	<0.0013	<0.00035	<0.00035	9.4E-04J		<0.00016	<0.00061		<7.9E-04	<5.5E-04		<0.0035	<0.00064					<0.00041		
DB-2	12/1/2012	5			0.16	<0.019																	
DB-3	11/27/2012	5		<0.0034	<4.3E-03	<4.3E-03	<4.3E-03		<0.0021	<0.0021		<0.0034	<0.0021			<0.0034					<4.3E-03		
DB-4	11/28/2012	5		<0.2	**52**	<4.3	**150**		<2.1	<2.1		<0.2	<2.1			<0.2					<4.3		
DB-5	11/29/2012	5		<0.004	0.017	<0.0042	0.01		<0.0021	<0.0021		<0.004	<0.0021			<0.004					<0.0042		
DC-RS2	6/28/2000	4						<0.33				<0.0046				<0.0046							
DC-RS3	6/28/2000	4			<0.0033	<0.0033	<0.0033				<4.7	<0.0046			<0.033	<0.0046							
DC-RS4	6/28/2000	4			0.023	0.11	0.031				<5				<0.033								
GP05-2004	6/3/2004	5		<208	13	<3.9	11		<1.96	<1.96		<208	<1.96			<208	<0.038		<0.38	<0.038	<3.9	<0.075	**3.4**
HA-4	3/7/1995	3.5-4			**20**	<5	7.7						<2.5		**140**								
HA-5	3/7/1995	3.5-4			12	<5	<5						<2.5		**88**								
HA-6	3/7/1995	3.5-4			<10	<10	**64**						<5		**260**								
HA-7	3/7/1995	3.5-4			**140U**	<10	**190**						<5		**420**								
HA-8	3/7/1995	3.5-4			9.1	<5	16						<2.5		**50**								
SS-GOLD-B	8/29/1996	2.42-2.92			**45E**	<0.27	7.1E		<0.31	<0.12	<8.3		**3.1E**								**1.4J,E**		
SS-GOLD-C	8/29/1996	2.67-3			**85**	**17E**	**220E**		**7.6E**	**2.2E,J**	<8.2		<1.4								**25E**		

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Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			91	92	34	62	31	1000	0.61	7.8	0.38	0.32	ND	ND	ND	1800	ND	ND	ND	ND	3100
Maximum Post-Remedial Action			ND	ND	ND	ND	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.86000001
B22	11/2/1998	5								<0.00166											<0.8325
B23	11/2/1998	5								<0.00166											<0.1665
B24	11/2/1998	5								<0.00166											<0.8325
B25	11/2/1998	5								<0.00166											<0.1665
B5	9/28/1998	5								<0.01											<0.5
B59	1/19/1999	3								<0.00166											<0.1665
B7	9/29/1998	5								<0.01											<0.5
B92	10/18/2000	5	<0.0024	<0.0046	<0.0046	<0.0046	0.014	<0.001	<0.0024	<0.0024	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	0.86
B93	10/18/2000	5	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	<0.001	<0.002	<0.002	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.2
B94	10/18/2000	5	<0.0021	<0.004	<0.004	<0.004	<0.004	<0.001	<0.0021	<0.0021	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.21
B95	10/18/2000	5	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.001	<0.002	<0.002	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.2
BHS-29	6/30/2006	3-5	8	6	0.74P	<0.36	<0.74	6.3	<0.16	0.61J	<0.082					9.1				<0.071	**39.5**
BHS-30	6/30/2006	3-5	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.0008	<0.00016	<0.00038	<9.2E-04					<0.0013				<7.9E-04	<0.014
DB-2	12/1/2012	5																			
DB-3	11/27/2012	5	<0.0021	<4.3E-03	<4.3E-03	<4.3E-03	<4.3E-03	<0.0034	<0.0021	<0.0021	<0.0034					<0.0034				<0.0034	<0.21
DB-4	11/28/2012	5	**36**	<4.3	<4.3	<4.3	<4.3	3.2	<2.1	**7.5**	0.38					8.1				<0.2	<1100
DB-5	11/29/2012	5	<0.0021	<0.0042	<0.0042	<0.0042	<0.0042	0.091	<0.0021	<0.0021	<0.004					0.18E				<0.004	<0.21
DC-RS2	6/28/2000	4						0.11							<0.33			<1.7		<0.0046	
DC-RS3	6/28/2000	4						0.0084		<0.0017										<0.0046	0.41
DC-RS4	6/28/2000	4								<0.0017											<0.17
GP05-2004	6/3/2004	5	2.7	<3.9	<3.9	<3.9	<3.9	**1000**	<3.9	<1.96	<208	0.32P	<0.019	<0.075		**1800**	<0.038			<208	**260**
HA-4	3/7/1995	3.5-4								<2.5											<100
HA-5	3/7/1995	3.5-4								<2.5											<100
HA-6	3/7/1995	3.5-4								**7.8**											<200
HA-7	3/7/1995	3.5-4								**7.8**											<200
HA-8	3/7/1995	3.5-4								<2.5											**520**
SS-GOLD-B	8/29/1996	2.42-2.92	5E	4E	<1.7	7.2E	<0.5		0.61J,E	<0.27											**280**
SS-GOLD-C	8/29/1996	2.67-3	**91E**	**92E**	**34E**	**62E**	**31E**		<0.6	<1											**3100**

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft																							
Maximum Pre-Remedial Action			ND	ND	15	2.9	100	ND	ND	ND	11	ND	ND	ND	640	ND	ND	5.9	ND	ND	ND	ND	0.097
Maximum Post-Remedial Action			ND	ND	9.9	0.29	59.94	ND	ND	ND	11	ND	ND	ND	34	ND	ND	5.9	ND	ND	ND	ND	0.097
B10	9/29/1998	10			0.84	0.18	6.5				11				8.2								
B11	9/30/1998	14			1.5	<1	18				<1				**34**								
B22	11/2/1998	8			<0.00333	<0.00333	<0.00333				3.81				0.007								
B23	11/2/1998	8			<13.32	<13.32	**60**				<0.95				**10.74**								
B24	11/2/1998	8			<0.00333	<0.00333	<0.00333				4.74				<0.00166								
B5	9/28/1998	10			<0.01	<0.01	<0.02				3.3				<0.1								
B5	9/28/1998	15			<0.01	<0.01	<0.02				<1				<0.1								
B7	9/29/1998	10			<0.01	<0.01	<0.02				<1				<0.1								
B7	9/29/1998	15			<0.01	<0.01	<0.02				<1				<0.1								
B9	9/29/1998	10			11	2.9	**55**				<1				**88**								
B9	9/29/1998	15			<0.01	<0.01	**37**				<1				<0.1								
B92	10/18/2000	10	<1	<1	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<1	<0.02		<0.2	<1	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	**0.097**
B92	10/19/2000	15	<0.005	<0.005	<0.02	<0.02	0.16	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.016	<0.5	<0.016	<0.016	<0.02	<0.016	<0.016
BHS-29	6/30/2006	8-10	<0.15	<8.0E-02	0.39	0.1P	1.4		<0.0033	<0.012		<0.049	<0.011		1.4	<0.039					<0.0084		
BHS-29	6/30/2006	13-15	<2.5	<1.3	<0.07	0.19JP	6.1		<0.033	<0.12		<0.78	<0.11		6.1	<0.63					<0.081		
BHS-30	6/30/2006	8-10	<0.0021	<0.0011	<0.00036	0.00095J P	0.0038		<0.00017	<0.00062		5.600001E-(	<0.00056		<0.0036	<0.00053					<0.00042		
DB-1	11/30/2012	10																					<0.0333
DB-10	8/22/2013	6			1.2		0.48								4.8								
DB-10	8/22/2013	10			0.039		0.019								0.19								
DB-11	8/21/2013	6			3.1		8								**19**								
DB-11	8/21/2013	10			0.011		0.008								0.087								
DB-12	8/21/2013	6			<0.0039		<0.0039								<0.039								
DB-12	8/21/2013	10			<0.004		<0.004								<0.04								
DB-13	8/20/2013	6			<0.0039		<0.0039								<0.039								
DB-13	8/20/2013	10			<0.004		<0.004								<0.04								
DB-14	8/21/2013	6			<0.004		<0.004								<0.04								
DB-14	8/21/2013	10			<0.0041		<0.0041								<0.041								
DB-2	12/1/2012	10		<0.0028	0.0097		4.30E-03								0.039J								
DB-3	11/27/2012	10			<0.0039	<0.0039	<0.0039								<0.039								
DB-3	11/27/2012	15																					
DB-4	11/28/2012	10			15	<4.1	**100**								**84**								
DB-5	11/29/2012	10			0.017	<0.004	0.024		<0.002	<0.002			<0.002								<0.004		
DB-8	8/21/2013	6			<0.0038		<0.0038								<0.038								
DB-8	8/21/2013	10			0.059		0.4								0.71								
DB-9	8/22/2013	6			9.9		4.3								**17**								
DB-9	8/22/2013	10			<0.39		3.3								5.6								
DC-RS1	6/28/2000	7			0.027	0.048	<0.0033				7.93				<0.033								
DC-RS2	6/28/2000	7			<0.0033	<0.0033	**78**				<4.59				**640**								
GP05-2004	6/3/2004	10		<2.39	0.27	<8.2E-02	0.72		<4.1E-02	<4.1E-02		<2.39	<4.1E-02			<2.39	<0.033		<0.33	<0.033	<8.2E-02	<0.066	<0.066
S-13	9/23/2005	14-16	<0.0022	<0.0011	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	2.1	<0.0007	<5.5E-04	<0.23	<0.0035	<0.00057		3.8	<0.0058		<0.00041	<8.8E-03	
S-14	9/23/2005	14-16	<5.2	<2.7	0.95	0.29J P	4.7	<0.24	<0.016	<0.059	0.72J	<1.7	<0.053	<0.23	<0.34	<1.3		2.9	<0.012		<0.04	<0.018	
S-15	9/23/2005	14-16	<0.0023	<0.0012	<0.00035	<0.00035	<0.00032	<0.25	<0.00017	<0.00061	2.8	<0.00075	<5.5E-04	<0.24	<0.0035	<0.0006		5.9	<0.0058		<0.00041	<8.8E-03	

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft																					
Maximum Pre-Remedial Action			2.9	0.97000003	0.47	0.52	ND	110	ND	1.998	71	0.35	0.54	ND	ND	120	0.36	ND	ND	ND	1100
Maximum Post-Remedial Action			2.9	0.97000003	0.47	0.52	ND	110	ND	1.998	71	0.35	0.54	ND	ND	120	0.36	ND	ND	ND	306
B10	9/29/1998	10								<0.1											**22**
B11	9/30/1998	14								<1											**79**
B22	11/2/1998	8								<0.00166											<0.1665
B23	11/2/1998	8								**2.0**											**306.4**
B24	11/2/1998	8								<0.00166											<0.1665
B5	9/28/1998	10								<0.01											<0.5
B5	9/28/1998	15								<0.01											<0.5
B7	9/29/1998	10								<0.01											<0.5
B7	9/29/1998	15								<0.01											<0.5
B9	9/29/1998	10								<3											**490**
B9	9/29/1998	15								<0.01											<0.5
B92	10/18/2000	10	0.035	<0.02	<0.02	0.065	<0.02	<1	<0.02	<0.02	**71**	<0.013	<0.013	<0.013	<0.33		0.066	<0.33		<1	<0.4
B92	10/19/2000	15	<0.02	<0.02	<0.02	0.52	<0.02	<0.005	<0.02	<0.02	<0.005	<0.016	<0.016	<0.016	<0.33		0.037	<0.33		<0.005	<0.4
BHS-29	6/30/2006	8-10	0.2	0.17	0.042J	<0.0076	<0.016	4.2	<0.0033	0.017J	0.32					5.7				<0.048	2.4J
BHS-29	6/30/2006	13-15	0.54	0.55J	0.31	<0.074	<0.15	23	<0.033	0.11J	<0.9					**29**				<0.77	**15**
BHS-30	6/30/2006	8-10	9.2E-04J	7.9E-04J	<0.00044	<0.00038	<0.00077	<6.61E-04	<0.00017	<0.00038	<0.00076					<0.0011				<0.00065	<0.014
DB-1	11/30/2012	10									<0.0033										
DB-10	8/22/2013	6	<0.038	<7.6E-02	<7.6E-02					<0.038											7.6
DB-10	8/22/2013	10	0.018	0.015	<0.0039					<0.002											0.46
DB-11	8/21/2013	6	2.9	0.97	<0.4					<0.2											**55**
DB-11	8/21/2013	10	0.0064	0.0057	<0.0042					<0.0021											<0.21
DB-12	8/21/2013	6	<0.002	<0.0039	<0.0039					<0.002											<0.2
DB-12	8/21/2013	10	<0.002	<0.004	<0.004					<0.002											<0.2
DB-13	8/20/2013	6	<0.002	<0.0039	<0.0039					<0.002											<0.2
DB-13	8/20/2013	10	<0.002	<0.004	<0.004					<0.002											<0.2
DB-14	8/21/2013	6	<0.002	<0.004	<0.004					<0.002											<0.2
DB-14	8/21/2013	10	<0.0021	<0.0041	<0.0041					<0.0021											<0.21
DB-2	12/1/2012	10								<0.002						<0.0006					<0.2
DB-3	11/27/2012	10								<0.0019											<0.19
DB-3	11/27/2012	15														<0.0006					<0.21
DB-4	11/28/2012	10								<2.1											**560**
DB-5	11/29/2012	10	0.024	<0.004	<0.004	<0.004	<0.004		<0.002	<0.002											0.25
DB-8	8/21/2013	6	<0.0019	<0.0038	<0.0038					<0.0019											<0.19
DB-8	8/21/2013	10	6.90E-02	0.09	9.20E-02					0.01											**11**
DB-9	8/22/2013	6	2.3	0.68	<0.38					<0.19											**58**
DB-9	8/22/2013	10	0.47	0.49	0.47					0.23											**36**
DC-RS1	6/28/2000	7								<0.0017											<0.17
DC-RS2	6/28/2000	7								<0.0017											**1100**
GP05-2004	6/3/2004	10	0.09	<8.2E-02	<8.2E-02	<8.2E-02	<8.2E-02	52	<8.2E-02	<4.1E-02	3.1	0.17	**0.28**	<0.066		**100**	0.32			<2.4	<4.1
S-13	9/23/2005	14-16	<0.00019	<0.00031	<0.00043	<0.00037	<0.00075	<0.00071	<0.00016	<0.00037	<8.1E-04	<0.006	<0.01		<0.041	<0.0011	<6.8E-03	<0.0011	<0.93	<0.0007	<0.014
S-14	9/23/2005	14-16	0.95	0.56	<0.042	<0.036	<0.074	**110**	<0.016	0.12J	<1.9	0.35	**0.54**		<0.04	**120**	0.36	<0.0011	<0.95	<1.7	**11J**
S-15	9/23/2005	14-16	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00076	<0.00017	<0.00038	<0.00086	<0.006	<0.01		<0.041	<0.0012	<6.8E-03	<0.0012	<0.97	<0.00074	<0.014

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
>15 ft																							
Maximum Pre-Remedial Action			ND	1.2	0.017	0.26	340	1	ND	ND	6.3	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	1.2	0.017	0.26	340	1	ND	ND	6.3	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND
B7	9/29/1998	19			<0.01	<0.01	<0.02				<1				<0.1								
B9	9/29/1998	19			<0.01	<0.01	<0.02				1				<0.1								
DB-1	11/30/2012	20																					
DB-1	11/30/2012	30																					
DB-10	8/22/2013	20		<0.0023	<0.0037		<0.0037								<0.037								
DB-10	8/22/2013	40		<0.0032	<0.0045		<0.0045								<0.045								
DB-10	8/22/2013	52		<0.0028	<0.004		<0.004								<0.04								
DB-13	8/20/2013	20		<0.0031	<0.004		<0.004								<0.04								
DB-13	8/20/2013	40		**0.02**	<0.0038		<0.0038								<0.038								
DB-13	8/20/2013	60		**0.015**	<0.004		<0.004								<0.04								
DB-3	11/27/2012	20																					
DB-3	11/27/2012	35		<0.0031																			
DB-3	11/27/2012	50		<0.0031			<0.0044																
DB-3	11/27/2012	60		<0.0041			<0.0051																
DB-4	11/28/2012	20		<0.16	0.017		6.90E-02																
DB-4	11/28/2012	30		**0.28**																			
DB-4	11/28/2012	50		**0.43**	<0.0045	<0.0045	0.015																
DB-4	11/28/2012	60		**1.2**			**340**																
DB-5	11/29/2012	20		<0.0029	<0.0039		<0.0039																
DB-5	11/29/2012	30		0.0075																			
DB-5	11/29/2012	50				<0.0055	<0.0055																
DB-5	11/29/2012	60		**0.013**			<0.0045																
DB-5	11/29/2012	70		<0.0035			8.6E-03H																
DB-8	8/21/2013	20		<0.0026	<0.0038		<0.0038								<0.038								
DB-8	8/21/2013	40		<0.003	<0.004		<0.004								<0.04								
DB-8	8/21/2013	47		<0.0036	0.011		0.014								<0.045								
DB-9	8/22/2013	20		<0.0031	<0.0041		<0.0041								<0.041								
DB-9	8/22/2013	40		**0.2**	<0.0038		<0.0038								<0.038								
DB-9	8/22/2013	60		**0.096**	<0.0038		<0.0038								<0.038								
S-13	9/23/2005	19-21	<0.12	**0.094J**	0.00069J	<0.00034	0.0024J	<0.24	<0.00016	<0.00059	6.3	<0.037	<0.00054	<0.47	<0.0034	<0.029		10	<0.0058		<0.0004	<8.8E-03		
S-13	9/23/2005	22-24	<0.13	**0.11J**	<0.00036	<0.00036	0.00048J	1J	<0.00017	<0.00062	5.6	<0.042	<0.00056	<0.48	<0.0036	<0.034		11	<0.0058		<0.00042	<8.8E-03		
S-13	9/23/2005	26-28	<0.097	**6.5E-02J**	<0.0035	0.26P	0.62	<0.25	<0.0017	<0.0061	<0.69	<0.031	<0.0055	<0.23	<0.035	<0.025		5.1	<6.8E-03		<0.0041	<0.01		
S-14	9/23/2005	19-21	<0.0023	**0.013**	0.0014J	<0.00035	0.0011J	<0.25	<0.00016	<0.00061	2.7	<0.00073	<5.5E-04	<0.23	<0.0035	<0.00059		6.3	<0.0058		<0.00041	<8.8E-03		
S-14	9/23/2005	24-26	<0.1	<0.053	<0.00037	<0.00037	<0.00033	<0.26	<0.00017	<0.00063	1.3	<0.032	<0.00057	<0.25	<0.0037	<0.026		6.9	<0.0058		<0.00043	<8.8E-03		
S-15	9/23/2005	19-21	<0.0024	<0.0012	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	1.1J	<0.00075	<0.00054	<0.24	<0.0035	<0.0006		3.5	<0.0058		<0.0004	<8.8E-03		
S-15	9/23/2005	24-26	<0.0025	<0.0013	<0.00034	<0.00034	<0.0003	<0.24	<0.00016	<0.00059	<0.74	<7.9E-04	<0.00053	<0.24	<0.0034	<0.00064		2.3	<0.0058		<0.00039	<8.8E-03		

EPS

Table 4A Soil Data for Area-Averaging - CSX Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
>15 ft																					
Maximum Pre-Remedial Action			0.11000001	0.13000001	ND	ND	ND	4	ND	0.016	ND	0.25	ND	ND	ND	4	0.044	ND	ND	ND	2.30000019
Maximum Post-Remedial Action			0.11000001	0.13000001	ND	ND	ND	4	ND	0.016	ND	0.25	ND	ND	ND	4	0.044	ND	ND	ND	2.30000019
B7	9/29/1998	19								<0.01											<0.5
B9	9/29/1998	19								<0.01											<0.5
DB-1	11/30/2012	20														<0.0005					
DB-1	11/30/2012	30									<0.0026					<0.0026					
DB-10	8/22/2013	20	<0.0019	<0.0037	<0.0037					<0.0019						2.6					<0.19
DB-10	8/22/2013	40	<0.0022	<0.0045	<0.0045					<0.0022						<0.0032					<0.22
DB-10	8/22/2013	52	<0.002	<0.004	<0.004					<0.002						<0.0028					<0.2
DB-13	8/20/2013	20	<0.002	<0.004	<0.004					<0.002						0.0058					<0.2
DB-13	8/20/2013	40	<0.0019	<0.0038	<0.0038					<0.0019						2.6					<0.19
DB-13	8/20/2013	60	<0.002	<0.004	<0.004					<0.002						0.058					<0.2
DB-3	11/27/2012	20														<0.0006					<0.19
DB-3	11/27/2012	35																			
DB-3	11/27/2012	50																			<0.22
DB-3	11/27/2012	60																			
DB-4	11/28/2012	20											<0.0331								
DB-4	11/28/2012	30																			
DB-4	11/28/2012	50																			<0.23
DB-4	11/28/2012	60																			
DB-5	11/29/2012	20																			
DB-5	11/29/2012	30																			
DB-5	11/29/2012	50																			<0.27
DB-5	11/29/2012	60																			
DB-5	11/29/2012	70																			
DB-8	8/21/2013	20	<0.0019	<0.0038	<0.0038					<0.0019						<0.0026					<0.19
DB-8	8/21/2013	40	<0.002	<0.004	<0.004					<0.002						<0.003					<0.2
DB-8	8/21/2013	47	<0.0023	<0.0045	<0.0045					<0.0023						<0.0036					<0.23
DB-9	8/22/2013	20	<0.002	<0.0041	<0.0041					<0.002						4					<0.2
DB-9	8/22/2013	40	<0.0019	<0.0038	<0.0038					<0.0019						2.8					<0.19
DB-9	8/22/2013	60	<0.0019	<0.0038	<0.0038					<0.0019						1.3					<0.19
S-13	9/23/2005	19-21	<0.00018	<0.00031	<0.00042	<0.00037	<0.00074	2.7	<0.00016	<0.00037	<0.042	<0.006	<0.01		<0.04	2.9	<6.8E-03	<0.0011	<0.97	<0.036	<0.014
S-13	9/23/2005	22-24	<0.00019	<0.00032	<0.00044	<0.00038	<0.00078	4	<0.00017	<0.00038	<0.048	<0.006	<0.01		<0.042	4	0.01J	<0.0012	<0.98	<0.042	<0.014
S-13	9/23/2005	26-28	0.11P	0.13	<0.0044	<0.0038	<0.0077	0.29	<0.0017	0.016J	<0.035	0.25	<0.012		<0.041	0.87	0.044	<0.0012	<0.93	<0.03	2.3
S-14	9/23/2005	19-21	<0.00019	0.00058J P	<0.00044	<0.00038	<0.00076	<0.00074	<0.00016	<0.00038	<0.00084	<0.006	<0.01		<0.041	0.019	<6.8E-03	<0.0012	<0.93	<0.00073	<0.014
S-14	9/23/2005	24-26	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	0.25	<0.00017	<0.00039	<0.037	<0.006	<0.01		<0.043	0.77	<6.8E-03	<0.0012	<1	<0.032	<0.015
S-15	9/23/2005	19-21	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	<0.00076	<0.00016	<0.00037	<0.00087	<0.006	<0.01		<0.04	0.0017J	<6.8E-03	<0.0011	<1	<0.00074	<0.014
S-15	9/23/2005	24-26	<0.00018	<0.0003	<0.00042	<0.00036	<0.00073	<0.0008	<0.00016	<0.00036	<9.1E-04	<0.006	<0.01		<0.039	0.0026J	<6.8E-03	<0.0011	<0.99	<7.9E-04	<0.014

To be excavated as part of remedial action plan

Bold: Exceeds residential RRS

Qualifiers:

J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

EPS

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	ND	88.00001	16	340	70	ND	0.87	56	45	0.051	ND	450	61	4	51	ND	ND	ND	1.6	ND
Maximum Post-Remedial Action			ND	ND	88.00001	0.24	340	ND	ND	0.018	56	0.032	0.051	ND	3.5	0.0063	0.047	51	ND	ND	ND	0.57	ND
B100	10/18/2000	0															<0.013		<0.013	<0.013		0.023	<0.013
B100	10/18/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1	<0.005	<0.02		<0.2	<0.005		<0.5			<0.02		
B101	10/19/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B101	10/19/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005		1			<0.02		
B101	10/18/2000	0.5									<4.94			<2.47									
B102	10/19/2000	0															<0.015		<0.015	<0.015		<0.015	<0.015
B102	10/19/2000	0	<1	<1	<2	<2	<2	<0.33	<2	<2	2.8	<1	<2		<20	<1		<0.5			<2		
B103	10/19/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B103	10/19/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	9.9	<0.005	<0.02		<0.2	<0.005		6.2			<0.02		
B106	10/19/2000	0															<0.015		<0.015	<0.015		<0.015	<0.015
B106	10/19/2000	0	<5	<5				<0.33			7.6	<5			**450**	<5		2.1					
B106	10/19/2000	0.5			13	<0.0033	**62**	**70**	<0.0017	<0.0017	<4.65	<0.0024	<0.0017	<2.33		<0.0024					<0.0033		
B17	11/1/1998	0			<0.00333	<0.00333	<0.00333				<1.02				<0.00166								
B18	6/27/2000	1			1.1	0.8	<0.0033				<4.87				2.3								
B27	6/27/2000	0			<0.0033	<0.0033	<0.0033				5.42				<0.033								
B27	11/3/1998	0			<0.0333	<0.0333	<0.0333				12.55				<0.01665								
B28	11/3/1998	0			<0.00333	0.045	0.019				3.63				0.002								
B29	11/3/1998	0			<0.01665	<0.01665	<0.01665				3.21				<0.00832								
B4	6/28/2000	0			**88**	<0.0033	**340**				13.6				<0.033								
B80	2/5/1999	0			<0.00333	<0.00333	<0.00333				2.48				<0.00166								
B81	2/5/1999	0			<0.00333	<0.00333	<0.00333				3.66				<0.00166								
B82	2/5/1999	0			<0.00333	<0.00333	<0.00333				2.53				<0.00166								
B83	2/5/1999	0			<0.00333	<0.00333	<0.00333				3.03				<0.00166								
B86	10/16/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B86	10/16/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.8	<0.005	<0.02		<0.2	<0.005		0.64			<0.02		
B86	2/5/1999	0			<0.00333	<0.00333	0.0101				1.78				<0.00166								
B87	10/16/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B87	10/16/2000	0	<0.005	<0.005	<0.0038	<0.0038	<0.0038	<0.33	<0.0019	<0.0019	1.4	<0.005	<0.0019		<0.0019	<0.005		2.1			<0.0038		
B87	2/5/1999	0			<0.00333	<0.00333	<0.00333				2.48				<0.00166								
B96	10/18/2000	0															<0.013		<0.013	<0.013		0.024	<0.013
B96	10/18/2000	0	<0.005	<0.005	<0.02	0.12	<0.02	<0.33	<0.02	<0.02	0.53	<0.005	<0.02		<0.2	<0.005		1.5			<0.02		
B96	10/18/2000	0.5									<4.94			<2.47									
B97	10/18/2000	0															<0.013		<0.013	<0.013		0.024	<0.013
B97	10/18/2000	0	<0.005	<0.005	<0.02	0.05	0.2	<0.33	<0.02	<0.02	0.28	<0.005	<0.02		<0.2	<0.005		0.85			<0.02		
B97	10/18/2000	0.5									<4.9			<2.45									
B98	10/19/2000	0															<0.013		<0.013	<0.013		0.024	<0.013
B98	10/19/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		3.5	<0.005		1.3			<0.02		
B99	10/19/2000	0															<0.013		<0.013	<0.013		<0.013	<0.013
B99	10/19/2000	0	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.05	<0.02		<0.2	<0.05		<0.5			<0.02		
B99	10/18/2000	0.5									<4.83			<2.42									
GP01-2004	6/3/2004	0			<3.8	<3.8	<3.8		<1.9	<1.9			<1.9				<0.038		<0.38	<0.038	<3.8	0.57	<0.075
GP02-2004	6/3/2004	0			<3.6	<3.6	18		<1.8	<1.8			<1.8				0.047		<0.34	<0.034	<3.6	0.12	<0.068
GP03-2004	6/3/2004	0			4.90E-03	0.056	8.60E-03		<1.8E-03	<1.8E-03			<1.8E-03				<0.036		<0.36	<0.036	<3.5E-03	<0.072	<0.072
GP04-2004	6/1/2004	1.5		<31	**57E**	**16E**	11E		<0.10	**0.87**		**45**	<0.10			**61**	4		<8.5	<0.85	<0.21	<1.7	<1.7
GP06-2004	6/3/2004	0		<2.2	0.23	0.29	0.13		<0.018	<0.018		<2.2	<0.018			<2.2	<0.035		<0.35	<0.035	<3.5E-02	<0.07	<0.07

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			52.0000038	1.60000002	1.7	0.021	ND	170	2.7	18	81.00001	ND	ND	ND	ND	400	0.17	ND	ND	ND	420.000031
Maximum Post-Remedial Action			1.79999995	1.60000002	1.7	0.021	ND	31	0.0043	0.015	3.8	ND	ND	ND	ND	1	0.14	ND	ND	ND	420.000031
B100	10/18/2000	0										<0.013	<0.013	<0.013			<0.013				
B100	10/18/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B101	10/19/2000	0										<0.013	<0.013	<0.013			<0.013				
B101	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	0.035	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B101	10/18/2000	0.5																	<4.94		
B102	10/19/2000	0										<0.015	<0.015	<0.015			0.016				
B102	10/19/2000	0	0.54	<2	**1.7**	<2	<2	31	<2	<2	3.8				<0.33			<0.33		<1	<40
B103	10/19/2000	0										<0.013	<0.013	<0.013			<0.013				
B103	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B106	10/19/2000	0										<0.015	<0.015	<0.015			0.17				
B106	10/19/2000	0						**170**			10				<0.33			<0.33		<5	
B106	10/19/2000	0.5	**52**	<0.0033	<0.0033	<0.0033	<0.0033	41	<0.0033	**18**					<3.3			<17	<4.65	<0.0024	**310**
B17	11/1/1998	0								<0.00166											<0.1665
B18	6/27/2000	1								<0.0017											7.6
B27	6/27/2000	0								<0.0017											<0.17
B27	11/3/1998	0								<0.01665											<1.665
B28	11/3/1998	0								0.015											<0.1665
B29	11/3/1998	0								<0.00832											1.8
B4	6/28/2000	0								<0.0017											**420**
B80	2/5/1999	0								<0.00166											<0.1665
B81	2/5/1999	0								<0.00166											<0.1665
B82	2/5/1999	0								<0.00166											<0.1665
B83	2/5/1999	0								<0.00166											<0.1665
B86	10/16/2000	0										<0.013	<0.013	<0.013			<0.013				
B86	10/16/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B86	2/5/1999	0								<0.00166											<0.1665
B87	10/16/2000	0										<0.013	<0.013	<0.013			<0.013				
B87	10/16/2000	0	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.005	<0.0019	<0.0019	<0.005				<0.33			<0.33		<0.005	<0.19
B87	2/5/1999	0								<0.00166											<0.1665
B96	10/18/2000	0										<0.013	<0.013	<0.013			<0.013				
B96	10/18/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	0.0056	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B96	10/18/2000	0.5																	<4.94		
B97	10/18/2000	0										<0.013	<0.013	<0.013			<0.013				
B97	10/18/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B97	10/18/2000	0.5																	<4.9		
B98	10/19/2000	0										<0.013	<0.013	<0.013			<0.013				
B98	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B99	10/19/2000	0										<0.013	<0.013	<0.013			0.14				
B99	10/19/2000	0	1.8	1.6	<0.02	0.021	<0.02	<0.05	<0.02	<0.02	<0.05				<0.33			<0.33		<0.05	<0.4
B99	10/18/2000	0.5																	<4.83		
GP01-2004	6/3/2004	0	<1.9	<3.8	<3.8	<3.8	<3.8		<3.8	<1.9		<0.038	<0.019	<0.075			<0.038				**120**
GP02-2004	6/3/2004	0	<1.8	<3.6	<3.6	<3.6	<3.6		<3.6	<1.8		<0.034	<0.018	<0.068			<0.034				**110**
GP03-2004	6/3/2004	0	0.0091	0.01	<3.5E-03	<3.5E-03	<3.5E-03		<3.5E-03	<1.8E-03		<0.036	<0.018	<0.072			<0.036				<0.18
GP04-2004	6/1/2004	1.5	<0.10	<0.21	<0.21	<0.21	<0.21	**130**	**2.7**	<0.105	**81**	<0.85	<0.44	<1.7		**400**	<0.85			<31.4	<10.5
GP06-2004	6/3/2004	0	<0.017	0.15NC	<3.5E-02	<3.5E-02	<3.5E-02	7.2	<3.5E-02	<0.018	<2.2	<0.035	<0.018	<0.07		**37**	<0.035			<2.2	3.7

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft continued																							
GP07-2004	6/2/2004	0		<2.4	<3.7E-03	<3.7E-03	0.023		<1.8E-03	<1.8E-03		<2.4	<1.8E-03			<2.4	0.038		<0.37	<0.037	<3.7E-03	<7.3E-02	<7.3E-02
GP08-2004	6/3/2004	0		<3.3E-03								<3.3E-03				0.0063							
GP09-2004	6/2/2004	0		<4.3E-03								0.0048				<4.3E-03							
GP10-2004	6/2/2004	0		<4.4E-03								<4.3E-03				<4.3E-03							
GP14-2004	6/3/2004	0		<2.3	<0.37	<0.37	8.3NC		<0.19	<0.19		<2.3	<0.19			<2.3	<0.18		<1.8	<0.18	<0.37	**1.6**	<0.37
GP15-2004	6/3/2004	0		<4.2E-03	<3.7E-03	0.14	<3.7E-03		<1.9E-03	<1.9E-03		<4.2E-03	<1.9E-03			<4.2E-03	<0.037		<0.37	<0.037	<3.7E-03	0.59	<7.3E-02
GP16-2004	6/3/2004	0		<3.6E-03	<3.6E-03	<3.6E-03	<3.6E-03		<1.8E-03	<1.8E-03		0.032	<1.8E-03			<3.6E-03	<0.037		<0.37	<0.037	<3.6E-03	<0.074	<0.074
GP17-2004	6/2/2004	0			0.17E	0.24E	0.95E		<1.8E-03	0.018			0.051				<0.037		<0.37	<0.037	<3.7E-03	<0.074	<0.074
HA-10	2/14/2012	2									<0.9												
S-22	10/12/2005	0-2	<0.003	<0.0016	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	**56**	<0.00096	<5.5E-04	<0.23	<0.0035	<0.00077		51	<6.8E-03		<0.00041	<0.01	
S-23	10/12/2005	0-2	<0.0024	<0.0013	<0.00034	0.0041	8.8E-04J	<0.24	<0.00016	<0.00059	2.2	<0.00078	<0.00053	<0.22	<0.0034	<0.00062		4.2	<0.0066		<0.0004	<0.01	

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft continued																					
GP07-2004	6/2/2004	0	0.078E	0.041	<3.7E-03	<3.7E-03	<3.7E-03	9.2	<3.7E-03	<1.8E-03	<2.437083	<0.037	<0.019	<7.3E-02		20	<0.037			<2.437083	0.54
GP08-2004	6/3/2004	0						0.15E			0.37E					1E				<3.27E-03	
GP09-2004	6/2/2004	0						<4.28E-03			<4.28E-03					<4.28E-03				<4.28E-03	
GP10-2004	6/2/2004	0						0.12			0.015					0.0045				<4.36E-03	
GP14-2004	6/3/2004	0	<0.19	<0.37	<0.37	<0.37	<0.37	5.8	<0.37	0.43	<2.349229	<0.18	<0.096	<0.37		19	<0.18			<2.349229	**180**
GP15-2004	6/3/2004	0	<1.9E-03	0.005	<3.7E-03	<3.7E-03	<3.7E-03	<4.2E-03	<3.7E-03	<1.9E-03	<4.2E-03	<0.037	<0.019	<7.3E-02		<4.19E-03	<0.037			<4.19E-03	<0.1865324
GP16-2004	6/3/2004	0	<1.8E-03	<3.6E-03	<3.6E-03	<3.6E-03	<3.6E-03	0.028	<3.6E-03	<1.8E-03	<3.6E-03	<0.037	<0.019	<0.074		0.0082	<0.037			<3.67E-03	<0.1812432
GP17-2004	6/2/2004	0	<1.9E-03	<3.7E-03	<3.7E-03	<3.7E-03	<3.7E-03		4.30E-03	<1.9E-03		<0.037	<0.019	<0.074			<0.037				1.1
HA-10	2/14/2012	2																			
S-22	10/12/2005	0-2	<0.00019	<0.00031	<0.00043	<0.00037	<0.00076	<9.7E-04	<0.00016	<0.00037	<0.0011	<0.007	<0.012		<0.041	<0.0016	<7.9E-03	<0.0011	<0.94	<0.00095	<0.014
S-23	10/12/2005	0-2	<0.00018	<0.00031	<0.00042	<0.00036	<0.00074	<0.00078	<0.00016	<0.00036	<0.00089	<6.8E-03	<0.011		<0.04	<0.0013	<0.0077	<0.0011	<0.91	<0.00077	<0.014

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			16	ND	21	2.7	5.5	ND	ND	0.0083	20	0.007	ND	0.43	300	0.0026	ND	17	ND	ND	3.7	0.8	8.6
Maximum Post-Remedial Action			ND	ND	0.91	ND	1.2	ND	ND	0.0083	7.1	0.007	ND	ND	0.44	0.0026	ND	11	ND	ND	ND	0.027	ND
AB-1	9/23/2005	2-4	<0.0024	<0.0012	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	1.8	<0.00075	<0.00054	<0.24	<0.0035	<0.0006		4.3	<0.0058		<0.0004	<8.8E-03	
AB-2	9/23/2005	2-4	<4.5	<2.3	<0.033	2.7P	<0.03	<0.23	<0.016	<0.058	8.6	<1.4	<0.052	0.43J	<0.33	<1.1		17	<0.0058		**3.7P**	<8.8E-03	
AB-3	9/23/2005	2-4	<0.0023	<0.0012	<0.00034	<0.00034	<0.00031	<0.24	<0.00016	<0.0006	1.3	<0.00074	<0.00054	<0.24	<0.0034	0.0026J		3.5	<0.0067		<0.0004	<0.01	
B100	10/18/2000	5	<0.1	<0.1	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.1	<0.02		<0.2	<0.1	<0.013	<0.5	<0.013	<0.013	<0.02	0.025	<0.013
B101	10/19/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B102	10/19/2000	5	<0.1	<0.1	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.1	<0.02		<0.2	<0.1	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B103	10/19/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B106	10/19/2000	5	**16**	<5	<10	<10	<10	<3.3	<10	<10	20	<5	<10		**300**	<5	<7.5	1	<7.5	<7.5	<10	<7.5	<7.5
B16	11/1/1998	5			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B17	11/1/1998	5			<0.00333	<0.00333	<0.00333				2.14				<0.00166								
B19	11/2/1998	5			0.0037	0.03	<0.00333				<1				<0.00166								
B26	11/3/1998	5			<0.00333	<0.00333	<0.00333				4.44				0.004								
B29	11/3/1998	5			<0.00333	<0.00333	<0.00333				5.02				<0.00166								
B3	9/28/1998	5			<0.01	<0.01	<0.02				<1				<0.1								
B4	6/28/2000	4			0.015	<0.0033	0.051				<4.99				<0.033								
B4	9/28/1998	5			0.012	<0.01	0.08				<1				<0.1								
B80	2/5/1999	5			<0.00333	<0.00333	<0.00333	<0.33			7.1				<0.00166								
B81	2/5/1999	5			<0.00333	<0.00333	<0.00333	<0.33			2.98				<0.00166								
B82	10/4/2000	5						<0.33															
B83	10/4/2000	5						<0.33															
B86	10/16/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B87	10/16/2000	5	<0.005	<0.005	<0.0042	<0.0042	<0.0042	<0.33	<0.002	<0.002	1.4	<0.005	<0.002		<0.2	<0.005	<0.013	11	<0.013	<0.013	<0.0038	<0.013	<0.013
B96	10/18/2000	5	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.4	<0.05	<0.02		<0.2	<0.05	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B97	10/18/2000	5	<0.005	<0.005	<0.02	<0.02	1.2	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	1.1	<0.013	<0.013	<0.02	0.027	<0.013
B98	10/19/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		0.44	<0.005	<0.013	0.56	<0.013	<0.013	<0.02	<0.013	<0.013
B99	10/19/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.26	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	0.023	<0.013
GP01-2004	6/3/2004	5			0.91E	<3.97E-03	0.53E		<1.99E-03	<1.99E-03			<1.99E-03				<0.04		<0.4	<0.04	<3.97E-03	<8.0E-02	<8.0E-02
GP02-2004	6/3/2004	5			<3.7E-03	<3.7E-03	0.0065NC		<1.9E-03	<1.9E-03			<1.9E-03				<0.037		<0.37	<0.037	<3.7E-03	<7.3E-02	<7.3E-02
GP03-2004	6/3/2004	5			0.0041	<3.9E-03	0.031		<1.9E-03	<1.9E-03			<1.9E-03				<0.038		<0.38	<0.038	<3.9E-03	<7.71E-02	<7.71E-02
GP04-2004	6/3/2004	5		<19.9	**21**	<3.9	5.5		<1.97	<1.97		<19.9	<1.97			<19.9	<0.37		<3.7	<0.37	<3.9	<0.74	**1.1**
GP06-2004	6/3/2004	5		<24	<0.41	<0.41	2.7NC		<0.20	<0.20		<24	<0.20			<24	<0.04		<0.4	<0.04	<0.41	<8.0E-02	**8.6**
GP07-2004	6/2/2004	5		<2.7	<3.8	<3.8	0.075		<1.9E-03	8.30E-03		<2.7	<1.9E-03			<2.7	<0.038		<0.38	<0.038	<3.8E-03	<7.7E-02	<7.7E-02
GP08-2004	6/3/2004	5		<0.19								<0.19				<0.19							
GP09-2004	6/2/2004	5		<4.8E-03								<4.8E-03				<4.8E-03							
GP10-2004	6/2/2004	5		<4.1E-03								<4.1E-03				<4.1E-03							
GP14-2004	6/3/2004	5		<1.9	<0.39	0.42NC	0.95		<0.19	<0.19		<1.9	<0.19			<1.924628	<0.038		<0.38	<0.038	<0.39	**0.8**	<0.075
GP15-2004	6/3/2004	5		<0.19	<3.7E-03	<3.7E-03	<3.7E-03		<1.8E-03	<1.8E-03		<0.19	<1.8E-03			<0.1934416	<0.04		<0.4	<0.04	<3.7E-03	<8.0E-02	<8.0E-02
GP16-2004	6/3/2004	5		<4.4E-03	<3.9E-03	<3.86E-03	<3.86E-03		<1.9E-03	<1.9E-03		0.007	<1.9E-03			<4.4E-03	<0.039		<0.39	<0.039	<3.86E-03	<0.078	<0.078
GP17-2004	6/2/2004	5			<0.0038	<0.0038	0.014		<1.9E-03	<1.9E-03			<1.9E-03				<0.038		<0.38	<0.038	<0.0038	<7.7E-02	<7.7E-02
S-22	10/12/2005	4-6	<0.0023	<0.0012	<0.00034	<0.00034	<0.00031	<0.24	<0.00016	<0.0006	1.9	<7.2E-04	<0.00054	<0.23	<0.0034	<0.00058		3	<0.0067		<0.0004	<0.01	
S-23	10/12/2005	4-6	<0.0024	<0.0012	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	2.8	<0.00076	<5.5E-04	<0.24	<0.0035	<0.00061		5	<0.0067		<0.00041	<0.01	

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			11.000001	1.80000007	ND	ND	ND	1500	ND	0.76	96	67	24	ND	4.4	650.0001	12	98	ND	ND	110.000008
Maximum Post-Remedial Action			0.06	0.03	ND	ND	ND	0.56	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	2.60000014
AB-1	9/23/2005	2-4	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	0.0016J	<0.00016	<0.00037	<0.00087	<0.006	<0.01		<0.04	0.0031J	<6.8E-03	<0.0011	<0.98	<0.00074	<0.014
AB-2	9/23/2005	2-4	<0.018	1.8P	<0.041	<0.036	<0.072	35D	<0.016	**0.76**	12D	<0.006	<0.01		<0.039	**220D**	<6.8E-03	<0.0011	<0.93	<1.4	<1.3
AB-3	9/23/2005	2-4	<0.00018	<0.00031	<0.00042	<0.00037	<0.00075	<0.00075	<0.00016	<0.00037	<8.5E-04	<0.0069	<0.011		<0.04	<0.0012	<7.8E-03	<0.0011	<0.97	<0.00073	<0.014
B100	10/18/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	0.17	<0.02	<0.02	<0.1	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.1	<0.4
B101	10/19/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B102	10/19/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	0.56	<0.02	<0.02	<0.1	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.1	<0.4
B103	10/19/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B106	10/19/2000	5	<10	<10	<10	<10	<10	**1500**	<10	<10	**96**	**67**	**24**	<7.5	**4.4**		<7.5	**98**		<5	<200
B16	11/1/1998	5								<0.00166											<0.1665
B17	11/1/1998	5								<0.00166											<0.1665
B19	11/2/1998	5								<0.00166											<0.1665
B26	11/3/1998	5								<0.00166											<0.1665
B29	11/3/1998	5								<0.00166											<0.1665
B3	9/28/1998	5								<0.01											<0.5
B4	6/28/2000	4								<0.0017											<0.17
B4	9/28/1998	5								<0.01											<0.5
B80	2/5/1999	5								<0.00166					<0.33			<0.33			<0.1665
B81	2/5/1999	5								<0.00166					<0.33			<0.33			<0.1665
B82	10/4/2000	5													<0.33			<0.33			
B83	10/4/2000	5													<0.33			<0.33			
B86	10/16/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B87	10/16/2000	5	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	<0.005	<0.002	<0.002	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.2
B96	10/18/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	0.55	<0.02	<0.02	<0.05	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.05	<0.4
B97	10/18/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B98	10/19/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B99	10/19/2000	5	0.06	0.03	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
GP01-2004	6/3/2004	5	<1.99E-03	<3.97E-03	<3.97E-03	<3.97E-03	<3.97E-03		<3.97E-03	<1.99E-03		<0.04	<0.021	<8.0E-02			<0.04				<0.1989524
GP02-2004	6/3/2004	5	0.0031	<3.7E-03	<3.7E-03	<3.7E-03	<3.7E-03		<3.7E-03	<1.87E-03		<0.037	<0.019	<7.3E-02			<0.037				<0.1869687
GP03-2004	6/3/2004	5	<1.9E-03	<3.9E-03	<3.9E-03	<3.9E-03	<3.9E-03		<3.9E-03	<1.94E-03		<0.038	<0.02	<7.7E-02			<0.038				<0.1940499
GP04-2004	6/3/2004	5	11	<3.9	<3.9	<3.9	<3.9	<19.9	<3.9	<1.97	<19.9	1P	**0.97**	<0.74		**180**	12			<19.93747	**110**
GP06-2004	6/3/2004	5	<0.20	1.7	<0.41	<0.41	<0.41	**82**	<0.41	0.33	<24.3	<0.04	<0.021	<8.0E-02		**650**	<0.04			<24.28552	**63**
GP07-2004	6/2/2004	5	0.054	<3.8E-03	<3.8E-03	<3.8E-03	<3.8E-03	<2.7	<3.8E-03	<1.89E-03	<2.73	<0.038	<0.02	<7.7E-02		4.8	<0.038			<2.729463	2.6E
GP08-2004	6/3/2004	5						<0.1937985			<0.1937985					<0.1937985				<0.1937985	
GP09-2004	6/2/2004	5						<4.84E-03			<4.84E-03					<4.84E-03				<4.84E-03	
GP10-2004	6/2/2004	5						0.028			<4.13E-03					<4.13E-03				<4.13E-03	
GP14-2004	6/3/2004	5	<0.19	<0.39	<0.3885076	<0.3885076	<0.3885076	24	<0.3885076	<0.1948371	2	<0.038	<0.019	<0.075		**75**	<0.038			<1.924628	**21**
GP15-2004	6/3/2004	5	<1.8E-03	<3.7E-03	<3.7E-03	<3.7E-03	<3.7E-03	3.4	<3.7E-03	<1.8E-03	0.29	<0.04	<0.021	<8.0E-02		9.700001	<0.04			<0.1934416	<0.1846108
GP16-2004	6/3/2004	5	<1.9E-03	<3.86E-03	<3.86E-03	<3.86E-03	<3.86E-03	0.0047	<3.86E-03	<1.9E-03	<4.36E-03	<0.039	<0.02	<0.078		<4.4E-03	<0.039			<4.36E-03	<0.1936858
GP17-2004	6/2/2004	5	<1.9E-03	<0.0037	<0.0038	<0.0038	<0.0038		<0.0038	<1.88E-03		<0.038	<0.02	<7.7E-02			<0.038				<0.1881082
S-22	10/12/2005	4-6	<0.00018	<0.00031	<0.00042	<0.00037	<0.00075	<0.00073	<0.00016	<0.00037	<0.00083	<0.0069	<0.012		<0.04	<0.0012	<7.8E-03	<0.0011	<0.94	<0.00071	<0.014
S-23	10/12/2005	4-6	<0.00019	<0.00031	<0.00043	<0.00037	<0.00075	<0.00076	<0.00016	<0.00037	<0.00087	<0.007	<0.012		<0.04	<0.0012	<7.9E-03	<0.0011	<0.97	<0.00075	<0.014

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft																							
Maximum Pre-Remedial Action			ND	ND	23	15	120	2.8	ND	0.1	219	ND	ND	ND	390.00003	0.0013	0.71	6.6	4.5	0.016	6.2	0.23	1.7
Maximum Post-Remedial Action			ND	ND	0.53	0.052	2.9	ND	ND	0.0045	12	ND	ND	ND	3.6000001	0.0013	0.71	6.6	ND	0.016	ND	0.23	0.17
AB-1	9/23/2005	6-8	<0.0024	<0.0013	<0.00036	<0.00036	<0.00033	<0.25	<0.00017	<0.00063	7.2	<0.00078	<0.00057	<0.25	<0.0036	<0.00062		6.3	<0.0058		<0.00042	<8.8E-03	
AB-1	9/23/2005	10-12	<0.1	<0.054	<0.00036	<0.00036	<0.00033	<0.25	<0.00017	<0.00063	2.1	<0.033	<0.00057	<0.26	<0.0036	<0.026		5.1	<0.0058		<0.00042	<8.8E-03	
AB-2	9/23/2005	6-8	<24	<12	<0.15	1.9D	<0.13	<0.26	<0.068	0.1J	1.6	<7.5	<0.23	<0.24	<1.5	<6		4.6	<0.0058		**6.2P D**	<8.8E-03	
AB-2	9/23/2005	10-12	<4.8	<2.5	<0.034	0.87	1.3	<0.24	<0.016	<0.06	1.7	<1.5	<0.054	<0.23	<0.34	<1.2		4.1	<0.0058		**3.1P**	<8.8E-03	
AB-3	9/23/2005	6-8	<0.0023	<0.0012	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	1.8	<0.00073	<0.00056	<0.24	<0.0036	0.0013J		3.3	<0.0069		<0.00042	<0.01	
AB-3	9/23/2005	10-12	<0.0023	<0.0012	<0.00034	<0.00034	<0.00031	<0.24	<0.00016	<0.00059	0.91J	<7.2E-04	<0.00053	<0.24	<0.0034	<0.00058		2.5	<0.0066		<0.0004	<0.01	
B100	10/18/2000	10	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.05	<0.02		<0.2	<0.05	<0.013	<0.5	<0.013	<0.013	<0.02	0.026	<0.013
B100	10/18/2000	15	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.05	<0.02		<0.2	<0.05	0.71	<0.5	<0.015	0.016	<0.02	<0.015	<0.015
B101	10/19/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	0.68	<0.013	<0.013	<0.02	<0.013	<0.013
B101	10/19/2000	15	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.05	<0.02		<0.2	<0.05	<0.013	2	<0.013	<0.013	<0.02	<0.013	<0.013
B102	10/19/2000	10									<4.81			<2.41									
B102	10/19/2000	10	<0.1	<0.1	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.32	<0.1	<0.02		<0.2	<0.1	<0.016	2.2	<0.016	<0.016	<0.02	<0.016	0.17
B102	10/19/2000	15	<2.5	<2.5	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<2.5	<0.02		<0.2	<2.5	<0.015	1.3	<0.015	<0.015	<0.02	<0.015	<0.015
B103	10/19/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.54	<0.005	<0.02		<0.2	<0.005	<0.013	2.1	<0.013	<0.013	<0.02	<0.013	<0.013
B103	10/19/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	1.8	<0.013	<0.013	<0.02	<0.013	<0.013
B12	9/30/1998	15			0.02	<0.01	1.7U				<1				0.21								
B13	9/30/1998	15			<0.01	<0.01	<0.02				<1				<0.1								
B14	9/30/1998	10			<0.11	<0.05	0.25				<1				<1								
B14	9/30/1998	15			<2	<1	2.9				<1				<10								
B16	11/1/1998	10			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B17	6/27/2000	11			0.012	0.036	0.006				4.59				<0.033								
B17	6/27/2000	13									<4.95												
B17	6/29/2000	13			0.53																		
B17	6/30/2000	13				<0.0033																	
B17	7/1/2000	13					0.13																
B17	7/2/2000	13													3.6								
B17	7/3/2000	13																					
B17	7/4/2000	13																					
B18	6/27/2000	11			0.018	0.06	0.0046				8.59				0.053								
B19	6/27/2000	12			<0.0033	<0.0033	7				<4.75				**17**								
B19	11/2/1998	15			<0.00333	<0.00333	<0.00333				1.94				<0.00166								
B20	11/2/1998	10			<0.00333	<0.00333	<0.00333				2.15				0.095								
B26	11/3/1998	10			<0.00333	<0.00333	<0.00333				<0.96				<0.00166								
B27	11/3/1998	10			<0.00333	<0.00333	<0.00333				3.1				<0.00166								
B27	11/3/1998	15			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B28	6/27/2000	7			0.0067	<0.0033	0.036				<4.29				<0.033								
B28	11/3/1998	10			<0.00333	<0.00333	<0.00333				2.34				<0.00166								
B28	11/3/1998	15			<0.00333	<0.00333	<0.00333				4.24				<0.00166								
B29	11/3/1998	10			0.012	<0.00333	0.088				1.8				<0.00166								
B29	11/3/1998	15			<0.00333	<0.00333	<0.00333				2.8				<0.00166								
B3	9/28/1998	10			<0.01	<0.01	<0.02				<1				<0.1								
B3	9/28/1998	15			<0.01	<0.01	<0.02				2.7				<0.1								
B4	9/28/1998	10			<0.01	<0.01	<0.02				1.2				<0.1								
B8	9/29/1998	10			0.24	0.052	2.1				1.2				1.1								
B8	9/29/1998	15			0.025	<0.01	0.21				1.3				<0.1								

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft																					
Maximum Pre-Remedial Action			9.40000057	18	ND	0.067	ND	1100	ND	16	53	470.00003	160	17	ND	1700	260	ND	ND	20	1400
Maximum Post-Remedial Action			0.63	0.41999999	ND	0.067	ND	920.0001	ND	0.22	0.48	20	0.049	17	ND	1100	16	ND	ND	ND	180
AB-1	9/23/2005	6-8	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	0.0032J	<0.00017	<0.00039	<0.0009	<0.006	<0.01		<0.042	<0.0013	<6.8E-03	<0.0012	<1	<0.00077	<0.015
AB-1	9/23/2005	10-12	<0.00019	<0.00033	<0.00045	<0.00039	<0.00078	<0.033	<0.00017	<0.00039	<0.038	<0.006	<0.01		<0.042	0.79	<6.8E-03	<0.0012	<1	<0.033	<0.014
AB-2	9/23/2005	6-8	<0.078	4.1D	<0.18	<0.16	<0.32	**93D**	<0.068	**0.72J P D**	**53D**	0.0063JP	<0.01		<0.043	**880D**	<6.8E-03	<0.0012	<1	<7.4	**97J D**
AB-2	9/23/2005	10-12	<0.018	2.3	<0.043	<0.037	<0.075	22D	<0.016	0.29	10D	0.31	<0.01		<0.04	**140D**	0.013JP	<0.0011	<0.92	<1.5	**55**
AB-3	9/23/2005	6-8	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00074	<0.00017	<0.00038	<0.00084	<0.0071	<0.012		<0.042	<0.0012	<8.1E-03	<0.0012	<0.99	<7.2E-04	<0.014
AB-3	9/23/2005	10-12	<0.00018	<0.00031	<0.00042	<0.00036	<0.00074	<0.00073	<0.00016	<0.00036	<0.00083	<6.8E-03	<0.011		<0.04	<0.0012	<0.0077	<0.0011	<0.98	<0.00071	<0.014
B100	10/18/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	0.25	<0.02	<0.02	0.056	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.05	<0.4
B100	10/18/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	<0.02	<0.02	<0.05	<0.015	<0.015	<0.015	<0.33		<0.015	<0.33		<0.05	<0.4
B101	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	0.022	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B101	10/19/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	<0.02	<0.02	<0.05	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.05	<0.4
B102	10/19/2000	10																	<4.81		
B102	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	9.2	<0.02	<0.02	0.48	<0.016	<0.016	<0.016	<0.33		<0.016	<0.33		<0.1	**17**
B102	10/19/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	7.6	<0.02	<0.02	<2.5	<0.015	0.049	<0.015	<0.33		0.016	<0.33		<2.5	10
B103	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B103	10/19/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B12	9/30/1998	15								<0.01											<0.5
B13	9/30/1998	15								<0.01											<0.5
B14	9/30/1998	10								<0.05											6.6
B14	9/30/1998	15								<1											**180**
B16	11/1/1998	10								<0.00166											<0.1665
B17	6/27/2000	11								<0.0017											<0.17
B17	6/27/2000	13																			
B17	6/29/2000	13																			
B17	6/30/2000	13																			
B17	7/1/2000	13																			
B17	7/2/2000	13																			
B17	7/3/2000	13								<0.0017											
B17	7/4/2000	13																			3.7
B18	6/27/2000	11								<0.0017											<0.17
B19	6/27/2000	12								0.57											**54**
B19	11/2/1998	15								<0.00166											<0.1665
B20	11/2/1998	10								0.099											<0.1665
B26	11/3/1998	10								<0.00166											<0.1665
B27	11/3/1998	10								<0.00166											<0.1665
B27	11/3/1998	15								<0.00166											<0.1665
B28	6/27/2000	7								<0.0017											<0.17
B28	11/3/1998	10								<0.00166											<0.1665
B28	11/3/1998	15								<0.00166											<0.1665
B29	11/3/1998	10								<0.00166											<0.1665
B29	11/3/1998	15								<0.00166											<0.1665
B3	9/28/1998	10								<0.01											<0.5
B3	9/28/1998	15								<0.01											<0.5
B4	9/28/1998	10								<0.01											<0.5
B8	9/29/1998	10								<0.1											7
B8	9/29/1998	15								<0.01											0.65

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft Continued																							
B80	2/5/1999	10			<0.00333	<0.00333	<0.00333				2.8				<0.00166								
B80	6/27/2000	15			0.0063	<0.0033	0.037				<4.76				0.096								
B80	2/5/1999	15			<0.00333	<0.00333	<0.00333				11.6				<0.00166								
B81	2/5/1999	15			<0.00333	<0.00333	<0.00333				1.96				<0.00166								
B82	2/5/1999	10			<0.00333	<0.00333	<0.00333				3.11				<0.00166								
B82	2/5/1999	15			<0.00333	<0.00333	<0.00333				1.4				<0.00166								
B83	2/5/1999	10			<0.00333	<0.00333	<0.00333				2.6				<0.00166								
B83	2/5/1999	15			<0.00333	<0.00333	<0.00333				2.57				<0.00166								
B86	10/16/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B86	2/5/1999	10			<0.00333	<0.00333	<0.00333				<1				<0.00166								
B86	10/16/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B86	2/5/1999	15			<0.00333	<0.00333	<0.00333				<0.96				<0.00166								
B87	10/16/2000	10									5.47			<2.45									
B87	10/16/2000	10	<0.005	<0.005	<0.0038	<0.0038	<0.0038	<0.33	<0.02	<0.02	4.8	<0.005	<0.02		<0.2	<0.005	<0.013	4	<0.013	<0.013	<0.0038	<0.013	<0.013
B87	2/5/1999	10			<0.00333	<0.00333	<0.00333				1.78				<0.00166								
B87	2/5/1999	15			<0.00333	<0.00333	<0.00333				2.4				<0.00166								
B96	10/18/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	0.5	<0.013	<0.013	<0.02	0.023	<0.013
B96	10/18/2000	15	<0.1	<0.1	<0.02	<0.02	2.2	<0.33	<0.02	<0.02	12	<0.1	<0.02		<0.2	<0.1	<3	1.8	<3	<3	<0.02	<3	<3
B97	10/18/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	0.067	<0.013
B97	10/18/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	0.23	<0.013
B98	10/19/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		0.7	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B98	10/19/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B99	10/19/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	0.031	<0.013
B99	10/19/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1.1	<0.005	<0.02		<0.2	<0.005	<0.013	1.9	<0.013	<0.013	<0.02	<0.013	<0.013
DC-14N	6/27/2000	7			<0.0033	<0.0033	**120**	2.8			**219**	<1.5			**390**	<1.5							
DC-RS5	6/28/2000	8			0.011	<0.0033	0.045				<5				<0.033								
GP01-2004	6/3/2004	10			0.046	<4.12E-03	0.006NC		<2.07E-03	<2.07E-03			<2.07E-03				<0.041		<0.41	<0.041	<4.12E-03	<0.081	<0.081
GP02-2004	6/3/2004	10			<4.07E-03	<4.07E-03	<4.07E-03		<2.04E-03	<2.04E-03			<2.04E-03				<0.041		<0.41	<0.041	<4.07E-03	<0.082	<0.082
GP03-2004	6/3/2004	10			<4.2E-03	<4.2E-03	<4.2E-03		<2.09E-03	<2.09E-03			<2.09E-03				<0.041		<0.41	<0.041	<4.2E-03	<0.082	<0.082
GP04-2004	6/3/2004	10		<262	7.1	<4.22831	10		<2.120504	<2.120504		<261.8	<2.120504			<261.8319	<40		<400	<40	<4.22831	<80	<80
GP06-2004	6/3/2004	10		<24	<3.96E-02	<3.96E-02	0.37		<1.99E-02	<1.99E-02		<24.1	<1.99E-02			<24.07635	<0.039		<0.39	<0.039	<3.96E-02	<0.078	**1.7**
GP07-2004	6/2/2004	10		<191	<3.9E-03	<3.9E-03	0.16E		<1.94E-03	0.0045		<191	<1.94E-03			<191	<0.041		<0.41	<0.041	<3.9E-03	<0.081	<0.081
GP08-2004	6/3/2004	10		<0.18								<0.18				<0.18							
GP09-2004	6/2/2004	10		<4.5E-03								<4.5E-03				<4.5E-03							
GP10-2004	6/2/2004	10		<4.3E-03								<4.3E-03				<4.3E-03							
GP14-2004	6/3/2004	10		<2.35	<0.39	<3.88	<3.88		<1.9	<1.9		<2.3	<1.9			<2.3	<0.038		<0.38	<0.038	<3.88	<7.7E-02	<7.7E-02
GP15-2004	6/3/2004	10		<213	**23**	<3.7	5.5		<1.8	<1.8		<213	<1.8			<213	<3.7		<37	<3.7	<3.7	<7.4	<7.4
GP16-2004	6/3/2004	10		<0.22	<4.1E-03	<4.1E-03	0.015		<2.06E-03	<2.06E-03		<0.22	<2.06E-03			<0.2244771	<0.04		<0.4	<0.04	<4.1E-03	<8.0E-02	<8.0E-02
GP17-2004	6/2/2004	10			<3.98E-03	<3.98E-03	<3.98E-03		<2.0E-03	<2.0E-03			<2.0E-03				<0.04		<0.4	<0.04	<3.98E-03	<8.0E-02	<8.0E-02
GP20-2004	6/2/2004	10		<4.8E-03								<4.8E-03				<4.8E-03							
S-16	9/23/2005	14-16	<23	<12	<1.4	**15P**	**74D**	2.3	<0.64	<2.4	3.6	<7.2	<2.2	<0.23	<14	<5.8		2.8	**4.5J**		<1.6	<2	
S-22	10/12/2005	8-10	<0.0026	<0.0014	8.60E-03	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	1.8	<0.00083	<0.00056	<0.24	<0.0036	<0.00067		3.2	<0.007		<0.00042	<0.011	
S-23	10/12/2005	8-10	<0.0024	<0.0013	0.011	0.0006J	<0.00032	<0.25	<0.00017	<0.00062	5.8	<0.00077	<0.00056	<0.25	<0.0036	<0.00062		6.6	<0.0069		<0.00041	<0.01	

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft Continued																					
B80	2/5/1999	10								<0.00166											<0.1665
B80	6/27/2000	15								4.30E-03											0.29
B80	2/5/1999	15								<0.00166											<0.1665
B81	2/5/1999	15								<0.00166											<0.1665
B82	2/5/1999	10								<0.00166											<0.1665
B82	2/5/1999	15								<0.00166											<0.1665
B83	2/5/1999	10								<0.00166											<0.1665
B83	2/5/1999	15								<0.00166											<0.1665
B86	10/16/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B86	2/5/1999	10								<0.00166											<0.1665
B86	10/16/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B86	2/5/1999	15								<0.00166											<0.1665
B87	10/16/2000	10																	<4.89		
B87	10/16/2000	10	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	<0.005	<0.02	<0.002	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.2
B87	2/5/1999	10								<0.00166											<0.1665
B87	2/5/1999	15								<0.00166											<0.1665
B96	10/18/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	0.92	<0.02	<0.02	0.011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B96	10/18/2000	15	0.63	0.42	<0.02	<0.02	<0.02	3.3	<0.02	0.22	0.13	20	<3	**17**	<0.33		16	<0.33		<0.1	<0.4
B97	10/18/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	0.018	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B97	10/18/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	0.11	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B98	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B98	10/19/2000	15	<0.02	<0.02	<0.02	0.067	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B99	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	0.049	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B99	10/19/2000	15	<0.02	<0.02	<0.02	0.02	<0.02	0.033	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
DC-14N	6/27/2000	7						**810**		**16**					<0.33			<1.7		**20**	**1400**
DC-RS5	6/28/2000	8								<0.0017											<0.17
GP01-2004	6/3/2004	10	<2.07E-03	<4.12E-03	<4.12E-03	<4.12E-03	<4.12E-03		<4.12E-03	<2.1E-03		<0.041	<0.021	<0.081			<0.041				<0.2067743
GP02-2004	6/3/2004	10	<2.04E-03	<4.07E-03	<4.07E-03	<4.07E-03	<4.07E-03		<4.07E-03	<2.0E-03		<0.041	<0.021	<0.082			<0.041				<0.2038985
GP03-2004	6/3/2004	10	<2.09E-03	<4.2E-03	<4.2E-03	<4.2E-03	<4.2E-03		<4.2E-03	<2.1E-03		<0.041	<0.021	<0.082			<0.041				<0.2087068
GP04-2004	6/3/2004	10	2.5	<4.22831	<4.22831	<4.22831	<4.22831	**1100**	<4.22831	<2.120504	<261.8319	**470**	**160**	<80		**660**	**260**			<261.8	**150**
GP06-2004	6/3/2004	10	<1.99E-02	<3.96E-02	<3.96E-02	<3.96E-02	<3.96E-02	35	<3.97E-02	0.098	<24.07635	0.34	0.06P	<0.078		**300**	0.2			<24.1	**14**
GP07-2004	6/2/2004	10	0.05NC	0.13E	<3.9E-03	<3.9E-03	<3.9E-03	**920**	<3.9E-03	0.034NC	<191.4266	<0.041	<0.021	<0.081		**1100**	<0.041			<191.4	9.7E
GP08-2004	6/3/2004	10						<0.184			<0.184					2				<0.184	
GP09-2004	6/2/2004	10						<4.5E-03			<4.5E-03					<4.5E-03				<4.5E-03	
GP10-2004	6/2/2004	10						<4.3E-03			<4.3E-03					<4.3E-03				<4.3E-03	
GP14-2004	6/3/2004	10	<1.9	<3.88	<3.88	<3.88	<3.88	4.8	<3.88	<1.9	<2.3	<0.038	<0.02	<7.7E-02		**36**	<0.038			<2.3	**230**
GP15-2004	6/3/2004	10	3.3	<3.7	<3.7	<3.7	<3.7	**530**	<3.7	<1.8	<213	**35**	<1.9	<7.4		**1700**	<3.7			<213	**130**
GP16-2004	6/3/2004	10	0.0032	<4.1E-03	<4.1E-03	<4.1E-03	<4.1E-03	<0.22	<4.1E-03	<2.1E-03	<0.22	<0.04	<0.02	<8.0E-02		0.28	<0.04			<0.22	<0.206
GP17-2004	6/2/2004	10	<2.0E-03	<3.98E-03	<3.98E-03	<3.98E-03	<3.98E-03		<3.98E-03	<1.99E-03		<0.04	<0.02	<8.0E-02			<0.04				<0.1997
GP20-2004	6/2/2004	10						<4.8E-03			<4.8E-03					<4.8E-03				<4.8E-03	
S-16	9/23/2005	14-16	9.4P	**18**	<1.7	<1.5	<3	**780**	<0.64	**6.9J D**	<8.3	**82**	**96**		<0.04	**740**	**38**	<0.0011	<0.94	<7.2	**790 P D**
S-22	10/12/2005	8-10	<0.00019	<0.00032	<0.00044	<0.00038	<0.00078	<0.00084	<0.00017	<0.00038	<0.00096	<0.0072	<0.012		<0.042	<0.0014	<0.0082	<0.0012	<0.98	<0.00082	<0.014
S-23	10/12/2005	8-10	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00078	<0.00017	<0.00038	<0.00089	<0.0071	<0.012		<0.041	<0.0013	<8.1E-03	<0.0012	<1	<0.00076	<0.014

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
>15 ft																							
Maximum Pre-Remedial Action			ND	2.7	7.5	1.1	30	5.7	ND	ND	7.6	ND	ND	ND	2.22	ND	ND	8	ND	ND	ND	0.024	0.047
Maximum Post-Remedial Action			ND	2.7	7.5	1.1	30	5.7	ND	ND	7.6	ND	ND	ND	2.22	ND	ND	8	ND	ND	ND	0.024	0.047
B100	10/18/2000	20															<0.016		<0.016	<0.016		<0.016	**0.047**
B100	10/19/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005		<0.5			<0.02		
B101	10/19/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	0.6	<0.013	<0.013	<0.02	0.024	<0.013
B102	10/19/2000	20	<0.2	<0.2	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.26	<0.2	<0.02		<0.2	<0.2	<0.013	1.1	<0.013	<0.013	<0.02	<0.013	<0.013
B103	10/19/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	0.6	<0.013	<0.013	<0.02	<0.013	<0.013
B14	9/30/1998	18			<0.01	<0.01	<0.02				<1				<0.1								
B8	9/29/1998	19			<0.01	<0.01	<0.02				1				<0.1								
B81	2/5/1999	19			<0.00333	<0.00333	<0.00333				1.21				<0.00166								
B82	2/5/1999	19			<0.00333	<0.00333	<0.00333				6.25				<0.00166								
B83	2/5/1999	19			<0.00333	<0.00333	<0.00333				2.95				<0.00166								
B86	2/5/1999	19			<0.00333	<0.00333	<0.00333				1.53				<0.00166								
B86	10/16/2000	19-20										<0.005				<0.005							
B86	10/16/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B87	2/5/1999	19			<0.00333	<0.00333	<0.00333				1.19				<0.00166								
B98	10/19/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	2.5	<0.013	<0.013	<0.02	<0.013	<0.013
B99	10/19/2000	20	<0.05	<0.05	<0.02	<0.02	0.05	<0.33	<0.02	<0.02	0.34	<0.05	<0.02		<0.2	<0.05	<0.013	0.51	<0.013	<0.013	<0.02	0.024	<0.013
BHS-24	6/28/2006	37-39	<0.48	<0.25	0.026JDP	0.061D	0.2		<6.8E-04	<0.0025		<0.15	<0.0023		0.31D	<0.12					<0.0017		
BHS-24	6/28/2006	48-50	<0.0027	0.0015J	0.21P	0.21P	1		<0.007	<0.026		<8.5E-04	<0.023		2.22	<6.8E-04					<0.017		
BHS-25	6/29/2006	33-35	<8.8E-02	**0.18**	<0.00035	<0.00035	<0.00031		<0.00016	<0.0006		<0.028	<0.00054		<0.0035	<0.022					<0.0004		
BHS-25	6/29/2006	43-45	<0.0025	0.0016J	<0.00036	<0.00036	<0.00033		<0.00017	<0.00063		<8.1E-04	<0.00057		<0.0036	<0.00065					<0.00043		
BHS-25	6/29/2006	53-55	<0.0039	<0.002	<0.00042	<0.00042	<0.00038		<0.0002	<7.2E-04		<0.0012	<0.00065		<0.0042	<0.00098					<0.00049		
BHS-26	6/29/2006	33-35	<0.12	**0.63**	<0.0015	<0.0015	0.041		<0.00071	<0.0026		<0.037	<0.0024		<0.015	<0.03					<0.0018		
BHS-26	6/29/2006	43-45	<0.13	**0.53**	3P	1.1P	**29**		<0.18	<0.66		<0.043	<0.59		<3.8	<0.034					<0.44		
BHS-26	6/29/2006	57-59	<0.0037	<0.0019	<0.00038	<0.00038	0.00084J		<0.00018	<6.6E-04		<0.0012	<0.0006		<0.0038	<0.00095					<0.00044		
DB-6	12/1/2012	35		<0.0029																			<0.0333
DB-6	12/1/2012	35																					<0.0333
DB-6	12/1/2012	50					<0.0044																
DB-6	12/1/2012	60		<0.0031																			
S-16	9/23/2005	19-21	<0.96	**1.5J**	0.64	<0.014	2.4	3.8	<0.0067	<0.025	4.7	<0.31	<0.022	<0.25	<0.14	<0.25		7.1	<0.029		<0.017	<0.044	
S-16	9/23/2005	26-28	<0.093	**0.72**	<0.0087	0.26P	1.3	5.7	<0.0041	<0.015	<0.59	<0.03	<0.014	<0.19	<0.087	<0.024		4.3	<0.0067		<0.01	<0.01	
S-17	9/23/2005	17-19	<4.9	**2.7J**	7.5	<0.34	**30**	1.5J	<0.16	<0.59	1.4	<1.6	<0.53	<0.22	<3.4	<1.2		3.4	<0.58		<0.4	<0.8800001	
S-17	9/23/2005	22-24	<0.096	**0.74**	0.0024J P	<0.00036	6.80E-03	2.4	<0.00017	<0.00063	7.4	<0.03	<0.00057	<0.25	<0.0036	<0.024		5.6	<0.007		<0.00042	<0.011	
S-17	9/23/2005	26-28	<0.09	**0.34**	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.00061	6.3	<0.029	<5.5E-04	<0.24	<0.0035	<0.023		6.9	<6.8E-03		<0.00041	<0.01	
S-18	9/23/2005	17-19	<0.11	**0.13J**	<0.00035	<0.00035	<0.00031	2.1	<0.00016	<0.0006	3.2	<0.036	<0.00054	<0.22	<0.0035	<0.029		4.2	<0.0067		<0.0004	<0.01	
S-18	9/23/2005	22-24	<0.11	**0.093J**	<0.00034	<0.00034	<0.0003	<0.24	<0.00016	<0.00059	7.6	<0.034	<0.00053	<0.23	<0.0034	<0.027		6	<0.0066		<0.0004	<0.0099	
S-18	9/23/2005	26-28	<8.8E-02	**0.11J**	<0.00036	<0.00036	<0.00033	0.55J	<0.00017	<0.00063	3.7	<0.028	<0.00057	<0.26	<0.0036	<0.023		8	<0.007		<0.00042	<0.011	

Table 4B Soil Data for Area-Averaging - Drexel East Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
>15 ft																					
Maximum Pre-Remedial Action			1.70000005	2.20000005	0.078	ND	ND	220	ND	0.6	ND	21.000002	44.000004	ND	ND	190	18	ND	ND	0.00084	100
Maximum Post-Remedial Action			1.70000005	2.20000005	0.078	ND	ND	220	ND	0.6	ND	21.000002	44.000004	ND	ND	190	18	ND	ND	0.00084	100
B100	10/18/2000	20										<0.016	<0.016	<0.016			<0.016				
B100	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005				<0.33			<0.33		<0.005	<0.4
B101	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	0.019	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B102	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	1.9	<0.02	<0.02	<0.2	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.2	<0.4
B103	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B14	9/30/1998	18								<0.01											<0.5
B8	9/29/1998	19								<0.01											<0.5
B81	2/5/1999	19								<0.00166											<0.1665
B82	2/5/1999	19								<0.00166											<0.1665
B83	2/5/1999	19								<0.00166											<0.1665
B86	2/5/1999	19								<0.00166											<0.1665
B86	10/16/2000	19-20						<0.005												<0.005	
B86	10/16/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B87	2/5/1999	19								<0.00166											<0.1665
B98	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B99	10/19/2000	20	0.08	0.04	<0.02	<0.02	<0.02	0.14	<0.02	<0.02	<0.05	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.05	<0.4
BHS-24	6/28/2006	37-39	0.018D	0.025D	0.011JD	<0.0016	<0.0032	2.3	<6.8E-04	0.0038JD	<0.17					2.4				<0.15	0.77JD
BHS-24	6/28/2006	48-50	0.18	0.2	0.078P	<0.016	<0.032	0.0025J	<0.007	0.041J	<0.00098					0.0035J				0.00084J	3.8
BHS-25	6/29/2006	33-35	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	3.7	<0.00016	<0.00037	<0.032					3.2				<0.028	<0.014
BHS-25	6/29/2006	43-45	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	0.014	<0.00017	<0.00039	<0.00093					0.016				<0.0008	<0.015
BHS-25	6/29/2006	53-55	<0.00022	<0.00038	<0.00052	<0.00045	<9.10E-04	0.026	<0.0002	<0.00045	<0.0014					0.026				<0.0012	<0.017
BHS-26	6/29/2006	33-35	0.0029JP	<0.0014	<0.0019	<0.0016	<0.0033	5.1	<0.00071	<0.0016	<0.043					4.2				<0.037	<0.061
BHS-26	6/29/2006	43-45	1.3PJ	<0.34	<0.47	<0.4	<0.8200001	4	<0.18	0.45	<0.049					3.5				<0.042	**54**
BHS-26	6/29/2006	57-59	<0.0002	<0.00034	<0.00047	<0.00041	<0.00082	0.006J	<0.00018	<0.00041	<0.0014					0.011				<0.0012	<0.015
DB-6	12/1/2012	35																			
DB-6	12/1/2012	35																			
DB-6	12/1/2012	50																			
DB-6	12/1/2012	60																			
S-16	9/23/2005	19-21	0.15P	0.22	<0.018	<0.015	<0.031	24	<0.0067	0.039J	<0.35	1.2	**1.8**		<0.042	**22**	0.87	<0.0012	<1	<0.3	7J P
S-16	9/23/2005	26-28	0.12P	0.25	<0.011	<9.3E-03	<0.019	3	<0.0041	0.041J	<0.034	0.058	0.075		<0.04	3	0.22	<0.0011	<0.79	<0.029	7.400001
S-17	9/23/2005	17-19	1.7J P	2.2J	<0.42	<0.36	<0.74	**220**	<0.16	0.6J	<1.8	**21**	**44**		<0.04	**190**	18	<0.0011	<0.88	<1.5	**100J P**
S-17	9/23/2005	22-24	<0.00019	<0.00032	<0.00045	<0.00039	<0.00078	4.1	<0.00017	<0.00039	<0.035	<0.0072	<0.012		<0.042	3.8	0.014J	<0.0012	<1	<0.03	<0.014
S-17	9/23/2005	26-28	<0.00019	<0.00031	<0.00043	<0.00037	<0.00076	2.4	<0.00016	<0.00037	<0.033	<0.007	<0.012		<0.041	2.2	<7.9E-03	<0.0011	<0.99	<0.028	<0.014
S-18	9/23/2005	17-19	<0.00019	<0.00031	<0.00043	<0.00037	<0.00075	4.1	<0.00016	<0.00037	<0.041	0.0097J	<0.012		<0.04	5.4	0.015J	<0.0011	<0.91	<0.035	<0.014
S-18	9/23/2005	22-24	<0.00018	<0.0003	<0.00042	<0.00036	<0.00073	3.4	<0.00016	<0.00036	<0.039	6.800001E-0	<0.011		<0.04	4.2	<0.0077	<0.0011	<0.94	<0.034	<0.014
S-18	9/23/2005	26-28	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	3.7	<0.00017	<0.00039	<0.032	7.300001E-0	<0.012		<0.042	4.7	<0.0082	<0.0012	<1.1	<0.028	<0.015

To be excavated as part of remedial action plan

Bold: Exceeds residential RRS

Qualifiers:

J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	ND	0.013	0.017	0.0069	ND	ND	ND	42.4	0.0013	ND	46.9	ND	0.0091	0.57	94	ND	0.074	ND	0.27	0.16
Maximum Post-Remedial Action			ND	ND	0.013	0.017	0.0069	ND	ND	ND	42.4	0.0013	ND	46.9	ND	0.0091	0.57	94	ND	0.074	ND	0.27	0.16
B104	10/19/2000	0.5									**42.4**			**46.9**									
B104	10/19/2000	0															<0.013		<0.013	0.074		0.27	<0.013
B104	10/19/2000	0	<0.05	<0.05	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.5	<0.05	<0.02		<0.2	<0.05		1.7			<0.02		
B88	10/16/2000	0	<0.005	<0.005	<0.018	<0.018	<0.018	<0.33	<0.0091	<0.0091	2.1	<0.005	<0.0091		<0.91	<0.005	<0.013	4.4	<0.013	<0.013	<0.018	<0.013	<0.013
B89	10/17/2000	0	<0.001	<0.001	<0.0038	<0.0038	<0.0038	<0.33	<0.0019	<0.0019	1.2	<0.001	<0.0019		<0.19	<0.001	<0.013	1.4	<0.013	<0.013	<0.0038	<0.013	<0.013
SI-10	10/17/2000	0	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1.8	<0.001	<0.02		<0.2	<0.001	<0.013	1.7	<0.013	<0.013	<0.02	<0.013	0.16
SI-11	12/19/2000	0	<0.0012	<0.0012	<0.0037	<0.0037	<0.0037	<0.37	<0.0018	<0.0018	1.9	<0.0012	<0.0018			<0.0012	<0.11	3.2	<0.11	<0.11	<0.0037	<0.21	<0.11
SI-12	12/19/2000	0	<0.0011	<0.0011	<0.0035	0.011	0.0035	<0.35	<0.0018	<0.0018	4.2	0.0013	<0.0018			0.0091	<0.1	15	<0.1	<0.1	<0.0035	<0.21	<0.1
SI-13	12/19/2000	0	<0.0012	<0.0012	<0.0041	<0.0041	<0.0041	<0.4	<0.002	<0.002	7	<0.0012	<0.002			<0.0012	<0.12	6.2	<0.12	<0.12	<0.0041	<0.24	<0.12
SI-16	12/20/2000	0	<0.0012	<0.0012	<0.004	<0.004	<0.004	<0.4	<0.002	<0.002	3.4	<0.0012	<0.002			<0.0012	<0.12	4.9	<0.12	<0.12	<0.004	<0.24	<0.12
SI-17	12/21/2000	0	<0.0011	<0.0011	<0.0038	0.0042	<0.0038	<0.38	<0.0018	<0.0018	2.7	<0.0011	<0.0018			<0.0011	<0.11	94	<0.11	<0.11	<0.0038	<0.22	<0.11
SI-18	10/17/2000	0	<0.0011	<0.0011	<0.18	<0.0035	<0.0035	<0.33	<0.0035	<0.0018	2.6	<0.0011	<0.0018		<0.0018	<0.0011	<0.013	2.5	<0.013	<0.013	<0.0035	<0.013	<0.013
SI-21	10/17/2000	0	<0.0012	<0.0012								<0.0012				<0.0012							
SI-21	12/21/2000	0			<0.0039	0.017	<0.0039	<0.38	<0.0019	<0.0019	2.1		<0.0019				<0.12	5	<0.12	<0.12	<0.0039	<0.23	<0.12
SI-22	10/17/2000	0	<0.0011	<0.0011								<0.0011				<0.0011							
SI-22	12/21/2000	0			<0.0038	<0.0038	<0.0038	<0.38	<0.0018	<0.0018	5.7		<0.0018				<0.11	5.8	<0.11	<0.11	<0.0038	<0.23	<0.11
SI-23	10/17/2000	0	<0.0011	<0.0011	0.0046	0.0055	0.0069	<0.33	<0.0019	<0.0019	2	<0.0011	<0.0019		<0.19	<0.0011	<0.013	3.1	<0.013	<0.013	<0.0036	<0.013	<0.013
SI-2	12/20/2000	0	<0.001	<0.001	<0.0035	<0.0035	<0.0035	<0.35	<0.0017	<0.0017	2.7	<0.001	<0.0017			<0.001	<0.1	5.9	<0.1	<0.1	<0.0035	<0.21	<0.1
SI-3	12/20/2000	0	<0.001	<0.001	0.0056	<0.0035	<0.0035	<0.35	<0.0017	<0.0017	1.5	<0.001	<0.0017			<0.001	<0.1	1.7	<0.1	<0.1	<0.0035	<0.21	<0.1
SI-6	10/17/2000	0	<0.0011	<0.0011	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.43	<0.0011	<0.02		<0.2	<0.0011	<0.013	<0.56	<0.013	<0.013	<0.02	<0.013	<0.013
SI-7	10/17/2000	0	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.9	<0.001	<0.02		<0.2	<0.001	<0.013	<0.52	<0.013	<0.013	<0.02	<0.013	<0.013
SI-8	10/17/2000	0	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.2	<0.001	<0.02		<0.2	<0.001	<0.013	2.9	<0.013	<0.013	<0.02	<0.013	<0.013
GP11-2004	6/2/2004	0		<0.23	0.013	<4.0E-03	<4.0E-03		<2.0E-03	<2.0E-03		<0.23	<2.0E-03			<0.23	0.57		<0.39	<0.039	<4.0E-03	<0.078	<0.078
GP19-2004	6/2/2004	0															<0.035		<0.35	<0.035		<0.07	<0.07

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			0.044	0.045	ND	0.019	0.018	ND	1.1	ND	ND	ND	ND	0.017	ND	ND	0.03	ND	42.4	ND	ND
Maximum Post-Remedial Action			0.044	0.045	ND	0.019	0.018	ND	1.1	ND	ND	ND	ND	0.017	ND	ND	0.03	ND	42.4	ND	ND
B104	10/19/2000	0.5																	**42.4**		
B104	10/19/2000	0										<0.013	<0.013	0.017			0.03				
B104	10/19/2000	0	0.044	0.045	<0.02	<0.02	<0.02	<0.05	**1.1**	<0.02	<0.05				<0.33			<0.33		<0.05	<0.4
B88	10/16/2000	0	<0.0091	<0.018	<0.018	0.019	0.018	<0.005	<0.0091	<0.0091	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.91
B89	10/17/2000	0	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.001	<0.0019	<0.0019	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.19
SI-10	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
SI-11	12/19/2000	0	<0.0018	<0.0037	<0.0037	<0.0037	<0.0037	<0.0012	<0.0018	<0.0018	<0.0012	<0.11	<0.11	<0.21	<0.37		<0.11	<0.37		<0.0012	<0.18
SI-12	12/19/2000	0	<0.0018	<0.0035	<0.0035	<0.0035	<0.0035	<0.0011	<0.0018	<0.0018	<0.0011	<0.1	<0.1	<0.21	<0.35		<0.1	<0.35		<0.0011	<0.18
SI-13	12/19/2000	0	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.4		<0.12	<0.4		<0.0012	<0.2
SI-16	12/20/2000	0	<0.002	0.0096	<0.004	<0.004	<0.004	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.4		<0.12	<0.4		<0.0012	<0.2
SI-17	12/21/2000	0	<0.0018	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.0018	<0.0018	<0.0011	<0.11	<0.11	<0.22	<0.38		<0.11	<0.38		<0.0011	<0.18
SI-18	10/17/2000	0	<0.0018	<0.0035	<0.0035	<0.0035	<0.0035	<0.0011	<0.0018	<0.0018	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.18
SI-21	10/17/2000	0						<0.0012			<0.0012									<0.0012	
SI-21	12/21/2000	0	0.0071	0.0056	<0.0039	<0.0039	<0.0039		<0.0019	<0.0019		<0.12	<0.12	<0.23	<0.38		<0.12	<0.38			<0.19
SI-22	10/17/2000	0						<0.0011			<0.0011									<0.0011	
SI-22	12/21/2000	0	<0.0018	<0.0038	<0.0038	<0.0038	<0.0038		<0.0018	<0.0018		<0.11	<0.11	<0.23	<0.38		<0.11	<0.38			<0.18
SI-23	10/17/2000	0	<0.0019	<0.0036	<0.0036	<0.0036	<0.0036	<0.0011	<0.0019	<0.0019	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.19
SI-2	12/20/2000	0	<0.0017	<0.0035	<0.0035	<0.0035	<0.0035	<0.001	<0.0017	<0.0035	<0.001	<0.1	<0.1	<0.21	<0.35		<0.1	<0.35		<0.001	<0.17
SI-3	12/20/2000	0	<0.0017	<0.0035	<0.0035	<0.0035	<0.0035	<0.001	<0.0017	<0.0017	<0.001	<0.1	<0.1	<0.21	<0.35		<0.1	<0.35		<0.001	<0.018
SI-6	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0011	<0.02	<0.02	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.4
SI-7	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
SI-8	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
GP11-2004	6/2/2004	0	0.039	0.016	<4.0E-03	<4.0E-03	<4.0E-03	<0.23	0.0046NC	<2.0E-03	<0.23	<0.039	<0.02	<0.078		<0.23	<0.039			<0.23	<0.20
GP19-2004	6/2/2004	0										<0.035	<0.018	<0.07			<0.035				

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			ND	ND	ND	0.025	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	0.025	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND
B88	10/16/2000	5									<4.9			<2.45									
B104	10/19/2000	5	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.001	<0.02		<0.2	<0.001	<0.013	2.7	<0.013	<0.013	<0.02	<0.013	<0.013
B88	10/16/2000	5	<0.005	<0.005	<0.0038	<0.0038	<0.0038	<0.33	<0.002	<0.002	3.6	<0.005	<0.002		<0.2	<0.005	<0.013	5	<0.013	<0.013	<0.0038	<0.013	<0.013
B89	10/17/2000	5	<0.001	<0.001	<0.0039	<0.0039	<0.0039	<0.33	<0.002	<0.002	4.7	<0.001	<0.002		<0.2	<0.001	<0.013	7	<0.013	<0.013	<0.039	<0.013	<0.013
SI-10	10/17/2000	5	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2	<0.001	<0.02		<0.2	<0.001	<0.013	2.9	<0.013	<0.013	<0.02	<0.013	<0.013
SI-11	12/19/2000	5	<0.0011	<0.0011	<0.0037	<0.0037	<0.0037	<0.37	<0.0019	<0.0019	3.9	<0.0011	<0.0019			<0.0011	<0.11	4.7	<0.11	<0.11	<0.0037	<0.21	<0.11
SI-12	12/19/2000	5	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.38	<0.0019	<0.0019	4.8	<0.0012	<0.0019			<0.0012	<0.12	5.5	<0.12	<0.12	<0.0039	<0.23	<0.12
SI-13	12/19/2000	5	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.38	<0.0019	<0.0019	4	<0.0012	<0.0019			<0.0012	<0.11	5.7	<0.11	<0.11	<0.0039	<0.23	<0.11
SI-16	12/20/2000	5	<0.0013	<0.0013	<0.0037	<0.0037	<0.0037	<0.37	<0.0018	<0.0018	0.73	<0.0013	<0.0018			<0.0013	<0.11	3.7	<0.11	<0.11	<0.0037	<0.22	<0.11
SI-17	12/21/2000	5	<0.0011	<0.0011	<0.0038	0.0045	<0.0038	<0.38	<0.0018	<0.0018	1.5	<0.0011	<0.0018			<0.0011	<0.11	8.4	<0.11	<0.11	<0.0038	<0.23	<0.11
SI-18	10/17/2000	5	<0.0011	<0.0011	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	3.3	<0.0011	<0.02		<0.2	<0.0011	<0.013	4.5	<0.013	<0.013	<0.02	<0.013	<0.013
SI-21	12/21/2000	5	<0.0012	<0.0012	<0.004	0.025	<0.004	<0.39	<0.002	<0.002	3	<0.0012	<0.002			<0.0012	<0.11	4.9	<0.11	<0.11	<0.004	<0.23	<0.11
SI-22	12/21/2000	5	<0.0011	<0.0011	<0.0038	<0.0038	<0.0038	<0.38	<0.0019	<0.0019	0.34	<0.0011	<0.0019			<0.0011	<0.11	1.9	<0.11	<0.11	<0.0038	<0.23	<0.11
SI-23	10/17/2000	5	<0.0011	<0.0011	<0.0038	<0.0038	<0.0038	<0.33	<0.002	<0.002	1.4	<0.0011	<0.002		<0.2	<0.0011	<0.013	2.3	<0.013	<0.013	<0.0038	<0.013	<0.013
SI-2	12/20/2000	5	<0.0011	<0.0011	<0.0037	<0.0037	<0.0037	<0.37	<0.0018	<0.0018	4.3	<0.0011	<0.0018			<0.0011	<0.11	7.9	<0.11	<0.11	<0.0037	<0.22	<0.11
SI-3	12/20/2000	5	<0.0011	<0.0011	<0.0036	0.01	<0.0036	<0.36		<0.0018	2.2	<0.0011	<0.0018			<0.0011	<0.11	4.6	<0.11	<0.11	<0.0036	<0.22	<0.11
SI-6	10/17/2000	5	<0.0011	<0.0011	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1.6	<0.0011	<0.02		<0.2	<0.0011	<0.013	1.9	<0.013	<0.013	<0.02	<0.013	<0.013
SI-7	10/17/2000	5	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.89	<0.0012	<0.02		<0.2	<0.0012	<0.013	4.2	<0.013	<0.013	<0.02	<0.013	<0.013
SI-8	10/17/2000	5	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.7	<0.0012	<0.02		<0.2	<0.0012	<0.013	1.6	<0.013	<0.013	<0.02	<0.013	<0.013
B6	9/29/1998	5			<0.01	<0.01	<0.02				1.6				<0.1								
GP11-2004	6/2/2004	5		<0.0033	<3.8E-03	<3.8E-03	<3.8E-03		<1.9E-03	<1.9E-03		<0.0033	<1.9E-03			<0.0033	<0.038		<0.38	<0.038	<3.8E-03	<7.7E-02	<7.7E-02
GP19-2004	6/2/2004	5		<5E-03	<3.9E-03	<3.9E-03	<3.9E-03		<1.97E-03	<1.97E-03		<5E-03	<1.97E-03			<5E-03	<0.039		<0.39	<0.039	<3.9E-03	<0.078	<0.078

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			ND	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	0.0075	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B88	10/16/2000	5																	<4.9		
B104	10/19/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
B88	10/16/2000	5	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	<0.005	<0.002	<0.002	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.2
B89	10/17/2000	5	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.001	<0.002	<0.002	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.2
SI-10	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
SI-11	12/19/2000	5	<0.0019	<0.0037	<0.0037	<0.0037	<0.0037	<0.0011	<0.0019	<0.0019	<0.0011	<0.11	<0.11	<0.21	<0.37		<0.11	<0.37		<0.0011	<0.19
SI-12	12/19/2000	5	<0.0019	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0012	<0.12	<0.12	<0.23	<0.38		<0.12	<0.38		<0.0012	<0.19
SI-13	12/19/2000	5	<0.0019	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0012	<0.11	<0.11	<0.23	<0.38		<0.11	<0.38		<0.0012	<0.19
SI-16	12/20/2000	5	<0.0018	0.0075	<0.0037	<0.0037	<0.0037	<0.0013	<0.0018	<0.0018	<0.0013	<0.11	<0.11	<0.22	<0.37		<0.11	<0.37		<0.0013	<0.18
SI-17	12/21/2000	5	<0.0018	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.0018	<0.0018	<0.0011	<0.11	<0.11	<0.23	<0.38		<0.11	<0.38		<0.0011	<0.18
SI-18	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0011	<0.02	<0.02	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.4
SI-21	12/21/2000	5	<0.002	<0.004	<0.004	<0.004	<0.004	<0.0012	<0.002	<0.002	<0.0012	<0.11	<0.11	<0.23	<0.39		<0.11	<0.39		<0.0012	<0.2
SI-22	12/21/2000	5	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.0019	<0.0019	<0.0011	<0.11	<0.11	<0.23	<0.38		<0.11	<0.38		<0.0011	<0.19
SI-23	10/17/2000	5	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.002	<0.002	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.2
SI-2	12/20/2000	5	<0.0018	<0.0037	<0.0037	<0.0037	<0.0037	<0.0011	<0.0018	<0.0018	<0.0011	<0.11	<0.11	<0.22	<0.37		<0.11	<0.37		<0.0011	<0.18
SI-3	12/20/2000	5	<0.0018	0.0036	<0.0036	<0.0036	<0.0036	<0.0011	<0.0018	<0.0018	<0.0011	<0.11	<0.11	<0.22	<0.36		<0.11	<0.36		<0.0011	<0.018
SI-6	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0011	<0.02	<0.02	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.4
SI-7	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
SI-8	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
B6	9/29/1998	5								<0.01											<0.5
GP11-2004	6/2/2004	5	<1.9E-03	<3.8E-03	<3.8E-03	<3.8E-03	<3.8E-03	<0.0033	<3.8E-03	<1.9E-03	<0.0033	<0.038	<0.02	<7.7E-02		<0.0033	<0.038			<0.0033	<0.1912807
GP19-2004	6/2/2004	5	<1.97E-03	<3.9E-03	<3.9E-03	<3.9E-03	<3.9E-03	<5.0E-03	<3.9E-03	<2.0E-03	<5.0E-03	<0.039	<0.02	<0.078		<5.0E-03	<0.039			<5.0E-03	<0.1972723

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft																							
Maximum Pre-Remedial Action			ND	ND	0.031	0.023	0.12	ND	ND	0.0014	6.45	ND	0.0011	ND	4.9	0.0012	ND	22	ND	ND	0.0022	ND	ND
Maximum Post-Remedial Action			ND	ND	0.031	0.023	0.12	ND	ND	0.0014	6.45	ND	0.0011	ND	4.9	0.0012	ND	22	ND	ND	0.0022	ND	ND
B89	10/17/2000	10									6.45			<2.48									
SI-10	10/17/2000	7									<4.7			<2.35									
SI-11	12/19/2000	14										<0.0029				<0.0029							
SI-12	12/20/2000	14										<0.003				<0.003							
SI-12	12/19/2000	14			<0.0033	<0.0033	<0.0033	<0.33	<0.0017	<0.0017	<4.93	<0.0033	<0.0017	<2.46		<0.0033			<0.1	<0.1	<0.0033	<0.2	<0.1
SI-16	12/20/2000	14			<0.0033	<0.0033	<0.0033	<0.33	<0.0017	<0.0017	<4.99	<0.0025	<0.0017	<2.5		<0.0025			<0.1	<0.1	<0.0033	<0.2	<0.1
SI-17	12/21/2000	14			<0.0033	<0.0033	<0.0033	<0.33	<0.0017	<0.0017	<4.93	<0.0034	<0.0017	<2.46		<0.0034			<0.095	<0.095	<0.0033	<0.19	<0.095
SI-2	12/20/2000	14			<0.0033	<0.0033	<0.0033	<0.33	<0.0017	<0.0017	<4.95	<0.0027	<0.0017	<2.48		<0.0027			<0.1	<0.1	<0.0033	<0.2	<0.1
SI-20-4	9/21/2005	6-8	<0.0023	<0.0012	<0.00034	<0.00034	0.00084J	<0.24	<0.00016	<0.00059	1.6	<0.00073	<0.00053	<0.22	<0.0034	<0.00058		4.7	<0.0066		<0.0004	<0.0099	
SI-21	12/21/2000	14										<0.003				<0.003							
SI-22	12/21/2000	14			<0.0033	<0.0033	<0.0033	<0.33	<0.0017	<0.0017	<4.97	<0.0027	<0.0017	<2.49		<0.0027			<0.1	<0.1	<0.0033	<0.2	<0.1
SI-3	12/20/2000	14										<0.0032				<0.0032							
SI-6	10/17/2000	15									<4.74			<2.37									
B104	10/19/2000	10															<0.013		<0.013	<0.013		<0.013	<0.013
B104	10/19/2000	10	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	4.7	<0.001	<0.02		<0.2	<0.001		<0.5			<0.02		
B104	10/19/2000	15	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.001	<0.02		<0.2	<0.001	<0.013	1.6	<0.013	<0.013	<0.02	<0.013	<0.013
B88	10/16/2000	10	<0.005	<0.005	<0.0038	<0.0038	<0.0038	<0.33	<0.002	<0.002	2.2	<0.005	<0.002		<0.2	<0.005	<0.013	2.7	<0.013	<0.013	<0.0038	<0.013	<0.013
B89	10/17/2000	10	<0.001	<0.001	<0.0038	<0.0038	<0.0038	<0.33	<0.002	<0.002	4.2	<0.001	<0.002		<0.2	<0.001	<0.013	4.8	<0.013	<0.013	<0.0038	<0.013	<0.013
SI-11	12/19/2000	10	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.39	<0.002	<0.002	2.8	<0.0012	<0.002			<0.0012	<0.11	14	<0.11	<0.11	<0.0039	<0.22	<0.11
SI-11	12/19/2000	15	<0.0012	<0.0012	<0.004	<0.004	<0.004	<0.4	<0.002	<0.002	2	<0.0012	<0.002			<0.0012	<0.12	22	<0.12	<0.12	<0.004	<0.23	<0.12
SI-12	12/19/2000	10	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.38	<0.0019	<0.0019	1.7	<0.0012	<0.0019			<0.0012	<0.11	3.7	<0.11	<0.11	<0.0039	<0.22	<0.11
SI-12	12/20/2000	15	<0.0011	<0.0011	<0.0038	<0.0038	<0.0038	<0.38	<0.0019	<0.0019	0.75	<0.0011	<0.0019			<0.0011	<0.11	2.5	<0.11	<0.11	<0.0038	<0.22	<0.11
SI-13	12/19/2000	10	<0.0012	<0.0012	<0.004	<0.004	<0.004	<0.39	<0.002	<0.002	3.2	<0.0012	<0.002			<0.0012	<0.12	6.2	<0.12	<0.12	<0.004	<0.24	<0.12
SI-13	12/19/2000	15	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.39	<0.002	<0.002	3.4	<0.0012	<0.002			<0.0012	<0.12	6.4	<0.12	<0.12	<0.0039	<0.24	<0.12
SI-16	12/20/2000	10	<0.0013	<0.0013	<0.0039	<0.0039	<0.0039	<0.39	<0.0019	<0.0019	2.6	<0.0013	<0.0019			<0.0013	<0.11	6	<0.11	<0.11	<0.0039	<0.22	<0.11
SI-16	12/20/2000	15	<0.0013	<0.0013	<0.0042	<0.0042	<0.0042	<0.42	<0.002	<0.002	2.5	<0.0013	<0.002			<0.0013	<0.12	9.2	<0.12	<0.12	<0.0042	<0.25	<0.12
SI-17	12/21/2000	10	<0.0012	<0.0012	<0.0039	0.016	<0.0039	<0.38	<0.0019	<0.0019	1.2	<0.0012	<0.0019			<0.0012	<0.11	4.4	<0.11	<0.11	<0.0039	<0.22	<0.11
SI-17	12/21/2000	15	<0.0011	<0.0011	<0.0038	0.023	<0.0038	<0.38	<0.0019	<0.0019	<0.29	<0.0011	<0.0019			<0.0011	<0.11	3	<0.11	<0.11	<0.0038	<0.23	<0.11
SI-18	10/17/2000	10	<0.0012	<0.0012	<0.0041	<0.0041	<0.0041	<0.33	<0.0021	<0.0021	3.3	<0.0012	<0.0021		<0.21	<0.0012	<0.013	4.8	<0.013	<0.013	<0.0041	<0.013	<0.013
SI-2	12/20/2000	10	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.39	<0.002	<0.002	3.2	<0.0012	<0.002			<0.0012	<0.12	7.4	<0.12	<0.12	<0.0039	<0.24	<0.12
SI-21	12/21/2000	10	<0.0012	<0.0012	<0.0038	0.015	<0.0038	<0.41	<0.0019	<0.0019	5.7	<0.0012	<0.0019			<0.0012	<0.12	7.2	<0.12	<0.12	<0.0038	<0.23	<0.12
SI-21	12/21/2000	15	<0.0012	<0.0012	<0.004	0.0083	<0.004	<0.39	<0.002	<0.002	1.8	<0.0012	<0.002			0.0012	<0.12	6.3	<0.12	<0.12	<0.004	<0.24	<0.12
SI-2	12/20/2000	15	<0.0012	<0.0012	<0.0041	<0.0041	<0.0041	<0.4	<0.002	<0.002	2.1	<0.0012	<0.002			<0.0012	<0.12	9	<0.12	<0.12	<0.0041	<0.24	<0.12
SI-22	12/21/2000	10	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.39	<0.0019	<0.0019	4.9	<0.0012	<0.0019			<0.0012	<0.11	6.9	<0.11	<0.11	<0.0039	<0.22	<0.11
SI-22	12/21/2000	15	<0.0012	<0.0012	<0.0041	<0.0041	<0.0041	<0.41	<0.002	<0.002	4.4	<0.0012	<0.002			<0.0012	<0.12	9.4	<0.12	<0.12	<0.0041	<0.25	<0.12
SI-23	10/17/2000	10	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1.2	<0.0012	<0.02		<0.2	<0.0012	<0.013	2.9	<0.013	<0.013	<0.02	<0.013	<0.013
SI-3	12/20/2000	10	<0.0012	<0.0012	<0.0039	<0.0039	<0.0039	<0.39	<0.002	<0.002	4.9	<0.0012	<0.002			<0.0012	<0.12	8.6	<0.12	<0.12	<0.0039	<0.24	<0.12
SI-3	12/20/2000	15	<0.0012	<0.0012	<0.0041	<0.0041	<0.0041	<0.41	<0.002	<0.002	1.2	<0.0012	<0.002			<0.0012	<0.12	6.3	<0.12	<0.12	<0.0041	<0.23	<0.12
SI-6	10/17/2000	10	<0.0011	<0.0011	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.4	<0.0011	<0.02		<0.2	<0.0011	<0.013	3.4	<0.013	<0.013	<0.02	<0.013	<0.013
SI-6	10/17/2000	15	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.7	<0.0012	<0.02		<0.2	<0.0012	<0.013	3.2	<0.013	<0.013	<0.02	<0.013	<0.013
SI-7	10/17/2000	10	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.77	<0.0012	<0.02		<0.2	<0.0012	<0.013	2.8	<0.013	<0.013	<0.02	<0.013	<0.013
SI-7	10/17/2000	15	<0.0011	<0.0011	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	1.5	<0.0011	<0.02		<0.2	<0.0011	<0.013	4.2	<0.013	<0.013	<0.02	<0.013	<0.013
SI-8	10/17/2000	10	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.6	<0.0012	<0.02		<0.2	<0.0012	<0.013	1.3	<0.013	<0.013	<0.02	<0.013	<0.013
SI-8	10/17/2000	15	<0.0012	<0.0012	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.89	<0.0012	<0.02		<0.2	<0.0012	<0.013	1.6	<0.013	<0.013	<0.02	<0.013	<0.013
B6	9/29/1998	10			<0.01	<0.01	<0.02				1.1				<0.1								

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft																					
Maximum Pre-Remedial Action			0.065	0.033	0.13	0.042	ND	ND	0.00073	0.13	ND	0.03	ND	ND	ND	ND	0.015	ND	ND	ND	6
Maximum Post-Remedial Action			0.065	0.033	0.13	0.042	ND	ND	0.00073	0.13	ND	0.03	ND	ND	ND	ND	0.015	ND	ND	ND	6
B89	10/17/2000	10																	<4.95		
SI-10	10/17/2000	7																	<4.7		
SI-11	12/19/2000	14						<0.0029												<0.0029	
SI-12	12/20/2000	14						<0.003												<0.003	
SI-12	12/19/2000	14	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017		<0.1	<0.1	<0.2	<0.33		<0.1	<1.7	<4.93	<0.0033	<0.17
SI-16	12/20/2000	14	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	<0.0025	<0.0033	<0.0017		<0.1	<0.1	<0.2	<0.33		<0.1	<1.7	<4.99	<0.0025	<0.17
SI-17	12/21/2000	14	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	<0.0034	<0.0033	<0.0017		<0.19	<0.19	<0.19	<0.33		<0.095	<1.7	<4.93	<0.0034	<0.171
SI-2	12/20/2000	14	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	<0.0027	<0.0033	<0.0017		<0.1	<0.1	<0.2	<0.33		<0.1	<1.7	<4.95	<0.0027	<0.17
SI-20-4	9/21/2005	6-8	<0.00018	<0.0003	<0.00042	<0.00036	<0.00073	<0.00073	<0.00016	<0.00036	<0.00083	<6.8E-03	<0.011		<0.04	<0.0012	<0.0077	<0.0011	<0.91	<7.2E-04	<0.014
SI-21	12/21/2000	14						<0.003												<0.003	
SI-22	12/21/2000	14	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	<0.0027	<0.0033	<0.0017		<0.1	<0.1	<0.2	<0.33		<0.1	<1.7	<4.97	<0.0027	<0.17
SI-3	12/20/2000	14						<0.0032												<0.032	
SI-6	10/17/2000	15																	<4.74		
B104	10/19/2000	10										<0.013	<0.013	<0.013			<0.013				
B104	10/19/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001				<0.33			<0.33		<0.001	<0.4
B104	10/19/2000	15	<0.02	<0.02	<0.02	0.042	<0.02	<0.001	<0.02	<0.02	<0.001	0.03	<0.013	<0.013	<0.33		0.015	<0.33		<0.001	<0.4
B88	10/16/2000	10	0.0049	<0.0038	<0.0038	<0.0038	<0.0038	<0.005	<0.002	<0.0038	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.0038
B89	10/17/2000	10	<0.0038	<0.002	<0.0038	<0.0038	<0.0038	<0.001	<0.002	<0.002	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.2
SI-11	12/19/2000	10	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.002	<0.002	<0.0012	<0.11	<0.11	<0.22	<0.39		<0.11	<0.39		<0.0012	<0.2
SI-11	12/19/2000	15	<0.002	<0.004	<0.004	<0.004	<0.004	<0.0012	<0.002	<0.004	<0.0012	<0.12	<0.12	<0.23	<0.4		<0.12	<0.4		<0.0012	<0.2
SI-12	12/19/2000	10	<0.0019	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0012	<0.11	<0.11	<0.22	<0.38		<0.11	<0.38		<0.0012	<0.19
SI-12	12/20/2000	15	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.0019	<0.0019	<0.0011	<0.11	<0.11	<0.22	<0.38		<0.11	<0.38		<0.0011	<0.19
SI-13	12/19/2000	10	<0.002	<0.004	<0.004	<0.004	<0.004	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.39		<0.12	<0.39		<0.0012	<0.2
SI-13	12/19/2000	15	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.39		<0.12	<0.39		<0.0012	<0.2
SI-16	12/20/2000	10	<0.0019	0.033	<0.0039	<0.0039	<0.0039	<0.0013	<0.0019	<0.0019	<0.0013	<0.11	<0.11	<0.22	<0.39		<0.11	<0.39		<0.0013	<0.19
SI-16	12/20/2000	15	<0.002	<0.0042	<0.0042	<0.0042	<0.0042	<0.0013	<0.002	<0.002	<0.0013	<0.12	<0.12	<0.25	<0.42		<0.12	<0.42		<0.0013	<0.2
SI-17	12/21/2000	10	<0.0019	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0012	<0.11	<0.11	<0.22	<0.38		<0.11	<0.38		<0.0012	<0.19
SI-17	12/21/2000	15	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	<0.0011	<0.0019	<0.0019	<0.0011	<0.11	<0.11	<0.23	<0.38		<0.11	<0.38		<0.0011	<0.19
SI-18	10/17/2000	10	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0012	<0.0021	<0.0021	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.21
SI-2	12/20/2000	10	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.39		<0.12	<0.39		<0.0012	<0.2
SI-21	12/21/2000	10	0.023	<0.0038	<0.0038	<0.0038	<0.0038	<0.0012	<0.0019	<0.0019	<0.0012	<0.12	<0.12	<0.23	<0.41		<0.12	<0.41		<0.0012	<0.19
SI-21	12/21/2000	15	0.0095	<0.004	<0.004	<0.004	<0.004	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.39		<0.12	<0.39		<0.0012	<0.2
SI-2	12/20/2000	15	<0.002	<0.0041	<0.0041	<0.0041	<0.0041	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.4		<0.12	<0.4		<0.0012	<0.2
SI-22	12/21/2000	10	0.0067	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0012	<0.11	<0.11	<0.22	<0.39		<0.11	<0.39		<0.0012	<0.19
SI-22	12/21/2000	15	0.007	<0.0041	<0.0041	<0.0041	<0.0041	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.25	<0.41		<0.12	<0.41		<0.0012	<0.2
SI-23	10/17/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
SI-3	12/20/2000	10	<0.002	<0.0039	<0.0039	<0.0039	<0.0039	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.24	<0.39		<0.12	<0.39		<0.0012	<0.2
SI-3	12/20/2000	15	<0.002	<0.0041	<0.0041	<0.0041	<0.0041	<0.0012	<0.002	<0.002	<0.0012	<0.12	<0.12	<0.23	<0.41		<0.12	<0.41		<0.0012	<0.2
SI-6	10/17/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0011	<0.02	<0.02	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.4
SI-6	10/17/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
SI-7	10/17/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
SI-7	10/17/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0011	<0.02	<0.02	<0.0011	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0011	<0.4
SI-8	10/17/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
SI-8	10/17/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.0012	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.0012	<0.4
B6	9/29/1998	10								<0.01											<0.5

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft Continued																							
B6	9/29/1998	15			<0.01	<0.01	<0.02				<1				<0.1								
GP11-2004	6/2/2004	10		<0.0046	<3.9E-03	<3.9E-03	<3.9E-03		<1.9E-03	<1.9E-03		<0.0046	<1.9E-03			<0.0046	<0.039		<0.39	<0.039	<3.9E-03	<0.078	<0.078
GP19-2004	6/2/2004	10															<0.041		<0.41	<0.041		<0.082	<0.082
BHS1C-9-1	7/1/2006	13-15			<7.3E-03	<7.3E-03	0.12		<0.0034	<0.013			<0.012		4.9						<8.6E-03		
BHS1C-9-2	7/1/2006	13-15			<0.0016	0.015JP	<0.0015		<0.00076	<0.0028			<0.0026		0.78						<0.0019		
BHS1C-10-1	6/30/2006	13-15			<0.00035	<0.00035	<0.00031		<0.00016	<0.00061			<5.5E-04		<0.0035						<0.00041		
BHS1C-10-1	6/30/2006	8-10			<0.00034	<0.00034	0.0022J		<0.00016	<0.00059			<0.00053		<0.0034						<0.00039		
BHS1C-10-2	6/30/2006	13-15			<0.00037	<0.00037	<0.00033		<0.00017	<0.00064			<0.00058		<0.0037						<0.00043		
BHS1C-10-2	6/30/2006	8-10			<0.00034	<0.00034	<0.00031		<0.00016	<0.00059			<0.00053		<0.0034						<0.0004		
BHS1C-15-1	6/30/2006	8-10			0.031P	0.0097PJ	0.12		<6.8E-04	0.0014J	1J		0.0011J		<0.015						0.0022JP		
BHS1C-15-2	6/30/2006	8-10			<0.00033	<0.00033	<0.0003		<0.00016	<0.00058	1.6		<0.00052		<0.0033						<0.00039		
BHS1C-15-1	6/30/2006	13-15			7.90E-03	0.0031JP	0.037		<0.00017	0.00089J	3.2		<0.00056		<0.0036						<0.00042		
BHS1C-15-2	6/30/2006	13-15			<0.00034	<0.00034	<0.00031		<0.00016	<0.0006	2.2		<0.00054		<0.0034						<0.0004		
>15 ft																							
Maximum Pre-Remedial Action			ND	ND	ND	0.027	0.025	ND	0.0022	ND	5.7	ND	ND	ND	0.54	ND	ND	16	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	0.027	0.025	ND	0.0022	ND	5.7	ND	ND	ND	0.54	ND	ND	16	ND	ND	ND	ND	ND
B104	10/19/2000	20	<0.001	<0.001	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.001	<0.02		<0.2	<0.001	<0.013	16	<0.013	<0.013	<0.02	<0.013	<0.013
B6	9/29/1998	19			<0.01	<0.01	<0.02				5.7				<0.1								
BHS1C-10-1	6/30/2006	18-20			<0.00036	<0.00036	<0.00032		<0.00017	<0.00062			<0.00056		<0.0036						<0.00042		
BHS1C-10-2	6/30/2006	18-20			<0.00035	<0.00035	<0.00032		<0.00016	<0.00061			5.500001E-(		<0.0035						<0.00041		
BHS1C-15-1	6/30/2006	18-20			<0.00036	<0.00036	<0.00033		<0.00017	<0.00063	2		<0.00057		<0.0036						<0.00043		
BHS1C-15-2	6/30/2006	18-20			<0.00036	<0.00036	<0.00033		<0.00017	<0.00063	<0.79		<0.00057		<0.0036						<0.00042		
BHS1C-5-1	7/7/2006	18-20			<0.00034	<0.00034	<0.00031		<0.00016	<0.00059			<0.00054		<0.0034						<0.0004		
BHS1C-5-2	7/7/2006	18-20			<0.0013	<0.0013	<0.0012		<0.00063	<0.0023			<0.0021		0.22P						<0.0016		
BHS1C-9-1	7/1/2006	18-20			<0.0014	<0.0014	0.019		0.0022J	<0.0024			<0.0022		<0.014						<0.0016		
BHS1C-9-2	7/1/2006	18-20			<0.0015	0.027P	0.025		<0.00071	<0.0026			<0.0024		0.54						<0.0018		

Table 4C Soil Data for Area-Averaging - Drexel West Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft Continued																					
B6	9/29/1998	15								<0.01											<0.5
GP11-2004	6/2/2004	10	<1.9E-03	<3.9E-03	<3.9E-03	<3.9E-03	<3.9E-03	<0.0046	<3.9E-03	<1.9E-03	<0.0046	<0.039	<0.02	<0.078		<0.0046	<0.039			<0.0046	<0.1937309
GP19-2004	6/2/2004	10										<0.041	<0.021	<0.082			<0.041				
BHS1C-9-1	7/1/2006	13-15	6.5E-02P	<0.0066	0.13	<7.8E-03	<0.016		<0.0034	0.13											6
BHS1C-9-2	7/1/2006	13-15	<0.00087	<0.0015	<0.002	<0.0017	<0.0035		<0.00076	<0.0017											<6.5E-02
BHS1C-10-1	6/30/2006	13-15	<0.00019	<0.00031	<0.00043	<0.00037	<0.00076		<0.00016	<0.00037											<0.014
BHS1C-10-1	6/30/2006	8-10	0.062PE	0.00046J	<0.00042	<0.00036	<0.00073		<0.00016	<0.00036											<0.014
BHS1C-10-2	6/30/2006	13-15	<0.0002	<0.00033	<0.00045	<0.00039	<0.0008		<0.00017	<0.00039											<0.015
BHS1C-10-2	6/30/2006	8-10	<0.00018	<0.00031	<0.00042	<0.00036	<0.00074		<0.00016	<0.00036											<0.014
BHS1C-15-1	6/30/2006	8-10	<0.00078	<0.0013	<0.0018	<0.0016	<0.0032		0.00073JP	<0.0016											<0.058
BHS1C-15-2	6/30/2006	8-10	0.00084J	<0.0003	<0.00041	<0.00036	7.200001E-0		<0.00016	<0.00036											<0.013
BHS1C-15-1	6/30/2006	13-15	<0.00019	0.0025J	<0.00044	<0.00038	<0.00078		<0.00017	<0.00038											<0.014
BHS1C-15-2	6/30/2006	13-15	<0.00018	<0.00031	<0.00042	<0.00037	<0.00075		<0.00016	<0.00037											<0.014
>15 ft																					
Maximum Pre-Remedial Action			0.021	ND	0.029	ND	ND	ND	ND	0.0065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7
Maximum Post-Remedial Action			0.021	ND	0.029	ND	ND	ND	ND	0.0065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.7
B104	10/19/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.4
B6	9/29/1998	19								<0.01											<0.5
BHS1C-10-1	6/30/2006	18-20	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077		<0.00017	<0.00038											<0.014
BHS1C-10-2	6/30/2006	18-20	<0.00019	<0.00032	<0.00043	<0.00037	<0.00076		<0.00016	<0.00037											<0.014
BHS1C-15-1	6/30/2006	18-20	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04		<0.00017	<0.00039											<0.015
BHS1C-15-2	6/30/2006	18-20	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04		<0.00017	<0.00039											<0.015
BHS1C-5-1	7/7/2006	18-20	<0.00018	<0.00031	<0.00042	<0.00036	<0.00074		<0.00016	<0.00036											<0.014
BHS1C-5-2	7/7/2006	18-20	<7.2E-04	<0.0012	<0.0017	<0.0014	<0.0029		<0.00063	<0.0014											1
BHS1C-9-1	7/1/2006	18-20	<0.00075	<0.0013	9.8E-03JP	<0.0015	<0.003		<0.00065	0.0027J											0.89
BHS1C-9-2	7/1/2006	18-20	0.021P	<0.0014	0.029	<0.0016	<0.0033		<0.00071	0.0065J											1.7

To be excavated as part of remedial action plan

Bold: Exceeds residential RRS

Qualifiers:

J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

Table 4D Soil Data for Area-Averaging - North Swale Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	ND	0.06	7	0.04	ND	ND	ND	4.04	ND	ND	ND	0.02	ND	ND	3.6	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	0.06	7	0.04	ND	ND	ND	4.04	ND	ND	ND	0.02	ND	ND	3.6	ND	ND	ND	ND	ND
B77	10/5/2000	0	<0.0015	<0.0015				<0.33			2.8	<0.0015				<0.0015		7.3					
B77	12/18/2000	0			<0.05	<0.05	<0.05		<0.05	<0.05			<0.05		<0.5		<0.24		<0.24	<0.24	<0.05	<0.48	<0.24
B78	10/5/2000	0	<0.005	<0.005				<0.33			1.2	<0.005				<0.005		3.6					
B78	12/18/2000	0			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B79	10/5/2000	0	<0.0012	<0.0012				<0.33			0.63	<0.0012				<0.0012		3.4					
B79	12/18/2000	0			<0.027	<0.027	<0.027		<0.027	<0.027			<0.027		<0.27		<0.13		<0.13	<0.13	<0.027	<0.27	<0.13
B80A	10/4/2000	0	<0.001	<0.001				<0.33			<0.25	<0.001				<0.001		1.1					
B80A	12/18/2000	0			<0.027	<0.027	<0.027		<0.027	<0.027			<0.027		<0.27		<0.14		<0.14	<0.14	<0.027	<0.27	<0.14
B81A	10/4/2000	0	<0.001	<0.001				<0.33			0.48	<0.001				<0.001		1.7					
B81A	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.23	<0.11
B82A	10/4/2000	0	<0.001	<0.001				<0.33			1.3	<0.001				<0.001		2.9					
B82A	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.22	<0.11
B83A	10/4/2000	0	<0.001	<0.001				<0.33			2.2	<0.001				<0.001		3.2					
B83A	12/18/2000	0			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B84	10/4/2000	0	<0.001	<0.001				<0.33			2.6	<0.001				<0.001		2.4					
B84	12/18/2000	0			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.11		<0.11	<0.11	<0.024	<0.22	<0.11
B21	11/2/1998	0			<0.00333	<0.00333	<0.00333				1.6				<0.00166								
B34	1/18/1999	1			<0.00333	<0.00333	<0.00333				1.56				0.01								
B34	1/18/1999	0			0.003	0.01	<0.00333				2.4				0.02								
B36	1/18/1999	1			<0.00333	0.01	<0.00333				3.07				<0.00166								
B36	1/18/1999	0			<0.00333	0.01	<0.00333				2.04				0.007								
B38	1/18/1999	1			<0.00333	<0.00333	<0.00333				4.04				<0.00166								
B38	1/18/1999	0			<0.00333	<0.00333	<0.00333				3.88				<0.00166								
B40	1/18/1999	1			0.03	<0.00333	<0.00333				2.48				0.02								
B40	1/18/1999	0			<0.00333	<0.00333	<0.00333				2.63				<0.00166								
B42	1/18/1999	1			0.02	7	<0.00333				<0.96				<0.00166								
B42	1/18/1999	0			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B44	1/18/1999	1			<0.00333	<0.00333	<0.00333				<0.97				<0.00166								
B44	1/18/1999	0			0.03	<0.01665	0.03				<0.95				<0.00832								
B46	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.98				<0.00166								
B46	1/19/1999	0			<0.01665	<0.01665	<0.01665				<0.95				<0.00832								
B48	1/19/1999	1			<0.00333	<0.00333	<0.00333				<1.01				<0.00166								
B48	1/19/1999	0			0.013	0.02	<0.00333				1.53				0.02								
B64	2/5/1999	1			<0.00333	<0.00333	<0.00333				1.15				<0.00166								
B64	2/5/1999	0			0.06	0.12	0.04				<0.95				<0.08325								

Table 4D Soil Data for Area-Averaging - North Swale Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			0.055	ND	0.059	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			0.055	ND	0.059	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B77	10/5/2000	0						<0.0015			<0.0015				<0.33			<0.33		<0.0015	
B77	12/18/2000	0	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05		<0.24	<0.24	<0.48			<0.24				<1
B78	10/5/2000	0						<0.005			<0.005				<0.33			<0.33		<0.005	
B78	12/18/2000	0	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.49
B79	10/5/2000	0						<0.0012			<0.0012				<0.33			<0.33		<0.0012	
B79	12/18/2000	0	<0.027	<0.027	<0.027	<0.027	<0.027		<0.027	<0.027		<0.13	<0.13	<0.27			<0.13				<0.54
B80A	10/4/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B80A	12/18/2000	0	0.055	<0.027	<0.027	<0.027	<0.027		<0.027	<0.027		<0.14	<0.14	<0.27			<0.14				<0.55
B81A	10/4/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B81A	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.23			<0.11				<0.46
B82A	10/4/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B82A	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.22			<0.11				<0.46
B83A	10/4/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B83A	12/18/2000	0	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.47
B84	10/4/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B84	12/18/2000	0	<0.024	<0.024	0.059	<0.024	<0.024		<0.024	<0.024		<0.11	<0.11	<0.22			<0.11				<0.47
B21	11/2/1998	0								<0.00166											<0.1665
B34	1/18/1999	1								<0.00166											<0.1665
B34	1/18/1999	0								<0.00166											<0.1665
B34	1/18/1999	1								<0.00166											<0.1665
B36	1/18/1999	0								<0.00166											<0.1665
B38	1/18/1999	1								<0.00166											<0.1665
B38	1/18/1999	0								<0.00166											<0.1665
B40	1/18/1999	1								<0.00166											<0.1665
B40	1/18/1999	0								<0.00166											<0.1665
B42	1/18/1999	1								<0.00166											<0.1665
B42	1/18/1999	0								<0.00166											<0.1665
B44	1/18/1999	1								<0.00166											<0.1665
B44	1/18/1999	0								<0.00832											<0.8325
B46	1/19/1999	1								<0.00166											<0.1665
B46	1/19/1999	0								<0.00832											<0.8325
B48	1/19/1999	1								<0.00166											<0.1665
B48	1/19/1999	0								<0.00166											<0.1665
B64	2/5/1999	1								<0.00166											<0.1665
B64	2/5/1999	0								<0.08325											<8.325

Table 4D Soil Data for Area-Averaging - North Swale Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	5.34	ND	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	5.34	ND	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND
B77	10/5/2000	5	<0.001	<0.001				<0.33			<0.25	<0.001				<0.001		1.6					
B77	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.23	<0.12
B78	10/5/2000	5	<0.001	<0.001				<0.33			<0.25	<0.001				<0.001		2.1					
B78	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.11		<0.11	<0.11	<0.024	<0.23	<0.11
B79	10/5/2000	5	<0.0011	<0.0011				<0.33			0.42	<0.0011				<0.0011		1.8					
B79	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B80A	10/4/2000	5	<0.001	<0.001							1.5	<0.001				<0.001		2.2					
B80A	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B81A	10/4/2000	5	<0.001	<0.001							4.9	<0.001				<0.001		3.3					
B81A	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B82A	10/4/2000	5	<0.001	<0.001							0.64	<0.001				<0.001		3.8					
B82A	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.23	<0.12
B83A	10/4/2000	5	<0.001	<0.001							<0.25	<0.001				<0.001		1.7					
B83A	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.23	<0.12
B84	10/4/2000	5	<0.001	<0.001				<0.33			0.58	<0.001				<0.001		2.1					
B84	12/18/2000	5			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.12		<0.12	<0.12	<0.023	<0.23	<0.12
B21	11/2/1998	5			<0.00333	<0.00333	<0.00333				5.34				<0.00166								

Table 4D Soil Data for Area-Averaging - North Swale Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B77	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B77	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.23			<0.12				<0.48
B78	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B78	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.11	<0.11	<0.23			<0.11				<0.48
B79	10/5/2000	5						<0.0011			<0.0011				<0.33			<0.33		<0.0011	
B79	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B80A	10/4/2000	5						<0.001			<0.001									<0.001	
B80A	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.47
B81A	10/4/2000	5						<0.001			<0.001									<0.001	
B81A	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B82A	10/4/2000	5						<0.001			<0.001									<0.001	
B82A	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.23			<0.12				<0.48
B83A	10/4/2000	5						<0.001			<0.001									<0.001	
B83A	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.23			<0.12				<0.48
B84	10/4/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B84	12/18/2000	5	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.12	<0.12	<0.23			<0.12				<0.46
B21	11/2/1998	5								<0.00166											<0.1665

Qualifiers:

	To be excavated as part of remedial action plan
Bold:	**Exceeds residential RRS**
J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

Table 4E Soil Data for Area-Averaging - South Swale Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	ND	74	19.31	273	ND	0.32	ND	57.8	ND	0.0055	ND	57	0.006	690.0001	18100	ND	ND	ND	8	ND
Maximum Post-Remedial Action			ND	ND	5.33	1.27	0.22	ND	ND	ND	14.6	ND	0.0055	ND	10.0	ND	ND	16.4	ND	ND	ND	ND	ND
B31	1/18/1999	0			<0.00333	<0.00333	<0.00333				4.43U				<0.00166								
B31	1/18/1999	1			<0.00333	0.03	<0.00333				3.37				<0.00166								
B32	1/18/1999	0			0.02	0.02	<0.01665				3.63				0.06								
B32	1/18/1999	1			5.33	1.27	<0.0333				11.1				**9.99**								
B33	1/18/1999	0			1.3	0.05	<0.333				8.67				3.57								
B33	1/18/1999	1			0.028	0.09	<0.0666				4.66				0.75								
B35	1/18/1999	0			3	0.93	<0.333				12.1				5.73								
B35	1/18/1999	1			0.02	<0.00333	<0.00333				4.41				0.15								
B37	1/18/1999	0			5.12	0.09	<0.666				10.5				6.99								
B37	1/18/1999	1			0.06	<0.0333	<0.0333				2.45				0.07								
B39	1/18/1999	0			2.13	<0.666	<0.666				14.6				2.2								
B39	1/18/1999	1			0.05	<0.01665	0.04				4.95				0.03								
B41	1/18/1999	0			5.42	2.26	4.86				14.1				2.46								
B41	1/18/1999	1			**19.31**	3.13	1.13				**39.7**				3.73								
B43	1/18/1999	0			**57.28**	12.65	**35.96**				**57.8**				**56.61**								
B43	1/18/1999	1			**42.62**	**19.31**	**20.65**				**45.5**				**46.62**								
B65	2/5/1999	0			2.73	0.67	0.999				3.24				<0.333								
B65	2/5/1999	1			**23.31**	<6.66	**273**				5.47				<3.33								
B65A	10/3/2000	0	<0.001	<0.001				<0.33			0.5	<0.001				<0.001		0.92					
B65A	12/18/2000	0			<0.023	0.039	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.22	<0.11
B66	10/3/2000	0	<0.001	<0.001				<0.33			1.4	<0.001				<0.001		1.5					
B66	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.22	<0.11
B67	10/3/2000	0	<0.0011	<0.0011				<0.33			1	<0.0011				<0.0011		1.8					
B67	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.23	<0.11
B68	10/3/2000	0	<0.001	<0.001				<0.33			2.9	<0.001				<0.001		6.2					
B68	12/18/2000	0			<0.025	<0.025	<0.025		<0.025	<0.025			<0.025		<0.25		<0.12		<0.12	<0.12	<0.025	<0.24	<0.12
B69	10/3/2000	0	<0.001	<0.001				<0.33			0.58	<0.001				<0.001		0.74					
B69	12/18/2000	0			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B70	10/3/2000	0	<0.001	<0.001				<0.33			1.3	<0.001				<0.001		2.2					
B70	12/18/2000	0			<0.025	<0.025	<0.025		<0.025	<0.025			<0.025		<0.25		<0.12		<0.12	<0.12	<0.025	<0.24	<0.12
B71	10/3/2000	0	<0.001	<0.001				<0.33			0.62	<0.001				<0.001		2.5					
B71	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.22	<0.11
B72	10/3/2000	0	<0.001	<0.001				<0.33			0.52	<0.001				<0.001		1.4					
B72	12/18/2000	0			<0.022	0.036	0.036		<0.022	<0.022			<0.022		<0.22		<0.11		<0.11	<0.11	<0.022	<0.22	<0.11
B73	10/3/2000	0	<0.0011	<0.0011				<0.33			1.5	<0.0011				<0.0011		2.7					
B73	12/18/2000	0			<0.022	<0.022	<0.022		<0.022	<0.022			<0.022		<0.22		<0.11		<0.11	<0.11	<0.022	<0.21	<0.11
B74	10/3/2000	0	<0.001	<0.001				<0.33			1.8	<0.001				<0.001		3.3					
B74	12/18/2000	0			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.22	<0.11
B75A	10/3/2000	0	<0.005	<0.005	<2	<2	<2	<3.3	<2	<2	6	<0.005	<2		<2	0.006	9.8	670	<0.65	<0.65	<2	<0.65	<0.65
B76	10/5/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	6.6	<0.005	<0.02		<0.2	<0.005	0.035	**2100**	<0.013	<0.013	<0.02	0.022	<0.013
BHS-27	6/30/2006	0-2			<0.00032	0.003J P	0.0008J P		<0.00015	5.500001E-(	0.96J		<0.0005		<0.0032						<0.00037		
BHS-28	6/30/2006	0-2			<0.033	8.00E-02	0.22J		<0.015	<0.056	1.2		0.0055J		<0.33						<0.038		
HA-9	3/7/1995	0-0.5			**74**	**19U**	**140**				8.6		<2.5		<25								
PFR1	4/15/2004	0-0.5		<0.0085	<0.0071	0.0075	<0.0071		<0.0035	<0.0035	<7.1	<0.0085	<0.0035	<3.6		<0.0085	<7.7E-02	16.4	<0.77	<7.7E-02	<0.0071	<0.15	<0.15
PFR10	4/16/2004	0-0.5		<9.8E-03	3.1	<0.641	0.48		<0.0321	<0.0321	10.6	<9.8E-03	<0.0321	<3.5		<9.8E-03	5.8	**2900**	<9.4	<0.94	<0.0641	**8**	<1.9
PFR11	4/16/2004	0-0.5		<0.0058	1.3	0.39	0.63		<0.0023	<0.0023	<4.7	<0.0058	<0.0023	<2.3		<0.0058	<0.56	117	<5.6	<0.56	<0.0045	**2.6**	<1.1
PFR2	4/15/2004	0-0.5		<0.0195	2.4	<1.19	<1.19		0.32	<0.0059	14.6	<0.0195	<0.0059	<6.9		<0.0195	2.9	**18100**	<10	<1	<0.0119	<2.1	<2.1
PFR8	4/16/2004	0-0.5		<6.8E-03	1.1	<0.0545	9.700001		<0.0027	<0.0027	16.3	<6.8E-03	<0.0027	<2.2		<6.8E-03	**690.0001**	613	<110	<11	<0.0055	<23	<23

Table 4E Soil Data for Area-Averaging - South Swale Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			47	12	0.75	ND	ND	ND	ND	ND	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	587
Maximum Post-Remedial Action			5.1	0.77	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3
B31	1/18/1999	0								<0.00166											<0.1665
B31	1/18/1999	1								<0.00166											<0.1665
B32	1/18/1999	0								<0.00832											<0.8325
B32	1/18/1999	1								<0.1665											<16.65
B33	1/18/1999	0								<0.1665											<16.65
B33	1/18/1999	1								<0.0333											<3.33
B35	1/18/1999	0								<0.1665											<16.65
B35	1/18/1999	1								<0.0332											<3.33
B37	1/18/1999	0								<0.333											<33.3
B37	1/18/1999	1								<0.01665											<1.665
B39	1/18/1999	0								<0.333											<33.3
B39	1/18/1999	1								<0.00832											<0.8325
B41	1/18/1999	0								<0.333											<33.3
B41	1/18/1999	1								<0.333											<33.3
B43	1/18/1999	0								<3.33											**586.7**
B43	1/18/1999	1								<3.33											**339.7**
B65	2/5/1999	0								<0.333											<33.3
B65	2/5/1999	1								<3.33											<333
B65A	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B65A	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.22			<0.11				<0.45
B66	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B66	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.22			<0.11				<0.46
B67	10/3/2000	0						<0.0011			<0.0011				<0.33			<0.33		<0.0011	
B67	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.23			<0.11				<0.46
B68	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B68	12/18/2000	0	<0.025	<0.025	<0.025	<0.025	<0.025		<0.025	<0.025		<0.12	<0.12	<0.24			<0.12				<0.5
B69	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B69	12/18/2000	0	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B70	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B70	12/18/2000	0	<0.025	<0.025	0.03	<0.025	<0.025		<0.025	<0.025		<0.12	<0.12	<0.24			<0.12				<0.51
B71	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B71	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.22			<0.11				<0.46
B72	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B72	12/18/2000	0	<0.022	<0.022	<0.022	<0.022	<0.022		<0.022	<0.022		<0.11	<0.11	<0.22			<0.11				0.46
B73	10/3/2000	0						<0.0011			<0.0011				<0.33			<0.33		<0.0011	
B73	12/18/2000	0	<0.022	<0.022	<0.022	<0.022	<0.022		<0.022	<0.022		<0.11	<0.11	<0.21			<0.11				<0.45
B74	10/3/2000	0						<0.001			<0.001				<0.33			<0.33		<0.001	
B74	12/18/2000	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.22			<0.11				<0.45
B75A	10/3/2000	0	**47**	**12**	<2	<2	<2	<0.005	<2	<2	0.015	<0.65	<0.65	<0.65	<3.3		<0.65	<3.3		<0.005	<40
B76	10/5/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
BHS-27	6/30/2006	0-2	<0.00017	<0.00029	<0.00039	<0.00034	<0.00069		<0.00015	<0.00034											<0.013
BHS-28	6/30/2006	0-2	5.1DE	0.77	0.7500001	<0.035	<0.071		<0.015	<0.035											1.3
HA-9	3/7/1995	0-0.5								<2.5											<100
PFR1	4/15/2004	0-0.5	<0.0035	<0.0071	<0.0071	<0.0071	<0.0071	<0.0085	<0.0071	<0.0035	<0.0085	<7.7E-02	<0.04	<0.15		<0.0085	<7.7E-02		<7.1	<0.0085	<0.355
PFR10	4/16/2004	0-0.5	17	<0.0641	<0.0641	<0.0641	<0.0641	<9.8E-03	<0.0641	<0.0321	<9.8E-03	<0.9400001	<0.48	<1.9		<9.8E-03	<0.9400001		<6.9	<9.8E-03	<3.21
PFR11	4/16/2004	0-0.5	0.23	<0.0045	<0.0045	<0.0045	<0.0045	<0.0058	<0.0045	<0.0023	<0.0058	<0.56	<0.29	<1.1		<0.0058	<0.56		<4.7	<0.0058	<2.27
PFR2	4/15/2004	0-0.5	9	<0.119	<0.119	<0.0119	<0.0119	<0.0195	<0.0119	<0.0059	0.29	<1	<0.53	<2.1		<0.0195	<1		<13.9	<0.0195	<0.595
PFR8	4/16/2004	0-0.5	12	<0.0055	<0.0055	<0.0055	<0.0055	<6.8E-03	<0.0055	<0.0027	<6.8E-03	<11	<5.9	<23		<6.8E-03	<11		<4.4	<6.8E-03	<2.73

Table 4E Soil Data for Area-Averaging - South Swale Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			ND	ND	0.004	ND	ND	ND	ND	ND	4.1	ND	ND	ND	ND	ND	ND	5.4	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	0.0023	ND	ND	ND	ND	ND	4.1	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND	ND
B65A	10/3/2000	5	<0.001	<0.001				<0.33			2.7	<0.001				<0.001		2.5					
B65A	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.11		<0.11	<0.11	<0.024	<0.22	<0.11
B66	10/3/2000	5	<0.001	<0.001				<0.33			1.9	<0.001				<0.001		1.2					
B66	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B67	10/3/2000	5	<0.001	<0.001				<0.33			1.8	<0.001				<0.001		2.3					
B67	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B68	10/3/2000	5	<0.001	<0.001				<0.33			1.2	<0.001				<0.001		1.4					
B68	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.11		<0.11	<0.11	<0.024	<0.23	<0.11
B69	10/3/2000	5	<0.001	<0.001				<0.33			1.7	<0.001				<0.001		1.5					
B69	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B70	10/3/2000	5	<0.001	<0.001				<0.33			1.8	<0.001				<0.001		1.2					
B70	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B71	10/5/2000	5	<0.001	<0.001				<0.33			0.84	<0.001				<0.001		1.8					
B71	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B72	10/5/2000	5	<0.001	<0.001				<0.33			1.3	<0.001				<0.001		1.8					
B72	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B73	10/5/2000	5	<0.001	<0.001				<0.33			2.1	<0.001				<0.001		2.2					
B73	12/18/2000	5			<0.024	<0.024	<0.024		<0.024	<0.024			<0.024		<0.24		<0.12		<0.12	<0.12	<0.024	<0.24	<0.12
B74	10/5/2000	5	<0.001	<0.001				<0.33			1.3	<0.001				<0.001		3.2					
B74	12/18/2000	5			<0.023	<0.023	<0.023		<0.023	<0.023			<0.023		<0.23		<0.11		<0.11	<0.11	<0.023	<0.23	<0.11
BHS-27	6/30/2006	3-5			<0.00035	<0.00035	<0.00031		<0.00016	<0.0006	4.1		<5.5E-04		<0.0035						<0.00041		
BHS-28	6/30/2006	3-5			0.0023J	<0.00035	<0.00031		<0.00016	<0.0006	3		<5.5E-04		<0.0035						<0.00041		

Table 4E Soil Data for Area-Averaging - South Swale Exposure Domain

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			0.0021	0.002	0.0026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			0.0021	0.002	0.0026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B65A	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B65A	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.11	<0.11	<0.22			<0.11				<0.47
B66	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B66	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.47
B67	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B67	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B68	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B68	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.11	<0.11	<0.23			<0.11				<0.48
B69	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B69	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.49
B70	10/3/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B70	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.49
B71	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B71	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B72	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B72	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.48
B73	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B73	12/18/2000	5	<0.024	<0.024	<0.024	<0.024	<0.024		<0.024	<0.024		<0.12	<0.12	<0.24			<0.12				<0.49
B74	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B74	12/18/2000	5	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.23			<0.11				<0.46
B74	10/5/2000	5						<0.001			<0.001				<0.33			<0.33		<0.001	
B74	12/18/2000	5	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023		<0.11	<0.11	<0.23			<0.11				<0.46
BHS-27	6/30/2006	3-5	<0.00019	<0.00031	<0.00043	<0.00037	<0.00075		<0.00016	<0.00037											<0.014
BHS-28	6/30/2006	3-5	0.0021	0.002J	0.0026JP	<0.00037	<0.00076		<0.00016	<0.00037											<0.014

To be excavated as part of remedial action plan

Bold: Exceeds residential RRS

Qualifiers:

J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft																							
Maximum Pre-Remedial Action			ND	ND	0.04	0.093	0.096	ND	0	0.0022	4.9	0	ND	0	1.1	0.03	3.8	31.2	0	1.127	0.047	0.056	ND
Maximum Post-Remedial Action			ND	ND	0.34	0.2	2.1	ND	0.0048	0.0022	4.9	0.0072	ND	0.4	1.1	0.03	3.8	33	0.0064	1.127	0.047	0.056	ND
B107	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B107	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B107	4/4/2001	0	<0.0059	<0.0059	<0.024	<0.024	<0.024		<0.024	<0.024	1.8	<0.0059	<0.024		<0.24	<0.0059		5.4			<0.024		
B107	4/4/2001	0						<0.39															
B108	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B108	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B108	4/4/2001	0			<0.028	<0.028	<0.028		<0.028	<0.028	0.9		<0.028		<0.28			2.9			<0.028		
B109	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B109	4/4/2001	0															<0.028		<0.028	<0.028		<0.028	<0.028
B109	4/4/2001	0			<0.023	<0.023	<0.023		<0.023	<0.023	<0.29		<0.023		<0.23			2.4			<0.023		
B15	9/30/1998	0			<0.01	<0.01	<0.02				<1				<0.1								
B50	1/19/1999	0			<0.00333	<0.00333	<0.00333				<0.97				<0.00166								
B50	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.99				<0.00166								
B51	1/19/1999	0			<0.00333	<0.00333	<0.00333				<0.97				<0.00166								
B51	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.98				<0.00166								
B52	1/19/1999	0			<0.00333	<0.00333	<0.00333				1.56				<0.00166								
B52	1/19/1999	1			<0.00333	<0.00333	<0.00333				<1				<0.00166								
B53	1/19/1999	0			<0.00333	0.005	<0.00333				<1.01				<0.00166								
B53	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.97				<0.00166								
B54	1/19/1999	0			<0.00333	0.007	<0.00333				<0.00333				<0.00166								
B54	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.95				<0.00166								
B55	1/19/1999	0			<0.00333	<0.00333	<0.00333				<0.98				<0.00166								
B55	1/19/1999	1			<0.00333	<0.00333	<0.00333				<1.02				<0.00166								
B56	1/19/1999	0			0.004	0.014	0.004				<0.99				<0.00166								
B56	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.95				<0.00166								
B57	1/19/1999	0			<0.00333	0.007	<0.00333				1.71				<0.00166								
B57	1/19/1999	1			<0.00333	<0.00333	<0.00333				<1.02				<0.00166								
B58	1/19/1999	0			0.04	<0.00333	<0.00333				<0.97				<0.00166								
B58	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.96				<0.00166								
B60	1/19/1999	1			<0.00333	<0.00333	<0.00333				<0.98				<0.00166								
B62	1/19/1999	0			<0.00333	<0.00333	<0.00333				<1.01				<0.00166								
B62	1/19/1999	1			<0.00333	<0.00333	<0.00333				<1				<0.00166								
B85	10/16/2000	0	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.56	<0.005	<0.02		<0.2	<0.005	<0.013	2.6	<0.013	<0.013	<0.02	<0.013	<0.013
B90	10/17/2000	0	<0.001	<0.001	<0.0036	0.021	0.018	<0.33	<0.0018	<0.0018	1.5	<0.001	<0.0018		1.1	<0.001	<0.013	5	<0.013	<0.013	<0.0036	<0.013	<0.013
B91	10/17/2000	0	<0.001	<0.001	<0.0038	<0.0038	<0.0038	<0.33	<0.0019	<0.0019	1.4	<0.001	<0.0019		<0.19	<0.001	<0.013	4.4	<0.013	<0.013	<0.0038	<0.013	<0.013
D01	3/10/2004	1.5-2			<3.88E-03	<3.88E-03	<3.88E-03	<0.0083	<1.95E-03	<1.95E-03	<4.19		<1.95E-03	<2.09			0.02633	7.87	<0.01667	0.03767	<3.88E-03	<0.01667	<0.01667
D03	3/10/2004	1.5-2		<4.8E-03	<3.94E-03	<3.94E-03	<3.94E-03	<0.0083	<1.98E-03	0.0022	4.9	<4.8E-03	<1.98E-03	<1.72		0.03	3.8	12.4	<0.01667	1.127	<3.94E-03	<0.01667	<0.01667
D04	3/10/2004	1.5-2		<9.5E-03	<4.1E-03	<4.1E-03	<4.1E-03	<0.0083	<2.0E-02	<2.0E-02	<4.58	<9.5E-03	<2.0E-02	<2.29		0.017	0.3433	30.7	<0.01667	0.08267	0.047	0.056U	<0.01667
D05	3/10/2004	0.3-1		<3.6E-03	0.03	<3.6E-03	0.096	<0.0083	<1.82E-03	<1.82E-03	<4.98	<3.6E-03	<1.82E-03	<2.49		<3.6E-03	0.608	31.2	<0.01661	0.1615	<3.6E-03	<0.01661	<0.01661
D06	3/10/2004	1.5-2		<3.6E-03	<3.8E-02	<3.8E-02	<3.8E-02	<0.0083	<1.93E-02	<1.93E-02	<4.03	<3.61E-03	<1.93E-02	<2.01		0.0039	<0.01667	25.8	<0.01667	<0.01667	<3.8E-02	<0.01667	<0.01667
D07	3/10/2004	1.5-2		<3.98E-03	<3.62E-03	<3.62E-03	<3.62E-03	<0.0083	<1.8E-03	<1.8E-03	<4.32	<3.98E-03	<1.8E-03	<2.16		<3.98E-03	<0.01667	3.41	<0.01667	<0.01667	<3.62E-03	<0.01667	<0.01667
HA-1_MWH	10/5/2005	0-1	<0.0026	<0.0014	<0.00031	0.0013J	0.0017J	<0.22	<0.00014	<0.00054	<0.65	<0.00084	<0.00049	<0.21	<0.0031	<0.00067		1.8J	<0.0058		<0.00036	<8.8E-03	
HA-1_MWH	10/5/2005	0-1	<0.0031	<0.0016	<0.00034	0.00082J	0.00059J	<0.24	<0.00016	<0.00058	2.6	<9.9E-04	<0.00053	<0.21	<0.0034	<7.9E-04		2.7	<0.0058		<0.00039	<8.8E-03	
HA-1_MWH	10/5/2005	0-1	<0.0028	<0.0014	<0.00031	0.00086J	8.1E-04J P	<0.22	<0.00014	<0.00054	<0.67	<0.00089	<0.00049	<0.22	<0.0031	<0.00071		1.7J	<0.0058		<0.00036	<8.8E-03	
HA-11	2/14/2012	2															<0.0025			<0.0025			

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft																					
Maximum Pre-Remedial Action			2.5	1.20000005	0.74	0.0088	0.0042	0.011	0.031	0	9	ND	ND	ND	ND	9.7	0	0	ND	ND	0.55000001
Maximum Post-Remedial Action			2.5	1.60000002	1	0.3	0.012	0.011	0.031	0.0033	9	ND	ND	ND	ND	9.7	0.013	0.0096	ND	ND	12
B107	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B107	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B107	4/4/2001	0	<0.024	<0.024	<0.024	<0.024	<0.024	<0.0059	<0.024	<0.024	<0.0059									<0.0059	<0.47
B107	4/4/2001	0													<0.39			<0.39			
B108	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B108	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B108	4/4/2001	0	<0.028	<0.028	<0.028	<0.028	<0.028		<0.028	<0.028											<0.57
B109	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B109	4/4/2001	0										<0.028	<0.028	<0.028			<0.028				
B109	4/4/2001	0	<0.023	<0.023	<0.023	<0.023	<0.023		<0.023	<0.023											<0.46
B15	9/30/1998	0								<0.01											<0.5
B50	1/19/1999	0								<0.00166											<0.1665
B50	1/19/1999	1								<0.00166											<0.1665
B51	1/19/1999	0								<0.00166											<0.1665
B51	1/19/1999	1								<0.00166											<0.1665
B52	1/19/1999	0								<0.00166											<0.1665
B52	1/19/1999	1								<0.00166											<0.1665
B53	1/19/1999	0								<0.00166											<0.1665
B53	1/19/1999	1								<0.00166											<0.1665
B53	1/19/1999	0								<0.00166											<0.1665
B53	1/19/1999	1								<0.00166											<0.1665
B54	1/19/1999	0								<0.00166											<0.1665
B54	1/19/1999	1								<0.00166											<0.1665
B55	1/19/1999	0								<0.00166											<0.1665
B55	1/19/1999	1								<0.00166											<0.1665
B56	1/19/1999	0								<0.00166											<0.1665
B56	1/19/1999	1								<0.00166											<0.1665
B57	1/19/1999	0								<0.00166											<0.1665
B57	1/19/1999	1								<0.00166											<0.1665
B58	1/19/1999	0								<0.00166											<0.1665
B58	1/19/1999	1								<0.00166											<0.1665
B60	1/19/1999	1								<0.00166											<0.1665
B62	1/19/1999	0								<0.00166											<0.1665
B62	1/19/1999	1								<0.00166											<0.1665
B85	10/16/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B90	10/17/2000	0	<0.0018	<0.0036	<0.0036	0.0088	<0.0036	<0.001	<0.0018	<0.0018	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.18
B91	10/17/2000	0	<0.0019	0.0045	<0.0038	<0.0038	0.0042	<0.001	<0.0019	<0.0019	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.19
D01	3/10/2004	1.5-2	0.1	0.052	0.041	<3.88E-03	<3.88E-03		<3.88E-03	<1.95E-03		<0.01667	<0.01667	<0.01667			<0.01667	<0.001667	<4.19		<0.1946679
D03	3/10/2004	1.5-2	2.5	1.1	0.74	<3.94E-03	<3.94E-03	0.011	0.031	<1.98E-03	9	<0.01667	<0.01667	<0.01667		9.7	<0.01667	<0.001667	<3.44	<4.82E-03	<0.1976272
D04	3/10/2004	1.5-2	2.1	1.2	0.27	<4.06E-03	<4.06E-03	<9.47E-03	<4.06E-03	<2.03E-03	0.22	<0.01667	<0.01667	<0.01667		0.45	<0.01667	<0.001667	<4.58	<9.47E-03	<0.2034799
D05	3/10/2004	0.3-1	9.50E-02	0.052	0.1	<3.64E-03	<3.64E-03	<3.6E-03	<3.64E-03	<1.8E-03	<3.6E-03	<0.01661	<0.01661	<0.01661		<3.62E-03	<0.01661	<0.001667	<4.98	<3.62E-03	0.55
D06	3/10/2004	1.5-2	<1.93E-02	<3.8E-02	<3.852E-02	<3.85E-02	<3.852E-02	<3.61E-03	<3.85E-02	<1.93E-02	0.0075	<0.01667	<0.01667	<0.01667		0.017	<0.01667	<0.001667	<4.03	<3.61E-03	<1.930466
D07	3/10/2004	1.5-2	<1.8E-03	<3.62E-03	<3.6E-03	<3.6E-03	<3.6E-03	<3.98E-03	<3.6E-03	<1.82E-03	<3.98E-03	<0.01667	<0.01667	<0.01667		<3.98E-03	<0.01667	<0.001667	<4.32	<3.98E-03	<0.1815784
HA-1_MWH	10/5/2005	0-1	<0.00017	<0.00028	0.0018J P	<0.00033	<0.00067	<8.5E-04	<0.00014	<0.00033	<9.7E-04	<0.006	<0.01		<0.036	<0.0014	<6.8E-03	<0.001	<0.88	<0.00083	<0.012
HA-1_MWH	10/5/2005	0-1	<0.00018	<0.0003	<0.00042	<0.00036	<0.00073	<0.001	<0.00016	<0.00036	<0.0011	<0.006	<0.01		<0.039	<0.0016	<6.8E-03	<0.0011	<0.87	<9.7E-04	<0.013
HA-1_MWH	10/5/2005	0-1	<0.00017	<0.00028	0.00089J	<0.00033	<0.00067	<0.0009	<0.00014	<0.00033	<0.001	<0.006	<0.01		<0.036	<0.0014	<6.8E-03	<0.001	<0.89	<8.8E-04	<0.012
HA-11	2/14/2012	2																			

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
0-2 ft Continued																							
HA-13	2/15/2012	2									<1												
HA-2	3/7/1995	0-0.5			0.021	0.093	0.021						<0.005		<0.05								
HA-2_MWH	10/5/2005	0-1	<0.0024	<0.0012	<0.00031	0.0025J	0.0021J	<0.22	<0.00015	<0.00054	<0.66	<0.00075	<0.00049	<0.22	<0.0031	<0.0006		2.4	<0.0058		<0.00037	<8.8E-03	
HA-2_MWH	10/5/2005	0-1	<0.0026	<0.0013	<0.00033	0.00073J	6.8E-04J	<0.23	<0.00015	<0.00056	<0.71	<0.00082	<0.00051	<0.23	<0.0033	6.600001E-		1.6J	<0.0058		<0.00038	<8.8E-03	
HA-2_MWH	10/5/2005	0-1	<0.0047	<0.0024	<0.00032	0.0018J	0.0011J	<0.22	<0.00015	<5.5E-04	<0.64	<0.0015	<0.0005	<0.21	<0.0032	<0.0012		1.1J	<0.0058		<0.00037	<8.8E-03	
HA-3	3/7/1995	0-0.5			<0.01	<0.01	<0.01						<0.005		<0.05								
HA-3_MWH	10/5/2005	0-1	<0.0024	<0.0012	<0.00031	0.0035	0.00098J	<0.22	<0.00014	<0.00053	<0.66	<0.00076	<0.00048	<0.22	<0.0031	<0.00061		1.8J	<0.0058		<0.00036	<8.8E-03	
HA-3_MWH	10/5/2005	0-1	<0.003	<0.0015	<0.00031	0.0036	0.0013J	<0.22	<0.00014	<0.00054	<0.65	<0.00095	<0.00048	<0.21	<0.0031	<0.00076		1.7J	<0.0058		<0.00036	<8.8E-03	
HA-3_MWH	10/5/2005	0-1	<0.0026	<0.0014	<0.00032	0.0041	0.00086J	<0.22	<0.00015	<5.5E-04	<0.68	<0.00084	<0.00049	<0.22	<0.0032	<0.00067		2J	<0.0058		<0.00037	<8.8E-03	
RR-SS-UP-1	8/29/1996	0.25-0.5			0.0036J	0.0033J	0.017		<0.00057	<0.00022	<7.4		<0.0007								<0.00035		
RR-SS-UP-2	8/29/1996	0.25-0.33			0.0069	0.0036J	0.019		<0.00053	<0.00021	<7.8		<0.00065								<0.00032		
RR-SS-UP-3	8/29/1996	0.25-0.5			0.13J,E	0.17J,E	0.29J,E		<0.029	<0.011	<8.3		<0.036								<0.018		
S-1	9/21/2005	0-2	<0.0035	<0.0018	0.035	0.056P	0.13	<0.3	<9.9E-04	<0.0037	2	<0.0011	<0.0033	<0.31	<0.021	<0.0009		4.9	<0.0082		<0.0025	<0.012	
S-10	9/22/2005	0-2	<0.0023	<0.0012	0.29	0.18P	1.2	<0.23	<0.003	<0.011	2.3	0.0072	<0.01	0.4J	<6.5E-02	<0.00058		5.1	0.0064J		<0.0076	<8.8E-03	
S-11	9/22/2005	0-2	<0.0023	<0.0012	0.28J	0.17J P	2.1	<0.22	<0.015	<0.055	3.6	<0.00074	<0.049	<0.21	<0.32	<0.0006		33	<0.0058		<0.037	<8.8E-03	
S-12	9/22/2005	0-2	<0.0024	<0.0013	0.054	0.068	6.90E-02	<0.23	0.0048J P	<0.0056	1.7	<0.00077	<0.0051	<0.23	<0.032	<0.00062		8.7	<0.0058		<0.0038	<8.8E-03	
S-19	10/12/2005	0-2	<0.0017	<0.00086	<0.0007	<0.0007	0.00096J	<0.25	<0.00033	<0.0012	3	<0.00053	<0.0011	<0.24	<0.007	<0.00042		4.3	<6.8E-03		<0.00082	<0.01	
S-2	9/22/2005	0-2	<0.0023	<0.0012	<0.00031	0.0028J	0.0016J	<0.22	<0.00014	<0.00053	<0.64	<0.00074	<0.00048	<0.21	<0.0031	<0.00059		3	<0.0059		<0.00036	<9.0E-03	
S-20	10/12/2005	0-2	<0.0026	<0.0014	<0.00031	0.0061	0.0024J	<0.22	<0.00015	<0.00054	0.91J	<0.00083	<0.00049	<0.22	<0.0031	<0.00067		3.3	<0.006		<0.00036	<0.0092	
S-21	10/12/2005	0-2	<0.0026	<0.0014	<0.00033	<0.00033	<0.0003	<0.23	<0.00016	<0.00058	2	<0.00084	<0.00052	<0.24	<0.0033	<0.00067		2.6	<0.0064		<0.00039	<9.8E-03	
S-3	9/22/2005	0-2	<0.0023	<0.0012	0.00046J	0.0064	0.004	<0.22	<0.00014	<0.00053	0.77J	<0.00074	<0.00048	<0.21	<0.0031	<0.00059		2.7	<0.0058		<0.00036	<8.8E-03	
S-4	9/22/2005	0-2	<0.0021	<0.0011	<0.00031	0.0014J	0.00059J	<0.22	<0.00015	<0.00054	<0.65	<6.8E-04	<0.00049	<0.21	<0.0031	<0.00054		1.6J	<0.006		<0.00036	<0.0092	
S-5	9/22/2005	0-2	<0.0025	<0.0013	<0.00031	0.0016J	0.0014J	<0.22	<0.00014	<0.00054	0.74J	<8.1E-04	<0.00048	<0.21	<0.0031	<0.00065		2.4	<0.006		<0.00036	<0.0091	
S-6	9/22/2005	0-2	<0.0026	<0.0013	<0.00031	0.0011J	0.00083J	<0.21	<0.00014	<0.00053	<0.66	<8.1E-04	<0.00048	<0.22	<0.0031	<0.00065		2.9	<0.0059		<0.00036	<9.0E-03	
S-7	9/22/2005	0-2	<0.0034	<0.0018	<0.00033	0.029	0.025	<0.23	0.00056J P	<0.00057	0.86J	<0.0011	<0.00051	<0.22	<0.0033	<0.00087		4.4	<0.0058		<0.00038	<8.8E-03	
S-8	9/22/2005	0-2	<0.0025	<0.0013	<0.00032	7.80E-03	8.30E-03	<0.22	<0.00015	<0.00056	2.7	<8.1E-04	<0.0005	<0.2	<0.0032	<0.00065		4.5	<0.0058		<0.00037	<8.8E-03	
S-9	9/22/2005	0-2	<0.0027	<0.0014	0.34J	0.2J	9.9E-02J	<0.22	<0.015	<0.055	2.4	<8.5E-04	<0.05	<0.21	<0.32	<6.8E-04		5	<0.0058		<0.037	<8.8E-03	
SD-1	7/22/2003	0	<0.021	<0.021	<9.5E-02	<0.024	<0.021	<23	<0.011	<0.0063	<8	<0.021	<9.5E-03	<0.5	<0.16	<0.021	<0.016	25			<0.0063		
SD-1	7/22/2003	0	<0.02	<0.02	<0.105	<0.026	<0.023	<26	<0.012	<0.007	<8	<0.02	<0.01	<0.5	<0.18	<0.02	<0.018	25			<0.007		
SD-2	7/21/2003	0	<0.0063	<0.0063	<0.004	<0.01	<0.0087	<8.9	<0.0047	<0.0027	<8	<0.0063	<0.004	<0.5	<0.067	<0.0063	<0.0067	<2.5			<0.0027		
SD-4	7/21/2003	0	<0.019	<0.019	<0.013	<0.033	<0.028	<210	<0.015	<0.0087	<8	<0.019	<0.013	<0.5	<0.22	<0.019	<0.022	32			<0.0087		
SS-2	7/21/2003	0	<0.005	<0.005	<0.0075	0.022D1	<0.0065	<5.6	<0.0035	<0.002	<8	<0.005	<0.003	<0.5	<0.05	<0.005	<0.005	10			<0.002		
SS-4	7/21/2003	0	<0.0055	<0.0055	<0.0075	0.036D	0.026D	<5.6	<0.0035	<0.002	<8	<0.0055	<0.003	<0.5	<0.05	<0.0055	<0.005	4.3			<0.002		
SS-FARM-E	8/29/1996	0.25-0.5			0.0025J	0.014	<0.00062		<0.00052	<0.0002	<6.5		<0.00063								<0.00031		
SS-FARM-NE	8/29/1996	0.25-0.5			<0.00034	0.0029J	<0.0006		<0.00051	<0.0002	<6.7		<0.00062								<0.00031		
SS-Pond	8/29/1996	0.25-0.5			0.011	0.012	0.02		<0.00073	<0.00028	<11		<0.0009								0.0016J		

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
0-2 ft Continued																					
HA-13	2/15/2012	2																			
HA-2	3/7/1995	0-0.5								<0.005											<0.2
HA-2_MWH	10/5/2005	0-1	<0.00017	<0.00028	<0.00039	<0.00033	<6.8E-04	<0.00076	<0.00015	<0.00033	<0.00086	<0.006	<0.01		<0.037	<0.0012	<6.8E-03	<0.001	<0.89	<0.00074	<0.013
HA-2_MWH	10/5/2005	0-1	<0.00017	<0.00029	<0.0004	<0.00035	<0.00071	<0.00083	<0.00015	<0.00035	<9.4E-04	<0.006	<0.01		<0.038	<0.0013	<6.8E-03	<0.0011	<0.96	<8.1E-04	<0.013
HA-2_MWH	10/5/2005	0-1	<0.00017	<0.00029	<0.00039	<0.00034	<0.00069	<0.0015	<0.00015	<0.00034	<0.0017	<0.006	<0.01		<0.037	<0.0024	<6.8E-03	<0.001	<0.86	<0.0015	<0.013
HA-3	3/7/1995	0-0.5								<0.005											<0.2
HA-3_MWH	10/5/2005	0-1	<0.00016	<0.00028	<0.00038	<0.00033	<0.00067	<0.00077	<0.00014	<0.00033	<0.00087	<0.006	<0.01		<0.036	<0.0012	<6.8E-03	<0.001	<0.89	<0.00075	<0.012
HA-3_MWH	10/5/2005	0-1	<0.00017	<0.00028	<0.00038	<0.00033	<0.00067	<0.00096	<0.00014	<0.00033	<0.0011	<0.006	<0.01		<0.036	<0.0015	<6.8E-03	<0.001	<0.88	<0.00093	<0.012
HA-3_MWH	10/5/2005	0-1	<0.00017	<0.00028	<0.00039	<0.00034	<6.8E-04	<8.5E-04	<0.00015	<0.00034	<0.00096	<0.006	<0.01		<0.037	<0.0014	<6.8E-03	<0.001	<0.91	<0.00083	<0.013
RR-SS-UP-1	8/29/1996	0.25-0.5	<0.00014	0.0051J	<0.0031	0.019	<9.2E-04		<0.00029	0.0033J											<0.0029
RR-SS-UP-2	8/29/1996	0.25-0.33	<0.00013	0.0034J	0.0039J	0.028	<0.00086		<0.00027	0.0023J											<0.0027
RR-SS-UP-3	8/29/1996	0.25-0.5	0.94E	1.6E	1E	0.3J,E	<0.047		<0.015	<0.026											**12**
S-1	9/21/2005	0-2	<0.0011	<0.0019	<0.0026	<0.0023	<0.0046	<0.0011	<9.9E-04	<0.0023	<0.0013	<0.0085	<0.014		<0.05	<0.0018	<0.0096	<0.0014	<1.2	<0.0011	0.97J
S-10	9/22/2005	0-2	<0.0035	<0.0058	<0.008	<0.0069	<0.014	0.0012J	<0.003	<0.0069	<0.00084	<0.006	<0.01		<0.038	<0.0012	<6.8E-03	0.0096P	<0.95	<7.2E-04	5.6
S-11	9/22/2005	0-2	0.089J P	<0.028	<0.039	<0.034	<0.068	<0.00075	<0.015	<0.034	<8.5E-04	<0.006	<0.01		<0.037	<0.0012	<6.8E-03	<0.001	<0.85	<0.00073	5.2J
S-12	9/22/2005	0-2	<0.0017	<0.0029	<0.004	<0.0035	<0.007	<0.00078	<0.0015	<0.0035	<0.00089	<0.006	<0.01		<0.038	<0.0013	<6.8E-03	<0.0011	<0.94	<0.00077	1.3J
S-19	10/12/2005	0-2	<0.00037	7.3E-03J	0.036	<0.00075	<0.0015	<0.00054	<0.00033	<0.00075	<0.00061	<0.007	<0.012		<0.041	<0.00086	<0.008	<0.0011	<0.99	<0.00052	<0.028
S-2	9/22/2005	0-2	<0.00016	<0.00028	<0.00038	<0.00033	<0.00067	<0.00074	<0.00014	<0.00033	<8.5E-04	<0.0062	<0.01		<0.036	<0.0012	<0.007	<0.001	<0.85	<0.00073	<0.012
S-20	10/12/2005	0-2	<0.00017	0.0011JP	0.013	<0.00033	<6.8E-04	<0.00084	<0.00015	<0.00033	<0.00096	<0.0063	<0.01		<0.036	<0.0014	<0.0071	<0.001	<0.92	<0.00082	<0.013
S-21	10/12/2005	0-2	<0.00018	<0.0003	<0.00041	<0.00035	<7.2E-04	<8.5E-04	<0.00016	<0.00035	<0.00096	<0.0067	<0.011		<0.039	<0.0014	<0.0075	<0.0011	<1	<0.00083	<0.013
S-3	9/22/2005	0-2	<0.00016	<0.00028	<0.00038	<0.00033	<0.00067	<0.00074	<0.00014	<0.00033	<8.5E-04	<0.006	<0.01		<0.036	<0.0012	<6.8E-03	<0.001	<0.86	<0.00073	0.015J
S-4	9/22/2005	0-2	<0.00017	<0.00028	<0.00039	<0.00033	<6.8E-04	<0.00069	<0.00015	<0.00033	<0.00078	<0.0063	<0.01		<0.036	<0.0011	<0.0071	<0.001	<0.87	<0.00067	<0.012
S-5	9/22/2005	0-2	<0.00016	<0.00028	<0.00038	<0.00033	<0.00067	<0.00082	<0.00014	<0.00033	<0.00093	<0.0062	<0.01		<0.036	<0.0013	<0.007	<0.001	<0.84	<0.0008	<0.012
S-6	9/22/2005	0-2	<0.00016	<0.00028	<0.00038	<0.00033	<6.6E-04	<0.00082	<0.00014	<0.00033	<9.4E-04	<0.0061	<0.01		<0.036	<0.0013	<0.0069	<0.001	<0.88	<0.0008	<0.012
S-7	9/22/2005	0-2	<0.00017	<0.00029	<0.0004	<0.00035	<0.00071	<0.0011	<0.00015	<0.00035	<0.0013	<0.006	<0.01		<0.038	<0.0018	<6.8E-03	<0.0011	<0.89	<0.0011	0.3
S-8	9/22/2005	0-2	<0.00017	<0.00029	<0.0004	<0.00034	<0.0007	<0.00082	<0.00015	<0.00034	<0.00093	<0.006	<0.01		<0.037	<0.0013	<6.8E-03	<0.001	<0.83	<0.0008	0.17J
S-9	9/22/2005	0-2	<0.017	<0.029	<0.039	<0.034	<6.9E-02	<0.00086	<0.015	<0.034	<0.00098	<0.006	<0.01		<0.037	<0.0014	0.013J	<0.001	<0.85	<0.00084	4.2J P
SD-1	7/22/2003	0	<0.016	<0.024	<0.025	<0.024	<0.011	<0.021	<0.0032	<0.016	<0.021				<4.7	<0.021		<23	<19	<0.021	<0.41
SD-1	7/22/2003	0	<0.018	<0.026	<0.28	<0.026	<0.012	<0.02	<0.0035	<0.018	<0.02				<5.2	<0.02		<26	<19	<0.02	<0.46
SD-2	7/21/2003	0	<0.0067	<0.01	<0.011	<0.01	<0.0047	<0.0063	<0.0013	<0.0067	<0.0063				<1.8	<0.0063		<8.900001	<19	<0.0063	<0.17
SD-4	7/21/2003	0	<0.022	<0.033	<0.035	<0.033	<0.015	<0.019	<0.0044	<0.022	<0.019				<43	<0.019		<210	<19	<0.019	<0.5700001
SS-2	7/21/2003	0	<0.005	0.06D1	0.044D1	<0.0075	<0.0035	<0.005	<0.001	<0.005	<0.005				<1.1	<0.005		<5.6	<19	<0.005	0.3D1
SS-4	7/21/2003	0	<0.005	<0.0075	<0.008	<0.0075	<0.0035	<0.0055	<0.001	<0.005	<0.0055				<1.1	<0.0055		<5.6	<19	<0.0055	0.43D
SS-FARM-E	8/29/1996	0.25-0.5	<0.00013	<0.0004	0.0071	<0.00061	<0.00083		0.00049J	<0.00045											<0.0026
SS-FARM-NE	8/29/1996	0.25-0.5	<0.00013	0.0042J	<0.0027	<0.0006	0.012		0.00049J	<0.00044											<0.0025
SS-Pond	8/29/1996	0.25-0.5	<0.00018	0.0026J	0.0054J	<0.00087	<0.0012		<0.00037	0.0032J											<0.0037

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
2-5 ft																							
Maximum Pre-Remedial Action			ND	ND	0.00048	0.018	0.00097	ND	ND	ND	8.6	ND	0.0012	ND	ND	0.00183	ND	20	ND	ND	0.0071	ND	ND
Maximum Post-Remedial Action			ND	ND	0.00048	0.018	0.00097	ND	ND	ND	8.6	ND	0.0012	ND	ND	0.00183	ND	20	ND	ND	0.0071	ND	ND
B1	9/28/1998	5			<0.01	<0.01	<0.02				<1				<0.1								
B15	9/30/1998	2-3			<0.01	<0.01	<0.02				<1				<0.1								
B15	9/30/1998	5			<0.01	<0.01	<0.02				<1				<0.1								
B2	9/28/1998	5			<0.01	<0.01	<0.02				3.1				<0.1								
B60	1/19/1999	4			<0.00333	0.01	<0.00333				1.63				<0.00166								
B85	10/16/2000	5	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	0.51	<0.005	<0.02		<0.2	<0.005	<0.013	<0.5	<0.013	<0.013	<0.02	<0.013	<0.013
B90	10/17/2000	5	<0.001	<0.001	<0.002	<0.002	<0.002	<0.33	<0.002	<0.002	3.9	<0.001	<0.002		<0.002	<0.001	<0.013	5.2	<0.013	<0.013	<0.002	<0.013	<0.013
B91	10/17/2000	5	<0.001	<0.001	<0.0036	<0.0036	<0.0036	<0.33	<0.0018	<0.0018	1.1	<0.001	<0.0018		<0.18	<0.001	<0.013	1.4	<0.013	<0.013	<0.0036	<0.013	<0.013
D02	3/10/2004	2-2.5		<4.4E-03	<3.8E-03	0.018	<3.8E-03	<0.008333	<1.9E-03	<1.9E-03	4.03	<4.4E-03	<1.9E-03	<1.76		<4.4E-03	<0.01667	9.61	<0.01667	<0.01667	0.0071	<0.01667	<0.01667
DisEast	10/6/2003	2.5	<0.0005	<0.0005	<0.000001	<0.000001	<0.000001	<0.0025	<0.000001	<0.000001		<0.0005	<0.000001		<0.00001	<0.0005	<0.05		<0.05	<0.05	<0.000001	<0.05	<0.05
DisWest	10/6/2003	2.5	<0.0005	<0.0005	<0.000001	<0.000001	<0.000001	<0.0025	<0.000001	<0.000001		<0.0005	<0.000001		<0.00001	0.00183	<0.05		<0.05	<0.05	<0.000001	<0.05	<0.05
S-1	9/21/2005	4-6	<0.0022	<0.0011	0.00048J	<0.00034	<0.00031	<0.24	<0.00016	<0.00059	1.5	<0.00071	<0.00053	<0.24	<0.0034	<0.00057		3.1	<0.0066		<0.0004	<0.01	
S-10	9/22/2005	4-6	<0.0026	<0.0013	<0.0004	<0.0004	9.7E-04J	<0.28	<0.00019	<0.00069	2.4	<0.00083	<0.00063	<0.5	<0.004	<6.6E-04		3.7	<0.0077		<0.00047	<0.012	
S-11	9/22/2005	4-6	<0.0025	<0.0013	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	5	<0.0008	0.0012J	<0.24	<0.0035	<0.00065		20	<0.0058		<0.00041	<8.8E-03	
S-12	9/22/2005	4-6	<0.0023	<0.0012	<0.00035	<0.00035	<0.00032	<0.25	<0.00016	<0.00061	8.6	<0.00074	<5.5E-04	<0.48	<0.0035	<0.00059		10	<0.0058		<0.00041	<8.8E-03	
S-19	10/12/2005	4-6	<0.0029	<0.0015	<0.00035	<0.00035	<0.00032	<0.25	<0.00016	<0.00061	3.2	<9.2E-04	<5.5E-04	<0.25	<0.0035	<0.00074		4.1	<6.8E-03		<0.00041	<0.01	
S-2	9/22/2005	4-6	<0.0026	<0.0013	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	2.6	<0.00083	<0.00056	<0.25	<0.0036	<6.6E-04		4.2	<0.0069		<0.00042	<0.011	
S-20	10/12/2005	4-6	<0.0022	<0.0011	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	4.2	<0.00069	<0.00056	<0.23	<0.0036	<5.5E-04		4.7	<0.0069		<0.00042	<0.011	
S-21	10/12/2005	4-6	<0.0045	<0.0023	<0.0004	<0.0004	<0.00036	<0.28	<0.00018	<0.00069	2.8	<0.0014	<0.00062	<0.27	<0.004	<0.0011		3.3	<0.0077		<0.00046	<0.012	
S-3	9/22/2005	4-6	<0.0031	<0.0016	<0.00035	<0.00035	<0.00032	<0.25	<0.00016	<0.00061	2.8	<9.7E-04	<5.5E-04	<0.22	<0.0035	<0.00078		4.6	<0.0058		<0.00041	<8.8E-03	
S-4	9/22/2005	4-6	<0.0023	<0.0012	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	2	<0.00074	<0.00054	<0.22	<0.0035	<0.00059		4.4	<0.0067		<0.0004	<0.01	
S-5	9/22/2005	4-6	<0.003	<0.0015	<0.00035	<0.00035	<0.00032	<0.25	<0.00016	<0.00061	4.6	<0.00095	<5.5E-04	<0.24	<0.0035	<0.00076		5.3	<6.8E-03		<0.00041	<0.01	
S-6	9/22/2005	4-6	<0.0039	<0.002	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	2.3	<0.0012	<0.00056	<0.23	<0.0036	<0.001		4.2	<0.0058		<0.00042	<8.8E-03	
S-7	9/22/2005	4-6	<0.0024	<0.0013	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	2.8	<0.00078	<0.00056	<0.25	<0.0036	<0.00062		6.1	<0.0058		<0.00042	<8.8E-03	
S-8	9/22/2005	4-6	<0.0024	<0.0012	<0.00034	<0.00034	<0.00031	<0.24	<0.00016	<0.0006	<0.73	<0.00075	<0.00054	<0.24	<0.0034	<0.0006		3.2	<0.0058		<0.0004	<8.8E-03	
S-9	9/22/2005	4-6	<0.0024	<0.0012	<0.00035	<0.00035	<0.00032	<0.25	<0.00017	<0.00062	2.6	<0.00075	<0.00056	<0.25	<0.0035	<0.0006		6.9	<0.0058		<0.00041	<8.8E-03	

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
2-5 ft																					
Maximum Pre-Remedial Action			0.16000001	0.11000001	ND	ND	ND	ND	0.0004	ND	0.0094	ND	ND	ND	ND	0.061	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			0.16000001	0.11000001	ND	ND	ND	ND	0.0004	ND	0.0094	ND	ND	ND	ND	0.061	ND	ND	ND	ND	ND
B1	9/28/1998	5								<0.01											<0.5
B15	9/30/1998	2-3								<0.01											<0.5
B15	9/30/1998	5								<0.01											<0.5
B2	9/28/1998	5								<0.01											<0.5
B60	1/19/1999	4								<0.00166											<0.1665
B85	10/16/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B90	10/17/2000	5	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.2
B91	10/17/2000	5	<0.0018	<0.0036	<0.0036	<0.0036	<0.0036	<0.001	<0.0018	<0.0018	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.18
D02	3/10/2004	2-2.5	0.16	0.11	<3.84E-03	<3.84E-03	<3.84E-03	<4.4E-03	<3.84E-03	<1.93E-03	0.0094	<0.01667	<0.01667	<0.01667		0.061	<0.01667	<0.001667	<3.51	<4.40E-03	<0.1926874
DisEast	10/6/2003	2.5	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.0005		<0.000001	<0.0005	<0.05	<0.05	<0.05	<0.002		<0.05	<0.05		<0.0005	<0.0001
DisWest	10/6/2003	2.5	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.0005		<0.000001	0.00836	<0.05	<0.05	<0.05	<0.002		<0.05	<0.05		<0.0005	<0.0001
S-1	9/21/2005	4-6	<0.00018	<0.00031	<0.00042	<0.00036	<0.00074	<0.00071	<0.00016	<0.00036	<8.10E-04	<6.8E-03	<0.011		<0.04	<0.0011	<0.0077	<0.0011	<0.96	<0.0007	<0.014
S-10	9/22/2005	4-6	<0.00021	<0.00036	<0.00049	<0.00043	<0.00086	<0.00084	<0.00019	<0.00043	<0.00095	<0.008	<0.013		<0.047	<0.0013	<9.0E-03	<0.0013	<1	<0.00082	<0.016
S-11	9/22/2005	4-6	<0.00019	<0.00031	<0.00043	<0.00037	<0.00075	3.100001E-(	0.0004J	<0.00037	<0.00093	<0.006	<0.01		<0.041	<0.0013	<6.8E-03	<0.0011	<0.98	<0.0008	<0.014
S-12	9/22/2005	4-6	<0.00019	<0.00032	<0.00043	<0.00037	<0.00076	<0.00075	<0.00016	<0.00037	<8.5E-04	<0.006	<0.01		<0.041	<0.0012	<6.8E-03	<0.0011	<0.98	<0.00073	<0.014
S-19	10/12/2005	4-6	<0.00019	<0.00032	<0.00043	<0.00037	<0.00076	<0.00093	<0.00016	<0.00037	<0.0011	<0.007	<0.012		<0.041	<0.0015	<0.008	<0.0011	<1	<9.1E-04	<0.014
S-2	9/22/2005	4-6	<0.00019	<0.00032	<0.00044	<0.00038	<0.00078	<0.00084	<0.00017	<0.00038	<0.00095	<0.0072	<0.012		<0.042	<0.0013	<8.1E-03	<0.0012	<1	<0.00082	<0.014
S-20	10/12/2005	4-6	<0.00019	<0.00032	<0.00044	<0.00038	<0.00078	<0.00069	<0.00017	<0.00038	<7.9E-04	<0.0072	<0.012		<0.042	<0.0011	<8.1E-03	<0.0012	<0.95	<6.8E-04	<0.014
S-21	10/12/2005	4-6	<0.00021	<0.00036	<0.00049	<0.00042	<0.00086	<0.0014	<0.00018	<0.00042	<0.0016	<7.9E-03	<0.013		<0.046	<0.0023	<9.0E-03	<0.0013	<1.1	<0.0014	<0.016
S-3	9/22/2005	4-6	<0.00019	<0.00032	<0.00043	<0.00038	<0.00076	<0.00098	<0.00016	<0.00038	<0.0011	<0.006	<0.01		<0.041	<0.0016	<6.8E-03	<0.0012	<0.91	<0.00096	<0.014
S-4	9/22/2005	4-6	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	<0.00075	<0.00016	<0.00037	<8.5E-04	<0.0069	<0.012		<0.04	<0.0012	<7.8E-03	<0.0011	<0.91	<0.00073	<0.014
S-5	9/22/2005	4-6	<0.00019	<0.00032	<0.00043	<0.00037	<0.00076	<0.00096	<0.00016	<0.00037	<0.0011	<0.007	<0.012		<0.041	<0.0015	<0.008	<0.0011	<0.97	<9.4E-04	<0.014
S-6	9/22/2005	4-6	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.0013	<0.00017	<0.00038	<0.0014	<0.006	<0.01		<0.042	<0.002	<6.8E-03	<0.0012	<0.96	<0.0012	<0.014
S-7	9/22/2005	4-6	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00078	<0.00017	<0.00038	<0.00089	<0.006	<0.01		<0.042	<0.0013	<6.8E-03	<0.0012	<1	<0.00077	<0.014
S-8	9/22/2005	4-6	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	<0.00076	<0.00016	<0.00037	<0.00086	<0.006	<0.01		<0.04	<0.0012	<6.8E-03	<0.0011	<0.98	<0.00074	<0.014
S-9	9/22/2005	4-6	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00076	<0.00017	<0.00038	<0.00086	<0.006	<0.01		<0.041	<0.0012	<6.8E-03	<0.0012	<1	<0.00074	<0.014

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	1,2,3-Trichloropropane (mg/kg)	1,2-Dibromoethane (mg/kg)	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	4-Nitrophenol (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Arsenic (mg/kg)	Benzene (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chlorobenzene (mg/kg)	Chlorpyrifos (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Diazinon (mg/kg)	Dieldrin (mg/kg)	Dimethoate (mg/kg)	Disulfoton (mg/kg)
Residential RRS (mg/kg)			**0.5**	**0.01**	**19**	**14**	**20**	**6**	**0.66**	**0.66**	**20**	**0.5**	**0.66**	**7.5**	**9.2**	**10**	**15**	**915**	**1**	**1.3**	**0.66**	**0.7**	**0.03**
Industrial SS RRS (mg/kg)			**1.9**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**38**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
Industrial SB RRS (mg/k)			**4**	**0.01**	**47**	**38**	**54**	**6**	**0.66**	**0.66**	**41**	**0.5**	**0.66**	**150**	**9.2**	**10**	**94**	**2886**	**1**	**8.8**	**0.66**	**0.7**	**0.15**
5-15 ft																							
Maximum Pre-Remedial Action			ND	ND	0.0012	ND	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND	ND	69	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	0.0012	ND	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND	ND	69	ND	ND	ND	ND	ND
B85	10/16/2000	10	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	2.7	<0.013	<0.013	<0.02	<0.013	<0.013
B85	10/16/2000	15	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	<0.25	<0.005	<0.02		<0.2	<0.005	<0.013	2.1	<0.013	<0.013	<0.02	<0.013	<0.013
B90	10/17/2000	10	<0.001	<0.001	<0.0041	<0.0041	<0.0041	<0.33	<0.0021	<0.0021	1	<0.001	<0.0021		<0.0021	<0.001	<0.013	6	<0.013	<0.013	<0.0041	<0.013	<0.013
B91	10/17/2000	10	<0.001	<0.001	<0.004	<0.004	<0.004	<0.33	<0.0021	<0.0021	0.56	<0.001	<0.0021		<0.21	<0.001	<0.013	3	<0.013	<0.013	<0.004	<0.013	<0.013
DB-7	1/23/2013	10				<0.004	<0.004																
S-1	9/21/2005	8-10	<0.0023	<0.0012	<0.00035	<0.00035	<0.00031	<0.24	<0.00016	<0.0006	2.1	<7.2E-04	<0.00054	<0.23	<0.0035	<0.00058		3.7	<0.0067		<0.0004	<0.01	
S-10	9/22/2005	8-10	<0.003	<0.0015	<0.00038	<0.00038	<0.00034	<0.26	<0.00018	<0.00065	2.9	<0.00095	<0.00059	<0.27	<0.0038	<0.00076		5.3	<0.0058		<0.00044	<8.8E-03	
S-11	9/22/2005	8-10	<0.0025	<0.0013	<0.00036	<0.00036	<0.00033	<0.25	<0.00017	<0.00063	<0.75	<0.0008	<0.00057	<0.25	<0.0036	<0.00064		12	<0.0058		<0.00042	<8.8E-03	
S-12	9/22/2005	8-10	<0.0023	<0.0012	<0.00035	<0.00035	<0.00032	<0.25	<0.00017	<0.00062	<0.72	<0.00074	<0.00056	<0.24	<0.0035	<0.00059		7.7	<0.0058		<0.00041	<8.8E-03	
S-19	10/12/2005	8-10	<0.0024	<0.0013	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	2.3	<0.00077	<0.00056	<0.24	<0.0036	<0.00062		3	<0.0069		<0.00042	<0.01	
S-2	9/22/2005	8-10	<0.003	<0.0016	<0.00036	<0.00036	<0.00033	<0.25	<0.00017	<0.00063	2.6	<0.00096	<0.00057	<0.24	<0.0036	<0.00077		4.9	<0.0058		<0.00042	<8.8E-03	
S-20	10/12/2005	8-10	<0.0022	<0.0011	<0.00034	<0.00034	<0.0003	<0.24	<0.00016	<0.00058	1.8	<0.0007	<0.00053	<0.23	<0.0034	<0.00056		3.3	<0.0065		<0.00039	<0.0099	
S-21	10/12/2005	8-10	<0.0036	<0.0019	<0.00037	<0.00037	<0.00033	<0.26	<0.00017	<0.00064	2.5	<0.0011	<0.00057	<0.24	<0.0037	<9.2E-04		5.4	<0.0071		<0.00043	<0.011	
S-3	9/22/2005	8-10	<0.0023	<0.0012	<0.00035	<0.00035	<0.00032	<0.25	<0.00016	<0.00061	3.8	<0.00073	<5.5E-04	<0.24	<0.0035	<0.00059		4.8	<0.0058		<0.00041	<8.8E-03	
S-4	9/22/2005	8-10	<0.0025	<0.0013	<0.00036	<0.00036	<0.00032	<0.25	<0.00017	<0.00062	3.3	<0.0008	<0.00056	<0.23	<0.0036	<0.00064		4.4	<0.0069		<0.00042	<0.01	
S-5	9/22/2005	8-10	<0.0026	<0.0013	<0.00037	<0.00037	<0.00033	<0.26	<0.00017	<0.00064	4.3	<0.00083	<0.00058	<0.26	<0.0037	<6.6E-04		3.7	<0.0071		<0.00043	<0.011	
S-6	9/22/2005	8-10	<0.0025	<0.0013	<0.00037	<0.00037	<0.00033	<0.26	<0.00017	<0.00064	3.4	<8.1E-04	<0.00057	<0.25	<0.0037	<0.00065		6	<0.0058		<0.00043	<8.8E-03	
S-7	9/22/2005	8-10	<0.0026	<0.0014	<0.00037	<0.00037	<0.00033	<0.26	<0.00017	<0.00063	4.3	<0.00083	<0.00057	<0.24	<0.0037	<0.00067		12	<0.0058		<0.00043	<8.8E-03	
S-8	9/22/2005	8-10	<0.0022	<0.0011	<0.00034	<0.00034	<0.00031	<0.24	<0.00016	<0.0006	1.8	<0.00071	<0.00054	<0.23	<0.0034	<0.00057		10	<0.0058		<0.0004	<8.8E-03	
S-9	9/22/2005	8-10	<0.0028	<0.0015	0.0012J P	<0.00036	<0.00033	<0.25	<0.00017	<0.00063	4.5	<0.00089	<0.00057	<0.24	<0.0036	<7.2E-04		69	<0.0058		<0.00042	<8.8E-03	
>15 ft																							
Maximum Pre-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND
B1	9/28/1998	19			<0.01	<0.01	<0.02				1.1				<0.1								
B2	9/28/1998	19			<0.01	<0.01	<0.02				2.2				<0.1								
B85	10/16/2000	20									<4.84	<0.005		<2.42		<0.005							
B85	10/16/2000	20	<0.005	<0.005	<0.02	<0.02	<0.02	<0.33	<0.02	<0.02	2.7	<0.005	<0.02		<0.2	<0.005	<0.013	1.3	<0.013	<0.013	<0.02	<0.013	<0.013
DB-7	1/23/2013	30		<0.0029			<0.0038																
DB-7	1/23/2013	50		<0.0031			<0.0041																
DB-7	1/23/2013	60		<0.0025			<4.3E-03																

Table 4F Soil Data Outside Exposure Domains

CSX Exposure Domain	Date Sampled	Depth Range	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endosulfan sulfate (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Hepta chlor (mg/kg)	Isopropyl benzene (mg/kg)	Malathion (mg/kg)	Methyl parathion (mg/kg)	Mevin phos (mg/kg)	Nitro benzene (mg/kg)	o-Xylene (mg/kg)	Parathion (mg/kg)	Penta chloro phenol (mg/kg)	Selenium (mg/kg)	Styrene (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)			**26**	**10**	**1.65**	**10**	**10**	**70**	**0.66**	**0.67**	**22**	**20**	**0.2**	**10**	**2**	**20**	**20**	**3.3**	**8.3**	**14**	**10.88**
Industrial SS RRS (mg/kg)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
Industrial SB RRS (mg/k)			**170**	**10**	**1.65**	**24**	**10**	**70**	**0.66**	**0.83**	**33**	**20**	**1**	**10**	**2**	**38**	**60**	**4**	**52**	**57**	**10.88**
5-15 ft																					
Maximum Pre-Remedial Action			ND	0.0011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	0.0011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B85	10/16/2000	10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B85	10/16/2000	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
B90	10/17/2000	10	<0.0021	<0.0041	<0.0041	<0.0041	<0.0041	<0.001	<0.0021	<0.0041	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.21
B91	10/17/2000	10	<0.0021	<0.004	<0.004	<0.004	<0.004	<0.001	<0.0021	<0.0021	<0.001	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.001	<0.21
DB-7	1/23/2013	10	<0.002	<0.004	<0.004																
S-1	9/21/2005	8-10	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	<0.00073	<0.00016	<0.00037	<0.00083	<0.0069	<0.012		<0.04	<0.0012	<7.9E-03	<0.0011	<0.95	<0.00071	<0.014
S-10	9/22/2005	8-10	<0.0002	<0.00034	<0.00046	<0.0004	<8.1E-04	<0.00096	<0.00018	<0.0004	<0.0011	<0.006	<0.01		<0.044	<0.0015	<6.8E-03	<0.0012	<1.1	<9.4E-04	<0.015
S-11	9/22/2005	8-10	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	<8.1E-04	<0.00017	<0.00039	<9.2E-04	<0.006	<0.01		<0.042	<0.0013	<6.8E-03	<0.0012	<1	<7.9E-04	<0.015
S-12	9/22/2005	8-10	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00075	<0.00017	<0.00038	<8.5E-04	<0.006	<0.01		<0.041	<0.0012	<6.8E-03	<0.0012	<0.97	<0.00073	<0.014
S-19	10/12/2005	8-10	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<0.00078	<0.00017	<0.00038	<0.00089	<0.0071	<0.012		<0.042	<0.0013	<8.1E-03	<0.0012	<0.99	<0.00077	<0.014
S-2	9/22/2005	8-10	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	<9.7E-04	<0.00017	<0.00039	<0.0011	<0.006	<0.01		<0.042	<0.0016	<6.8E-03	<0.0012	<0.99	<0.00095	<0.014
S-20	10/12/2005	8-10	<0.00018	<0.0003	<0.00042	<0.00036	<0.00073	<0.00071	<0.00016	<0.00036	<8.1E-04	<0.0067	<0.011		<0.039	<0.0011	<0.0076	<0.0011	<0.95	<0.00069	<0.013
S-21	10/12/2005	8-10	<0.0002	<0.00033	<0.00045	<0.00039	<7.9E-04	<0.0012	<0.00017	<0.00039	<0.0013	<7.30E-03	<0.012		<0.043	<0.0019	<8.3E-03	<0.0012	<1	<0.0011	<0.015
S-3	9/22/2005	8-10	<0.00019	<0.00032	<0.00043	<0.00037	<0.00076	<0.00074	<0.00016	<0.00037	<0.00084	<0.006	<0.01		<0.041	<0.0012	<6.8E-03	<0.0011	<0.99	<7.2E-04	<0.014
S-4	9/22/2005	8-10	<0.00019	<0.00032	<0.00044	<0.00038	<0.00077	<8.1E-04	<0.00017	<0.00038	<9.2E-04	<0.0071	<0.012		<0.042	<0.0013	<8.1E-03	<0.0012	<0.95	<7.9E-04	<0.014
S-5	9/22/2005	8-10	<0.0002	<0.00033	<0.00046	<0.00039	<0.0008	<0.00084	<0.00017	<0.00039	<0.00095	<0.0074	<0.012		<0.043	<0.0013	<0.0084	<0.0012	<1	<0.00082	<0.015
S-6	9/22/2005	8-10	<0.0002	<0.00033	<0.00045	<0.00039	<0.0008	<0.00082	<0.00017	<0.00039	<0.00093	<0.006	<0.01		<0.043	<0.0013	<6.8E-03	<0.0012	<1	<0.0008	<0.015
S-7	9/22/2005	8-10	<0.00019	<0.00033	<0.00045	<0.00039	<7.9E-04	<0.00084	<0.00017	<0.00039	<0.00096	<0.006	<0.01		<0.043	<0.0014	<6.8E-03	<0.0012	<1	<0.00082	<0.015
S-8	9/22/2005	8-10	<0.00018	<0.00031	<0.00043	<0.00037	<0.00075	<0.00071	<0.00016	<0.00037	<8.1E-04	<0.006	<0.01		<0.04	<0.0011	<6.8E-03	<0.0011	<0.94	<0.0007	<0.014
S-9	9/22/2005	8-10	<0.00019	0.0011J	<0.00045	<0.00039	<0.00078	<0.0009	<0.00017	<0.00039	<0.001	<0.006	<0.01		<0.042	<0.0015	<6.8E-03	<0.0012	<0.99	<8.8E-04	<0.014
>15 ft																					
Maximum Pre-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Post-Remedial Action			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B1	9/28/1998	19								<0.01											<0.5
B2	9/28/1998	19								<0.01											<0.5
B85	10/16/2000	20						<0.005											<4.84	<0.005	
B85	10/16/2000	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.013	<0.013	<0.013	<0.33		<0.013	<0.33		<0.005	<0.4
DB-7	1/23/2013	30																			
DB-7	1/23/2013	50																			
DB-7	1/23/2013	60																			

To be excavated as part of remedial action plan

Bold: Exceeds residential RRS

Qualifiers:

J	The associated numerical value is an estimated quantity.
B	Analyte present in the blank and the sample.
*	Spike recovery is equal to or outside the control criteria used.
P	> 40% difference for detected concentrations between two columns - changed from 25% per DOE SOW Rev. 4 (6/30/04)
D	Analytes analyzed at a secondary dilution.
E	Reported value is estimated because of the presence of interference.

Table 5A Pre-Interpolation Screening of Soil Data - CSX Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
CSX 0-2 ft								
1,2,4-Trichlorobenzene	10.83	10.83	10.83	19	1	5%	0.00500	
1,2-Dibromoethane	0.01	0.01	0.01	19	1	5%	0.00202	
1,2-Dichlorobenzene	60	60	60	19	1	5%	0.00460	
1,4-Dichlorobenzene	7.5	7.5	7.5	19	1	5%	0.00750	
2-Butanone (MEK)	200	200	200	19	2	11%	0.090	
4,4'-DDD	19	47	47	46	20	43%	**190**	Yes
4,4'-DDE	14	38	38	39	13	33%	**31**	Yes
4,4'-DDT	20	54	54	46	23	50%	**660**	Yes
Acetone	400	400	400	19	7	37%	0.98	
Aldrin	0.66	0.66	0.66	21	1	5%	**14**	
alpha-BHC	0.66	0.66	0.66	21	1	5%	**3.3**	
Arsenic	20	38	41	32	16	50%	20	
Barium	2554	16480	16480	9	9	100%	210	
Benzene	0.5	0.5	0.5	19	2	11%	0.062	
Benzo(b)fluoranthene	12	78	96	8	2	25%	1.4	
Beryllium	156	3161	3161	3	2	67%	1.5	
Carbaryl	70	182	182	7	5	71%	0.42	
Carbon disulfide	400	400	400	14	1	7%	0.37	
Chlordane	9.2	9.2	9.2	35	11	31%	**42**	Yes
Chlorpyrifos	15	94	94	17	3	18%	9.7	
Chromium	100/100000	109/100000	1200/100000	9	9	100%	97	
Copper	915	2886	2886	14	14	100%	470	
Cyclohexanone	359	2351	2351	9	3	33%	11	
Diazinon	1.3	8.8	8.8	15	1	7%	**2.0**	
Dieldrin	0.66	0.66	0.66	21	1	5%	**21**	
Dimethoate	0.7	0.7	0.7	13	3	23%	**3.8**	Yes
Disulfoton	0.03	0.15	0.15	15	1	7%	**2.0**	
Endosulfan I	26	170	170	28	13	46%	**160**	Yes
Endosulfan II	10	10	10	28	10	36%	**170**	Yes
Endosulfan sulfate	1.65	1.65	1.65	28	6	21%	**79**	Yes
Endrin	10	24	24	21	1	5%	**140**	
Endrin aldehyde	10	10	10	21	1	5%	**61**	
Ethyl benzene	70	70	70	19	4	21%	8.4	
gamma-BHC (Lindane)	0.66	0.66	0.66	21	2	10%	0.012	
Heptachlor	0.67	0.83	0.83	46	3	7%	**60**	
Isopropylbenzene	22	33	33	19	5	26%	4.5	
Lead	270	400	400	9	9	100%	41	
Malathion	20	20	20	16	1	6%	0.082	
Mercury	2.1	17	17	9	1	11%	0.054	
Nickel	404	2608	2608	3	3	100%	21	
o-Xylene	20	38	38	14	5	36%	16	
Tetrachloroethene	0.5	0.5	0.5	19	1	5%	0.00167	
Toluene	100	100	100	19	2	11%	0.13	
Toxaphene	10.88	10.88	10.88	46	8	17%	**5600**	Yes
Zinc	5847	38564	38564	8	8	100%	230	

EPS

Table 5A Pre-Interpolation Screening of Soil Data - CSX Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
CSX 2-5 ft								
2-Butanone (MEK)	200	200	200	12	2	17%	0.078	
4,4'-DDD	19	47	47	27	14	52%	**140**	Yes
4,4'-DDE	14	38	38	27	4	15%	**17**	Yes
4,4'-DDT	20	54	54	26	14	54%	**220**	Yes
Acetone	400	400	400	12	2	17%	0.58	
Aldrin	0.66	0.66	0.66	12	2	17%	**7.6**	Yes
alpha-BHC	0.66	0.66	0.66	12	1	8%	**2.2**	
Arsenic	20	38	41	15	9	60%	4.2	
Benzo(b)fluoranthene	12	78	96	5	1	20%	0.59	
beta-BHC	0.66	0.66	0.66	17	2	12%	**3.1**	Yes
Chlordane	9.2	9.2	9.2	20	10	50%	**420**	Yes
Copper	915	2886	2886	4	4	100%	4.7	
Dichloromethane (Methylene chloride)	0.5	0.6	0.6	12	1	8%	0.26	
Dieldrin	0.66	0.66	0.66	12	2	17%	**25**	Yes
Disulfoton	0.03	0.15	0.15	5	1	20%	**3.4**	
Endosulfan I	26	170	170	12	5	42%	**91**	Yes
Endosulfan II	10	10	10	12	3	25%	**92**	Yes
Endosulfan sulfate	1.65	1.65	1.65	12	2	17%	**34**	Yes
Endrin	10	24	24	12	2	17%	**62**	Yes
Endrin aldehyde	10	10	10	12	2	17%	**31**	Yes
Ethyl benzene	70	70	70	12	6	50%	**1000**	Yes
Fluoranthene	2224	9118	9118	5	1	20%	0.36	
gamma-BHC (Lindane)	0.66	0.66	0.66	12	1	8%	0.61	
Heptachlor	0.67	0.83	0.83	26	4	15%	**7.8**	Yes
Isopropylbenzene	22	33	33	10	1	10%	0.38	
Malathion	20	20	20	5	1	20%	0.32	
o-Xylene	20	38	38	6	4	67%	**1800**	Yes
Toxaphene	10.88	10.88	10.88	26	7	27%	**3100**	Yes
Zinc	5847	38564	38564	4	4	100%	15	

Table 5A Pre-Interpolation Screening of Soil Data - CSX Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
CSX 5-15 ft								
4,4'-DDD	19	47	47	40	16	40%	15	
4,4'-DDE	14	38	38	25	7	28%	2.9	
4,4'-DDT	20	54	54	40	22	55%	**100**	Yes
Acetone	400	400	400	9	1	11%	0.19	
Arsenic	20	38	41	18	8	44%	11	
Barium	2554	16480	16480	3	3	100%	4.6	
Beryllium	156	3161	3161	3	3	100%	0.091	
bis(2-Ethylhexyl) phthalate	287	957	957	5	1	20%	0.053	
Chlordane	9.2	9.2	9.2	38	17	45%	**640**	Yes
Chromium	100/100000	109/100000	1200/100000	3	3	100%	15	
Copper	915	2886	2886	5	3	60%	5.9	
Cyclohexanone	359	2351	2351	4	1	25%	47	
Disulfoton	0.03	0.15	0.15	4	1	25%	**0.097**	
Endosulfan I	26	170	170	24	13	54%	2.9	
Endosulfan II	10	10	10	24	10	42%	0.97	
Endosulfan sulfate	1.65	1.65	1.65	24	4	17%	0.47	
Endrin	10	24	24	10	2	20%	0.52	
Ethyl benzene	70	70	70	9	4	44%	**110**	Yes
Fensulfothion	10	10	10	6	1	17%	0.030	
Heptachlor	0.67	0.83	0.83	40	6	15%	**2.0**	Yes
Isopropylbenzene	22	33	33	10	3	30%	**71**	Yes
Lead	270	400	400	3	3	100%	7.5	
Malathion	20	20	20	6	2	33%	0.35	
Methoxychlor	87	542	542	10	1	10%	0.043	
Methyl parathion	0.2	1	1	6	2	33%	**0.54**	Yes
Nickel	404	2608	2608	3	3	100%	1.3	
o-Xylene	20	38	38	9	4	44%	**120**	Yes
Parathion	20	60	60	6	4	67%	0.36	
Toxaphene	10.88	10.88	10.88	41	16	39%	**1100**	Yes
Zinc	5847	38564	38564	5	5	100%	5.0	

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Table 5A Pre-Interpolation Screening of Soil Data - CSX Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
CSX >15 ft								
1,2-Dibromoethane	0.01	0.01	0.01	30	13	43%	**1.2**	Yes
4,4'-DDD	19	47	47	24	4	17%	0.017	
4,4'-DDE	14	38	38	11	1	9%	0.26	
4,4'-DDT	20	54	54	30	9	30%	**340**	Yes
4-Nitrophenol	6	6	6	7	1	14%	1.0	
Arsenic	20	38	41	9	6	67%	6.3	
Barium	2554	16480	16480	7	7	100%	9.5	
Beryllium	156	3161	3161	7	7	100%	0.18	
bis(2-Ethylhexyl) phthalate	287	957	957	7	3	43%	0.21	
Chromium	100/100000	109/100000	1200/100000	7	7	100%	29	
Copper	915	2886	2886	7	7	100%	11	
Endosulfan I	26	170	170	19	1	5%	0.11	
Endosulfan II	10	10	10	19	2	11%	0.13	
EPN	6.4	20	6.4	7	1	14%	0.014	
Ethyl benzene	70	70	70	7	4	57%	4.0	
Heptachlor	0.67	0.83	0.83	21	1	5%	0.016	
Lead	270	400	400	7	7	100%	8.5	
Malathion	20	20	20	7	1	14%	0.25	
Mercury	2.1	17	17	7	6	86%	0.012	
Nickel	404	2608	2608	7	7	100%	2.1	
o-Xylene	20	38	38	22	14	64%	4.0	
Parathion	20	60	60	7	2	29%	0.044	
Toluene	100	100	100	7	2	29%	0.13	
Toxaphene	10.88	10.88	10.88	25	1	4%	2.3	
Zinc	5847	38564	38564	7	7	100%	22	

Bold: Exceeds Residential RRS

* Average calculated where the maximum detected value exceeds the residential RRS and where frequency of detection > 5%. 1/2 the detection limit used for non-detect results.

** Evaluated further if maximum concentration exceed Residential RRS, there is more than one detect, and the detection frequency > 10%

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Table 5B Pre-Interpolation Screening of Soil Data - Drexel East Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel East 0-2 ft								
1,4-Dichlorobenzene	7.5	7.5	7.5	23	1	4%	0.019	
2-Butanone (MEK)	200	200	200	23	4	17%	0.017	
4,4'-DDD	19	47	47	36	7	19%	**88**	Yes
4,4'-DDE	14	38	38	36	10	28%	**16**	Yes
4,4'-DDT	20	54	54	36	13	36%	**340**	Yes
4-Nitrophenol	6	6	6	14	1	7%	**70**	
Acetone	400	400	400	23	4	17%	0.087	
alpha-BHC	0.66	0.66	0.66	23	2	9%	**0.87**	
Arsenic	20	38	41	32	21	66%	**56**	Yes
Azinphos-methyl	10	10	10	23	1	4%	0.025	
Barium	2554	16480	16480	7	5	71%	25	
Benzene	0.5	0.5	0.5	23	3	13%	**45**	Yes
Benzo(a)pyrene	1.6	7.8	9.4	14	1	7%	0.050	
Benzo(b)fluoranthene	12	78	96	14	1	7%	0.079	
Benzo(g,h,i)perylene	500	500	500	14	1	7%	0.034	
Benzo(k)fluoranthene	125	784	940	14	1	7%	0.064	
Beryllium	156	3161	3161	2	2	100%	0.17	
beta-BHC	0.66	0.66	0.66	23	1	4%	0.051	
bis(2-Ethylhexyl) phthalate	287	957	957	14	2	14%	6.1	
Carbaryl	70	182	182	10	4	40%	36	
Carbon disulfide	400	400	400	12	2	17%	0.056	
Chlordane	9.2	9.2	9.2	26	4	15%	**450**	Yes
Chlorobenzene	10	10	10	23	2	9%	**61**	
Chlorpyrifos	15	94	94	21	3	14%	4.0	
Chromium	100/100000	109/100000	1200/100000	7	7	100%	16	
Chrysene	867	2817	2817	14	1	7%	0.058	
Copper	915	2886	2886	13	10	77%	51	
Cyclohexanone	359	2351	2351	9	2	22%	1.6	
Dimethoate	0.7	0.7	0.7	23	8	35%	**1.6**	Yes
Endosulfan I	26	170	170	23	5	22%	**52**	Yes
Endosulfan II	10	10	10	23	5	22%	1.6	
Endosulfan sulfate	1.65	1.65	1.65	23	1	4%	**1.7**	
Endrin	10	24	24	23	1	4%	0.021	
EPN	6.4	20	6.4	23	1	4%	0.19	
Ethyl benzene	70	70	70	23	12	52%	**170**	Yes
Fensulfothion	10	10	10	23	1	4%	0.023	
gamma-BHC (Lindane)	0.66	0.66	0.66	23	2	9%	**2.7**	
Heptachlor	0.67	0.83	0.83	36	3	8%	**18**	
Isopropylbenzene	22	33	33	22	5	23%	**81**	Yes
Lead	270	400	400	7	3	43%	31	
Mercury	2.1	17	17	7	2	29%	0.023	
Methoxychlor	87	542	542	23	2	9%	0.025	
Naphthalene	100	100	100	14	1	7%	8.6	
Nickel	404	2608	2608	2	2	100%	2.8	
o-Xylene	20	38	38	11	7	64%	**400**	Yes
Parathion	20	60	60	23	3	13%	0.17	
Pyrene	2184	6770	6770	14	1	7%	0.028	
Toluene	100	100	100	23	4	17%	0.15	
Toxaphene	10.88	10.88	10.88	36	10	28%	**420**	Yes
Zinc	5847	38564	38564	13	13	100%	52	

Table 5B Pre-Interpolation Screening of Soil Data - Drexel East Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel East 2-5 ft								
1,2,3-Trichloropropane	0.5	1.9	4	16	1	6%	**16**	
1,4-Dichlorobenzene	7.5	7.5	7.5	25	1	4%	2.8	
2,4-Dimethylphenol	70	70	70	20	1	5%	0.069	
4,4'-DDD	19	47	47	36	6	17%	**21**	Yes
4,4'-DDE	14	38	38	36	3	8%	2.7	
4,4'-DDT	20	54	54	36	11	31%	5.5	
Acenaphthylene	130	130	130	20	1	5%	0.022	
Acetone	400	400	400	25	1	4%	0.089	
alpha-BHC	0.66	0.66	0.66	26	1	4%	0.00830	
Antimony	5.4	36	36	5	1	20%	3.4	
Arsenic	20	38	41	26	14	54%	20	
Barium	2554	16480	16480	5	5	100%	53	
Benzene	0.5	0.5	0.5	25	1	4%	0.00700	
Benzo(a)anthracene	7.1	28	28	20	1	5%	0.14	
Benzo(a)pyrene	1.6	7.8	9.4	20	1	5%	0.13	
Benzo(b)fluoranthene	12	78	96	20	1	5%	0.19	
Benzo(g,h,i)perylene	500	500	500	20	1	5%	0.090	
Benzo(k)fluoranthene	125	784	940	20	1	5%	0.18	
Beryllium	156	3161	3161	5	5	100%	0.19	
bis(2-Ethylhexyl) phthalate	287	957	957	20	2	10%	0.33	
Cadmium	7.5	150	150	5	1	20%	0.43	
Carbaryl	70	182	182	10	2	20%	0.51	
Chlordane	9.2	9.2	9.2	26	3	12%	**300**	Yes
Chlorobenzene	10	10	10	25	1	4%	0.00260	
Chromium	100/100000	109/100000	1200/100000	5	5	100%	19	
Chrysene	867	2817	2817	20	1	5%	0.16	
cis-1,2-Dichloroethene	782	20440	0.53	25	1	4%	0.00180	
Copper	915	2886	2886	16	9	56%	17	
Cyclohexanone	359	2351	2351	9	3	33%	34	
Dieldrin	0.66	0.66	0.66	26	1	4%	**3.7**	
Dimethoate	0.7	0.7	0.7	26	4	15%	**0.80**	Yes
Di-n-butylphthalate	400	500	500	20	1	5%	11	
Disulfoton	0.03	0.15	0.15	21	2	10%	**8.6**	
Endosulfan I	26	170	170	26	4	15%	11	
Endosulfan II	10	10	10	26	3	12%	1.8	
EPN	6.4	20	6.4	26	1	4%	0.051	
Ethyl benzene	70	70	70	25	12	48%	**1500**	Yes
Fluoranthene	2224	9118	9118	20	1	5%	0.086	
Heptachlor	0.67	0.83	0.83	36	2	6%	**0.76**	
Indeno(1,2,3-cd)pyrene	12	78	312	20	1	5%	0.098	
Isopropylbenzene	22	33	33	25	4	16%	**96**	Yes
Lead	270	400	400	5	5	100%	65	
Malathion	20	20	20	26	2	8%	**67**	
Mercury	2.1	17	17	5	5	100%	0.029	
Methyl parathion	0.2	1	1	26	2	8%	**24**	
Naphthalene	100	100	100	20	1	5%	0.077	
Nickel	404	2608	2608	5	5	100%	4.2	
Nitrobenzene	2	2	2	20	1	5%	**4.4**	
o-Xylene	20	38	38	14	7	50%	**650**	Yes
Parathion	20	60	60	26	1	4%	12	
Pentachlorophenol	3.3	4	4	20	1	5%	**98**	
Phenanthrene	110	110	110	20	1	5%	0.051	

Table 5B Pre-Interpolation Screening of Soil Data - Drexel East Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel East 2-5 ft Continued								
Pyrene	2184	6770	6770	20	1	5%	0.11	
Silver	17	85	85	5	1	20%	0.16	
Toluene	100	100	100	25	4	16%	22	
Toxaphene	10.88	10.88	10.88	36	4	11%	**110**	Yes
Zinc	5847	38564	38564	16	16	100%	460	

Table 5B Pre-Interpolation Screening of Soil Data - Drexel East Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel East 5-15 ft								
2-Butanone (MEK)	200	200	200	39	2	5%	3.1	
3/4-Methylphenol	13	82	82	9	2	22%	0.069	
4,4'-DDD	19	47	47	76	15	20%	**23**	Yes
4,4'-DDE	14	38	38	76	7	9%	**15**	
4,4'-DDT	20	54	54	76	23	30%	**120**	Yes
4-Nitrophenol	6	6	6	29	2	7%	2.8	
alpha-BHC	0.66	0.66	0.66	38	2	5%	0.10	
Arsenic	20	38	41	68	38	56%	**219**	Yes
Barium	2554	16480	16480	11	10	91%	19	
Beryllium	156	3161	3161	9	9	100%	0.18	
bis(2-Ethylhexyl) phthalate	287	957	957	29	5	17%	2.0	
Carbaryl	70	182	182	10	2	20%	1.2	
Chlordane	9.2	9.2	9.2	66	9	14%	**390**	Yes
Chlorobenzene	10	10	10	39	1	3%	0.00130	
Chloroethane	34	163	163	39	1	3%	0.98	
Chlorpyrifos	15	94	94	29	1	3%	0.71	
Chromium	100/100000	109/100000	1200/100000	11	11	100%	29	
cis-1,2-Dichloroethene	782	20440	0.53	38	2	5%	0.00220	
Copper	915	2886	2886	28	19	68%	6.6	
Coumaphos	1	1	1	38	1	3%	**4.5**	
Cyclohexanone	359	2351	2351	10	2	20%	43	
Diazinon	1.3	8.8	8.8	29	1	3%	0.016	
Dieldrin	0.66	0.66	0.66	38	2	5%	**6.2**	
Dimethoate	0.7	0.7	0.7	38	5	13%	0.23	
Disulfoton	0.03	0.15	0.15	29	2	7%	**1.7**	
Endosulfan I	26	170	170	38	6	16%	9.4	
Endosulfan II	10	10	10	38	5	13%	**18**	Yes
Endrin	10	24	24	38	2	5%	0.067	
EPN	6.4	20	6.4	38	2	5%	0.056	
Ethyl benzene	70	70	70	39	22	56%	**1100**	Yes
Fensulfothion	10	10	10	38	1	3%	0.034	
Heptachlor	0.67	0.83	0.83	76	10	13%	**16**	Yes
Isopropylbenzene	22	33	33	38	6	16%	**53**	Yes
Lead	270	400	400	11	10	91%	7.2	
Malathion	20	20	20	38	7	18%	**470**	Yes
Mercury	2.1	17	17	11	8	73%	0.029	
Methyl parathion	0.2	1	1	38	4	11%	**160**	Yes
Mevinphos	10	10	10	29	1	3%	**17**	
Naphthalene	100	100	100	29	4	14%	2.7	
Nickel	404	2608	2608	9	9	100%	2.8	
o-Xylene	20	38	38	19	11	58%	**1700**	Yes
Parathion	20	60	60	38	6	16%	**260**	Yes
Silver	17	85	85	11	1	9%	0.12	
Styrene	14	57	57	39	1	3%	**20**	
Toluene	100	100	100	39	13	33%	19	
Toxaphene	10.88	10.88	10.88	76	18	24%	**1400**	Yes
Zinc	5847	38564	38564	28	28	100%	13	

Table 5B Pre-Interpolation Screening of Soil Data - Drexel East Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel East >15 ft								
1,2,4-Trichlorobenzene	10.83	10.83	10.83	23	1	4%	0.00400	
1,2-Dibromoethane	0.01	0.01	0.01	25	13	52%	**2.7**	Yes
1,2-Dichloropropane	0.5	0.5	0.5	24	4	17%	0.075	
1,4-Dichlorobenzene	7.5	7.5	7.5	23	1	4%	0.00140	
2,4-D	7	7	7	15	1	7%	0.025	
2-Butanone (MEK)	200	200	200	24	1	4%	0.030	
4,4'-DDD	19	47	47	30	6	20%	7.5	
4,4'-DDE	14	38	38	30	4	13%	1.1	
4,4'-DDT	20	54	54	31	10	32%	**30**	Yes
4-Nitrophenol	6	6	6	15	6	40%	5.7	
Acetone	400	400	400	24	1	4%	0.099	
Arsenic	20	38	41	22	15	68%	7.6	
Barium	2554	16480	16480	8	8	100%	6.8	
Beryllium	156	3161	3161	8	8	100%	0.13	
bis(2-Ethylhexyl) phthalate	287	957	957	15	4	27%	0.093	
Bromomethane	1	1	1	24	1	4%	0.00620	
Chlordane	9.2	9.2	9.2	30	2	7%	2.2	
Chromium	100/100000	109/100000	1200/100000	8	8	100%	27	
Copper	915	2886	2886	15	13	87%	8.0	
Dimethoate	0.7	0.7	0.7	15	2	13%	0.024	
Disulfoton	0.03	0.15	0.15	9	1	11%	**0.047**	
Endosulfan I	26	170	170	23	8	35%	1.7	
Endosulfan II	10	10	10	23	6	26%	2.2	
Endosulfan sulfate	1.65	1.65	1.65	23	2	9%	0.078	
Ethyl benzene	70	70	70	24	19	79%	**220**	Yes
Heptachlor	0.67	0.83	0.83	30	6	20%	0.60	
Lead	270	400	400	8	8	100%	9.5	
Malathion	20	20	20	15	4	27%	**21**	Yes
Mercury	2.1	17	17	8	8	100%	0.019	
Methyl parathion	0.2	1	1	15	3	20%	**44**	Yes
Nickel	404	2608	2608	8	8	100%	1.4	
o-Xylene	20	38	38	16	16	100%	**190**	Yes
Parathion	20	60	60	15	5	33%	18	
Styrene	14	57	57	24	1	4%	0.00084	
Toluene	100	100	100	24	13	54%	3.2	
Toxaphene	10.88	10.88	10.88	30	6	20%	**100**	Yes
Zinc	5847	38564	38564	15	15	100%	7.7	

Bold: Exceeds Residential RRS

* Average calculated where the maximum detected value exceeds the residential RRS and where frequency of detection > 5%.
1/2 the detection limit used for non-detect results.

** Evaluated further if maximum concentration exceed Residential RRS, there is more than one detect, and the detection frequency > 10%

Table 5C Pre-Interpolation Screening of Soil Data - Drexel West Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel West 0-2 ft								
4,4'-DDD	19	47	47	19	4	21%	0.29	
4,4'-DDE	14	38	38	19	5	26%	0.18	
4,4'-DDT	20	54	54	19	3	16%	1.2	
Acetone	400	400	400	19	1	5%	0.023	
Arsenic	20	38	41	19	19	100%	**42**	Yes
Azinphos-methyl	10	10	10	20	1	5%	0.024	
Barium	2554	16480	16480	2	2	100%	136	
Benzene	0.5	0.5	0.5	19	2	11%	0.0072	
Benzo(a)pyrene	1.6	7.8	9.4	18	1	6%	0.36	
Benzo(b)fluoranthene	12	78	96	18	1	6%	0.67	
Beryllium	156	3161	3161	1	1	100%	0.24	
Cadmium	7.5	150	150	2	2	100%	**47**	Yes
Carbaryl	70	182	182	2	2	100%	1.9	
Chlorobenzene	10	10	10	19	1	5%	0.0091	
Chlorpyrifos	15	94	94	19	1	5%	0.57	
Chromium	100/100000	109/100000	1200/100000	2	2	100%	67	
Chrysene	867	2817	2817	18	1	6%	0.35	
Copper	915	2886	2886	18	16	89%	94	
Cyclohexanone	359	2351	2351	1	1	100%	29	
Dalapon	20	20	20	19	3	16%	0.092	
Diazinon	1.3	8.8	8.8	19	1	5%	0.074	
Dimethoate	0.7	0.7	0.7	20	1	5%	0.27	
Endosulfan I	26	170	170	19	3	16%	0.044	
Endosulfan II	10	10	10	19	4	21%	0.045	
Endrin	10	24	24	19	1	5%	0.019	
Endrin aldehyde	10	10	10	19	1	5%	0.018	
Ethyl benzene	70	70	70	19	1	5%	0.0012	
Fensulfothion	10	10	10	20	1	5%	0.028	
gamma-BHC (Lindane)	0.66	0.66	0.66	19	2	11%	**1.1**	Yes
Indeno(1,2,3-cd)pyrene	12	78	312	18	1	6%	0.33	
Lead	270	400	400	2	2	100%	61	
Mercury	2.1	17	17	2	1	50%	0.016	
Methoxychlor	87	542	542	19	3	16%	0.34	
Mevinphos	10	10	10	19	1	5%	0.017	
Nickel	404	2608	2608	1	1	100%	3.6	
Parathion	20	60	60	20	1	5%	0.030	
Pentachlorophenol	3.3	4	4	18	1	6%	0.010	
Pyrene	2184	6770	6770	18	1	6%	0.43	
Selenium	8.3	52	52	2	1	50%	**42**	
Silver	17	85	85	2	1	50%	4.7	
Toluene	100	100	100	19	1	5%	0.0040	
Toxaphene	10.88	10.88	10.88	19	1	5%	5.6	
Zinc	5847	38564	38564	18	18	100%	42	

Table 5C Pre-Interpolation Screening of Soil Data - Drexel West Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel West 2-5 ft								
4,4'-DDE	14	38	38	21	3	14%	0.025	
4,4'-DDT	20	54	54	21	1	5%	0.0010	
Arsenic	20	38	41	20	18	90%	4.8	
Barium	2554	16480	16480	2	2	100%	11	
Beryllium	156	3161	3161	1	1	100%	0.16	
bis(2-Ethylhexyl) phthalate	287	957	957	18	1	6%	0.064	
Carbaryl	70	182	182	2	2	100%	3.8	
Chromium	100/100000	109/100000	1200/100000	2	2	100%	29	
Copper	915	2886	2886	18	18	100%	8.4	
Dalapon	20	20	20	20	1	5%	0.026	
Endosulfan II	10	10	10	20	2	10%	0.0075	
Lead	270	400	400	2	2	100%	7.2	
Mercury	2.1	17	17	2	1	50%	0.014	
Methoxychlor	87	542	542	20	3	15%	0.022	
Nickel	404	2608	2608	1	1	100%	1.1	
Zinc	5847	38564	38564	18	18	100%	15	
Drexel West 5-15 ft								
4,4'-DDD	19	47	47	50	2	4%	0.031	
4,4'-DDE	14	38	38	50	7	14%	0.023	
4,4'-DDT	20	54	54	50	5	10%	0.12	
Acetone	400	400	400	42	1	2%	0.12	
alpha-BHC	0.66	0.66	0.66	48	2	4%	0.0014	
Arsenic	20	38	41	45	36	80%	6.4	
Barium	2554	16480	16480	9	3	33%	17	
Beryllium	156	3161	3161	2	2	100%	0.18	
beta-BHC	0.66	0.66	0.66	48	1	2%	0.0011	
bis(2-Ethylhexyl) phthalate	287	957	957	37	1	3%	0.13	
Carbaryl	70	182	182	2	2	100%	0.098	
Chlordane	9.2	9.2	9.2	26	2	8%	4.9	
Chlorobenzene	10	10	10	42	1	2%	0.0012	
Chromium	100/100000	109/100000	1200/100000	9	9	100%	25	
Copper	915	2886	2886	32	31	97%	22	
Dalapon	20	20	20	38	3	8%	0.11	
Dieldrin	0.66	0.66	0.66	48	1	2%	0.0022	
Endosulfan I	26	170	170	48	8	17%	0.065	
Endosulfan II	10	10	10	48	3	6%	0.033	
Endosulfan sulfate	1.65	1.65	1.65	48	1	2%	0.13	
Endrin	10	24	24	48	1	2%	0.042	
gamma-BHC (Lindane)	0.66	0.66	0.66	48	1	2%	0.00073	
Heptachlor	0.67	0.83	0.83	50	1	2%	0.13	
Heptachlor epoxide	1.6	1.65	1.65	48	1	2%	0.0019	
Lead	270	400	400	9	6	67%	11	
Malathion	20	20	20	39	1	3%	0.030	
Mercury	2.1	17	17	13	2	15%	0.023	
Nickel	404	2608	2608	2	2	100%	1.8	
Parathion	20	60	60	39	1	3%	0.015	
Toxaphene	10.88	10.88	10.88	50	1	2%	6.0	
Zinc	5847	38564	38564	32	32	100%	19	

Table 5C Pre-Interpolation Screening of Soil Data - Drexel West Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
Drexel West >15 ft								
4,4'-DDE	14	38	38	10	1	10%	0.027	
4,4'-DDT	20	54	54	10	2	20%	0.025	
Aldrin	0.66	0.66	0.66	9	1	11%	0.0022	
Arsenic	20	38	41	4	2	50%	5.7	
Chlordane	9.2	9.2	9.2	10	2	20%	0.54	
Copper	915	2886	2886	1	1	100%	16	
Endosulfan I	26	170	170	9	1	11%	0.021	
Endosulfan sulfate	1.65	1.65	1.65	9	2	22%	0.029	
Heptachlor	0.67	0.83	0.83	10	2	20%	0.0065	
Methoxychlor	87	542	542	9	1	11%	0.13	
Toxaphene	10.88	10.88	10.88	10	3	30%	1.7	
Zinc	5847	38564	38564	1	1	100%	65	

Bold: Exceeds Residential RRS

* Average calculated where the maximum detected value exceeds the residential RRS and where frequency of detection > 5%. 1/2 the detection limit used for non-detect results.

** Evaluated further if maximum concentration exceed Residential RRS, there is more than one detect, and the detection frequency > 10%

Table 5D Pre-Interpolation Screening of Soil Data - North Swale Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
North Swale 0-2 ft								
4,4'-DDD	19	47	47	27	6	22%	0.060	
4,4'-DDE	14	38	38	27	6	22%	7.0	
4,4'-DDT	20	54	54	27	2	7%	0.040	
Arsenic	20	38	41	27	18	67%	4.0	
Chlordane	9.2	9.2	9.2	27	5	19%	0.020	
Copper	915	2886	2886	8	8	100%	7.3	
Endosulfan I	26	170	170	8	1	13%	0.055	
Endosulfan sulfate	1.65	1.65	1.65	8	1	13%	0.059	
Toluene	100	100	100	8	1	13%	0.00180	
Zinc	5847	38564	38564	8	8	100%	28	
North Swale 2-5 ft								
Arsenic	20	38	41	9	6	67%	5.3	
Copper	915	2886	2886	8	8	100%	3.8	
Zinc	5847	38564	38564	8	8	100%	8.4	

Bold: Exceeds Residential RRS

* Average calculated where the maximum detected value exceeds the residential RRS and where frequency of detection > 5%. 1/2 the detection limit used for non-detect results.

** Evaluated further if maximum concentration exceed Residential RRS, there is more than one detect, and the detection frequency > 10%

Table 5E Pre-Interpolation Screening of Soil Data - South Swale Exposure Domain

Parameter	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	# Samples	# Detects	Frequency of Detections	Maximum Detected Conc (mg/kg)	Evaluate Further**
South Swale 0-2 ft								
4,4'-DDD	19	47	47	38	21	55%	**74**	Yes
4,4'-DDE	14	38	38	38	19	50%	**19**	Yes
4,4'-DDT	20	54	54	38	14	37%	**273**	Yes
Acetone	400	400	400	17	5	29%	0.88	
Aldrin	0.66	0.66	0.66	19	1	5%	0.32	
Arsenic	20	38	41	38	36	95%	**58**	Yes
Barium	2554	16480	16480	5	5	100%	327	
beta-BHC	0.66	0.66	0.66	20	1	5%	0.00550	
Carbaryl	70	182	182	5	5	100%	0.79	
Carbon disulfide	400	400	400	5	4	80%	0.23	
Chlordane	9.2	9.2	9.2	33	14	42%	**57**	Yes
Chlorobenzene	10	10	10	17	1	6%	0.00600	
Chlorpyrifos	15	94	94	17	5	29%	**690**	Yes
Chromium	100/100000	109/100000	1200/100000	5	5	100%	51	
Copper	915	2886	2886	17	17	100%	**18100**	Yes
Cyclohexanone	359	2351	2351	5	4	80%	0.75	
Dimethoate	0.7	0.7	0.7	17	3	18%	**8.0**	Yes
Endosulfan I	26	170	170	19	6	32%	**47**	Yes
Endosulfan II	10	10	10	19	2	11%	**12**	Yes
Endosulfan sulfate	1.65	1.65	1.65	19	2	11%	0.75	
Fensulfothion	10	10	10	17	2	12%	1.0	
Isopropylbenzene	22	33	33	17	2	12%	0.29	
Lead	270	400	400	5	5	100%	41	
Mercury	2.1	17	17	5	1	20%	0.22	
Toluene	100	100	100	17	1	6%	0.00710	
Toxaphene	10.88	10.88	10.88	38	4	11%	**587**	Yes
Zinc	5847	38564	38564	12	12	100%	240	
South Swale 2-5 ft								
4,4'-DDD	19	47	47	12	1	8%	0.00230	
Arsenic	20	38	41	12	12	100%	4.1	
Copper	915	2886	2886	10	10	100%	3.2	
Endosulfan I	26	170	170	12	1	8%	0.00210	
Endosulfan II	10	10	10	12	1	8%	0.00200	
Endosulfan sulfate	1.65	1.65	1.65	12	1	8%	0.00260	
Zinc	5847	38564	38564	10	10	100%	8.6	

Bold: Exceeds Residential RRS

* Average calculated where the maximum detected value exceeds the residential RRS and where frequency of detection > 5%. 1/2 the detection limit used for non-detect results.

** Evaluated further if maximum concentration exceed Residential RRS, there is more than one detect, and the detection frequency > 10%

Table 6A Comparison of Post-Remediation Values to Cleanup Criteria - CSX Exposure Domain

Parameter	Cleanup Criteria			Pre-Remediation	Post-Remediation	
	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	Maximum Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Interpolated 95% UCL (mg/kg)
CSX 0-2 ft						
4,4'-DDD	19	47	47	190	1.5	
4,4'-DDE	14	38	38	31	0.89	
4,4'-DDT	20	54	54	660	0.15	
Chlordane	9.2	9.2	9.2	42	0.5	
Dimethoate	0.7	0.7	0.7	3.8	ND	
Endosulfan I	26	170	170	160	0.001	
Endosulfan II	10	10	10	170	0.006	
Endosulfan sulfate	1.65	1.65	1.65	79	0.0042	
Toxaphene	10.88	10.88	10.88	5600	0.44	
CSX 2-5 ft						
4,4'-DDD	19	47	47	140	**27**	1.4
4,4'-DDE	14	38	38	17	2.2	
4,4'-DDT	20	54	54	220	8.3	
Aldrin	0.66	0.66	0.66	7.6	ND	
beta-BHC	0.66	0.66	0.66	3.1	ND	
Chlordane	9.2	9.2	9.2	420	7.1	
Dieldrin	0.66	0.66	0.66	25	ND	
Endosulfan I	26	170	170	91	ND	
Endosulfan II	10	10	10	92	ND	
Endosulfan sulfate	1.65	1.65	1.65	34	ND	
Endrin	10	24	24	62	ND	
Endrin aldehyde	10	10	10	31	0.014	
Ethyl benzene	70	70	70	1000	ND	
Heptachlor	0.67	0.83	0.83	7.8	ND	
o-Xylene	20	38	38	1800	ND	
Toxaphene	10.88	10.88	10.88	3100	0.86	
CSX 5-15 ft						
4,4'-DDT	20	54	54	100	**60**	0.73
Chlordane	9.2	9.2	9.2	640	**34**	1.2
Ethyl benzene	70	70	70	110	**110**	2.5
Heptachlor	0.67	0.83	0.83	2.0	**2.0**	0.025
Isopropylbenzene	22	33	33	71	**71**	0.44
Methyl parathion	0.2	1	1	0.54	**0.54**	0.017
o-Xylene	20	38	38	120	**120**	1.1
Toxaphene	10.88	10.88	10.88	1100	**306**	6.0
CSX >15 ft						
1,2-Dibromoethane*	0.01/0.5	0.01/0.66	0.01/0.66	1.2	**1.2**	*0.031***
4,4'-DDT	20	54	54	340	**340**	0.52

Bold: Exceeds Residential RRS

* Protection of GW RRS / Direct Soil Contact RRS

** Italics: Exceeds Residential RRS for protection of groundwater, but not direct contact

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Table 6B Comparison of Post-Remediation Values to Cleanup Criteria - Drexel East Exposure Domain

Parameter	Cleanup Criteria			Pre-Remediation	Post-Remediation	
	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	Maximum Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Interpolated 95% UCL (mg/kg)
Drexel East 0-2 ft						
4,4'-DDD	19	47	47	88	**88**	0.18
4,4'-DDE	14	38	38	16	0.24	
4,4'-DDT	20	54	54	340	**340**	0.61
Arsenic	20	38	41	56	**56**	3.1
Benzene	0.5	0.5	0.5	45	0.032	
Chlordane	9.2	9.2	9.2	450	3.5	
Dimethoate	0.7	0.7	0.7	1.6	0.6	
Endosulfan I	26	170	170	52	1.8	
Ethyl benzene	70	70	70	170	31	
Isopropylbenzene	22	33	33	81	3.8	
o-Xylene	20	38	38	400	1	
Toxaphene	10.88	10.88	10.88	420	**420**	4.0
Drexel East 2-5 ft						
4,4'-DDD	19	47	47	21	0.91	
Chlordane	9.2	9.2	9.2	300	0.44	
Dimethoate	0.7	0.7	0.7	0.80	0.03	
Ethyl benzene	70	70	70	1500	1	
Isopropylbenzene	22	33	33	96	ND	
o-Xylene	20	38	38	650	4.8	
Toxaphene	10.88	10.88	10.88	110	3	
Drexel East 5-15 ft						
4,4'-DDD	19	47	47	23	0.53	
4,4'-DDT	20	54	54	120	2.9	
Arsenic	20	38	41	219	12	
Chlordane	9.2	9.2	9.2	390	3.6	
Endosulfan II	10	10	10	18	0.42	
Ethyl benzene	70	70	70	1100	**920**	2.3
Heptachlor	0.67	0.83	0.83	16	0.22	
Isopropylbenzene	22	33	33	53	0.48	
Malathion	20	20	20	470	20	
Methyl parathion	0.2	1	1	160	0.049	
o-Xylene	20	38	38	1700	**1100**	6.9
Parathion	20	60	60	260	ND	
Toxaphene	10.88	10.88	10.88	1400	**180**	1.6
Drexel East >15 ft						
1,2-Dibromoethane*	0.01/0.5	0.01/0.66	0.01/0.66	2.7	**2.7**	*0.0228***
4,4'-DDT	20	54	54	30	**30**	0.080
Ethyl benzene	70	70	70	220	**220**	0.46
Malathion	20	20	20	21	**21**	0.052
Methyl parathion	0.2	1	1	44	**44**	0.075
o-Xylene	20	38	38	190	**190**	11
Toxaphene	10.88	10.88	10.88	100	**100**	0.35

Bold: Exceeds Residential RRS

* Protection of GW RRS / Direct Soil Contact RRS

** Italics: Exceeds Residential RRS for protection of groundwater, but not direct contact

Table 6C Comparison of Post-Remediation Values to Cleanup Criteria - Drexel West Exposure Domain

Parameter	Cleanup Criteria			Pre-Remediation	Post-Remediation	
	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	Maximum Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Interpolated 95% UCL (mg/kg)
Drexel West 0-2 ft						
Arsenic	20	38	41	42	**42**	2.8
Cadmium	7.5	150	150	47	**47**	3.2
gamma-BHC (Lindane)	0.66	0.66	0.66	1.1	**1.1**	0.0060

Bold: Exceeds Residential RRS

* Protection of GW RRS / Direct Soil Contact RRS

** Italics: Exceeds Residential RRS for protection of groundwater, but not direct contact

Table 6D Comparison of Post-Remediation Values to Cleanup Criteria - South Swale Exposure Domain

Parameter	Cleanup Criteria			Pre-Remediation	Post-Remediation	
	Residential RRS (mg/kg)	Industrial SS RRS (mg/kg)	Industrial SB RRS (mg/kg)	Maximum Detected Conc (mg/kg)	Maximum Detected Conc (mg/kg)	Interpolated 95% UCL (mg/kg)
South Swale 0-2 ft						
4,4'-DDD	19	47	47	74	5.3	
4,4'-DDE	14	38	38	19	1.3	
4,4'-DDT	20	54	54	273	0.22	
Arsenic	20	38	41	58	15	
Chlordane	9.2	9.2	9.2	57	**10**	0.27
Chlorpyrifos	15	94	94	690	ND	
Copper	915	2886	2886	18100	16	
Dimethoate	0.7	0.7	0.7	8.0	ND	
Endosulfan I	26	170	170	47	5.1	
Endosulfan II	10	10	10	12	0.77	
Toxaphene	10.88	10.88	10.88	587	1.3	

Bold: Exceeds Residential RRS

* Protection of GW RRS / Direct Soil Contact RRS

** Italics: Exceeds Residential RRS for protection of groundwater, but not direct contact

Table 7 Former Surface Impoundment Soil Data

Sample ID		Location	Date Sampled	Depth	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Antimony (mg/kg)	Arsenic (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chloro benzene (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Dieldrin (mg/kg)	Disulfoton (mg/kg)	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Heptachlor (mg/kg)	Heptachlor epoxide (mg/kg)	Lead (mg/kg)	Methyl parathion (mg/kg)	o-Xylene (mg/kg)	Pentachloro-phenol (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)					**19**	**14**	**20**	**0.66**	**0.66**	**5.4**	**20**	**0.66**	**7.5**	**9.2**	**10**	**100**	**915**	**1**	**0.66**	**0.03**	**26**	**10**	**10**	**10**	**70**	**0.66**	**0.67**	**1.6**	**270**	**0.2**	**20**	**3.3**	**10.88**
Industrial Surface Soil RRS (mg/kg)					**47**	**38**	**54**	**0.66**	**0.66**	**36**	**38**	**0.66**	**150**	**9.2**	**10**	**109**	**2886**	**1**	**0.66**	**0.15**	**170**	**10**	**24**	**10**	**70**	**0.66**	**0.83**	**1.65**	**400**	**1**	**38**	**4**	**10.88**
Industrial Subsurface Soil RRS (mg/kg)					**47**	**38**	**54**	**0.66**	**0.66**	**36**	**41**	**0.66**	**150**	**9.2**	**10**	**1200**	**2886**	**1**	**0.66**	**0.15**	**170**	**10**	**24**	**10**	**70**	**0.66**	**0.83**	**1.65**	**400**	**1**	**38**	**4**	**10.88**
Maximum Detected Concentration (mg/kg)					**60**	**32**	**340**	**3.1**	**8.3**	**11**	**190**	**56**	**21**	**170**	**290**	**160**	**4900**	**5.4**	**1.7**	**42**	**140**	**18**	**160**	**38**	**650**	**4.4**	**0.9**	**20**	**2700**	**0.2**	**390**	**4**	**1000**
Surface Impoundment #4																																
SI-4		In SI	10/20/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02		1.2	<0.02		<0.2	<0.001		0.92	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-4-1		In SI	9/20/2005	2-4	0.37	0.05	0.38	<0.0016	<0.0059	<0.47	4.1	<0.0054	<0.23	<0.034	<0.00069	19	4.3	<0.0066	<0.004		<0.0018	<0.0031	<0.0037	<0.0074	<0.00087	<0.0016	<0.0037	<0.0024	3.8	<0.011	<0.0014	<0.0011	<0.14
SI-4-1 Dup		In SI	9/20/2005	2-4																											<9.5E-02	
SI-4-3		In SI	9/20/2005	2-4	<8.6E-03	0.037J	0.12	<0.004	<0.015	<0.5	5.1	<0.013	<0.24	<0.086	<0.00061	19	3.6	<0.0066	<0.01		<0.0046	<0.0077	<0.0091	<0.019	<0.00077	<0.004	<0.0091	<0.006	3.2	<0.011	<0.0012	0.003J	<0.34
SI-4-3 Dup		In SI	9/20/2005	2-4																											<9.5E-02	
SI-4		In SI	10/20/2000	4-5							<4.71		<2.36			19.7													<4.71				
SI-4		In SI	10/20/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02		0.62	<0.02		<0.2	<0.001		35	<0.013	<0.02	<0.013	0.1	<0.02	<0.02	<0.02	<0.001	0.046	<0.02	<0.02		<0.013		<0.33	<0.4
SI-4-2		In SI	9/20/2005	4-6	0.029	0.015	0.0079	<0.00016	0.00096J	<0.46	3.2	<0.00054	<0.22	<0.0034	<0.00059	17	3.9	<0.0067	<0.0004		<0.00018	<0.00031	<0.00037	<0.00075	<0.00075	<0.00016	<0.00037	<0.00024	3.3	<0.011	<0.0012	0.0064	<0.014
SI-4-2 Dup		In SI	9/20/2005	4-6																											<9.5E-02	
Surface Impoundment #5																																
SI-1		In SI	12/20/2000	0	<0.0035	0.0035	<0.0035	<0.0018	<0.0018		2.4	<0.0018			<0.0015		3.1	<0.11	<0.0035	<0.11	<0.0018	<0.0035	<0.0035	<0.0035	<0.0015	<0.0018	<0.0018	<0.0018		<0.11		<0.35	<0.18
SI-5		In SI	10/20/2000	0	<2	<2	<2	<2	<2		3.1	<2		**170**	<0.05		230	<6.5	<2	**28**	<2	<2	<2	<2	<0.05	<2	<2	<2		<6.5		<0.33	<40
SI-5-1		In SI	9/20/2005	1-3	<0.0034	0.3P	<0.003	<0.0016	<0.0058	<0.46	<0.69	<0.0053	<0.23	<0.034	<6.5E-02	5.6	1.7J	<0.13	<0.0039		<0.0018	<0.003	<0.0036	<7.3E-03	0.21J	<0.0016	<0.0036	<0.0024	2.5	<0.22	14	0.017	<0.13
SI-5-1 Dup		In SI	9/20/2005	1-3																											<0.47	
SI-5		In SI	10/20/2000	4-5	**32**	<0.0033	**34**	<0.0017	<0.0017		<4.7	<0.0017	<2.35		<0.0028	<2.35			<0.0033		15	<0.0033	<0.0033	<0.0033	0.069	<0.0033	<0.0017	<0.0017	5.25			<1.7	**98.00001**
SI-5		In SI	10/20/2000	5	<2	<2	<2	<2	<2		14	<2		**130**	<0.1		72	<17	<2	**42**	<2	<2	<2	<2	1.1	<2	<2	<2		<17		**4.4**	<40
SI-1		In SI	12/20/2000	5	<0.004	<0.004	<0.004	<0.0019	<0.0019		7	<0.0019			<0.0012		9.9	<0.12	<0.004	<0.12	<0.002	<0.004	<0.004	<0.004	<0.0012	<0.004	<0.002	<0.002		<0.12		<0.39	<0.2
SI-5-2		In SI	9/20/2005	3-5	<0.0013	0.019	<0.0012	<0.00061	<0.0023	<0.45	<0.67	<0.0021	<0.22	<0.013	<0.00057	8.2	100	<0.0064	<0.0015		<0.0007	<0.0012	<0.0014	<0.0029	0.073	<0.00061	<0.0014	<9.2E-04	5.2	<0.011	0.026	<0.0011	<0.053
SI-5-2 Dup		In SI	9/20/2005	3-5																											<9.1E-02	
SI-5-3		In SI	9/20/2005	4-6	0.9400001	0.3J	0.12J	<0.016	<0.06	<0.48	1.8	<0.054	<0.23	<0.35	0.23	6.1	51	0.011J	<0.04		<0.018	<0.031	<0.037	<0.075	1.2	<0.016	<0.037	<0.024	10	0.032	7	1.5D	<1.4
SI-5-3 Dup		In SI	9/20/2005	4-6																											1.4J	
SI-5-4		In SI	9/20/2005	4-6	<0.36	<0.36	<0.33	<0.17	<0.63	0.86J	3.2	<0.57	0.43J	<3.6	0.39J	10	110	<0.035	<0.42		<0.19	<0.33	<0.39	<0.78	6.3	<0.17	<0.39	<0.25	15B	<0.06	**28**	1.9	<14
SI-5-4 Dup		In SI	9/20/2005	4-6																											2.7J	
SI-1		Under SI	12/20/2000	10	<0.0039	<0.0039	<0.0039	<0.0019	<0.0019		2.8	<0.0019			<0.0012		7.3	<0.12	<0.0039	<0.12	<0.0019	<0.0039	<0.0039	<0.0039	<0.0012	<0.0019	<0.0019	<0.0019		<0.12		<0.38	<0.19
BHS1C-5-1		Under SI	7/7/2006	8-10	<0.00034	0.0022JP	<0.00031	<0.00016	<0.00059			<0.00054		<0.0034					<0.0004		0.0018J	0.0028JP	<0.00036	<0.00074		<0.00016	<0.00036	<0.00024					<0.014
BHS1C-5-2		Under SI	7/7/2006	8-10	<0.34	<0.34	<0.3	**3.1P**	<0.58			<0.53		<3.4					<0.39		<0.18	**18**	<0.36	<0.73		<0.16	<0.36	<0.24					**480P**
SI-1		Under SI	12/20/2000	14	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017		6.26	<0.0017	<2.47		<0.0056	75.4		<0.1	<0.0033	<0.1	<0.0017	<0.0033	<0.0033	<0.0033	<0.0056	<0.0033	<0.0017	<0.0017	6.83	<0.1		<1.7	<0.17
SI-1		Under SI	12/20/2000	15	<0.0043	<0.0043	<0.0043	<0.0022	<0.0022		5.4	<0.0022			<0.0018		8.7	<0.13	<0.0043	<0.13	<0.0022	<0.0043	<0.0043	<0.0043	<0.0018	<0.0022	<0.0022	<0.0022		<0.13		<0.43	<0.22
BHS1C-5-1		Under SI	7/7/2006	13-15	<0.00035	<0.00035	<0.00031	<0.00016	<0.0006			<0.00054		<0.0035					<0.0004		<0.00019	0.00033J	<0.00037	<0.00075		<0.00016	<0.00037	<0.00024					<0.014
BHS1C-5-2		Under SI	7/7/2006	13-15	<0.034	<0.034	<0.031	0.2P	<0.059			<0.053		**10**					<0.04		<0.018	<0.031	<0.036	<0.074		<0.016	0.17J	<0.024					**32P**
BHS1C-5-1	*	Under SI	7/7/2006	18-20	<0.00034	<0.00034	<0.00031	<0.00016	<0.00059			<0.00054		<0.0034					<0.0004		<0.00018	<0.00031	<0.00036	<0.00074		<0.00016	<0.00036	<0.00024					<0.014
BHS1C-5-2	*	Under SI	7/7/2006	18-20	<0.0013	<0.0013	<0.0012	<0.00063	<0.0023			<0.0021		0.22P					<0.0016		<7.2E-04	<0.0012	<0.0014	<0.0029		<0.00063	<0.0014	<9.4E-04					1
Surface Impoundment #9																																
SI-9			10/17/2000	0	<0.02	<0.02	0.42	<0.02	<0.02		1.1	<0.02		<0.2	<0.0012		2.3	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.0012	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-9-1			9/19/2005	0-2	1.1	<0.036	6.6	<0.017	<0.062	<0.49	1.1	<0.056	<0.24	<0.36	<6.8E-04	13	3.5	<0.0069	<0.042		<0.019	<0.032	<0.038	<7.7E-02	<0.00086	<0.017	<0.038	<0.025	4.7	<0.012	<0.0014	0.0018J	**14J**
SI-9-1 Dup			9/19/2005	0-2																											<9.9E-02	
SI-9-5			9/20/2005	2-4	0.021P	9.3E-03P	0.094	<6.8E-04	<0.0025	<0.48	1.7	0.001J	<0.24	<0.015	<0.00064	15	4.4	<0.007	<0.0017		<0.00077	<0.0013	<0.0015	<0.0031	<8.1E-04	0.00045JP	<0.0015	<0.001	5.6	<0.012	<0.0013	<0.0012	0.25
SI-9-5 Dup			9/20/2005	2-4																											<0.1	
SI-9-4			9/19/2005	4-6	0.012J	<0.0014	0.07	<0.00067	<0.0025	<0.51	1.4	<0.0022	<0.25	<0.014	<0.0006	12	5.2	<0.0069	<0.0017		<0.00076	0.0094J	<0.0015	<0.0031	<0.00076	0.0017J P	<0.0015	<0.001	6	<0.012	<0.0012	<0.0012	<0.057
SI-9-4 Dup			9/19/2005	4-6																											<9.9E-02	
SI-9			10/17/2000	7							5.45		<2.46		<0.005	47.9									<0.005				7.18				
SI-9			10/17/2000	7	<0.02	<0.02	0.15	<0.02	<0.02		1.5	<0.02		<0.2	<0.001		3.3	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-9-2			9/19/2005	6-8	0.04	0.008P	0.0011J	<0.00016	<0.00059	<0.49	1.9	<0.00053	<0.24	<0.0034	<0.00057	11	7.8	<0.0066	<0.0004		<0.00018	<0.00031	<0.00036	<0.00074	<0.00071	<0.00016	0.0058P	<0.00024	5.7	<0.011	<0.0012	<0.0011	<0.014
SI-9-2 Dup			9/19/2005	6-8																											<0.094	
SI-9-3			9/19/2005	6-8	3.6	<0.18	3.7D	<0.085	<0.32	<0.49	3.3	<0.29	<0.24	<1.8	<7.9E-04	25	220	<0.035	<0.21		3.2P	<0.16	<0.19	<0.4	<0.001	<0.085	<0.19	<0.13	7.9	<0.061	0.033	<0.0012	**130**
SI-9-3 Dup			9/19/2005	6-8																											<0.1	
SI-9-6			9/20/2005	6-8	<0.071	<0.071	2.8	<0.033	<0.12	<0.48	4.6	<0.11	<0.24	<0.71	<0.17	19	6.9	<0.034	<0.083		0.9300001	<0.064	<7.6E-02	<0.15	3.9	<0.033	**0.8700001**	<0.05	6.3	<0.059	**29**	<0.0012	**130**
SI-9-6 Dup			9/20/2005	6-8																											<0.098	
SI-9-6			9/20/2005	8-10	<0.00035	<0.00035	0.034	<0.00016	<0.00061	<0.52	2.5	<5.5E-04	<0.25	<0.0035	<0.026	11	5.9	<0.034	<0.00041		<0.00019	<0.00032	<0.00037	<0.00076	0.29	<0.00016	0.0063	<0.00025	3.7	**0.21**	2.3	<0.0011	1.3
SI-9-6 Dup			9/20/2005	8-10																											<0.097	
BHS1C-9-1		Under SI	7/1/2006	8-10	<0.034	1.3P	1.2	0.18J P	<0.06			<0.054		**41**					<0.04		1P	<0.031	<0.037	<0.075		<0.016	**0.77**	<0.024					**110DJP**
BHS1C-9-2		Under SI	7/1/2006	8-10	<0.068	<0.068	1.8	<0.032	<0.12			<0.11		**47**					<0.079		1.7P	<0.061	<0.072	<0.15		<0.032	0.6	<0.048					**160**
GP13-2004		Under SI	6/3/2004	10	<3.7E-02	<3.7E-02	<3.7E-02	<1.9E-02	<1.9E-02		<3.6	<1.9E-02			<0.0044			<0.36	<3.7E-02	<0.072	<1.9E-02	<3.7E-02	<3.7E-02	<3.7E-02	0.0045	<3.7E-02	<1.9E-02	<1.9E-02		<0.019	0.0078		0.48
BHS1C-9-1	*	Under SI	7/1/2006	13-15	<7.3E-03	<7.3E-03	0.12	<0.0034	<0.013			<0.012		4.9					<8.6E-03		6.5E-02P	<0.0066	.800001E-	<0.016		<0.0034	0.13	<0.0051					6
BHS1C-9-2	*	Under SI	7/1/2006	13-15	<0.0016	0.015JP	<0.0015	<0.00076	<0.0028			<0.0026		0.78					<0.0019		<0.00087	<0.0015	<0.0017	<0.0035		<0.00076	<0.0017	<0.0011					<6.5E-02
BHS1C-9-1	*	Under SI	7/1/2006	18-20	<0.0014	<0.0014	0.019	0.0022J	<0.0024			<0.0022		<0.014					<0.0016		<0.00075	<0.0013	<0.0015	<0.003		<0.00065	0.0027J	<0.00098					0.89
BHS1C-9-2	*	Under SI	7/1/2006	18-20	<0.0015	0.027P	0.025	<0.00071	<0.0026			<0.0024		0.54					<0.0018		0.021P	<0.0014	<0.0016	<0.0033		<0.00071	0.0065J	<0.0011					1.7
Surface Impoundment #10																																
SI-10	*	Outside SI	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02		1.8	<0.02		<0.2	<0.001		1.7	<0.013	<0.02	**0.16**	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-10-1		In SI	9/20/2005	0-2	0.083J	0.053J P	0.28	<0.0059	<0.022	<0.44	0.71J	<0.02	<0.21	<0.13	<6.8E-04	8.4	3.1	<0.0062	<0.015		<6.8E-03	<0.011	<0.014	<0.028	<0.00086	<0.0059	<0.014	<0.0089	3.3	<0.011	<0.0014	<0.001	<0.5100001
SI-10-1 Dup		In SI	9/20/2005	0-2																											<8.8E-02	
SI-10-4		In SI	9/20/2005	0-2	12	2.9	7.400001	0.23J	<0.29	<0.46	<0.68	<0.26	<0.22	<1.6	<0.00051	5.3	8.1	<0.0064	<0.19		<8.8E-02	<0.15	<0.18	<0.36	<0.00064	<7.7E-02	<0.18	<0.12	5.3	<0.011	<0.001	<0.0011	<6.6
SI-10-4 Dup		In SI	9/20/2005	0-2																											<9.1E-02	
SI-10	*	Outside SI	10/17/2000	5	<0.02	<0.02	<0.02	<0.02	<0.02		2	<0.02		<0.2	<0.001		2.9	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-10-2		In SI	9/20/2005	4-6	0.3D	0.056P	0.061JD	<0.0031	<0.012	<0.49	3.3	<0.01	<0.24	<0.067	<0.00057	9.4	15	<0.0065	<7.8E-03		<0.0036	<0.006	<0.0071	<0.014	<0.00071	<0.0031	<0.0071	<0.0047	7.8	<0.011	<0.0011	<0.0011	<0.27
SI-10-2 Dup		In SI	9/20/2005	4-6																											<9.2E-02	
SI-10-3		In SI	9/20/2005	4-6	0.35D	0.12P	0.026J	<0.0031	<0.012	<0.45	1.4	<0.01	<0.22	<0.067	<0.0006	7.4	8.9	<0.0064	<7.8E-03		<0.0036	<0.006	<0.0071	<0.014	<0.00076	<0.0031	<0.0071	<0.0047	7.9	<0.011	<0.0012	<0.0011	<0.27
SI-10-3 Dup		In SI	9/20/2005	4-6																											<9.2E-02	
SI-10	*	Outside SI	10/17/2000	7							<4.7		<2.35			21.4													<4.7				
BHS1C-10-1	*	Under SI	6/30/2006	8-10	<0.00034	<0.00034	0.0022J	<0.00016	<0.00059			<0.00053		<0.0034					<0.00039		0.062PE	0.00046J	<0.00036	<0.00073		<0.00016	<0.00036	<0.00024					<0.014
BHS1C-10-2	*	Under SI	6/30/2006	8-10	<0.00034	<0.00034	<0.00031	<0.00016	<0.00059			<0.00053		<0.0034					<0.0004		<0.00018	<0.00031	<0.00036	<0.00074		<0.00016	<0.00036	<0.00024					<0.014
BHS1C-10-1	*	Under SI	6/30/2006	13-15	<0.00035	<0.00035	<0.00031	<0.00016	<0.00061			<5.5E-04		<0.0035					<0.00041		<0.00019	<0.00031	<0.00037	<0.00076		<0.00016	<0.00037	<0.00024					<0.014
BHS1C-10-2	*	Under SI	6/30/2006	13-15	<0.00037	<0.00037	<0.00033	<0.00017	<0.00064			<0.00058		<0.0037					<0.00043		<0.0002	<0.00033	<0.00039	<0.0008		<0.00017	<0.00039	<0.00026					<0.015
BHS1C-10-1	*	Under SI	6/30/2006	18-20	<0.00036	<0.00036	<0.00032	<0.00017	<0.00062			<0.00056		<0.0036					<0.00042		<0.00019	<0.00032	<0.00038	<0.00077		<0.00017	<0.00038	<0.00025					<0.014
BHS1C-10-2	*	Under SI	6/30/2006	18-20	<0.00035	<0.00035	<0.00032	<0.00016	<0.00061			<5.5E-04		<0.0035					<0.00041		<0.00019	<0.00032	<0.00037	<0.00076		<0.00016	<0.00037	<0.00025					<0.014

Table 7 Former Surface Impoundment Soil Data

Sample ID		Location	Date Sampled	Depth	4,4'-DDD (mg/kg)	4,4'-DDE (mg/kg)	4,4'-DDT (mg/kg)	Aldrin (mg/kg)	alpha-BHC (mg/kg)	Antimony (mg/kg)	Arsenic (mg/kg)	beta-BHC (mg/kg)	Cadmium (mg/kg)	Chlordane (mg/kg)	Chloro benzene (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Coumaphos (mg/kg)	Dieldrin (mg/kg)	Disulfoton (mg/kg)	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endrin (mg/kg)	Endrin Aldehyde (mg/kg)	Ethyl benzene (mg/kg)	gamma-BHC (Lindane) (mg/kg)	Heptachlor (mg/kg)	Heptachlor epoxide (mg/kg)	Lead (mg/kg)	Methyl parathion (mg/kg)	o-Xylene (mg/kg)	Pentachloro-phenol (mg/kg)	Toxaphene (mg/kg)
Residential RRS (mg/kg)					**19**	**14**	**20**	**0.66**	**0.66**	**5.4**	**20**	**0.66**	**7.5**	**9.2**	**10**	**100**	**915**	**1**	**0.66**	**0.03**	**26**	**10**	**10**	**10**	**70**	**0.66**	**0.67**	**1.6**	**270**	**0.2**	**20**	**3.3**	**10.88**
Industrial Surface Soil RRS (mg/kg)					**47**	**38**	**54**	**0.66**	**0.66**	**36**	**38**	**0.66**	**150**	**9.2**	**10**	**109**	**2886**	**1**	**0.66**	**0.15**	**170**	**10**	**24**	**10**	**70**	**0.66**	**0.83**	**1.65**	**400**	**1**	**38**	**4**	**10.88**
Industrial Subsurface Soil RRS (mg/kg)					**47**	**38**	**54**	**0.66**	**0.66**	**36**	**41**	**0.66**	**150**	**9.2**	**10**	**1200**	**2886**	**1**	**0.66**	**0.15**	**170**	**10**	**24**	**10**	**70**	**0.66**	**0.83**	**1.65**	**400**	**1**	**38**	**4**	**10.88**
Surface Impoundment #14																																	
SI-14		In SI	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02		<0.25	<0.02		<0.2			<0.5	<0.013	<0.02	<0.013	<0.02	<0.02	0.032	<0.02		<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-14		In SI	10/19/2000	0											<0.005										<0.005								
SI-14		In SI	10/19/2000	6	<0.02	<0.02	<0.02	<0.02	<0.02		<0.25	<0.02		<0.2	<0.005		<0.5	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.005	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-14		In SI	10/18/2000	7	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017		<4.8	<0.0017	<2.4			10			<0.0033		<0.0017	<0.0033	<0.0033	<0.0033		<0.0033	<0.0017	<0.0017	<4.8			<1.7	<0.17
SI-14-1		In SI	9/21/2005	2-4	0.081	0.029J	0.086	<0.0015	<0.0056	<0.44	1.6	<0.0051	<0.21	<0.032	<0.00064	17	2.2	<0.0063	<0.0038		<0.0017	<0.0029	<0.0034	<0.007	<8.1E-04	<0.0015	<0.0034	<0.0023	2.6	<0.011	<0.0013	<0.0011	<0.13
SI-14-1 Dup		In SI	9/21/2005	2-4																												<0.089	
SI-14-2		In SI	9/21/2005	3-5	6.9E-02P	0.025PJ	0.0016J	<0.0015	<0.0056	<0.46	<0.68	<0.005	<0.22	<0.032	<0.00063	5.5	2.5	<0.0062	<0.0037		<0.0017	<0.0029	<0.0034	<0.007	<7.9E-04	<0.0015	<0.0034	<0.0022	1.4B	<0.011	<0.0013	<0.001	<0.13
SI-14-2 Dup		In SI	9/21/2005	3-5																												<0.089	
SI-14-3		In SI	9/21/2005	3-6	0.16D	0.11J P D	<0.012	<0.0064	<0.024	<0.49	1.6	0.016J	<0.24	<0.14	0.011	10	30	<0.0066	<0.016		<7.3E-03	<0.012	<0.015	<0.03	0.048	<0.0064	<0.015	<0.0096	5B	<0.011	<0.0013	<0.0011	<0.55
SI-14-3 Dup		In SI	9/21/2005	3-6																												<0.094	
SI-14-4		In SI	9/21/2005	1-3	<0.00032	900001E-03	0.0047	<0.00015	<5.5E-04	<0.44	0.74J	<0.0005	<0.22	<0.0032	<0.00062	5.8	2.5	<0.0062	<0.00037		<0.00017	<0.00029	<0.00034	<0.00069	<7.9E-04	<0.00015	<0.00034	<0.00022	1.6B	<0.011	<0.0013	<0.001	<0.013
SI-14-4 Dup		In SI	9/21/2005	1-3																												<8.8E-02	
Surface Impoundment #15																																	
SI-15		In SI	10/19/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02		0.28	<0.02		<0.2			2.2	<0.016	<0.02	<0.016	0.041	0.024	<0.02	<0.02		<0.02	<0.02	<0.02		<0.016		<0.33	<0.4
SI-15		In SI	10/19/2000	0											0.006										0.02								
SI-15		In SI	10/19/2000	4	<2	<2	<2	<2	<2		5.4	<2		<20	<0.05		130	**5.4**	<2	**1.7**	**40**	<2	<2	<2	1.5	<2	<2	<2		<1		<0.33	<40
SI-15-1		In SI	9/21/2005	3-5	**60P**	**21P**	**340**	<0.8	**8.3J**	**11**	**190**	<2.7	1.6	<17	<0.037	29	**4900**	<0.41	<2		12	<1.5	**28**	<3.7	1.1	**4.4J**	<1.8	<1.2	27B	<0.71	1.2	<0.0014	**650J**
SI-15-1 Dup		In SI	9/21/2005	3-5																												<1.2	
SI-15-2		In SI	9/21/2005	3-5	**21D**	12P	**71D**	<0.88	**1.3J**	<3.3	8.3	<3	**11**	<19	<0.032	**110**	**940**	<9.1E-02	<2.2		6.8	<1.7	**150D**	**38P**	0.9900001	0.6J	<2	<1.3	34B	<0.16	1.1	<0.015	**1000J**
SI-15-2 Dup		In SI	9/21/2005	3-5																												<1.3	
SI-15-3 Dup		In SI	9/21/2005	3-5	**440JD**	**21J**	**1300D**	<20	**20J**	3.4J	9.8	<68	**17**	8.6J	0.086J	56	**1200**	<0.0084	<51		**27**	**17J**	<46	0.00001	0.5100001	**7.5J**	<46	<30	22B	0.032	0.64	<0.0014	<1700
SI-15-3 Dup		In SI	9/21/2005	3-5																												<0.6	
SI-15-3		In SI	9/21/2005	3-5	**49**	<2.2	**110**	<1	<3.9	<3.1	6.4J	<3.5	**21**	<22	0.24J	55	490	<0.0087	<2.6		7.1J	2.9J	<2.4	<4.9	0.7	**1.9J**	<2.4	<1.6	13B	<0.015	0.74	0.097	<90
SI-15-3 Dup		In SI	9/21/2005	3-5																												<0.62	
SI-15		In SI	10/18/2000	4-6	**22**	2.9	9.3	<0.0017	<0.0017		5.25	<0.0017	**15.8**			40			<0.0033		**140**	<0.0033	**160**	**15**		<0.0033	<0.0017	<0.0017	8.28			<1.7	**120**
BHS1C-15-1	*	Under SI	6/30/2006	13-15	7.90E-03	0.0031JP	3.70E-02	<0.00017	0.00089J		3.20E+00	<0.00056		<0.0036					<0.00042		<0.00019	0.0025J	<0.00038	<0.00078		<0.00017	<0.00038	0.0019JP					<0.014
BHS1C-15-1	*	Under SI	6/30/2006	18-20	<0.00036	<0.00036	<0.00033	<0.00017	<0.00063		2	<0.00057		<0.0036					<0.00043		<0.00019	<0.00033	<0.00039	<7.9E-04		<0.00017	<0.00039	<0.00026					<0.015
BHS1C-15-1	*	Under SI	6/30/2006	8-10	0.031P	0.0097PJ	0.12	<6.8E-04	0.0014J		1J	0.0011J		<0.015					0.0022JP		<0.00078	<0.0013	<0.0016	<0.0032		0.00073JP	<0.0016	<0.001					<0.058
BHS1C-15-2	*	Under SI	6/30/2006	13-15	<0.00034	<0.00034	<0.00031	<0.00016	<0.0006		2.2	<0.00054		<0.0034					<0.0004		<0.00018	<0.00031	<0.00037	<0.00075		<0.00016	<0.00037	<0.00024					<0.014
BHS1C-15-2	*	Under SI	6/30/2006	18-20	<0.00036	<0.00036	<0.00033	<0.00017	<0.00063		<0.79	<0.00057		<0.0036					<0.00042		<0.00019	<0.00033	<0.00039	<7.9E-04		<0.00017	<0.00039	<0.00025					<0.015
BHS1C-15-2	*	Under SI	6/30/2006	8-10	<0.00033	<0.00033	<0.0003	<0.00016	<0.00058		1.6	<0.00052		<0.0033					<0.00039		0.00084J	<0.0003	<0.00036	<7.2E-04		<0.00016	<0.00036	<0.00023					<0.013
Surface Impoundment #19																																	
SI-19		In SI	10/17/2000	0	<0.02	<0.02	<0.02	<0.02	<0.02		0.82	<0.02		<0.2	<0.001		0.75	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	<0.001	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-19		In SI	10/17/2000	2-3	0.38	0.065	0.081	<0.0017	<0.0017			<0.0017							<0.0033		<0.0017	<0.0033	<0.0033	<0.0033		<0.0033	<0.0017	<0.0017				<1.7	0.95
SI-19		In SI	10/17/2000	4	<0.02	<0.02	1.92	<0.02	<0.02		1.2	<0.02		<0.2	0.0011		7.4	<0.013	<0.02	<0.013	<0.02	<0.02	<0.02	<0.02	0.095	<0.02	<0.02	<0.02		<0.013		<0.33	<0.4
SI-19-1		In SI	9/21/2005	5-7	0.49	0.094P	0.61	<0.0033	<0.012	<2.4	9.3	0.023J	<1.2	<0.072	0.056J	19	18	<0.0069	<0.0084		<0.0038	<0.0065	<0.0077	<0.016	0.44	<0.0033	<0.0077	<0.005	12B	<0.012	0.2	<0.0012	<0.29
SI-19-1 Dup		In SI	9/21/2005	5-7																												<9.9E-02	
SI-19-2		In SI	9/21/2005	4-6	0.33	0.079PD	0.085D	8.6E-03JD	<0.0063	0.56J	7	0.015J D	0.66	<0.036	0.094J	15	37	<0.007	<0.0042		<0.0019	<0.0033	0.014JP	<7.9E-03	2.1	<0.0017	0.0096J D	<0.0025	19B	<0.012	<0.055	<0.0012	<0.15
SI-19-2 Dup		In SI	9/21/2005	4-6																												<0.1	
SI-19-3		In SI	9/21/2005	4-6	0.82PD	0.41PD	0.16J	<0.017	<0.063	<2.6	4.2J	<0.056	7.4	<0.36	<0.06	38	9.8J	<0.007	<0.042		<0.019	<0.032	<0.038	<0.078	8.5D	<0.017	<0.038	<0.025	9.3B	<0.012	3.4D	<0.0012	<1.4
SI-19-3 Dup		In SI	9/21/2005	4-6																												<0.1	
SI-19-4		In SI	9/21/2005	2-4	0.23D	0.035J P D	0.086	<0.0045	<0.017	<0.52	5	<0.015	0.36J	<0.097	<0.067	23B	9.1	<0.0075	<0.011		<0.0052	<8.8E-03	<0.01	<0.021	14	<0.0045	<0.01	<6.8E-03	15	<0.013	8.5	0.0031J	<0.39
SI-19-4 Dup		In SI	9/21/2005	2-4																												<0.11	
Surface Impoundment #20																																	
SI-20-3		In SI	9/21/2005	2-4	3.2D	0.43PD	0.2	<0.015	<0.056	<0.46	<0.68	0.026JP	<0.22	<0.33	6.5E-02J	2.7	27	<0.0063	<0.038		0.16J D	<0.029	<0.035	<0.07	0.47	<0.015	<0.035	<0.023	1.7B	<0.011	0.3	<0.0011	<1.3
SI-20-3 Dup		In SI	9/21/2005	2-4																												<0.09	
SI-20-1		In SI	9/21/2005	4-6	3.7P	**32PD**	<9.2E-02	<0.048	<0.18	<5.8	**26**	**56PDE**	<2.8	<1	**290**	**160**	540	<0.079	**1.7P**		<0.055	<9.2E-02	<0.11	<0.22	**650.0001**	<0.048	<0.11	**20P**	**2700B**	<0.14	**390**	0.17	<4.1
SI-20-1 Dup		In SI	9/21/2005	4-6																												<4.1	
SI-20-2		In SI	9/21/2005	4-6	**59D**	11P	<0.31	<0.16	<0.6	<0.48	2.5	<0.54	<0.23	<3.4	**34**	13	17	<0.067	<0.4		9.5	2.1JPD	<0.37	<0.75	**350**	<0.16	<0.37	<0.24	7.8B	<0.11	**230**	0.0076P	<14
SI-20-2 Dup		In SI	9/21/2005	4-6																												<1.9	
GP18-2004		In SI	6/3/2004	6	**43**	**29**	19	<2.6	<2.6		**78**	<2.6			**13**			<2.7	<5.3	<0.53	<2.6	<5.3	<5.3	<5.3	**100**	<5.3	<2.6	<2.6		**0.24**	**74**		<264
SI-20		In SI	10/18/2000	7	5.9	0.45	0.71	<0.0017	<0.0017		5.81	<0.0017	<2.46			10.2			<0.0033		<0.0017	<0.0033	<0.0033	<0.0033		<0.0033	0.034	<0.0017	13.9			<1.7	<0.17
SI-20		In SI	10/19/2000	7	<0.02	<0.02	<0.02	<0.02	<0.02		3.1	<0.02		<0.2	<0.005		74	<3.2	<0.02	<3.2	6.5	1.1	<0.02	<0.02	<0.005	<0.02	<0.02	<0.02		<3.2		<0.33	<0.4
SI-20-4	*	Outside SI	9/21/2005	6-8	<0.00034	<0.00034	0.00084J	<0.00016	<0.00059	<0.45	1.6	<0.00053	<0.22	<0.0034	<0.00058	12	4.7	<0.0066	<0.0004		<0.00018	<0.0003	<0.00036	<0.00073	<0.00073	<0.00016	<0.00036	<0.00024	4B	<0.011	<0.0012	<0.0011	<0.014
SI-20-4 Dup	*	Outside SI	9/21/2005	6-8																												<0.094	

* To be included in area averaging analysis for the Site

To be excavated

FIGURES

0 250 500 1,000

Feet

Legend

- Drexel Facility
- CSX
- Drexel Additional Property

VRP Properties

Figure No. 1

EPS

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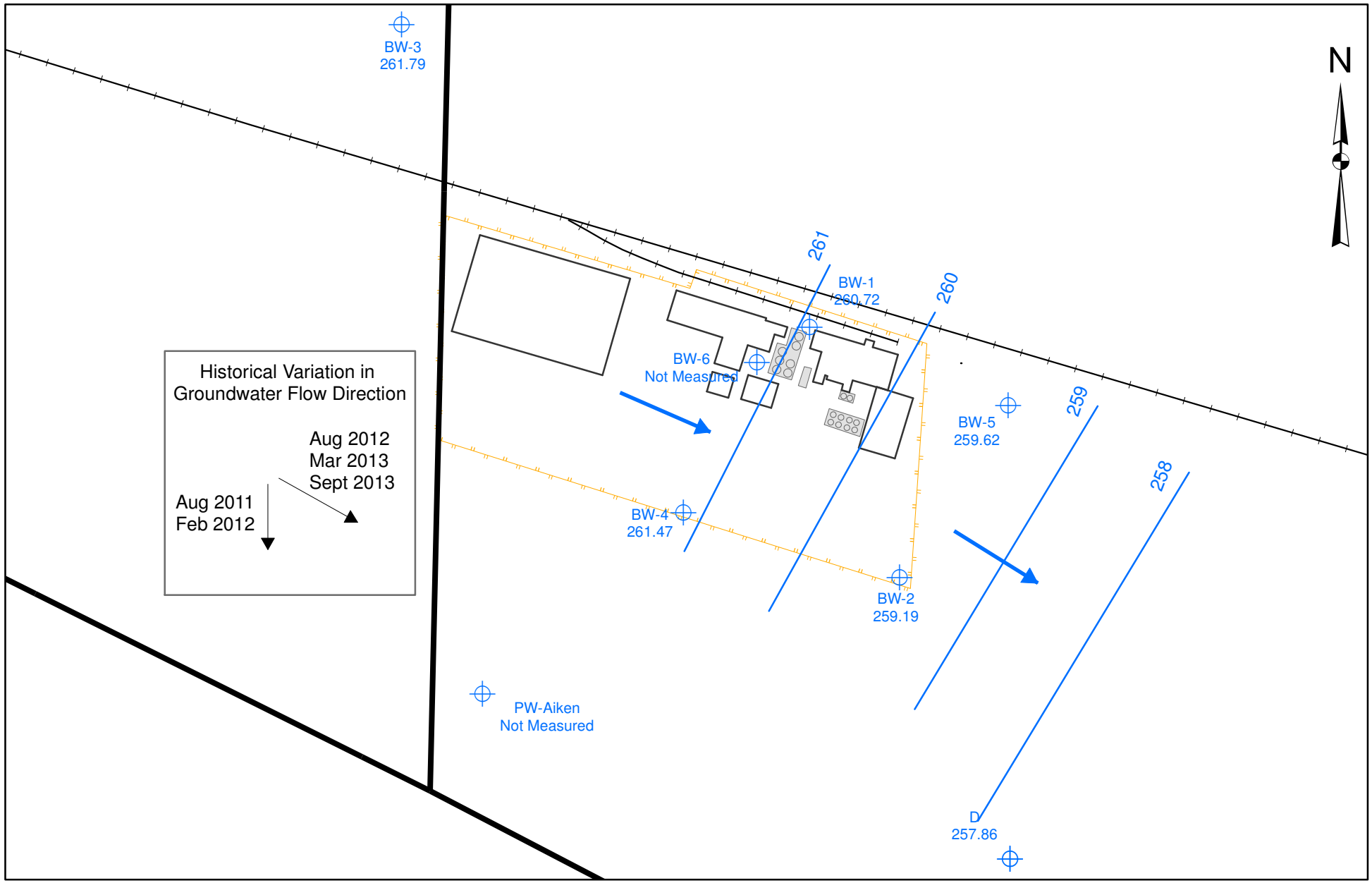
Figure 2. Projected Milestone Schedule

ID	Task Name	2011			2012				2013				2014				2015				2016	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	Project Management																					
	Semi-Annual Progress Reports			Oct 28		Apr 28		Oct 28		Apr 28		Dec 28		Apr 28		Oct 28		Apr 28		Oct 28		CSR Apr 28
	Horizontal delineation on Property					Apr 28																
	Horizontal delineation off-Property									Apr 28												
	Vertical delineation, final remediation plan, cost estimate for remediation											Dec 28										
2	Abandon Production Wells (PW-1, PW-2) and Install New Monitoring Well																					
	Develop Plan																					
	EPD Approval																					
	Perform Work																					
3	Groundwater Sampling																					
4	Additional Characterization																					
	Develop Scope																					
	Perform Work																					
5	Ecological Risk Assessment																					
	Revised SLERA																					
	Ecological Remediation Plan																					
6	Soil Remediation																					
	Surface Impoundments: Develop Plan																					
	Surface Impoundments: Remediation																					
	Develop Rail Car Unloading and Drainage Swale Plan																					
	Bid Rail/Swale Soil Remediation																					
	Submit Shoring Plan to CSX for Approval																					
	Perform Rail/Swale Soil Remedial Work																					
7	Groundwater Remediation																					
	Install Pump and Treat System																					
	Groundwater Monitoring																					

Complete
Anticipated



Potentiometric Surface - September 2013

EPS

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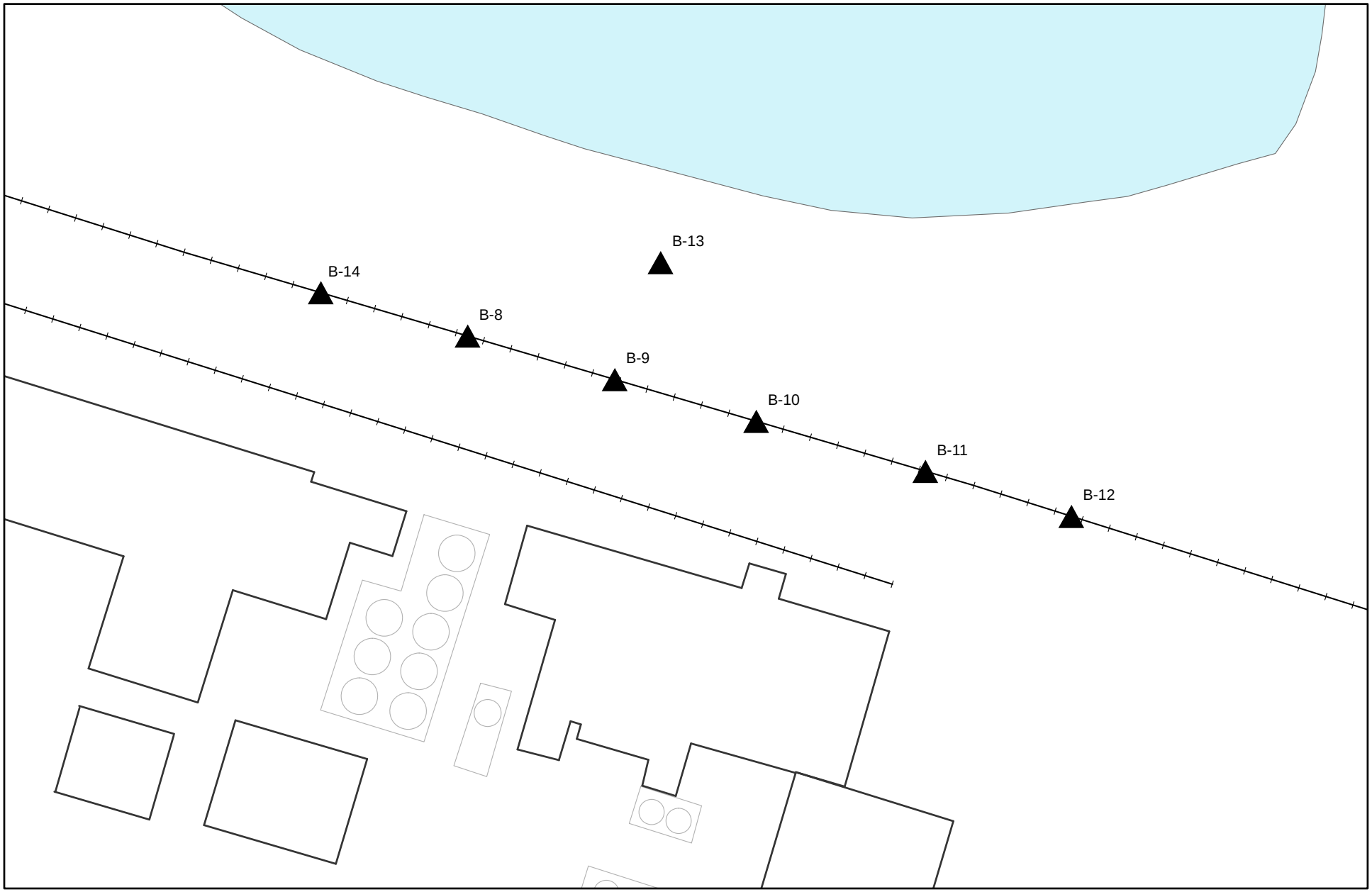
Figure No. 3



Legend

Boring Locations

0 25 50 100

Feet

EPS

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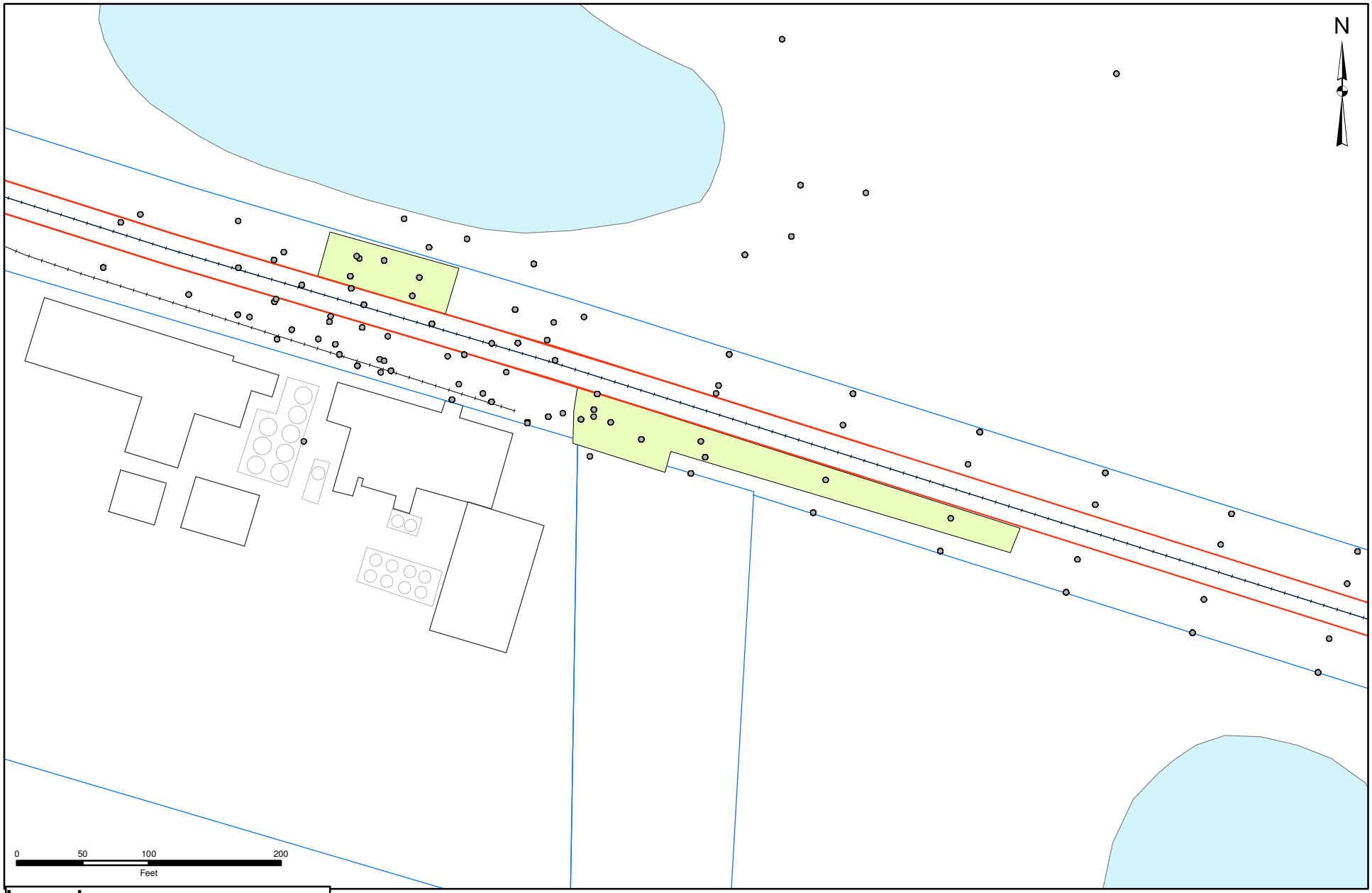
Rail Line Boring Locations

Figure No. 4



Ecological Remedial Action Areas

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Figure No. 5

Exposure Domains

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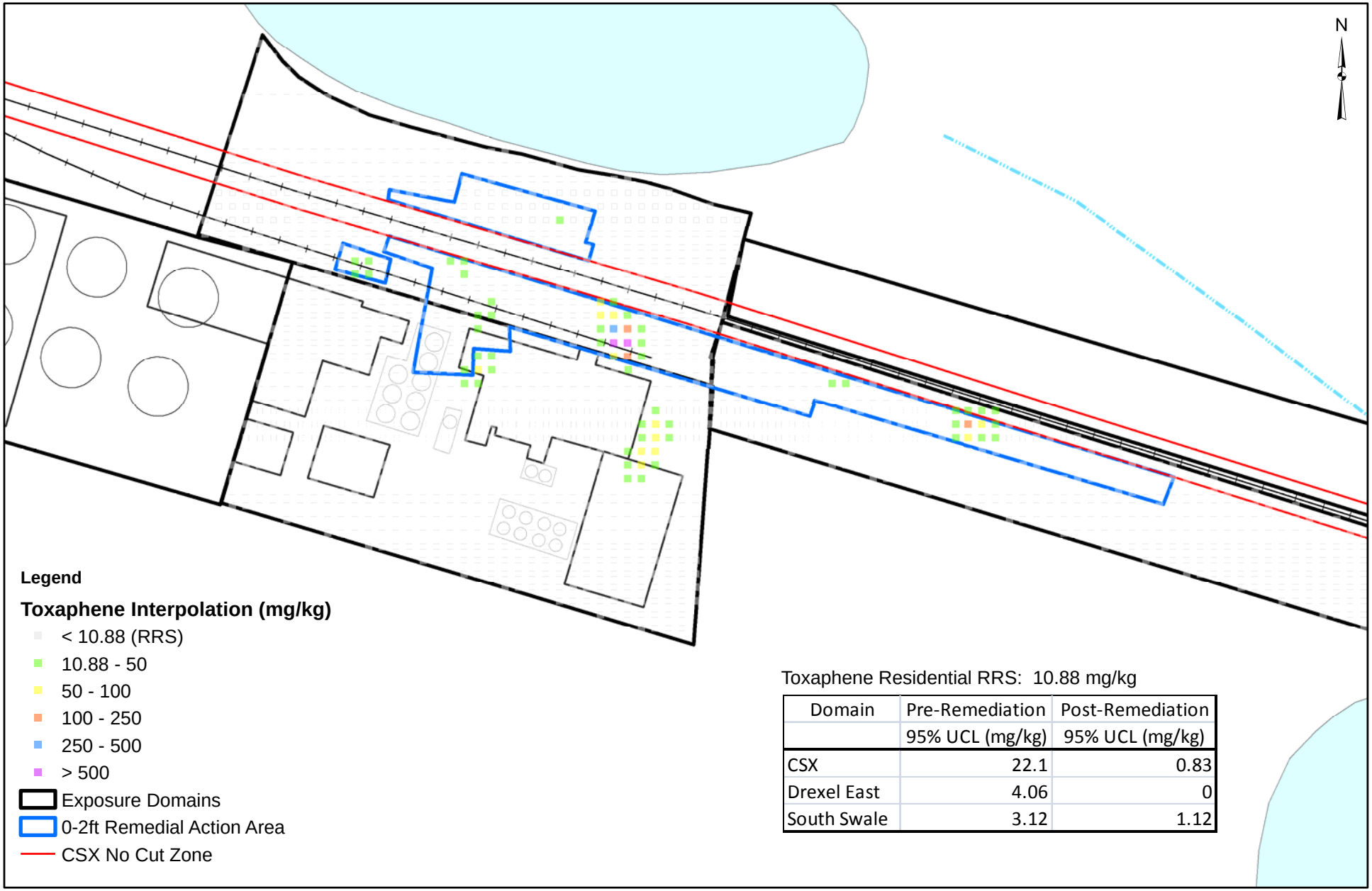
Figure No. 6



Toxaphene Residential RRS: 10.88 mg/kg

Domain	Pre-Remediation 95% UCL (mg/kg)	Post-Remediation 95% UCL (mg/kg)
CSX	22.1	0.83
Drexel East	4.06	0
South Swale	3.12	1.12

100 50 0 100 Feet

0-2ft Remedial Action Areas

EPS

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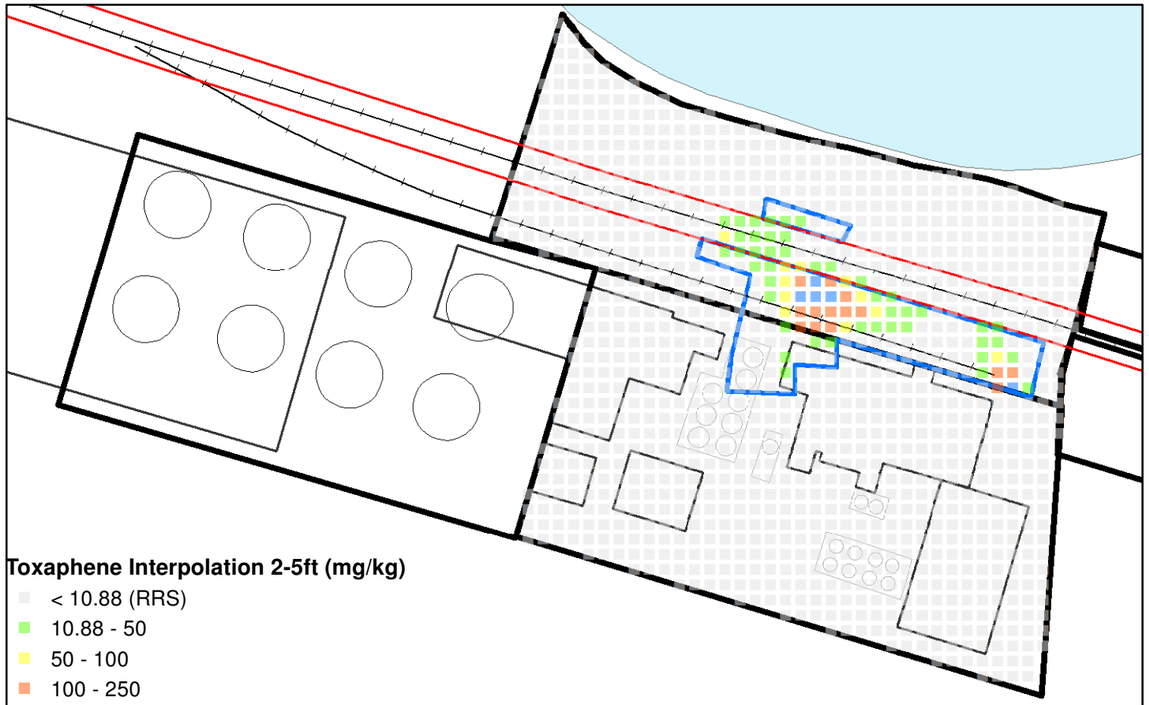
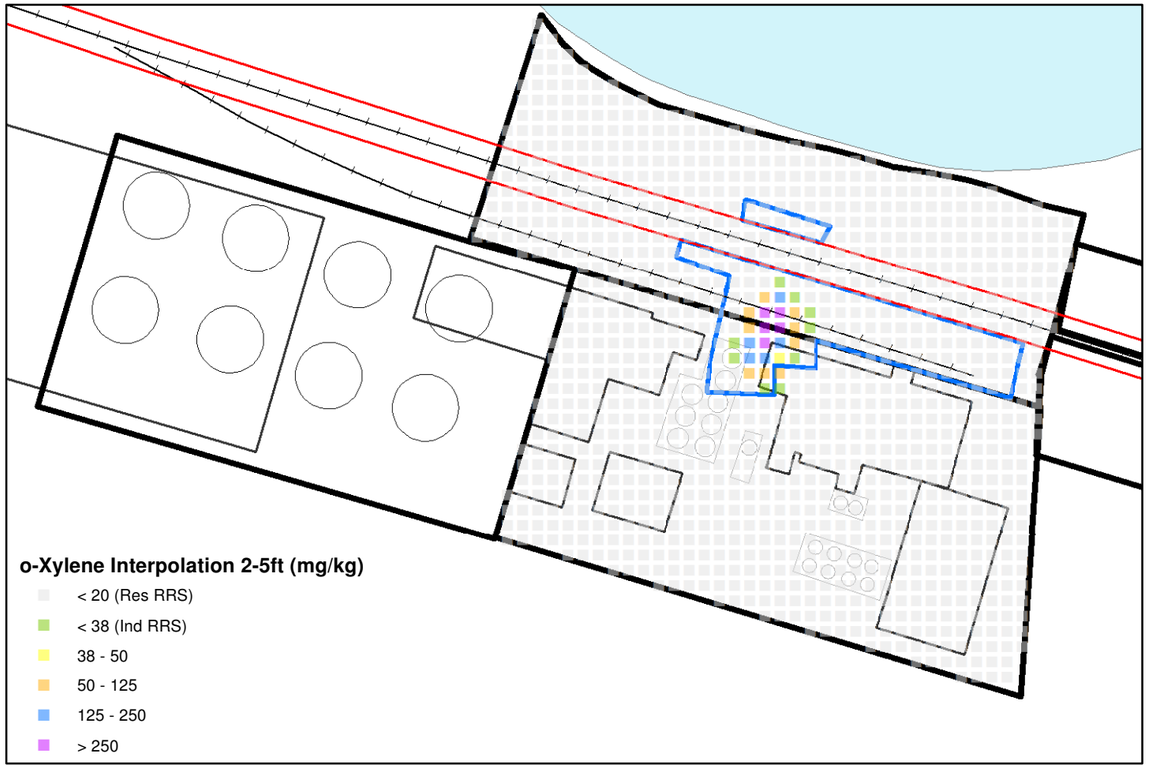
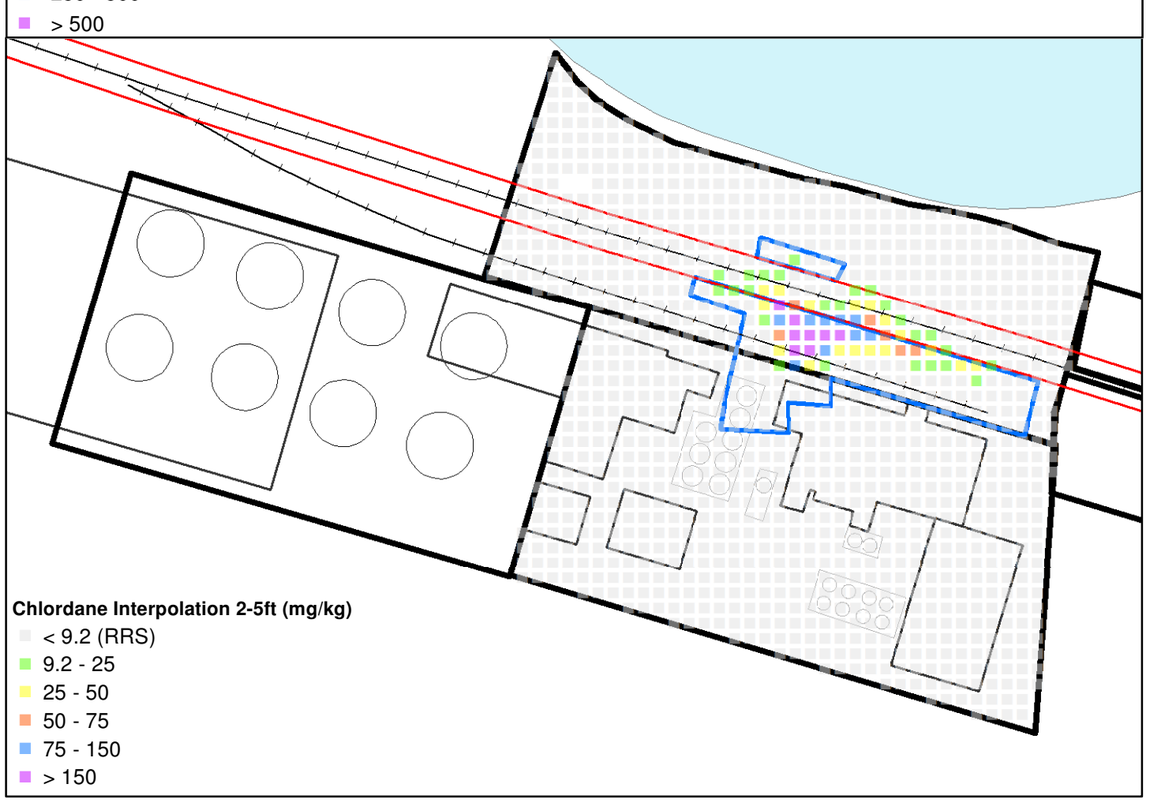
Figure No.7







0 50 100 200
Feet

Exposure Domains
CSX No Cut Zone
0-5ft Remedial Action Areas

Domain	Pre-Remediation 95% UCL (mg/kg)	Post-Remediation 95% UCL (mg/kg)
Toxaphene (Res RRS: 10.88 mg/kg)		
CSX	33	2.9
Drexel East	2.1	0.27
Chlordane (Res RRS: 9.2 mg/kg)		
CSX	23	3.8
Drexel East	0.23	0.07
o-Xylene (Res RRS: 20 mg/kg)		
CSX	13	0.35
Drexel East	8.3	0.33

2-5ft Remediation Areas

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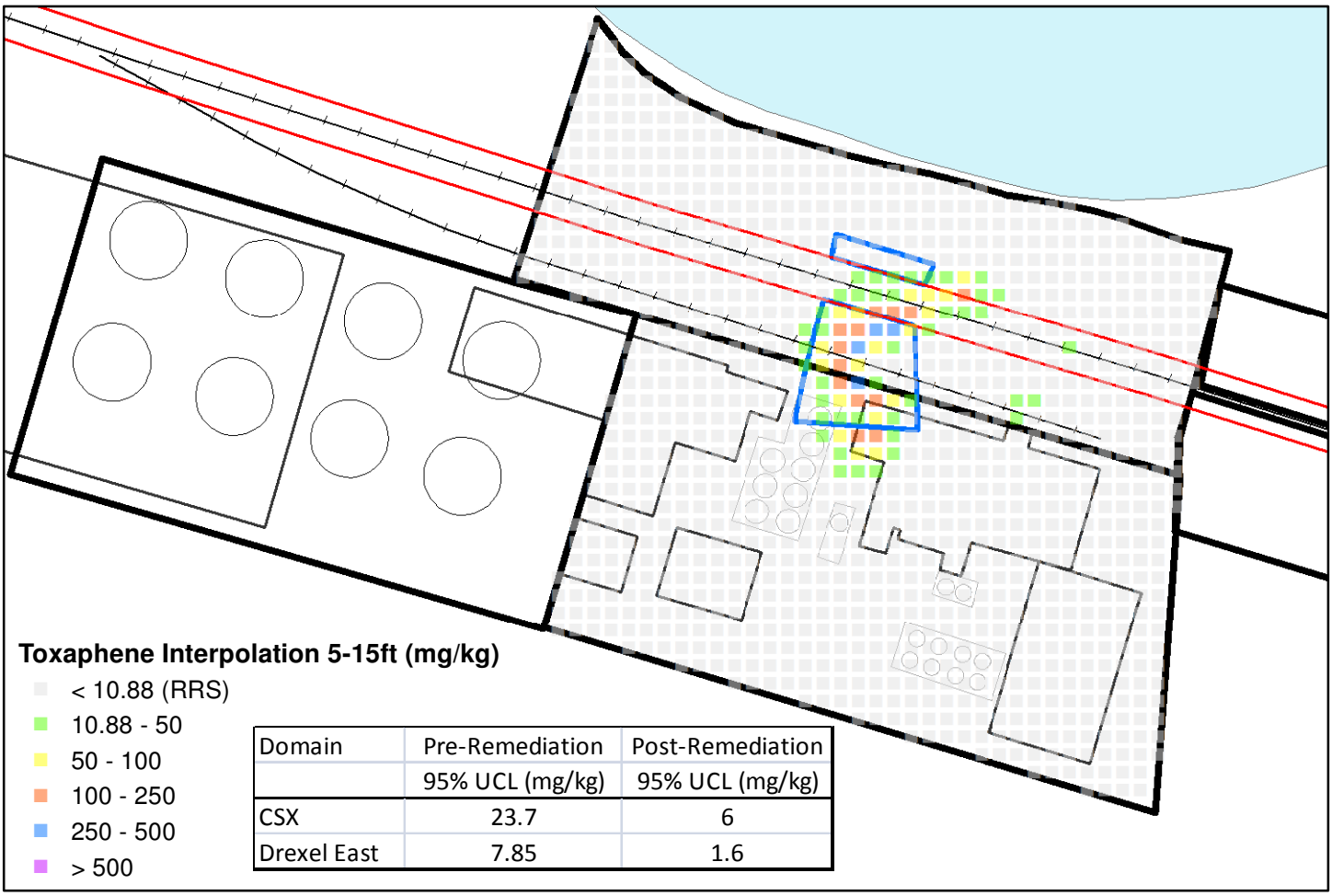
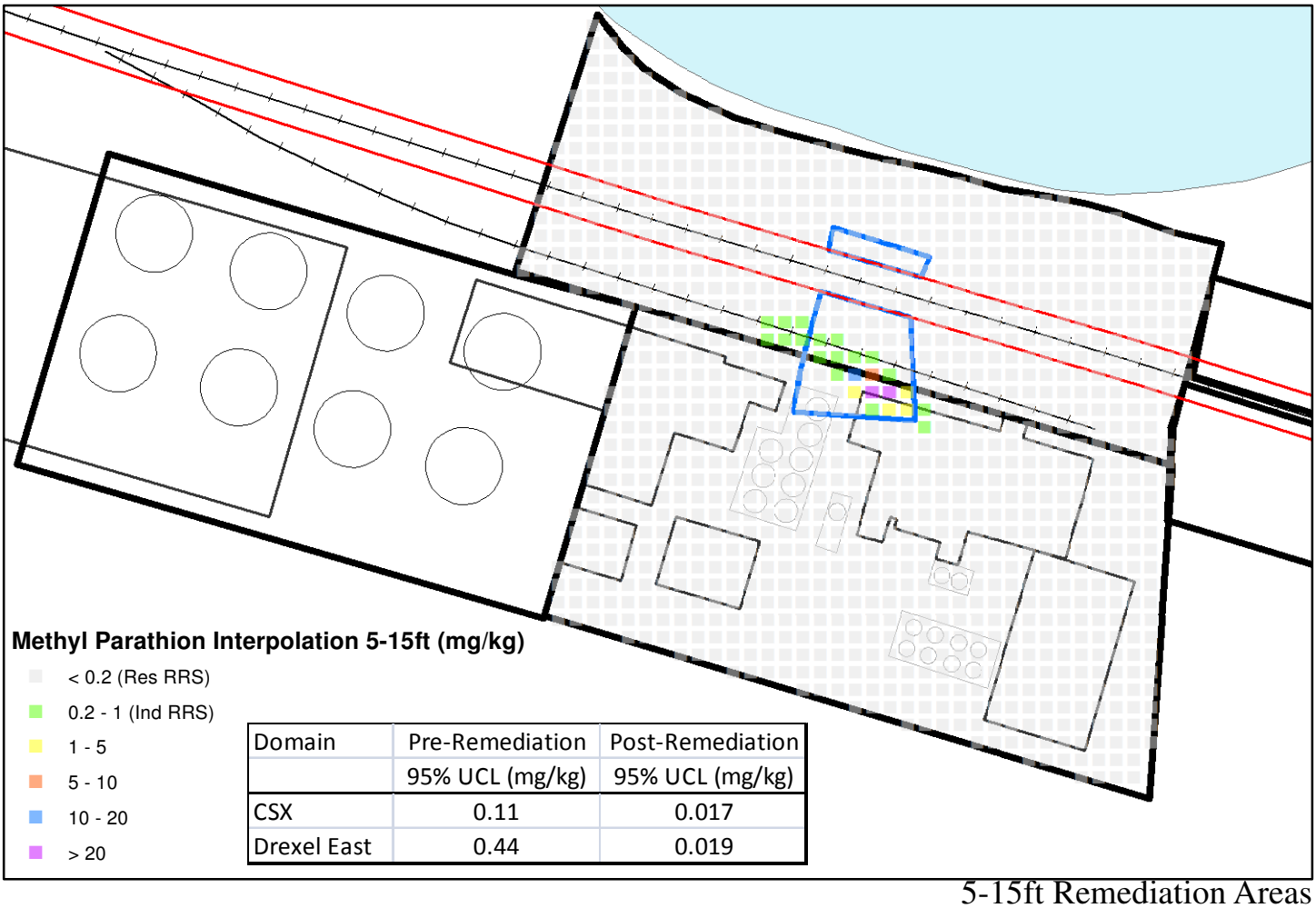
Figure No.8



Domain	Pre-Remediation	Post-Remediation
	95% UCL (mg/kg)	95% UCL (mg/kg)
CSX	23.7	6
Drexel East	7.85	1.6



Domain	Pre-Remediation	Post-Remediation
	95% UCL (mg/kg)	95% UCL (mg/kg)
CSX	0.11	0.017
Drexel East	0.44	0.019

5-15ft Remediation Areas

EPS

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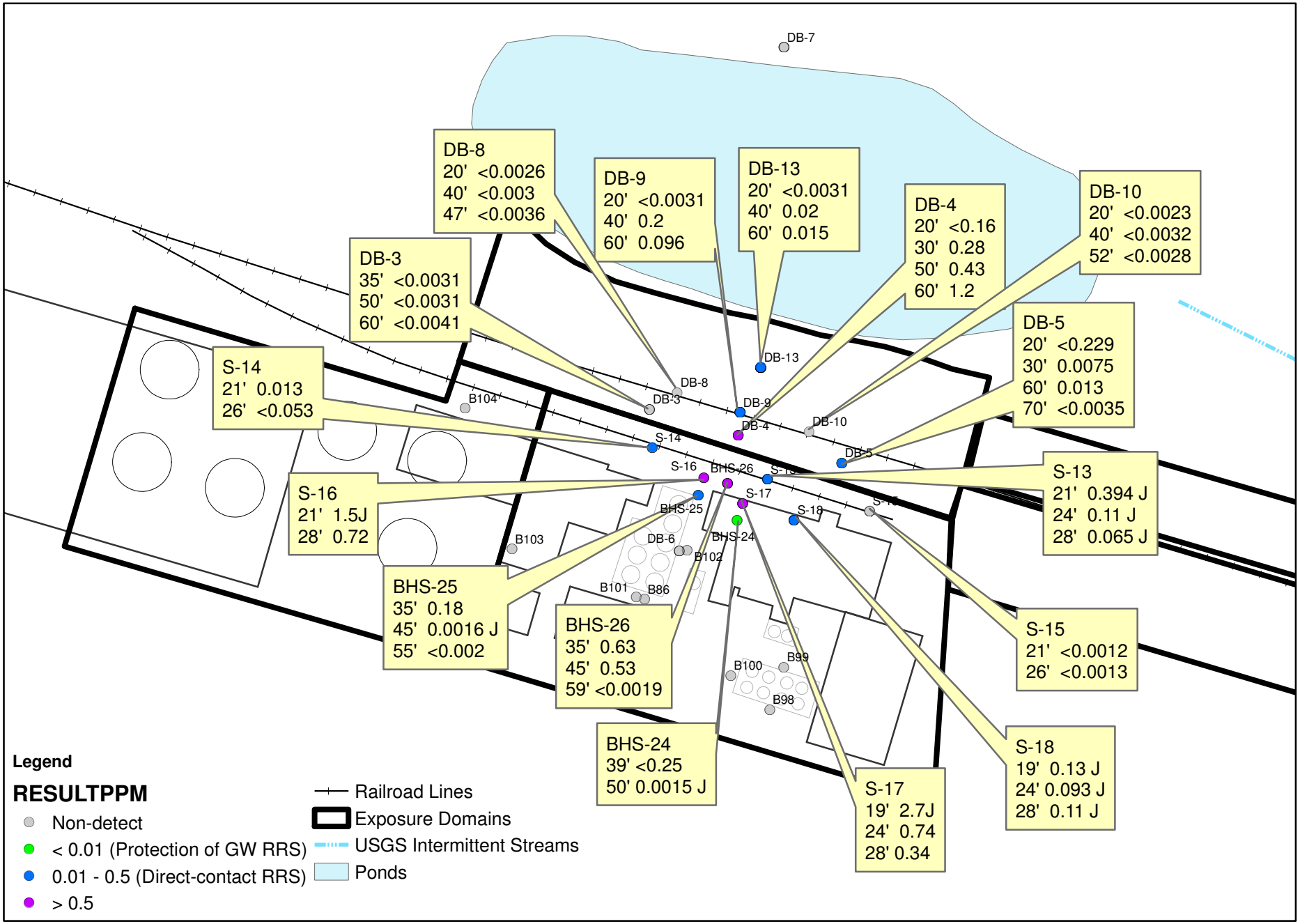
Figure No.9



Deep Soils (>15ft): EDB

EPS

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Figure No.10

0 50 100 200
Feet

Legend

- Former Surface Impoundments Being Excavated
- Former Surface Impoundments
- Concrete Cut Areas

Former Surface Impoundment Excavation Plan

EPS
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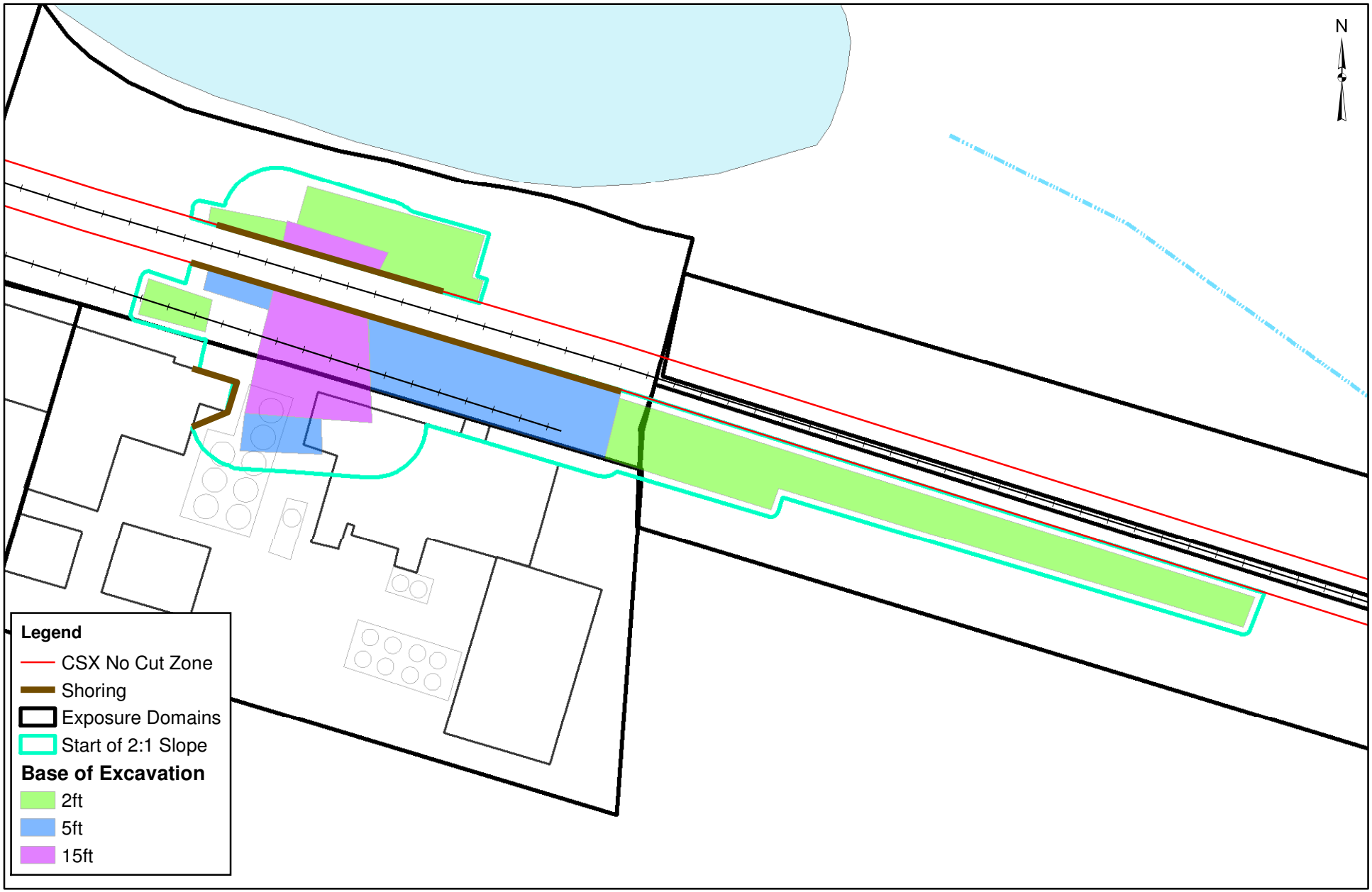
Figure No.11



Rail Line and Drainage Swale Excavation Plan

EPS

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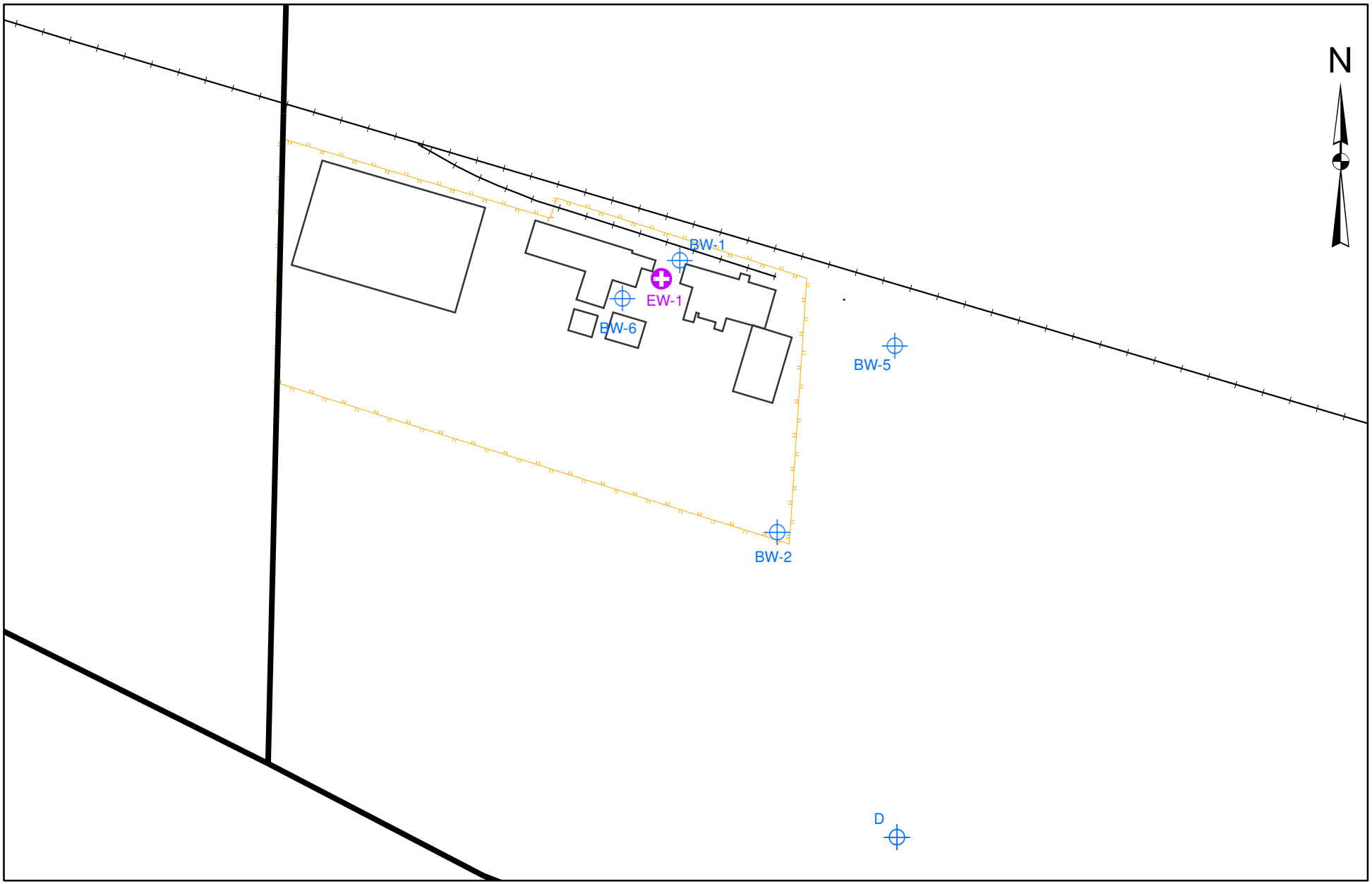
Figure No.12



Groundwater Remediation Plan

EPS

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Figure No. 13

APPENDIX A

PROFESSIONAL GEOLOGIST SUMMARY OF HOURS

Environmental Planning Specialists, Inc.
Drexel - Kirk Kessler - PG Hours
April through December 2013

	Apr 13	May 13	Jun 13	Jul 13	Aug 13	Sep 13	Oct 13	Nov 13	Dec 13	TOTAL
Drexel:Additional Characterization										
SP-Senior Principal:SP-Project Support	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Total Drexel:Additional Characterization	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Drexel:Consulting										
SP-Senior Principal:SP-Project Support	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	1.50
Total Drexel:Consulting	0.00	0.00	0.00	1.50	0.00	0.00	0.00	0.00	0.00	1.50
Drexel:Groundwater Sampling										
P-Principal:P-Project Support	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
Total Drexel:Groundwater Sampling	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
Drexel:Project Management										
P-Principal:P-Project Support	5.50	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	7.50
P-Principal:P-Site Visit	0.00	0.00	11.50	0.00	0.00	0.00	0.00	0.00	0.00	11.50
SP-Senior Principal:SP-Project Management	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00
SP-Senior Principal:SP-Project Support	2.00	3.00	0.00	2.00	5.00	4.00	0.00	2.00	0.00	18.00
SP-Senior Principal:SP-Site Visit	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	10.00
Total Drexel:Project Management	7.50	3.00	13.50	2.00	5.00	14.00	0.00	2.00	5.00	52.00
Drexel:Remediation										
SP-Senior Principal:SP-Project Support	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	4.00	10.00
Total Drexel:Remediation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	4.00	10.00
Drexel:Remediation Bid Package										
SP-Senior Principal:SP-Project Support	0.00	0.00	0.00	0.00	0.00	0.00	4.00	1.00	0.00	5.00
Total Drexel:Remediation Bid Package	0.00	0.00	0.00	0.00	0.00	0.00	4.00	1.00	0.00	5.00
Drexel:Status Report										
P-Principal:P-Document Review	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00
SP-Senior Principal:SP-Document Preparation	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
SP-Senior Principal:SP-Document Review	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	8.00
Total Drexel:Status Report	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	13.00
TOTAL	**18.50**	**3.00**	**13.50**	**3.50**	**6.00**	**14.00**	**4.00**	**9.00**	**13.00**	**84.50**

APPENDIX B

CONCEPTUAL SITE MODEL

EPS

APPENDIX B
CONCEPTUAL SITE MODEL

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B CONCEPTUAL SITE MODEL

B.1 Introduction

The CSM is intended to establish a common knowledge base about the Site (which includes all the VRP properties) and its environmental condition, to facilitate the development of basic remedial action objectives, and to allow an informed decision regarding possible remedial action measures. This section describes the surface and subsurface features at the Site, discusses the extent of contamination at the Site and discusses the potential receptors and exposure pathways.

B.2 Site Location and Description

Drexel's Pesticide Blending Facility is located approximately four miles east of downtown Cordele and two miles east of U.S. Interstate 75 off of U.S. Highway 280 East. Facility coordinates are 31^{o} 57' 12" North latitude and 83^{o} 43' 02" West longitude. The facility is set in a primarily agricultural and wooded area. The Drexel land parcel (the Facility) is approximately 6.89 acres, bounded on the west by Cape Road, to the north by a railroad, and to the south and east by agricultural land. Figure 1 shows the location of the Site with respect to the City of Cordel. Figure 2 is an aerial photograph (dated 2007) of the Site and immediate vicinity, along with an inset map of the land use interpreted from aerial photography.

The pesticide blending facility contains the following structures (see Figure 3):

- Main Warehouse / Mill Building,
- Middle Warehouse / Munsen Building,
- Liquid Production Building,
- several tank farms,
- Break Room/Locker Building, and
- Laboratory/Office Building.

The facility is served by a side track rail spur, owned by CSX and leased to Drexel, and located on the northern part of the Facility within the Facility's fence line. A chain link fence surrounds the facility. There are two former water supply wells, PW-1 and PW-2, which were used during most of the operational period of the facility. These wells were taken offline in 2003 due to the detection of 1,2-dibromoethane (also referred to as ethylene dibromide, EDB) in the water and were abandoned in 2012. An overall facility layout plan is shown on Figure 3.

In 1902, the property was obtained by the Atlantic and Birmingham Railroad Company from John Bulla. From 1902 until 1960, the Facility was owned and utilized by that railroad and/or its successors (i.e. Atlanta, Birmingham & Coast Railroad Co., and Atlantic Coast Line Railroad Co.). We do not know the specific use of the property by the railroad; however, aerial

photographs between 1937 and 1952 show four residences on the property, which was surrounded by cropland. In November 1960, the facility was purchased by Cotton Producers Association, which later changed its name to Gold Kist, Inc. (Gold Kist). Reportedly, fertilizer production began in the early 1960's and pesticide production followed thereafter. In 1985 Drexel purchased the property from Gold Kist and purchased an adjacent 3 acre agricultural parcel south of the Gold Kist property, bringing the total property size of the Facility to its current size of 6.89 acres.

Records and aerial photography indicate that, by 1962, the facility consisted of a production building, office, rail spur, eight subgrade surface impoundments, and a 235-foot deep water well (PW-1) reportedly used for both potable water and industrial purposes. Aerial photography indicates that, by 1968, an additional production (liquid production) building, attached warehouse, and bulk storage tanks had been constructed. It is unknown exactly when and/or how the first four of the eight surface impoundments were removed from service, or exactly how any were closed out. However, it appears from historical Georgia Environmental Protection Division (GAEPD) inspection reports that, of the eight noted in aerial photography, only four remained in operation by 1982, and none remained in operation by March 1984. It is believed the four western-most impoundments were filled with soil and graded in 1983 (USEPA, 1985). In 1986, Drexel constructed a 40,000 square foot warehouse (referred to as the Mill or New Warehouse) and attached production building over the location of the former (westernmost) surface impoundments. For more information about the operational history, please see the Revised 3013 Site Assessment Report (EPS, 2008).

B.3 Ground Surface Features

The majority of the Facility is flat (0-2% slopes) with a small rise in elevation on the southeast part of the Facility. Drainage features on the Site are indicated on Figure 4. Drainage in the surrounding area, the majority of which is in agricultural use, is primarily to the east, parallel to the CSX rail line along two drainage features, one on each side of the tracks. The north drainage ditch is about 40 feet (ft) wide, and has generally wet soils with areas of standing water. The south drainage is a shallower swale that is also about 40 ft wide, but has generally dry soils. The railroad manages the vegetation along these swales/ditches with intermittent herbicide application. During wet periods, surface water in the south swale flows to the northeast until it reaches a culvert beneath the rail line approximately 800 ft to the east of the Drexel Facility where it runs under a small culvert and joins with the north ditch. The north ditch continues to flow in a southeasterly direction to join with other intermittent stream flowing from the forested area to the north, at which point it turns south through a box culvert under the rail line approximately 3,000 ft to the east of the Drexel Facility. The ditch continues in a southeasterly direction and merges with several other drainage features to become Deep Creek.

The drainage swale that runs along the southern side of the rail is predominantly a dry ditch except during rainfall events (Photograph 1). In contrast, the swale along the north side of the rail line becomes comingled with an intermittent stream and wetlands feature eastward of the Facility. The National Wetlands Inventory classifies this area as a "freshwater forested/shrub wetland." The intermittent stream is a part of this low relief wetland and is not a discrete, incised

channel. Photograph 2 shows where the intermittent stream flows underneath the rail line (approximately 3,000 ft east of the Facility). Irrigation ponds are common in the area and there is one located approximately 100 ft to the north of the Facility and another is located just under 450 ft to the east of the Facility.

Photograph 1 Drainage Swale on Southern Side of Rail Line
(Facility is on the left; photograph taken facing northwest)

Photograph 2 Intermittent Stream on the North Side of the Rail Line East of the Facility
(photograph taken facing west-northwest back toward the Facility)

The majority of the facility is covered with a concrete apron. A concrete culvert runs underneath the Liquid Production building to the northeast corner of the property. Drexel operates under a National Pollution Discharge Elimination System (NPDES) permit to discharge stormwater runoff at multiple permitted discharge locations; however, the majority of stormwater runoff occurs at Outfall #001 (northeast corner of property) and to a lesser extent, at Outfall #002 (between the Mill and Middle Warehouse buildings). Both outfalls convey surface runoff to the southern CSX mainline railroad swale. The swale pitches to the east. The locations of the outfalls are shown on Figure 4.

Historically, Drexel operations produced a non-contact cooling water discharge from extraction of groundwater from the two production wells. In 2003, Drexel converted to an oil-cooled unit and discontinued the use of both production wells, which were subsequently abandoned in 2012. Drexel provided notice to GAEPD that it was ceasing that permitted discharge.

B.4 Subsurface Features

B.4.1 Geological Setting

B.4.1.1 Regional Geological Setting

Crisp County is located on the western flank of the Coastal Plain Physiographic Province. This province is bounded to the north by the Fall Line separating the Coastal Plain and Piedmont Physiographic Provinces. The coastal plain contains unconsolidated sediments (sands, silts and clays) and consolidated sediments (cemented sands and limestones) dating from Late Cretaceous to Recent age. These sedimentary sequences crop out at progressively younger ages away from the Fall Line to the Atlantic coast. The sedimentary formations dip gently to the south-southeast while thickening in the downdip direction forming wedge-shaped stratigraphic layers (Wait, 1960).

The Coastal Plain Physiographic Province in Crisp County is further divided into three districts. The Fall Line Hills District is exposed in the northwestern portion of the county. The central-southwestern portion of the county contains the Dougherty Plain District, a northeast-trending, wedge-shaped feature characterized by gently rolling low land. The Tifton District occurs in eastern Crisp County characterized by well developed dendritic drainage patterns. The Tifton District slopes in elevation from 480 ft above mean sea level (amsl) in the north to 150 ft amsl in the southeast (Clarke et al., 1976). The city of Cordele is located along the boundary between the Fall Line Hills and Tifton Districts.

The Ocala Limestone of upper Eocene age crops out along the western margin of the county and dips to the south-southeast, underlying the Flint River Formation. The Oligocene-age Flint River Formation is exposed from the western portion of the county to a line (north-south) approximately immediately west of Cordele. The Flint River Formation is also described in the scientific literature as the Suwannee Limestone and residuum. The Flint River Formation underlies the younger Hawthorne Formation of Miocene age from Cordele to the eastern margin of the county (Figure 5). The Hawthorne Formation is also described in the scientific literature as undifferentiated Neogene sediments. Chemical weathering of underlying rocks (especially limestones) creates a thick mantle of sandy clay or residuum. This residuum may be 50 ft or more in thickness.

The Hawthorne Formation is a pale to dark green phosphatic sandy clay with lesser amounts of sand and sandy limestone. The Flint River Formation is a siliceous limestone, sandy limestone and recrystalized limestone. The Ocala Limestone is a white to yellowish-white pure fossiliferous limestone. The Ocala thickens up to 130 ft in the southeastern corner of the county. Beneath the Ocala Limestone exists the Claiborne Group, a sandy limestone and sand with some clay beds. The Claiborne Group is 120 ft thick in the northwest portion of the county, thickening

to 320 ft in the southeastern portion of the county. Underlying the Claiborne is the Wilcox Group, a gray sandy clay and fine sand. The Wilcox Group is nearly uniform in thickness within the county, varying from 120 to 140 ft.

B.4.1.1.2 Site Geology – Residuum (overburden)

Numerous soil borings have been advanced across the Site (see Appendix E of the VIRP for more information about the different site investigations conducted since 1984). Boring logs from soil borings conducted since 2005 are presented in Appendix F of the VIRP. Similarly, well construction diagrams for wells constructed from 2005 - 2012 are presented in Appendix G of the VIRP and the wells constructed in 2013 are presented in Appendix C of the 5th Progress Report. The Lithologic cross-sections are shown in Figures 6 and 7.

The investigations revealed that beneath the topsoil layer, residuum is characterized by a predominantly clay soil texture with pockets of coarser-grained soil. Soil density and clay content increase with depth, with gradational changes in texture beginning at approximately 60-70 ft below ground surface (bgs) to a weathered rock (limestone) condition. As the degree of weathering decreases with further depth, the weathered rock transitions into competent limestone around 100 ft or more bgs.

B.4.2 Hydrogeological Setting

B.4.2.1 Regional Hydrogeological Setting

The Hawthorne and Flint River Formations supply modest yield of water to dug and shallow wells drilled in the eastern half of the county. These formations are not significant in terms of a regional water supply, and are considered as a semi-confining unit to the underlying Floridian aquifer (Ocala Limestone). The clay layer of chemically-weathered residuum of the Ocala is laterally continuous and of substantial thickness in places to create a hydraulic barrier to vertical flow of water, causing perched groundwater conditions.

The Ocala is the uppermost regional water supply of significant yield potential. In the area of the Site, water supply wells may yield up to 400 to 500 gallons per minute (gpm). Structure contour and isopach maps of the Ocala limestone in northeastern Crisp County show the top of the unit occurs as an approximate elevation of 290 ft amsl and the base at about 60 ft amsl (Arora, 1984). The depth to water in the Ocala varies across the county and may be as much as 150 ft bgs in eastern Crisp County.

The Claiborne Group is the principal regional water supply, capable of yields of 1200 gpm. The four City of Cordele water supply wells obtain their supply primarily from the Claiborne and to a lesser extent the underlying Wilcox Group (well numbers 1 and 2 were previously decommissioned; presently the city is served by well numbers 3, 4, 5, and 6). These water supply wells are dispersed and as far as three miles east of the city in the direction of the Drexel Facility. The nearest of the city water supply wells (well number 6) is approximately 4,000 ft northwest of the Facility; well number 6 is cased to a depth of 364 ft bgs with multiple screened intervals extending to a total depth of 600 ft bgs. Structure contour and isopach maps of the Claiborne Group in northeastern Crisp County show the top of the unit occurs as an approximate

elevation of 40 to 80 ft amsl and the base at about 245 to 280 ft below mean sea level (bmsl) (Arora, 1984).

Based upon a regional hydrologic study of the aquifer (Hydrologic Atlas 22), the groundwater flow direction is to the east-southeast (Peck et al., 1999).

B.4.2.2 Site Hydrogeology: Perched Water in Residuum

As mentioned above, perched groundwater conditions are often found in the residuum of the Ocala. Fifteen shallow perched water zone monitoring wells and one deeper perched water zone well offset were installed during the Compliance Status Report (CSR) investigation (Peachtree, 1999 and 2001). Water was reported to occur in each of the well installations, although the depth-to-water varied greatly from 1.3 ft below top of casing to as much as 35.4 ft below top of casing. At the well cluster location (MW-15), the depth-to-water varied from 3.3 ft below top of casing in the shallow well to 27.2 ft below top of casing in the deeper overburden well. In 2004, GeoSyntec Consultants (GeoSyntec) advanced 19 soil borings and direct-push well points (at some locations in excess of 40 ft bgs) across the Site to better understand the Site hydrogeology of the overburden; groundwater was not encountered in any of these borings or well points. Based on this, GeoSyntec concluded at that time that the shallow groundwater is either a localized perched water table condition, or the soils have such low permeabilities in places that water is extremely slow to release from the formation into the borehole/well point. Subsequent studies performed during the RCRA 3013 site assessment (EPS, 2008) proved the hypothesis that the water in the overburden (i.e., subsurface soils overlying the bedrock) is perched water (further detail is provided in Section 4.2.2.1 of Appendix E of the VIRP).

B.4.2.3 Site Hydrogeology: Ocala Limestone Aquifer

The Ocala Limestone underlies the overburden. Two former water supply wells (PW-1 and -2) were installed within the Ocala. PW-1 was approximately 235 ft deep while PW-2 was approximately 270 ft deep. These former water supply wells were cased through the overburden (to prevent soil from collapsing into the well) and partially into the limestone (likely where the rock is loosely cemented and easily friable), and were open-hole installations to their termination depth. These wells were abandoned in 2012. Groundwater at the Site is encountered at approximately 150 ft bgs.

In 2005 three groundwater wells were installed at and near the Site (see Figure 8). Well BW-1 was installed to a depth of 170 ft between Tank Farm #1 and the rail unloading area. Well BW-2 is 179 ft deep and is located at the southeastern corner of the Drexel Facility. Well BW-3, which is 175 ft deep, is located just over 300 ft from the northwest corner of the Drexel Facility. The first approximation of the potentiometric surface at the Site (based on these three wells) was presented in the RCRA 3013 Report (EPS, 2008) and is shown in Figure 8.[1] The groundwater flow direction based on these wells was determined to be to the south-southeast. Based on this direction of groundwater flow, a more ideally situated well downgradient from the area of greatest contamination was needed. Therefore, in 2010 another well (BW-4) was installed per an

[1] Note the elevations from the production wells (PW-1 and PW-2) are not used in developing the potentiometric contours as they are not as discrete with screened intervals. It is improper to combine elevations from the production wells with the other on-Site wells that do have discrete screened intervals.

EPD-approved Work Plan (EPS, 2010A). The total depth of the well is 180 ft and is located near the middle of the Drexel Facility's southern fence line. Groundwater depths from BW-1, BW-2, BW-3, and BW-4 were measured in August 2012, which indicated a groundwater flow direction with a more easterly component. Thus, for the purposes of delineation, EPS installed two additional wells in 2013. EPS installed BW-5 with a total well depth of 170 ft east of the Drexel Facility for horizontal delineation. EPS installed BW-5 near former well PW-1 for vertical delineation. BW-6 is a multi-level sampling well (specifically a FLUTe™ well) with sample ports screened at 180-190ft, 280-290ft, and 380-390ft. The potentiometric surface from September 2013 is shown on Figure 9.

B.5 Environmental Conditions

The Site has been investigated on numerous occasions over the years by a number of different parties. EPS has compiled all of these environmental data records into a relational database library. Throughout these investigations, the primary focus has been characterization of soil at the Drexel Facility and rail spur, and soil/sediment along drainage areas off the property. Groundwater has also been investigated. Hundreds of surficial and subsurface soil samples have been characterized for pesticides, herbicides, metals, volatile organic compounds (VOCs), and semi-VOCs (SVOCs). Appendix E of the VIRP contains a summary of the previous site characterization and response actions.

B.5.1 Risk Reduction Standards

Drexel has worked with the GAEPD to develop Risk Reduction Standards (RRSs) for the Site. The methodology used to determine the RRS is presented in a technical memorandum to the GAEPD (EPS, 2010B). The RRSs were revised according to EPD's comments in a letter dated December 2, 2010 and presented in the VIRP. These RRSs were approved by the EPD in a letter dated April 28, 2011. The approved soil and groundwater RRSs are shown in Table 1 and Table 2, respectively.

B.5.2 Delineation Criteria

Based on section 12-8-108 of the Georgia Voluntary Remediation Program Act, the soil and groundwater will be delineated to default residential cleanup standards. Type 1 RRSs will be used as the delineation standards and are highlighted in Tables 1 and 2 for soil and groundwater, respectively.

B.5.3 Nature of Contamination

B.5.3.1 Soil

A summary of the surface soil (<= 2 ft bgs) data[2] compared to residential and non-residential soil RRSs is shown in Table 3. Similarly, a summary of subsurface soil (> 2 ft bgs) data compared to subsurface soil RRSs is shown in Table 4. The data set represents a compilation of all data obtained through the multiple phases of the RCRA Section 3013 site assessment as well as the data records from past site assessments[3] (dating back to the 1996 Kiber investigation), and recent sampling events. Appendix E of the VIRP contains tables showing the historical analytical data. Tables 3 and 4 show comparisons of the maximum concentration of each detected constituent found in the soils to the RRSs. Comparisons are provided for both the non-Residential RRSs (higher of Type 3 and Type 4) and the Residential RRSs (higher of Type 1 and Type 2). These tables also show the number of samples that exceeded the RRS and the number of samples that were analyzed for each constituent (called the frequency of exceedance). For example, a frequency of exceedance of "3/122" means that of 122 samples that were analyzed for that constituent, 3 were above the RRS. This frequency of exceedance is equivalent to 2.5% of the samples (3 divided by 122) exceeding the RRS. An average magnitude of exceedance was calculated for the constituents that had concentrations higher than the Residential RRS. The average magnitude of exceedence is the average detected concentration divided by the Residential RRS. The purpose of this analysis is to identify the primary constituents of potential concern (COPC), which will be the drivers for evaluating potentially applicable remedial action technologies and to establish a preliminary remedial action plan. The COPC can be identified by looking at both the average magnitude of exceedance and the frequency of exceedance. The tables below show the COPCs for surface and subsurface soils. These tables list the constituents that have an average magnitude of exceedance greater than one and have more than 3% of the results exceeding the RRS.

Primary Surface Soil COPCs

Constituent	Average Magnitude of Exceedance	Frequency of Exceedance
Toxaphene	21	13/250 (5.2%)
Endosulfan sulfate	5.3	6/166 (3.6%)
Chlordane	2.6	8/201 (4.0%)
Dimethoate	1.69	5/131 (3.8%)
Endosulfan II	1.2	8/166 (4.8%)

[2] For corrective action at the Site, Drexel considers sediments to be material covered by water the majority of the time. There are many samples that have been designated as sediments that may actually be soils based on this definition. Samples that do not appear (based on GIS coordinates and aerial photographs) to be under water are being considered as soils.

[3] Data records from the 1984 and two 1985 sampling events (by EPA) are not incorporated into the presentation of the nature and extent of contamination, due to the age of these data and that the more recent CSR investigations sampled in the same areas as the past events.

Primary Subsurface Soil COPCs

Constituent	Average Magnitude of Exceedance	Frequency of Exceedance
Disulfoton	218	9/168 (5.4%)
Methyl parathion	107	11/265 (4.1%)
EDB	40	25/304 (8.2%)
Toxaphene	17	43/448 (9.6%)
Chlordane	6.1	20/368 (5.4%)
o-Xylene	6.2	23/161 (14%)
4,4'-DDT	1.4	20/458 (4.4%)
Ethyl benzene	1.3	14/290 (4.8%)

The primary COPCs are a mixture of chlorinated pesticides, VOCs and organophosphorus pesticides. The most frequent exceedances are for toxaphene (9.6%) and o-xylene (14%) in subsurface soils. The highest average magnitude of exceedance is for disulfoton in subsurface soils.

B.5.3.2 Groundwater

A summary of groundwater data compared to RRSs is shown in Table 5. The data set represents groundwater data collected from 2008 to the present. This table shows comparisons of the maximum concentration of each detected constituent found in the groundwater to both the Residential and Non-Residential RRSs. The only RRS exceedance in more than one sample is for EDB.

B.5.4 Extent of Soil Contamination

B.5.4.1 Soil

A comparison of the soil characterization to RRSs (Residential and Industrial) is demonstrated graphically in Figures 10 through 18. Each figure corresponds to a depth interval progression in the overburden. Depth intervals are chosen based, in part, upon standard USEPA exposure pathways (e.g., 0-2 ft for surficial exposure) and to provide the vertical dimensions; depth intervals are from 0-2 ft, 2-5 ft, 5-10 ft and 10 ft intervals deeper into subsurface soil thereafter. The green circles indicate locations where all constituents are below the Residential RRS. The purple circles indicate locations where at least one constituent exceeded the Industrial RRS and the blue circles indication locations with at least one exceedance of a Residential RRS. These figures show that the primary areas of contamination occur along the rail car unloading area and Tank Farm #1 corridor, and in the former surface impoundments.

B.5.4.2 Groundwater

A comparison of the current groundwater conditions to Residential RRSs is illustrated in Figure 19. This figure shows the locations of the monitoring wells (and the nearest off-Site residential wells) and where the RRS exceedances occur. As mentioned previously, the only RRS exceedance in more than one sample is EDB. The groundwater will be monitored through the allowable timeframe under the VRP regulations to see whether all wells achieve the RRS criteria.

B.5.4.3 Off-Site Sediment and Surface Water

In 2010, sediment and surface water samples were collected from background locations (pond and stream settings) outside the potential influence from the Drexel facility. (More information about this sampling event and the data obtained is presented in Appendix E of the VIRP.) Sediment and surface water background values were determined based on this dataset (see Appendix H of the VIRP).

Surface water samples have been collected in off-Site ponds and drainage features. Several samples were also collected from the two drainage ditches that run parallel to the CSX rail line. The southern swale rarely holds standing water and both are subject to desiccation during periods of low rainfall. The samples from these locations were evaluated in a Revised Screening-Level Ecological Risk Assessment (SLERA) report submitted to GAEPD in January 2012 (EPS 2012). Figure 20 shows the surface water sample locations.

Several sediment samples have been collected in the pond to the east of the main facility and in a pond to the north of the facility. Figure 21 shows the locations of these sediment samples.

B.6 Conceptual Model for EDB

The primary constituent of concern in groundwater (the only constituent that consistently exceeds its RRS) is EDB. This section provides a description of the potential fate and transport mechanisms for EDB and an empirical model for its fate and transport at the Site.

B.6.1 General Physical/Chemical Properties of EDB

EDB is a low-molecular-weight (187.88 g/mol) halogenated hydrocarbon that is more dense than water (specific gravity of 2.172 at 25° C; Windholz, 1983). The fate and transport of EDB through the overburden (soil) to the groundwater table depends on the soil adsorption properties and bioavailability for microbial degradation. The log K_{oc} (soil organic carbon/water partition coefficient) value for EDB is 1.45 (USEPA, 1998), which indicates that EDB has low to moderate soil adsorption and a high mobility in soil. The vapor pressure is 11 mm Hg at 25° C (ATSDR, 1992) and the dimensionless Henry's Law Constant is 0.0133 (USEPA, 1998) indicating that EDB readily volatilizes from dry or moist surfaces. Aerobic biodegradation of EDB in surface soil occurs readily (USEPA, 2004A) and EDB is moderately persistent in deeper soil with a representative half-life of 100 days (Extension Toxicology Network, 2004). Anaerobic biodegradation and abiotic degradation in soil are limited (USEPA, 2004B).

The fate and transport mechanisms of EDB in the groundwater include advection, dispersion, sorption to native organic matter, biodegradation, neutral hydrolysis, and non-biological reactions with sulfide. Adsorption of EDB to suspended solids in the groundwater table is not expected based on its log K_{oc}. The range of retardation ratios (rate of movement of water divided by the rate of movement of EDB) that is expected from sorption of EDB to native organic carbon in aquifers is 1 to 4.1, which corresponds to fraction of organic carbon range of 0.01% to 1% (USEPA, 2008). This indicates very little retardation due to sorption would be expected unless there is a significant amount of organic carbon (which is not characteristic of a limestone aquifer matrix). EDB is resistant to abiotic hydrolysis, with a hydrolytic half-life

ranging from 6 to 13.2 years (USEPA, 2004A and 2004B). However, at higher concentrations (above 0.2 mg/L), EDB can be abiotically transformed through a reaction with sulfide (USEPA, 2008). The biodegradation half-life under anaerobic conditions (which is the state of the groundwater at the Site) is 15 to 50 days (USEPA, 2006). The range of first order rate constants for anaerobic degradation of EDB in aquifer sediments is 0.03 to 17 per year (USEPA, 2008). Using these decay rates and the following reaction equation

$$C_t / C_o = e^{kt}$$

where

C_t = concentration at some time t; use the RRS of 0.00009 mg/L

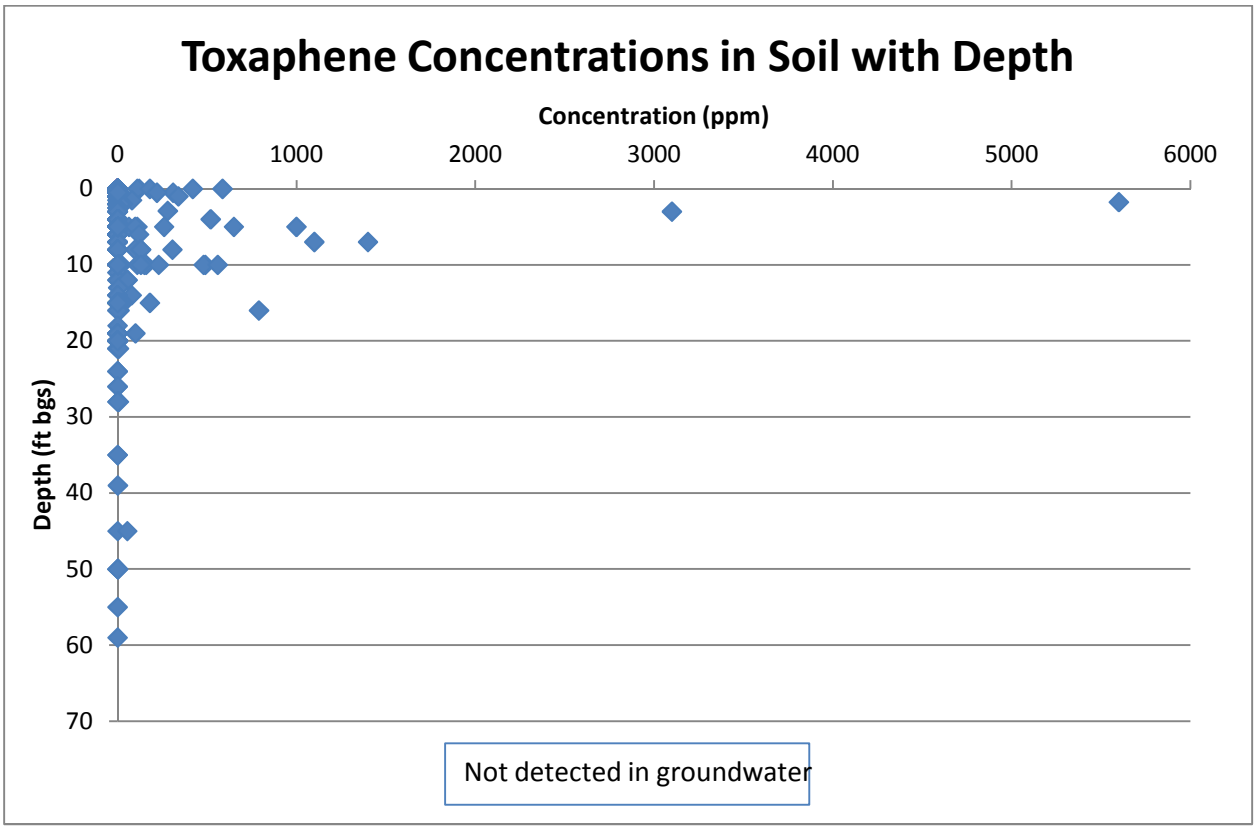
C_o = initial concentration; use March 2013 result of 0.00042 mg/L from BW-1

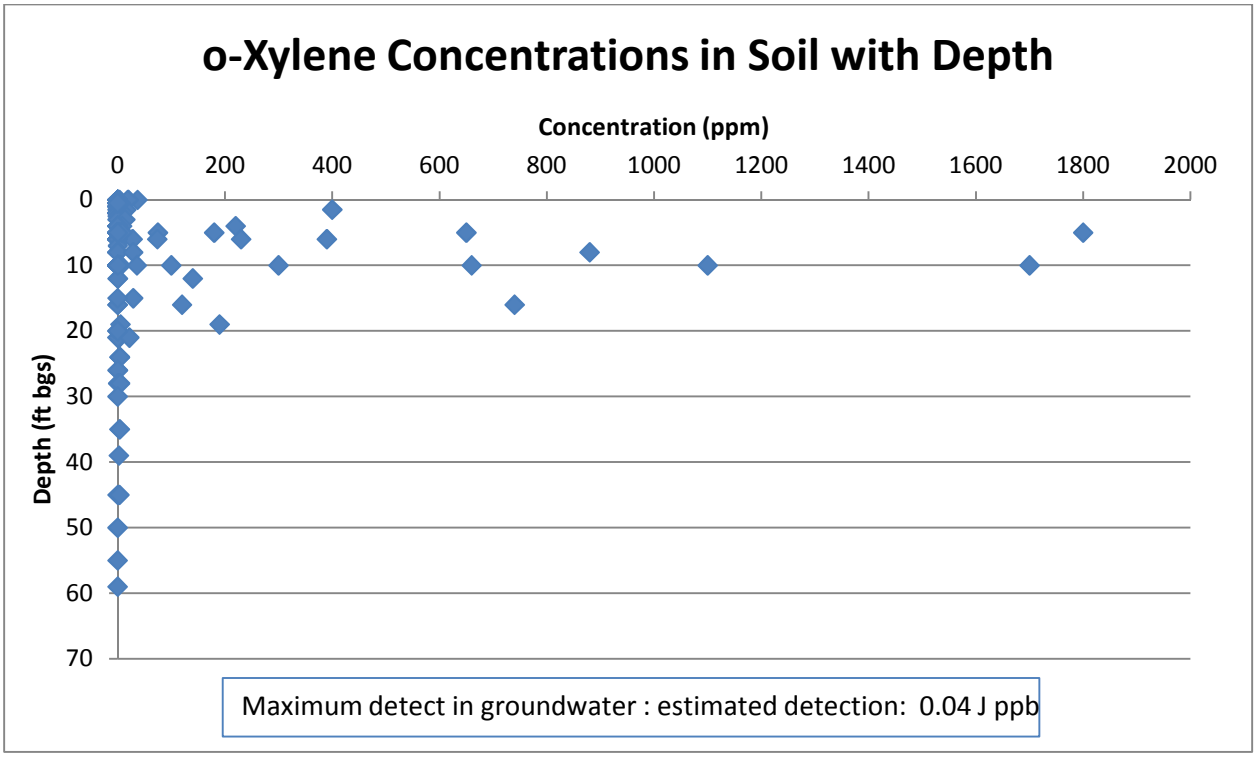
k = first order rate constant; to be conservative, use 0.1 per year,

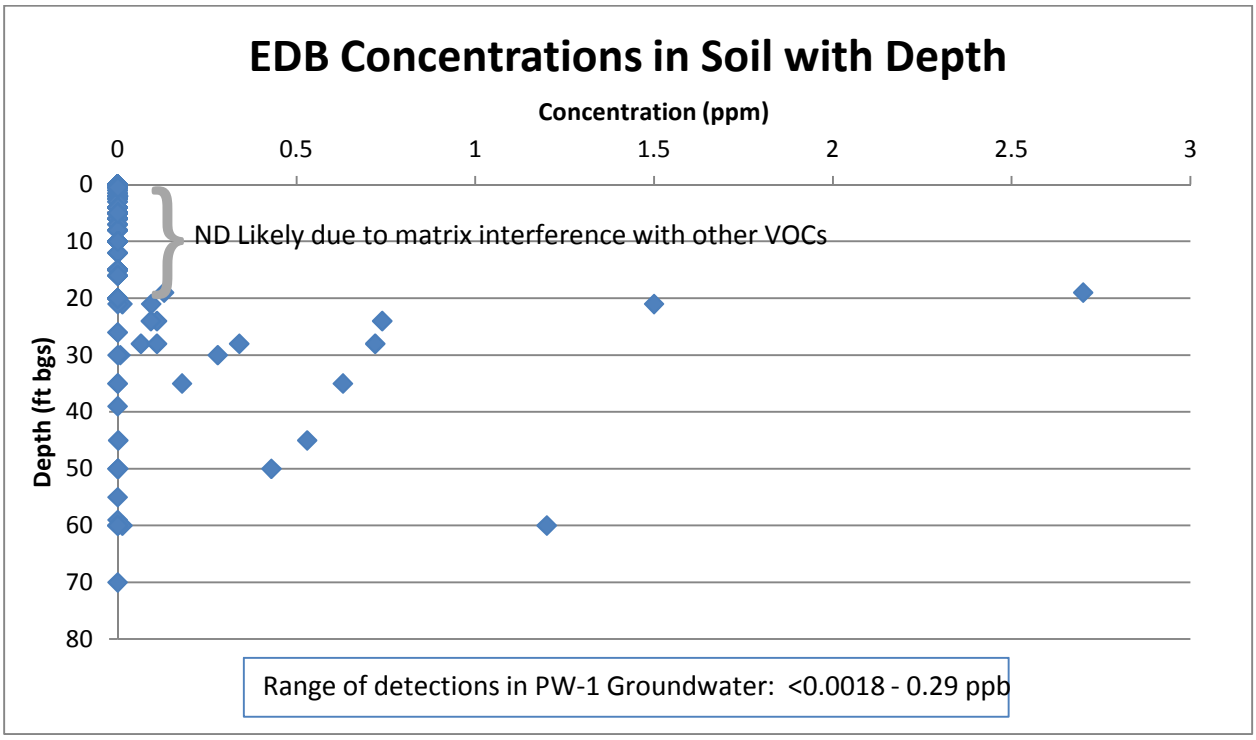
the resulting time until the RRS is reached (using a conservative rate constant) is modeled to be 15.4 years.

B.6.2 Empirical On-Site Model

The empirical evidence indicates that the leaching of constituents to groundwater is either not occurring or is not significant. The concentrations of constituents in the overburden decrease with depth. The graphs below for three of the primary soil COPCs demonstrate this decreasing concentration with depth below the ground surface. Despite the age of the facility (in operation since the 1960s) and the high concentrations seen in the overburden, only one constituent has been consistently detected above its RRS in groundwater. And this constituent (EDB) has only been above its RRS consistently in three existing wells (BW-1, BW-5, and BW-6) and one abandoned well (PW-1) and at low concentrations.


Toxaphene Concentrations in Soil with Depth
Concentration (ppm)
0
1000
2000
3000
4000
5000
6000
Depth (ft bgs)
0
10
20
30
40
50
60
70
Not detected in groundwater


o-Xylene Concentrations in Soil with Depth
Concentration (ppm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
Depth (ft bgs)
0
10
20
30
40
50
60
70
Maximum detect in groundwater : estimated detection: 0.04 J ppb



The highest concentrations of toxaphene and o-xylene in soil (along with other constituents) occur in the 0-20 ft bgs range. EDB is not detected at these shallow depths in soil, but is detected below 20 ft bgs. It is believed that the high concentrations of VOCs and pesticides in the 0-20 ft bgs range are causing matrix interferences for EDB.

The model described below and shown on Figure 22 provides an explanation as to how EDB may be found in the groundwater when leaching is not a significant factor at the Site. The groundwater aquifer, which is located in the limestone has very low concentrations of EDB. Considerably higher concentrations of EDB have been reported in perched water found in the overburden. Samples of the perched water have been collected in the area of high soil contamination (DC-14N) and near this area (MW-15, MW-15D). In 2000, a high concentration (3,200 µg/L) of EDB was found in perched water that was sampled while collecting a soil sample at location DC-14N. Nearby monitoring wells placed in the overburden (MW-15 and associated deeper overburden well MW-15D) had a concentration of 53 µg/L in 2000 and 80 µg/L in July of 2003[4]. During the same time period (2000-2003) PW-1 (which was located in the limestone aquifer downgradient of the area of high soil concentrations) had concentrations of <0.0021 – 0.21 µg/L. Well BW-1 (located near DC-14N in the area of higher soil contamination) was constructed in 2005 in the limestone aquifer. Concentrations in this well have ranged from non-detect to 0.42 µg/L.

[4] Samples collected in 2000 were labeled MW-15 and DW-1. Samples collected in 2000 by the EPD were labeled as MW-7 and MW-7D.

The production wells had an open borehole construction in the limestone bedrock. In 2005 downhole geophysical logging was performed on PW-1 and PW-2 (see Appendix E of the VIRP for more information). It was determined that the casings for these wells were not sealed. It is likely that the contaminated perched water migrated downward through the overburden then migrated vertically downward through the unsealed casings of PW-1, resulting in the presence of constituents in the limestone aquifer.

B.7 Potential Receptors and Exposure Pathways

The Drexel plant is an isolated industrial facility that is set in a primarily agricultural area. The facility is not connected to city water or city sewer. The Facility is approximately 6.89 acres bounded on the west by Cape Road, to the north by a railroad, and to the south and east by private agricultural land. All of the facility's pesticide blending operations take place on the northern half of the property; the southern half was purchased for future expansion and is presently used primarily for employee and visitor parking. A septic drain field is also present on the southern half of the property. The Facility is completely enclosed with an 8-foot chain link fence.

Drexel currently employs approximately 25 people at the Cordele facility. Potable water for employee use has been delivered to the facility from an outside vendor since Drexel ceased operations of the facility water supply wells. A literature-based well survey (Peachtree, 2001), identified three public water supply wells within a three mile radius of the property. These wells were determined to be located approximately 11,000 ft northwest, 4,000 ft northwest, 8,500 ft northeast of the Property, with depths upwards of 600 ft bgs. Nine private domestic-supply wells have been identified within a one half-mile radius of the property. The nearest private well downgradient of the Facility is at the Akin residence (100 Cape Rd.), approximately 383 ft south of the Facility's fence line. However, this well is not currently in operation and the power supply has been shut-off. There is an abandoned residential well (Well D) that is approximately 460 ft southeast of the Facility's fenceline. There is also a private well approximately 110 ft north of the Facility's fence line at the Stewart residence (140 Cape Rd.); this well is upgradient of the groundwater flow direction.

The adjoining properties are used for residential or agricultural purposes or are currently vacant. In October 2009, Drexel purchased additional parcels of land comprising approximately 35.2 acres. Several of these are contiguous parcels, totaling 32.2 acres, which border the southern and eastern boundaries of the Facility. These additional parcels owned by Drexel are currently vacant.

Areas of soil contamination are generally focused to two operational areas of the Facility: (1) the Rail Car Unloading Area and (2) base of the former surface impoundments (that were observed to contain bottom sludges or stained soils). Note that most areas are covered by buildings, pavement, or rock ballast. The current and/or potential future human receptors are listed below along with a brief discussion of the rationale behind their identification and the pathways through which they could potentially be exposed to regulated substances associated with releases at the Site.

- Current/Future Site Worker: There are currently approximately 25 workers at the Site, the majority of which work approximately 40 hours per week. It is anticipated that the facility will continue to operate in its current capacity for the foreseeable future. Receptors associated with this type of land use can potentially have long-term exposure to site-related chemicals in surface soil (0-2 ft bgs) via ingestion, dermal contact, and inhalation of volatiles in outdoor air. There is some potential for Site workers to be exposed to several of the more volatile COPC potentially migrating from impacted perched water and vadose zone soils to the indoor air of existing and/or future buildings. It is anticipated that if such vapor migration is occurring that the concentrations of these chemicals in indoor air would be well below the applicable OSHA standards.
- Future Construction Worker: No construction activities are currently planned at the Property, however, it is possible that additional buildings could be constructed on the Property in the future. Construction workers could potentially have short-term (<1 year) exposure to chemicals in mixed surface and subsurface soil (0-10 ft bgs) via ingestion, dermal contact, and inhalation of volatiles and particulates.
- Current/Future Off-Site Residents: There are several residential properties in relatively close proximity to the Site. Drexel's purchase of several adjoining parcels in 2009 serves to limit the potential for expanding residential use of the off-Site areas. In general, it is assumed that nearby residents could have long term exposure, as children through adulthood, to Site-related chemicals in surface soil (0-2 ft bgs) via ingestion, dermal contact, and inhalation of volatiles and particulates. Although no Site-related chemicals have been detected above relevant drinking water standards in off-Site groundwater, the presence of private residential water supply wells in close proximity to the Site offers the potential for exposure of future residents via ingestion, dermal contact, and inhalation of vapors associated with groundwater.

The on-Site areas impacted by the release of regulated substances are mostly covered by pavement, buildings, or rock ballast with rail. The area does not represent quality habitat for wildlife as it lacks natural vegetative cover and is unlikely to have substantial vegetative cover in the future due to ongoing facility operations. Facility operations and maintenance activities will continue to disrupt wildlife and cause animals to seek less frequently disturbed areas. In addition, any remedial actions to reduce potential human health exposures should also serve to reduce any potential ecological exposures.

The Georgia Natural Heritage Program provides a listing of "Known Locations of Rare and Other Special Concern Animals, Plants and Natural Communities within Georgia" organized by topographic quadrangle. The Site is located within the Penia Quadrangle. No sensitive animals were identified within this quadrangle. The sensitive plants within this quadrangle are the Cutleaf Beardtongue (*Penstemon dissectus*) and the Awned Meadowbeauty (*Rhexia aristosa*). Neither of these plants has been observed at the Site or in the surrounding area.

Because of documented releases of regulated substances into the drainage swales along the rail line to the northeast of the Site, the Screening Level Environmental Risk Assessment (SLERA; EPS 2010B) included a preliminary evaluation of terrestrial and aquatic organisms that could potentially be exposed in these areas. Theoretical potential exposure pathways for terrestrial and aquatic organisms are root absorption, ingestion (e.g., surface soil/sediment, surface water, and biota), dermal absorption, and inhalation.

With respect to potential ecological risks to off-Site receptors, the SLERA report (EPS 2010B) concluded that there is a modest potential for adverse ecological effects to terrestrial and semi-aquatic receptors from several Site-related substances in off-Site soil and sediments. The potential risk appears to be driven by relatively localized impacts in the drainage swale and ditch that border the rail line immediately north of the Site.

B.8 References

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Table 1. Soil Risk Reduction Standards and Delineation Criteria (mg/kg)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential RRS*	Type 3 SS RRS	Type 3 SbS RRS	Type 4 SS RRS	Type 4 SbS RRS	Cleanup Standard: Non-Residential SS RRS**	Cleanup Standard: Non-Residential SbS RRS**
Noncarcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)										
83-32-9	Acenaphthene	**300**	408	408	300	300	1244	1244	**1244**	**1244**
120-12-7	Anthracene	**500**	3121	3121	500	500	20584	20584	**20584**	**20584**
208-96-8	Acenaphthylene	**130**	Bkg/DL	130	130	130	Bkg/DL	Bkg/DL	**130**	**130**
191-24-2	Benzo(g,h,i)perylene	**500**	Bkg/DL	500	500	500	Bkg/DL	Bkg/DL	**500**	**500**
206-44-0	Fluoranthene	**500**	2224	2224	500	500	9118	9118	**9118**	**9118**
86-73-7	Fluorene	**360**	364	364	360	360	1492	1492	**1492**	**1492**
91-20-3	Naphthalene	**100**	1.3	100	100	100	1.3	1.3	**100**	**100**
85-01-8	Phenanthrene	**110**	Bkg/DL	110	110	110	Bkg/DL	Bkg/DL	**110**	**110**
129-00-0	Pyrene	**500**	2184	2184	500	500	6770	6770	**6770**	**6770**
Carcinogenic PAHs										
56-55-3	Benzo(a)anthracene	**5**	7.1	7.1	5	5	28	28	**28**	**28**
205-99-2	Benzo(b)fluoranthene	**5**	12	12	5	5	78	96	**78**	**96**
207-08-9	Benzo(k)fluoranthene	**5**	125	125	5	5	784	940	**784**	**940**
50-32-8	Benzo(a)pyrene	**1.6**	1.2	1.6	1.64	1.64	7.8	9.4	**7.8**	**9.4**
218-01-9	Chrysene	**5**	867	867	5	5	2817	2817	**2817**	**2817**
53-70-3	Dibenzo(a,h)anthracene	**2**	1.2	2	5	5	7.8	31	**7.8**	**31**
193-39-5	Indeno(1,2,3-cd)pyrene	**5**	12	12	5	5	78	312	**78**	**312**
Inorganic chemicals										
7440-36-0	Antimony	**4**	5.4	5.4	10	10	36	36	**36**	**36**
7440-38-2	Arsenic	**20**	5.8	20	38	41	5.8	5.8	**38**	**41**
7440-39-3	Barium	**1000**	2554	2554	1000	1000	16480	16480	**16480**	**16480**
7440-41-7	Beryllium	**2**	156	156	3	3	3161	3161	**3161**	**3161**
7440-43-9	Cadmium (food or soil)	**2**	7.5	7.5	39	39	150	150	**150**	**150**
	Chromium (unspeciated)	**100**	38	100	1200	1200	38	38	**1200**	**1200**
16065-83-1	Chromium (III)	**100**	117321	100000	1200	1200	3000000	6E+09	**100000**	**100000** ***
18540-29-9	Chromium (VI)	**100**	18	100	109	1200	38	38	**109**	**1200**
7440-50-8	Copper	**100**	915	915	1500	1500	2886	2886	**2886**	**2886**
57-12-5	Cyanide	**20**	40	40	20	20	40	40	**40**	**40**
7439-92-1	Lead	**75**	270	270	400	400	270	270	**400**	**400**
7439-97-6	Mercury	**0.5**	2.1	2.1	17	17	2.1	2.1	**17**	**17**
7440-02-0	Nickel	**50**	404	404	420	420	2608	2608	**2608**	**2608**
7782-49-2	Selenium	**2**	8.3	8.3	36	36	52	52	**52**	**52**
7440-22-4	Silver	**2**	17	17	10	10	85	85	**85**	**85**

EPS

Table 1. Soil Risk Reduction Standards and Delineation Criteria (mg/kg)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential RRS*	Type 3 SS RRS	Type 3 SbS RRS	Type 4 SS RRS	Type 4 SbS RRS	Cleanup Standard: Non-Residential SS RRS**	Cleanup Standard: Non-Residential SbS RRS**
7440-28-0	Thallium	**2**	2.8	2.8	10	10	2.8	2.8	**10**	**10**
7440-66-6	Zinc	**100**	5847	5847	2800	2800	38564	38564	**38564**	**38564**
Other Chemicals										
540-54-5	1-Chloropropane (2,2'-Oxybis)	**DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**	**Bkg/DL**
96-18-4	1,2,3-Trichloropropane	**0.5**	0.3	0.5	1.9	4	0.35	0.35	**1.9**	**4**
120-82-1	1,2,4-Trichlorobenzene	**10.83**	4.1	10.83	10.83	10.83	4.1	4.1	**10.83**	**10.83**
106-93-4	1,2-Dibromoethane (EDB)	**0.01**	0.0006	0.01	0.01	0.01	0.0006	0.0006	**0.01**	**0.01**
95-50-1	1,2-Dichlorobenzene	**60**	12	60	60	60	12	12	**60**	**60**
78-87-5	1,2-Dichloropropane	**0.5**	0.03	0.5	0.5	0.5	0.05	0.05	**0.5**	**0.5**
541-73-1	1,3-Dichlorobenzene	**60**	13	60	60	60	13	13	**60**	**60**
106-46-7	1,4-Dichlorobenzene	**7.5**	1.4	7.5	7.5	7.5	1.4	1.4	**7.5**	**7.5**
95-95-4	2,4,5-Trichlorophenol	**400**	304	400	400	400	760	760	**760**	**760**
93-72-1	2,4,5-TP (Silvex)	**10**	1.4	10	10	10	8.8	8.8	**10**	**10**
88-06-2	2,4,6-Trichlorophenol	**3**	2.3	3	3	3	7.6	7.6	**7.6**	**7.6**
94-75-7	2,4-D	**7**	0.83	7	7	7	5.2	5.2	**7**	**7**
120-83-2	2,4-Dichlorophenol	**2**	1.2	2	2	2	7.3	7.3	**7.3**	**7.3**
105-67-9	2,4-Dimethylphenol	**70**	17	70	70	70	47	47	**70**	**70**
51-28-5	2,4-Dinitrophenol	**7**	1.6	7	7	7	4.5	4.5	**7**	**7**
121-14-2	2,4-Dinitrotoluene	**0.66**	0.08	0.66	0.66	0.66	0.25	0.25	**0.66**	**0.66**
606-20-2	2,6-Dinitrotoluene	**0.76**	0.56	0.76	0.76	0.76	2.8	2.8	**2.8**	**2.8**
78-93-3	2-Butanone (MEK)	**200**	9.6	200	200	200	50	50	**200**	**200**
91-58-7	2-Chloronaphthalene	**25**	135	135	25	25	853	853	**853**	**853**
95-57-8	2-Chlorophenol	**4**	1.3	4	4	4	8.1	8.1	**8.1**	**8.1**
95-48-7	2-Methylphenol	**3.8**	13	13	3.8	3.8	83	83	**83**	**83**
88-75-5	2-Nitrophenol	**DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**	**Bkg/DL**
91-94-1	3,3'-Dichlorobenzidine	**25**	0.26	25	25	25	0.79	0.79	**25**	**25**
108-39-4	3-Methylphenol	**3.8**	13	13	3.8	3.8	82	82	**82**	**82**
106-44-5	4-Methylphenol	**3.8**	1.3	3.8	3.8	3.8	8	8	**8**	**8**
7005-72-3	4-Chlorophenyl-phenylether	**DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**	**Bkg/DL**
72-54-8	4,4'-DDD	**0.66**	19	19	0.66	0.66	47	47	**47**	**47**
72-55-9	4,4'-DDE	**0.66**	14	14	0.66	0.66	38	38	**38**	**38**
50-29-3	4,4'-DDT	**0.66**	20	20	0.66	0.66	54	54	**54**	**54**
106-47-8	4-Chloroaniline	**10**	0.86	10	10	10	0.86	0.86	**10**	**10**
59-50-7	4-Chloro-3-methylphenol	**13**	38	38	13.2	13.2	236	236	**236**	**236**

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Table 1. Soil Risk Reduction Standards and Delineation Criteria (mg/kg)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential RRS*	Type 3 SS RRS	Type 3 SbS RRS	Type 4 SS RRS	Type 4 SbS RRS	Cleanup Standard: Non-Residential SS RRS**	Cleanup Standard: Non-Residential SbS RRS**
100-02-7	4-Nitrophenol	**6**	0.98	6	6	6	0.98	0.98	**6**	**6**
67-64-1	Acetone	**400**	33	400	400	400	189	189	**400**	**400**
309-00-2	Aldrin	**0.66**	0.16	0.66	0.66	0.66	0.66	0.66	**0.66**	**0.66**
319-84-6	alpha-BHC	**0.66**	0.01	0.66	0.66	0.66	0.06	0.06	**0.66**	**0.66**
86-50-0	Azinphos-methyl	**10**	0.3	10	10	10	1.9	1.9	**10**	**10**
71-43-2	Benzene	**0.5**	0.05	0.5	0.5	0.5	0.09	0.09	**0.5**	**0.5**
319-85-7	beta-BHC (Hexachlorocyclohexane, Beta-)	**0.66**	0.06	0.66	0.66	0.66	0.23	0.23	**0.66**	**0.66**
111-91-1	bis(2-Chloroethoxy)methane	**0.03**	0.23	0.23	0.027	0.027	1.4	1.4	**1.4**	**1.4**
111-44-4	bis(2-Chloroethyl) ether	**0.6**	0.001	0.6	0.6	0.6	0.001	0.001	**0.6**	**0.6**
117-81-7	bis(2-Ethylhexyl) phthalate	**50**	287	287	50	50	957	957	**957**	**957**
74-83-9	Bromomethane	**1**	0.05	1	1	1	0.05	0.05	**1**	**1**
85-68-7	Butylbenzylphthalate	**50**	128	128	50	50	426	426	**426**	**426**
63-25-2	Carbaryl	**70**	29	70	70	70	182	182	**182**	**182**
75-15-0	Carbon disulfide	**400**	23	400	400	400	23	23	**400**	**400**
56-23-5	Carbon tetrachloride	**0.5**	0.05	0.5	0.5	0.5	0.08	0.08	**0.5**	**0.5**
57-74-9	Chlordane	**9.2**	2.7	9.2	9.2	9.2	2.7	2.7	**9.2**	**9.2**
108-90-7	Chlorobenzene	**10**	1.4	10	10	10	1.9	1.9	**10**	**10**
75-00-3	Chloroethane	**0.17**	34	34	0.17	0.17	163	163	**163**	**163**
2921-88-2	Chlorpyrifos	**2**	15	15	2	2	94	94	**94**	**94**
56-72-4	Coumaphos	**1**	Bkg/DL	1	1	1	Bkg/DL	Bkg/DL	**1**	**1**
108-94-1	Cyclohexanone	**20**	359	359	20	20	2351	2351	**2351**	**2351**
75-99-0	Dalapon	**20**	1.9	20	20	20	13	13	**20**	**20**
319-86-8	delta-BHC	**DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**	**Bkg/DL**
333-41-5	Diazinon	**1**	1.3	1.3	1	1	8.8	8.8	**8.8**	**8.8**
124-48-1	Dibromochloromethane	**10**	0.53	10	10	10	0.53	0.53	**10**	**10**
1918-00-9	Dicamba	**20**	2.4	20	20	20	16	16	**20**	**20**
75-09-2	Dichloromethane (Methylene chloride)	**0.5**	0.3	0.5	0.5	0.5	0.6	0.6	**0.6**	**0.6**
60-57-1	Dieldrin	**0.66**	0.04	0.66	0.66	0.66	0.16	0.16	**0.66**	**0.66**
84-66-2	Diethylphthalate	**500**	107	500	500	500	672	672	**672**	**672**
60-51-5	Dimethoate	**0.7**	0.03	0.7	0.7	0.7	0.09	0.09	**0.7**	**0.7**
131-11-3	Dimethylphthalate	**40000**	6240	40000	40000	40000	6240	6240	**40000**	**40000**
87-74-2	Di-n-butylphthalate	**400**	200	400	400	400	500	500	**500**	**500**
117-84-0	Di-n-octylphthalate	**70**	5491	5491	70	70	5491	5491	**5491**	**5491**
88-85-7	Dinoseb (DNBP)	**0.7**	3.5	3.5	0.7	0.7	18	18	**18**	**18**

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Table 1. Soil Risk Reduction Standards and Delineation Criteria (mg/kg)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential RRS*	Type 3 SS RRS	Type 3 SbS RRS	Type 4 SS RRS	Type 4 SbS RRS	Cleanup Standard: Non-Residential SS RRS**	Cleanup Standard: Non-Residential SbS RRS**
298-04-4	Disulfoton	**0.03**	0.02	0.03	0.03	0.03	0.15	0.15	**0.15**	**0.15**
115-29-7	Endosulfan I	**10**	26	26	10	10	170	170	**170**	**170**
33213-65-9	Endosulfan II	**10**	1.8	10	10	10	1.8	1.8	**10**	**10**
1031-07-8	Endosulfan sulfate	**1.65**	Bkg/DL	1.65	1.65	1.65	Bkg/DL	Bkg/DL	**1.65**	**1.65**
72-20-8	Endrin	**10**	4	10	10	10	24	24	**24**	**24**
7421-93-4	Endrin aldehyde	**10**	Bkg/DL	10	10	10	Bkg/DL	Bkg/DL	**10**	**10**
2104-64-5	EPN	**6.4**	0.12	6.4	20	Bkg/DL	0.62	0.62	**20**	**6.4** ****
100-41-4	Ethyl benzene	**70**	16	70	70	70	16	16	**70**	**70**
115-90-2	Fensulfothion	**10**	Bkg/DL	10	10	10	Bkg/DL	Bkg/DL	**10**	**10**
58-89-9	gamma-BHC (Lindane)	**0.66**	0.12	0.66	0.66	0.66	0.35	0.35	**0.66**	**0.66**
76-44-8	Heptachlor	**0.66**	0.67	0.67	0.66	0.66	0.83	0.83	**0.83**	**0.83**
1024-57-3	Heptachlor epoxide	**1.6**	0.08	1.6	1.65	1.65	0.12	0.12	**1.65**	**1.65**
118-74-1	Hexachlorobenzene	**2.1**	0.24	2.1	2.14	2.14	0.49	0.49	**2.14**	**2.14**
87-68-3	Hexachlorobutadiene	**17.5**	0.78	17.5	17.5	17.5	3.9	3.9	**17.5**	**17.5**
77-47-4	Hexachlorocyclopentadiene	**15**	5.6	15	15.2	15.2	37	37	**37**	**37**
67-72-1	Hexachloroethane	**10**	0.24	10	10.0	10.0	1.2	1.2	**10**	**10**
78-59-1	Isophorone	**10**	5.9	10	10	10	20	20	**20**	**20**
98-82-8	Isopropylbenzene (cumene)	**22**	6.9	22	21.88	21.88	33	33	**33**	**33**
121-75-5	Malathion	**20**	1.6	20	20	20	10	10	**20**	**20**
72-43-5	Methoxychlor	**10**	87	87	10	10	542	542	**542**	**542**
298-00-0	Methyl parathion	**0.2**	0.14	0.2	0.2	0.2	1	1	**1**	**1**
7786-34-7	Mevinphos	**10**	Bkg/DL	10	10	10	Bkg/DL	Bkg/DL	**10**	**10**
98-95-3	Nitrobenzene	**2**	0.26	2	2	2	0.26	0.26	**2**	**2**
56-38-2	Parathion	**20**	20	20	20	20	60	60	**60**	**60**
87-86-5	Pentachlorophenol	**3.3**	1.4	3.3	3.3	3.3	4	4	**4**	**4**
108-95-2	Phenol	**400**	54	400	400	400	353	353	**400**	**400**
100-42-5	Styrene	**14**	11	14	14	14	57	57	**57**	**57**
127-18-4	Tetrachloroethene	**0.5**	0.05	0.5	0.5	0.5	0.05	0.05	**0.5**	**0.5**
108-88-3	Toluene	**100**	14	100	100	100	72	72	**100**	**100**
8001-35-2	Toxaphene	**10.88**	8.3	10.88	10.88	10.88	9.3	9.3	**10.88**	**10.88**
79-01-6	Trichloroethene	**0.5**	0.21	0.5	0.5	0.5	0.28	0.28	**0.5**	**0.5**
95-47-6	o-Xylene	**20**	7.3	20	20	20	38	38	**38**	**38**

* Higher of Type 1 and Type 2 RRS

** Higher of Type 3 and Type 4 RRS

*** Maximum value is 100,000

**** If Type 3/4 RRS is less than Type 1/2 value, then Type 1/2 value used

SS = Surface Soil (<= 2')

SbS = Subsurface Soil (>2')

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Table 2. Groundwater Risk Reduction Standards (mg/L)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential GW RRS*	Type 3 RRS	Type 4 RRS	Non-Residential RRS**
Noncarcinogenic Polycyclic Aromatic Hydrocarbons (PAHs)							
83-32-9	Acenaphthene	**2**	0.94	2	2	6.1	**6.1**
120-12-7	Anthracene	**Bkg/DL**	4.7	4.7	Bkg/DL	31	**31**
208-96-8	Acenaphthylene	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
191-24-2	Benzo(g,h,i)perylene	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
206-44-0	Fluoranthene	**1**	0.63	1	1	4.1	**4.1**
86-73-7	Fluorene	**1**	0.63	1	1	4.1	**4.1**
91-20-3	Naphthalene	**0.02**	0.002	0.02	0.02	0.009	**0.02**
85-01-8	Phenanthrene	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
129-00-0	Pyrene	**1**	0.47	1	1	3.1	**3.1**
Carcinogenic PAHs							
56-55-3	Benzo(a)anthracene	**0.0001**	0.001	0.001	0.0001	0.004	**0.004**
205-99-2	Benzo(b)fluoranthene	**0.0002**	0.001	0.001	0.0002	0.004	**0.004**
207-08-9	Benzo(k)fluoranthene	**Bkg/DL**	0.01	0.01	Bkg/DL	0.04	**0.04**
50-32-8	Benzo(a)pyrene	**0.0002**	0.0001	0.0002	0.0002	0.0004	**0.0004**
218-01-9	Chrysene	**0.0002**	0.12	0.12	0.0002	0.39	**0.39**
53-70-3	Dibenzo(a,h)anthracene	**0.0003**	0.0001	0.0003	0.0003	0.0004	**0.0004**
193-39-5	Indeno(1,2,3-cd)pyrene	**0.0004**	0.001	0.001	0.0004	0.004	**0.004**
Inorganic chemicals							
7440-36-0	Antimony	**0.006**	0.006	0.006	0.006	0.04	**0.04**
7440-38-2	Arsenic	**0.01**	0.0006	0.01	0.01	0.002	**0.01**
7440-39-3	Barium	**2**	3.1	3.1	2	20	**20**
7440-41-7	Beryllium	**0.004**	0.03	0.03	0.004	0.2	**0.2**
7440-43-9	Cadmium (water)	**0.005**	0.008	0.008	0.005	0.05	**0.05**
7440-43-9	Cadmium (food or soil)	**0.005**	0.000006	0.005	0.005	0.1	**0.1**
	Chromium (unspeciated)	**0.1**	0.1	0.1	0.1	0.1	**0.1**
16065-83-1	Chromium (III)	**0.1**	23	23	0.1	153	**153**
18540-29-9	Chromium (VI)	**0.1**	0.002	0.1	0.1	0.006	**0.1**
7440-50-8	Copper	**1.3**	0.63	1.3	1.3	4.1	**4.1**
57-12-5	Cyanide	**0.2**	0.2	0.2	0.2	0.2	**0.2**
7439-92-1	Lead	**0.015**	0.015	0.015	0.015	0.015	**0.015**
7439-97-6	Mercury	**0.002**	0.0002	0.002	0.002	0.0008	**0.002**
7440-02-0	Nickel	**0.1**	0.31	0.31	0.1	2	**2**
7782-49-2	Selenium	**0.05**	0.08	0.08	0.05	0.51	**0.51**
7440-22-4	Silver	**0.1**	0.08	0.1	0.1	0.51	**0.51**
7440-28-0	Thallium	**0.002**	0.002	0.002	0.002	0.002	**0.002**
7440-66-6	Zinc	**2**	4.7	4.7	2	31	**31**

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Table 2. Groundwater Risk Reduction Standards (mg/L)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential GW RRS*	Type 3 RRS	Type 4 RRS	Non-Residential RRS**
Other Chemicals							
540-54-5	1-Chloropropane (2,2'-Oxybis)	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
96-18-4	1,2,3-Trichloropropane	**0.04**	0.00003	0.04	0.04	0.0001	**0.04**
120-82-1	1,2,4-Trichlorobenzene	**0.07**	0.001	0.07	0.07	0.006	**0.07**
106-93-4	1,2-Dibromoethane (EDB)	**0.00005**	0.00009	0.00009	0.00005	0.0001	**0.0001**
95-50-1	1,2-Dichlorobenzene	**0.6**	0.11	0.6	0.6	0.55	**0.6**
78-87-5	1,2-Dichloropropane	**0.005**	0.002	0.005	0.005	0.007	**0.007**
541-73-1	1,3-Dichlorobenzene	**0.6**	0.6	0.6	0.6	0.6	**0.6**
106-46-7	1,4-Dichlorobenzene	**0.075**	0.006	0.075	0.075	0.007	**0.075**
95-95-4	2,4,5-Trichlorophenol	**4**	1.6	4	4	10	**10**
93-72-1	2,4,5-TP (Silvex)	**0.05**	0.13	0.13	0.05	0.82	**0.82**
88-06-2	2,4,6-Trichlorophenol	**0.03**	0.02	0.03	0.03	0.1	**0.1**
94-75-7	2,4-D	**0.07**	0.16	0.16	0.07	1	**1**
120-83-2	2,4-Dichlorophenol	**0.02**	0.05	0.05	0.02	0.31	**0.31**
105-67-9	2,4-Dimethylphenol	**0.7**	0.31	0.7	0.7	2	**2**
51-28-5	2,4-Dinitrophenol	**0.07**	0.03	0.07	0.07	0.2	**0.2**
121-14-2	2,4-Dinitrotoluene	**0.00005**	0.003	0.003	0.00005	0.009	**0.009**
606-20-2	2,6-Dinitrotoluene	**Bkg/DL**	0.02	0.02	Bkg/DL	0.1	**0.1**
78-93-3	2-Butanone (MEK)	**2**	2.3	2.3	2	12	**12**
91-58-7	2-Chloronaphthalene	**Bkg/DL**	1.3	1.3	Bkg/DL	8.2	**8.2**
95-57-8	2-Chlorophenol	**0.04**	0.08	0.08	0.04	0.51	**0.51**
95-48-7	2-Methylphenol	**Bkg/DL**	0.78	0.78	Bkg/DL	5.1	**5.1**
88-75-5	2-Nitrophenol	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
91-94-1	3,3'-Dichlorobenzidine	**0.00008**	0.002	0.002	0.00008	0.006	**0.006**
108-39-4	3-Methylphenol	**Bkg/DL**	0.78	0.78	Bkg/DL	5.1	**5.1**
106-44-5	4-Methylphenol	**Bkg/DL**	0.08	0.08	Bkg/DL	0.51	**0.51**
7005-72-3	4-Chlorophenyl-phenylether	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
72-54-8	4,4'-DDD	**0.0001**	0.004	0.004	0.0001	0.01	**0.01**
72-55-9	4,4'-DDE	**0.0001**	0.003	0.003	0.0001	0.008	**0.008**
50-29-3	4,4'-DDT	**0.0001**	0.003	0.003	0.0001	0.008	**0.008**
106-47-8	4-Chloroaniline	**0.1**	0.004	0.1	0.1	0.01	**0.1**
59-50-7	4-Chloro-3-methylphenol	**Bkg/DL**	1.6	1.6	Bkg/DL	10	**10**
100-02-7	4-Nitrophenol	**0.06**	0.06	0.06	0.06	0.06	**0.06**
67-64-1	Acetone	**4**	8	8	4	46	**46**
309-00-2	Aldrin	**0.00002**	0.00005	0.00005	0.00002	0.0002	**0.0002**
319-84-6	alpha-BHC	**0.000006**	0.0001	0.0001	0.000006	0.0005	**0.0005**
86-50-0	Azinphos-methyl	**Bkg/DL**	0.05	0.05	Bkg/DL	0.31	**0.31**

EPS

Table 2. Groundwater Risk Reduction Standards (mg/L)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential GW RRS*	Type 3 RRS	Type 4 RRS	Non-Residential RRS**
71-43-2	Benzene	**0.005**	0.005	0.005	0.005	0.009	**0.009**
319-85-7	beta-BHC (Hexachlorocyclohexane, Beta-)	**0.00002**	0.0005	0.0005	0.00002	0.002	**0.002**
111-91-1	bis(2-Chloroethoxy)methane	**Bkg/DL**	0.05	0.05	Bkg/DL	0.31	**0.31**
111-44-4	bis(2-Chloroethyl) ether	**0.00003**	0.0002	0.0002	0.00003	0.0002	**0.0002**
117-81-7	bis(2-Ethylhexyl) phthalate	**0.006**	0.06	0.06	0.006	0.2	**0.2**
74-83-9	Bromomethane	**0.01**	0.003	0.01	0.01	0.01	**0.01**
85-68-7	Butylbenzylphthalate	**0.1**	0.45	0.45	0.1	1.5	**1.5**
63-25-2	Carbaryl	**0.7**	1.6	1.6	0.7	10	**10**
75-15-0	Carbon disulfide	**4**	0.33	4	4	1.7	**4**
56-23-5	Carbon tetrachloride	**0.005**	0.006	0.006	0.005	0.01	**0.01**
57-74-9	Chlordane	**0.002**	0.0004	0.002	0.002	0.0007	**0.002**
108-90-7	Chlorobenzene	**0.1**	0.03	0.1	0.1	0.14	**0.14**
75-00-3	Chloroethane	**Bkg/DL**	6	6	Bkg/DL	29	**29**
2921-88-2	Chlorpyrifos	**0.02**	0.05	0.05	0.02	0.31	**0.31**
56-72-4	Coumaphos	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
108-94-1	Cyclohexanone	**Bkg/DL**	78	78	Bkg/DL	511	**511**
110-82-7	Cyclohexane	**Bkg/DL**	3.6	3.6	Bkg/DL	18	**18**
75-99-0	Dalapon	**0.2**	0.47	0.47	0.2	3.1	**3.1**
319-86-8	delta-BHC	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
333-41-5	Diazinon	**0.0006**	0.01	0.01	0.0006	0.07	**0.07**
124-48-1	Dibromochloromethane	**0.1**	0.02	0.1	0.1	0.03	**0.1**
1918-00-9	Dicamba	**0.2**	0.47	0.47	0.2	3.1	**3.1**
75-09-2	Dichloromethane (Methylene chloride)	**0.005**	0.06	0.06	0.005	0.12	**0.12**
60-57-1	Dieldrin	**0.00002**	0.00005	0.00005	0.00002	0.0002	**0.0002**
84-66-2	Diethylphthalate	**5**	13	13	5	82	**82**
60-51-5	Dimethoate	**0.007**	0.003	0.007	0.007	0.02	**0.02**
131-11-3	Dimethylphthalate	**400**	400	400	400	400	**400**
84-74-2	Di-n-butylphthalate	**4**	1.6	4	4	10	**10**
117-84-0	Di-n-octylphthalate	**0.7**	0.7	0.7	0.7	0.7	**0.7**
88-85-7	Dinoseb (DNBP)	**0.007**	0.02	0.02	0.007	0.1	**0.1**
298-04-4	Disulfoton	**0.0003**	0.0006	0.0006	0.0003	0.004	**0.004**
115-29-7	Endosulfan I	**0.002**	0.09	0.09	0.002	0.61	**0.61**
33213-65-9	Endosulfan II	**0.002**	0.002	0.002	0.002	0.002	**0.002**
1031-07-8	Endosulfan sulfate	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
72-20-8	Endrin	**0.002**	0.005	0.005	0.002	0.03	**0.03**
7421-93-4	Endrin aldehyde	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
2104-64-5	EPN	**Bkg/DL**	0.0002	0.0002	Bkg/DL	0.001	**0.001**

EPS

Table 2. Groundwater Risk Reduction Standards (mg/L)

CAS #	Constituent	Delineation Standard: Type 1 RRS	Type 2 RRS	Residential GW RRS*	Type 3 RRS	Type 4 RRS	Non-Residential RRS**
100-41-4	Ethyl benzene	**0.7**	0.02	0.7	0.7	0.03	**0.7**
115-90-2	Fensulfothion	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
58-89-9	gamma-BHC (Lindane)	**0.0002**	0.0008	0.0008	0.0002	0.003	**0.003**
76-44-8	Heptachlor	**0.0004**	0.0002	0.0004	0.0004	0.0006	**0.0006**
1024-57-3	Heptachlor epoxide	**0.0002**	0.00009	0.0002	0.0002	0.0003	**0.0003**
118-74-1	Hexachlorobenzene	**0.001**	0.0005	0.001	0.001	0.002	**0.002**
87-68-3	Hexachlorobutadiene	**0.001**	0.02	0.02	0.001	0.1	**0.1**
77-47-4	Hexachlorocyclopentadiene	**0.05**	0.09	0.09	0.05	0.61	**0.61**
67-72-1	Hexachloroethane	**0.001**	0.02	0.02	0.001	0.1	**0.1**
78-59-1	Isophorone	**0.1**	0.9	0.9	0.1	3	**3**
98-82-8	Isopropylbenzene (cumene)	**Bkg/DL**	0.21	0.21	Bkg/DL	1	**1**
121-75-5	Malathion	**0.2**	0.31	0.31	0.2	2	**2**
72-43-5	Methoxychlor	**0.04**	0.08	0.08	0.04	0.51	**0.51**
298-00-0	Methyl parathion	**0.002**	0.004	0.004	0.002	0.03	**0.03**
7786-34-7	Mevinphos	**Bkg/DL**	Bkg/DL	Bkg/DL	Bkg/DL	Bkg/DL	**Bkg/DL**
98-95-3	Nitrobenzene	**0.02**	0.002	0.02	0.02	0.002	**0.02**
56-38-2	Parathion	**0.2**	0.09	0.2	0.2	0.61	**0.61**
87-86-5	Pentachlorophenol	**0.001**	0.007	0.007	0.001	0.02	**0.02**
108-95-2	Phenol	**4**	4.7	4.7	4	31	**31**
100-42-5	Styrene	**0.1**	0.5	0.5	0.1	2.6	**2.6**
127-18-4	Tetrachloroethene	**0.005**	0.001	0.005	0.005	0.004	**0.005**
108-88-3	Toluene	**1**	0.88	1	1	5.2	**5.2**
8001-35-2	Toxaphene	**0.003**	0.0008	0.003	0.003	0.003	**0.003**
79-01-6	Trichloroethene	**0.005**	0.03	0.03	0.005	0.04	**0.04**
95-47-6	o-Xylene	**Bkg/DL**	0.37	0.37	Bkg/DL	1.9	**1.9**

* Higher of Type 1 and Type 2 RRS

** Higher of Type 3 and Type 4 RRS

EPS

Table 3. Summary Comparison of Surface Soil Results to RRSs (mg/kg)

CAS #	Constituent		Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SS RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
Inorganics								
7440-38-2	Arsenic		**58**	20	38	5/231	5/231	0.26
7440-39-3	Barium		327	2554	16480	0/62	0/62	
7440-41-7	Beryllium		1.5	156	3161	0/39	0/39	
7440-43-9	Cadmium		**47**	7.5	150	1/62	0/62	3.2
7440-47-3	Chromium	Chromium (III)	97	100000	100000	0/62	0/62	
7440-47-3		Chromium (unspeciated)	97	100	1200	0/62	0/62	
7440-47-3		Chromium (VI)	97	100	109	0/62	0/62	
7440-50-8	Copper		**18100**	915	2886	3/124	2/124	0.25
7439-92-1	Lead		61	270	400	0/62	0/62	
7439-97-6	Mercury		0.220	2.1	17	0/62	0/62	
744-00-2	Nickel		21	404	2608	0/39	0/39	
7782-49-2	Selenium		**42**	8.3	52	1/62	0/62	5.1
7440-22-4	Silver		4.7	17	85	0/62	0/62	
7440-66-6	Zinc		240	5847	38564	0/107	0/107	
Organics								
120-82-1	1,2,4-Trichlorobenzene		0.0050	10.83	10.83	0/197	0/197	
106-93-4	1,2-Dibromoethane		0.0020	0.01	0.01	0/136	0/136	
95-50-1	1,2-Dichlorobenzene		0.0054	60	60	0/176	0/176	
106-46-7	1,4-Dichlorobenzene		0.17	7.5	7.5	0/176	0/176	
93-72-1	2,4,5-TC (Silvex)		0.0069	10	10	0/123	0/123	
78-93-3	2-Butanone (MEK)		0.090	200	200	0/137	0/137	
72-54-8	4,4'-DDD		**190**	19	47	12/259	7/259	0.64
72-55-9	4,4'-DDE		**31**	14	38	4/252	0/252	0.10
50-29-3	4,4'-DDT		**660**	20	54	11/259	5/259	0.96
100-02-7	4-Nitrophenol		**70**	6	6	1/113	1/113	12
67-64-1	Acetone		4	400	400	0/137	0/137	
309-00-2	Aldrin		**14**	0.66	0.66	1/159	1/159	4.4
319-84-6	alpha-BHC		**3.3**	0.66	0.66	2/159	2/159	1.6
86-50-0	Azinphos-methyl		0.025	10	10	0/135	0/135	
71-43-2	Benzene		**45**	0.5	0.5	1/137	1/137	13

EPS

Table 3. Summary Comparison of Surface Soil Results to RRSs (mg/kg)

CAS #	Constituent	Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SS RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
56-55-3	Benzo(a)anthracene	0.037	7.1	28	0/106	0/106	
50-32-8	Benzo(a)pyrene	0.36	1.6	7.8	0/106	0/106	
205-99-2	Benzo(b)fluoranthene	6.3	12	78	0/106	0/106	
191-24-2	Benzo(g,h,i)perylene	0.043	500	500	0/106	0/106	
207-08-9	Benzo(k)fluoranthene	0.081	125	784	0/106	0/106	
319-85-7	beta-BHC	0.051	0.66	0.66	0/163	0/163	
117-81-7	bis(2-Ethylhexyl) phthalate	6.1	287	957	0/106	0/106	
63-25-2	Carbaryl	36	70	182	0/24	0/24	
75-15-0	Carbon disulfide	0.369	400	400	0/71	0/71	
57-74-9	Chlordane	**450**	9.2	9.2	8/201	8/201	2.6
108-90-7	Chlorobenzene	**61**	10	10	1/137	1/137	0.76
2921-88-2	Chlorpyrifos	**690.0**	15	94	1/116	1/116	2.9
218-01-9	Chrysene	0.35	867	2817	0/106	0/106	
56-72-4	Coumaphos	0.0064	1	1	0/135	0/135	
108-94-1	Cyclohexanone	29	359	2351	0/26	0/26	
75-99-0	Dalapon	0.092	20	20	0/115	0/115	
333-41-5	Diazinon	**2**	1.3	8.8	1/106	0/106	0.38
53-70-3	Dibenzo(a,h)anthracene	0.031	2	7.8	0/106	0/106	
1918-00-9	Dicamba	0.0026	20	20	0/114	0/114	
60-57-1	Dieldrin	**21**	0.66	0.66	1/159	1/159	11
60-51-5	Dimethoate	**8.0**	0.7	0.7	5/131	5/131	1.69
298-04-4	Disulfoton	**28**	0.03	0.15	3/105	3/105	335
959-98-8	Endosulfan I	**160**	26	170	7/166	0/166	0.61
33213-65-9	Endosulfan II	**170**	10	10	8/166	8/166	1.2
1031-07-8	Endosulfan sulfate	**79**	1.65	1.65	6/166	6/166	5.3
72-20-8	Endrin	**140**	10	24	1/159	1/159	1.56
	Endrin Aldehyde	**61**	10	10	1/159	1/159	1.5
2104-64-5	EPN	0.19	6.4	20	0/135	0/135	
100-41-4	Ethyl benzene	**170**	70	70	2/137	2/137	0.31
115-90-2	Fensulfothion	1.000	10	10	0/135	0/135	
206-44-0	Fluoranthene	0.059	2224	9118	0/106	0/106	

EPS

Table 3. Summary Comparison of Surface Soil Results to RRSs (mg/kg)

CAS #	Constituent	Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SS RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
59-89-9	gamma-BHC (Lindane)	**2.7**	0.66	0.66	2/159	2/159	0.65
76-44-8	Heptachlor	**60**	0.67	0.83	3/259	3/259	13
1024-57-3	Heptachlor epoxide	0.22	1.6	1.65	0/159	0/159	
193-39-5	Indeno(1,2,3-cd)pyrene	0.33	12	78	0/106	0/106	
98-82-8	Isopropylbenzene	**81**	22	33	1/136	1/136	0.31
121-75-5	Malathion	0.082	20	20	0/135	0/135	
72-43-5	Methoxychlor	0.42	87	542	0/150	0/150	
7786-34-7	Mevinphos	0.017	10	10	0/105	0/105	
91-20-3	Naphthalene	8.6	100	100	0/136	0/136	
95-47-6	o-Xylene	**400**	20	38	2/70	1/70	1.7
56-38-2	Parathion	0.17	20	60	0/135	0/135	
87-86-5	Pentachlorophenol	0.0096	3.3	4	0/142	0/142	
85-01-8	Phenanthrene	0.041	110	110	0/106	0/106	
129-00-0	Pyrene	0.43	2184	6770	0/106	0/106	
127-18-4	Tetrachloroethene	0.084	0.5	0.5	0/137	0/137	
108-88-3	Toluene	0.15	100	100	0/137	0/137	
8001-35-2	Toxaphene	**5600**	10.88	10.88	13/250	13/250	21
79-01-6	Trichloroethene	0.0086	0.5	0.5	0/137	0/137	

ND: not detected

Nonresidential RRS: Higher of Type 3 and Type 4

Maximum concentration exceeds Non-Residential RRS

Maximum concentration exceeds Residential RRS

Frequency of exceedance: Number of results above RRS / Number of results

Average magnitude of exceedance: Average detected concentration divided by the Residential RRS

EPS

Table 4. Summary Comparison of Subsurface Soil Results to RRSs (mg/kg)

CAS #	Constituent		Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SB RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
Inorganics								
7440-36-0	Antimony		**11**	5.4	36	1/99	0/99	0.71
7440-38-2	Arsenic		**219**	20	41	4/350	3/350	0.26
7440-39-3	Barium		80	2554	16480	0/119	0/119	
7440-41-7	Beryllium		2.2	156	3161	0/99	0/99	
7440-43-9	Cadmium		**21**	7.5	150	4/119	0/119	1.0
7440-47-3	Chromium	Chromium (III)	160	100000	100000	0/119	0/119	
7440-47-3		Chromium (unspeciated)	**160**	100	1200	2/119	0/119	0.19
7440-47-3		Chromium (VI)	**160**	100	1200	2/119	0/119	0.19
7440-50-8	Copper		**4900**	915	2886	3/228	1/228	0.05
7439-92-1	Lead		**2700**	270	400	1/119	1/119	0.11
7439-97-6	Mercury		0.46	2.1	17	0/123	0/123	
744-00-2	Nickel		27	404	2608	0/99	0/99	
7440-22-4	Silver		2.6	17	85	0/119	0/119	
7440-66-6	Zinc		640	5847	38564	0/227	0/227	
Organics								
96-18-4	1,2,3-Trichloropropane		**16**	0.5	4	1/243	1/243	32.00
120-82-1	1,2,4-Trichlorobenzene		1.5	10.83	10.83	0/438	0/438	
96-12-8	1,2-Dibromo-3-chloropropane		0.0054	0.003*	0.003*	1/273	1/273	1.8
106-93-4	1,2-Dibromoethane		**2.7**	0.01	0.01	25/304	25/304	39.89
95-50-1	1,2-Dichlorobenzene		3.5	60	60	0/387	0/387	
78-87-5	1,2-Dichloropropane		0.075	0.5	0.5	0/290	0/290	
106-46-7	1,4-Dichlorobenzene		2.8	7.5	7.5	0/387	0/387	
93-72-1	2,4,5-TC (Silvex)		0.018	10	10	0/268	0/268	
94-75-7	2,4-D		0.025	7	7	0/268	0/268	
105-67-9	2,4-Dimethylphenol		0.13	70	70	0/242	0/242	
78-93-3	2-Butanone (MEK)		3.1	200	200	0/289	0/289	
	3/4-Methylphenol		0.069	13	82	0/99	0/99	
72-54-8	4,4'-DDD		**440**	19	47	16/447	7/447	0.69
72-55-9	4,4'-DDE		**32**	14	38	6/418	0/418	0.19
50-29-3	4,4'-DDT		**1300**	20	54	20/458	15/458	1.37
100-02-7	4-Nitrophenol		5.7	6	6	0/243	0/243	
83-32-9	Acenaphthene		1.6	408	1244	0/242	0/242	
208-96-8	Acenaphthylene		0.022	130	130	0/242	0/242	
67-64-1	Acetone		7.3	400	400	0/288	0/288	
309-00-2	Aldrin		**7.6**	0.66	0.66	2/315	2/315	2.53

EPS

Table 4. Summary Comparison of Subsurface Soil Results to RRSs (mg/kg)

CAS #	Constituent	Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SB RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
319-84-6	alpha-BHC	**20.0**	0.66	0.66	4/316	4/316	4.84
120-12-7	Anthracene	0.092	3121	20584	0/242	0/242	
71-43-2	Benzene	0.11	0.5	0.5	0/290	0/290	
56-55-3	Benzo(a)anthracene	0.17	7.1	28	0/242	0/242	
50-32-8	Benzo(a)pyrene	0.28	1.6	9.4	0/242	0/242	
205-99-2	Benzo(b)fluoranthene	0.59	12	96	0/242	0/242	
191-24-2	Benzo(g,h,i)perylene	0.096	500	500	0/242	0/242	
207-08-9	Benzo(k)fluoranthene	0.18	125	940	0/242	0/242	
319-85-7	beta-BHC	**56**	0.66	0.66	2/321	2/321	9.01
117-81-7	bis(2-Ethylhexyl) phthalate	3.6	287	957	0/242	0/242	
74-83-9	Bromomethane	0.0062	1	1	0/290	0/290	
63-25-2	Carbaryl	3.800000191	70	182	0/28	0/28	
75-15-0	Carbon disulfide	0.48	400	400	0/160	0/160	
57-74-9	Chlordane	**640**	9.2	9.2	20/368	20/368	6.07
108-90-7	Chlorobenzene	**290**	10	10	3/290	3/290	2.11
75-00-3	Chloroethane	0.98	34	163	0/290	0/290	
2921-88-2	Chlorpyrifos	0.709999979	15	94	0/159	0/159	
218-01-9	Chrysene	0.21	867	2817	0/242	0/242	
156-59-2	cis-1,2-Dichloroethene	0.0022	782	0.53	0/273	0/273	
56-72-4	Coumaphos	**5.4**	1	1	2/264	2/264	2.48
108-94-1	Cyclohexanone	47	359	2351	0/40	0/40	
75-99-0	Dalapon	0.11	20	20	0/268	0/268	
333-41-5	Diazinon	0.016	1.3	8.8	0/165	0/165	
53-70-3	Dibenzo(a,h)anthracene	0.032	2	31	0/242	0/242	
132-64-9	Dibenzofuran	0.17	78	1.55	0/112	0/112	
1918-00-9	Dicamba	0.024	20	20	0/268	0/268	
75-09-2	Dichloromethane (Methylene chloride)	0.26	0.5	0.6	0/290	0/290	
60-57-1	Dieldrin	**25**	0.66	0.66	6/316	6/316	7.79
60-51-5	Dimethoate	**0.80**	0.7	0.7	1/264	1/264	0.16
84-74-2	Di-n-butylphthalate	11	400	500	0/242	0/242	
117-84-0	Di-n-octylphthalate	0.10	5491	5491	0/242	0/242	
88-85-7	Dinoseb (DNBP)	0.055	3.5	18	0/268	0/268	
298-04-4	Disulfoton	**42**	0.03	0.15	9/168	7/168	217.83
959-98-8	Endosulfan I	**140**	26	170	5/345	0/345	0.26
33213-65-9	Endosulfan II	**92**	10	10	4/345	4/345	0.39

Table 4. Summary Comparison of Subsurface Soil Results to RRSs (mg/kg)

CAS #	Constituent	Maximum Concentration (ppm)	Residential SS RRS	Non-Residential SB RRS	Frequency of Exceedance (Res)	Frequency of Exceedance (Non-Res)	Average Magnitude of Res Exceedance
1031-07-8	Endosulfan sulfate	**34**	1.65	1.65	1/345	1/345	1.50
72-20-8	Endrin	**160**	10	24	4/316	4/316	3.71
	Endrin Aldehyde	**38**	10	10	3/316	3/316	2.10
2104-64-5	EPN	2.3	6.4	6.4	0/264	0/264	
100-41-4	Ethyl benzene	**1500**	70	70	14/290	14/290	1.32
115-90-2	Fensulfothion	0.034	10	10	0/264	0/264	
206-44-0	Fluoranthene	1.8	2224	9118	0/242	0/242	
86-73-7	Fluorene	1.3	364	1492	0/242	0/242	
59-89-9	gamma-BHC (Lindane)	**8**	0.66	0.66	3/312	3/312	2.28
76-44-8	Heptachlor	**16**	0.67	0.83	10/443	7/443	1.99
1024-57-3	Heptachlor epoxide	**20**	1.6	1.65	1/316	1/316	3.13
193-39-5	Indeno(1,2,3-cd)pyrene	0.098	12	312	0/242	0/242	
98-82-8	Isopropylbenzene	**96**	22	33	3/275	3/275	0.48
121-75-5	Malathion	**470**	20	20	5/264	5/264	1.77
72-43-5	Methoxychlor	4.3	87	542	0/316	0/316	
298-00-0	Methyl parathion	**160**	0.2	1	11/265	6/265	106.65
7786-34-7	Mevinphos	**17**	10	10	1/165	1/165	1.70
91-20-3	Naphthalene	68	100	100	0/295	0/295	
98-95-3	Nitrobenzene	**4.4**	2	2	1/242	1/242	2.20
95-47-6	o-Xylene	**1800**	20	38	23/161	18/161	6.23
56-38-2	Parathion	**260**	20	60	2/264	1/264	0.68
87-86-5	Pentachlorophenol	**98**	3.3	4	2/344	2/344	2.57
85-01-8	Phenanthrene	2	110	110	0/242	0/242	
129-00-0	Pyrene	1.3	2184	6770	0/242	0/242	
100-42-5	Styrene	**20**	14	57	1/290	0/290	0.71
127-18-4	Tetrachloroethene	0.0067	0.5	0.5	0/290	0/290	
108-88-3	Toluene	64	100	100	0/290	0/290	
8001-35-2	Toxaphene	**3100**	10.88	10.88	43/448	43/448	17.12
79-01-6	Trichloroethene	0.011	0.5	0.5	0/290	0/290	

Nonresidential RRS: Higher of Type 3 and Type 4

Maximum concentration exceeds Non-Residential RRS

Maximum concentration exceeds Residential RRS

* No RRS calculated, notification criterion shown

Frequency of exceedance: Number of results above RRS / Number of results

Average magnitude of exceedance: Average detected concentration divided by the RRS

EPS

Table 5. Summary Comparison of Groundwater Results to RRSs (mg/L)

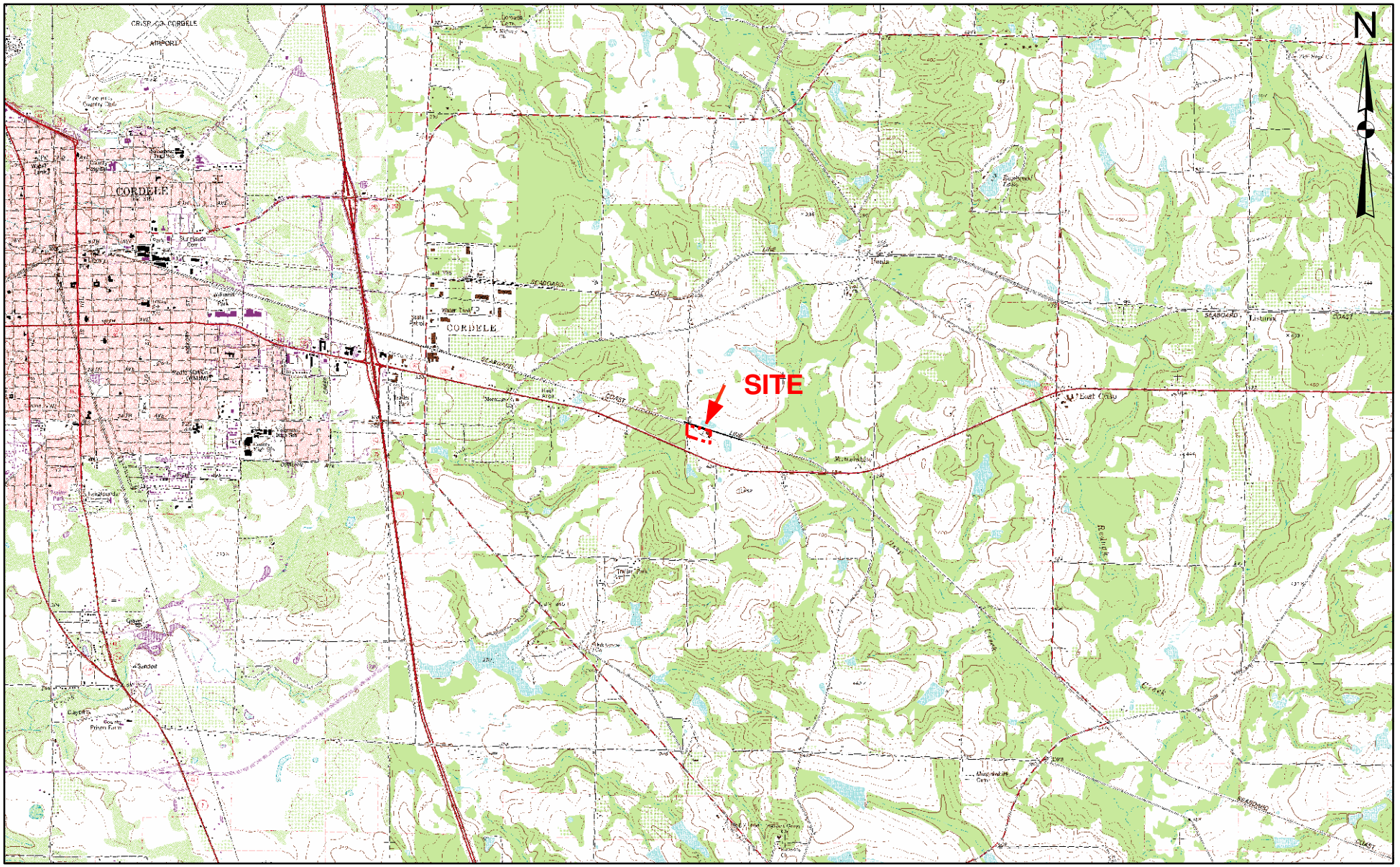
Constituent		Maximum Concentration*	Residential RRS	Residential Frequency of Exceedance	Non-Residential RRS	Non-Residential Frequency of Exceedance
Inorganics						
Antimony		0.000110	0.006	0/37	0.04	0/37
Arsenic		0.0016	0.01	0/37	0.01	0/37
Barium		0.17	3.1	0/37	20	0/37
Beryllium		0.00060	0.03	0/37	0.2	0/37
Cadmium		0.0016	0.008	0/37	0.05	0/37
Chromium	Chromium (III)	0.021	23	1/37	153	1/37
	Chromium (unspeciated)		0.1	1/37	0.1	1/37
	Chromium (VI)		0.1	1/37	0.1	1/37
Copper		0.013	1.3	0/37	4.1	0/37
Lead		0.0089	0.015	1/37	0.015	1/37
Mercury		0.000050	0.002	0/37	0.002	0/37
Nickel		0.018	0.31	0/37	2	0/37
Selenium		0.024	0.08	0/37	0.51	0/37
Silver		0.000163	0.1	0/37	0.51	0/37
Thallium		0.00028	0.002	0/37	0.002	0/37
Zinc		0.44	4.7	0/37	31	0/37
Organics						
1,2-Dibromo-3-chloropropane		8.2E-05	0.002**	0/37		0/37
1,2-Dibromoethane (EDB)		0.0014000	0.00009	12/42	0.0001	11/42
1,2-Dichloroethane		0.00053	0.005**	0/37		0/37
1,2-Dichloropropane		0.000350	0.005	0/37	0.007	0/37
1,4-Dichlorobenzene		6E-05	0.075	0/37	0.075	0/37
bis(2-Ethylhexyl) phthalate		0.00043	0.06	0/37	0.2	0/37
Carbon tetrachloride		0.00055	0.006	0/37	0.01	0/37
Dinoseb (DNBP)		0.0037	0.02	0/37	0.1	0/37
gamma-BHC (Lindane)		9.7E-06	0.0008	0/37	0.003	0/37
Heptachlor epoxide		0.00017	0.0002	0/37	0.0003	0/37
Toluene		0.00037	1	0/37	5.2	0/37

* Results from 2008-2013 used

** RRS not calculated, HSRA Table 1 Groundwater cirteria value shown

Maximum concentration exceeds RRS in more than one result

EPS



Source: USGS Quad maps: Cordele, GA and Penia, GA

Site Vicinity - Topographic Map

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_Site_TopoMap.mxd

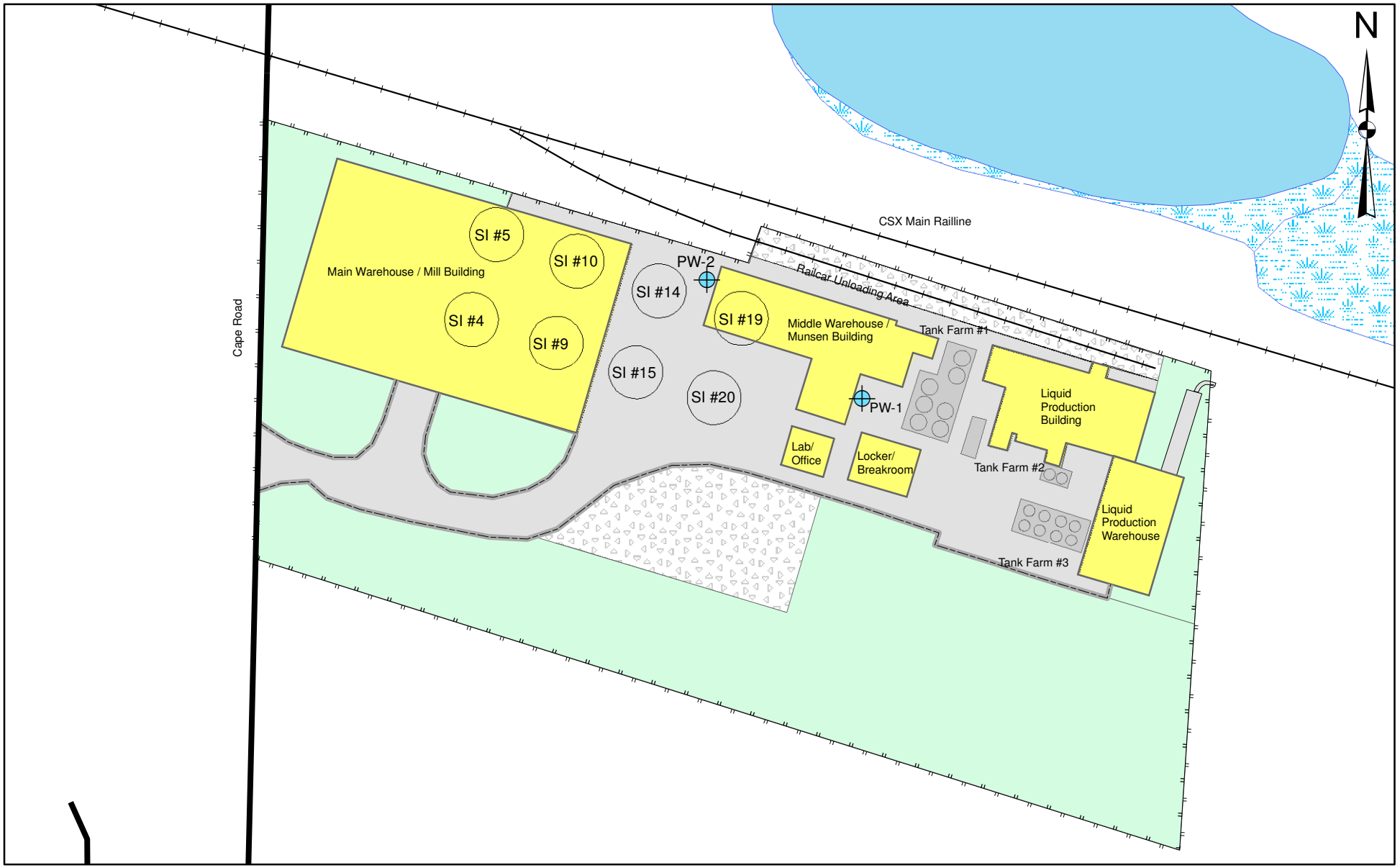
Figure No.1

Site Vicinity - Aerial and Land Use

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_Aerial.mxd

Figure No.2



Facility Layout Plan

EPS

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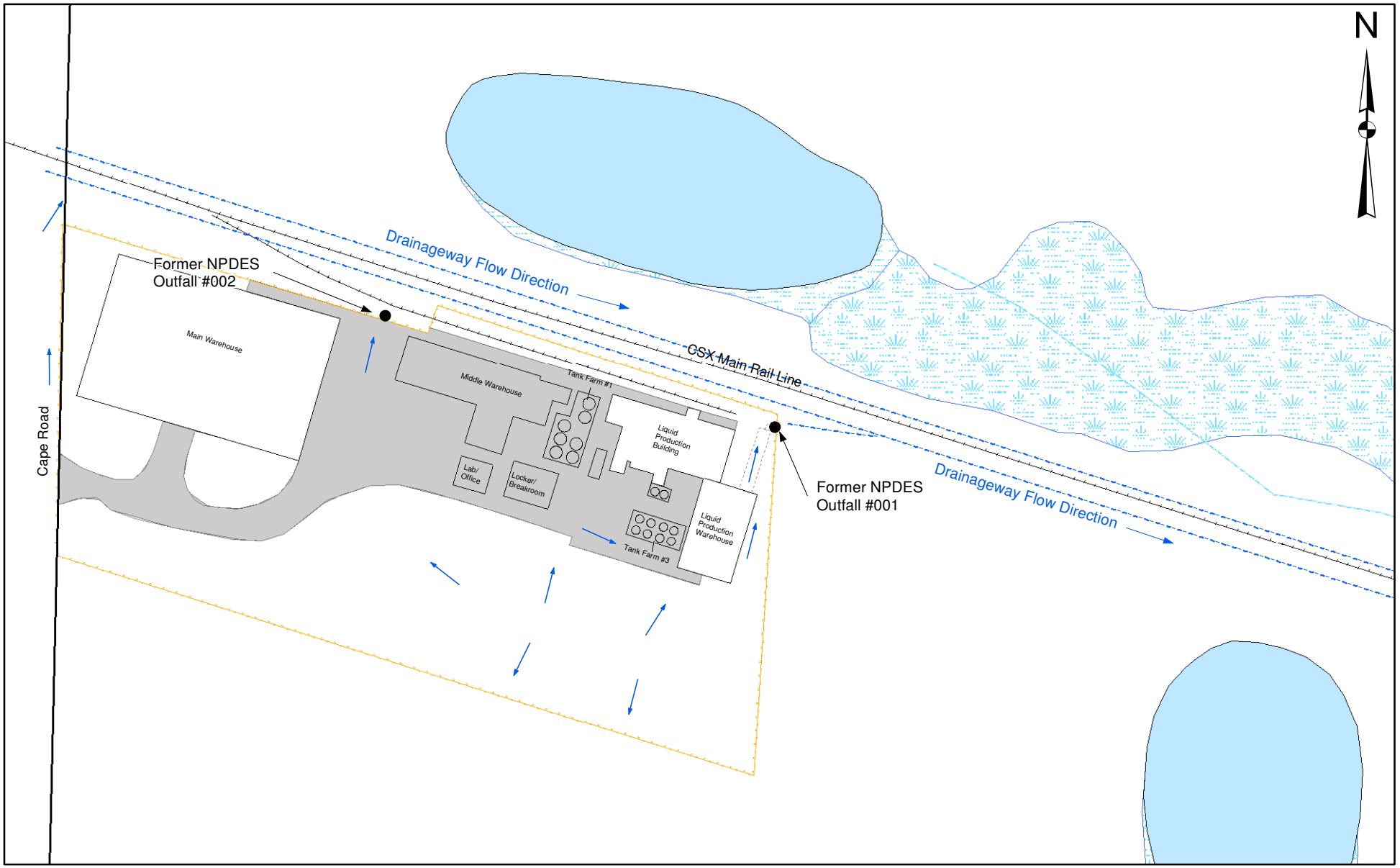
Figure No.3



0 75 150 300

Feet

- Roads
- USGS Intermittent Streams
- Fenceline
- Railroad
- Drainage
- Pavement
- Concrete paved
- Irrigation Ponds
- Wetland Polygons

Site Drainage Features

EPS

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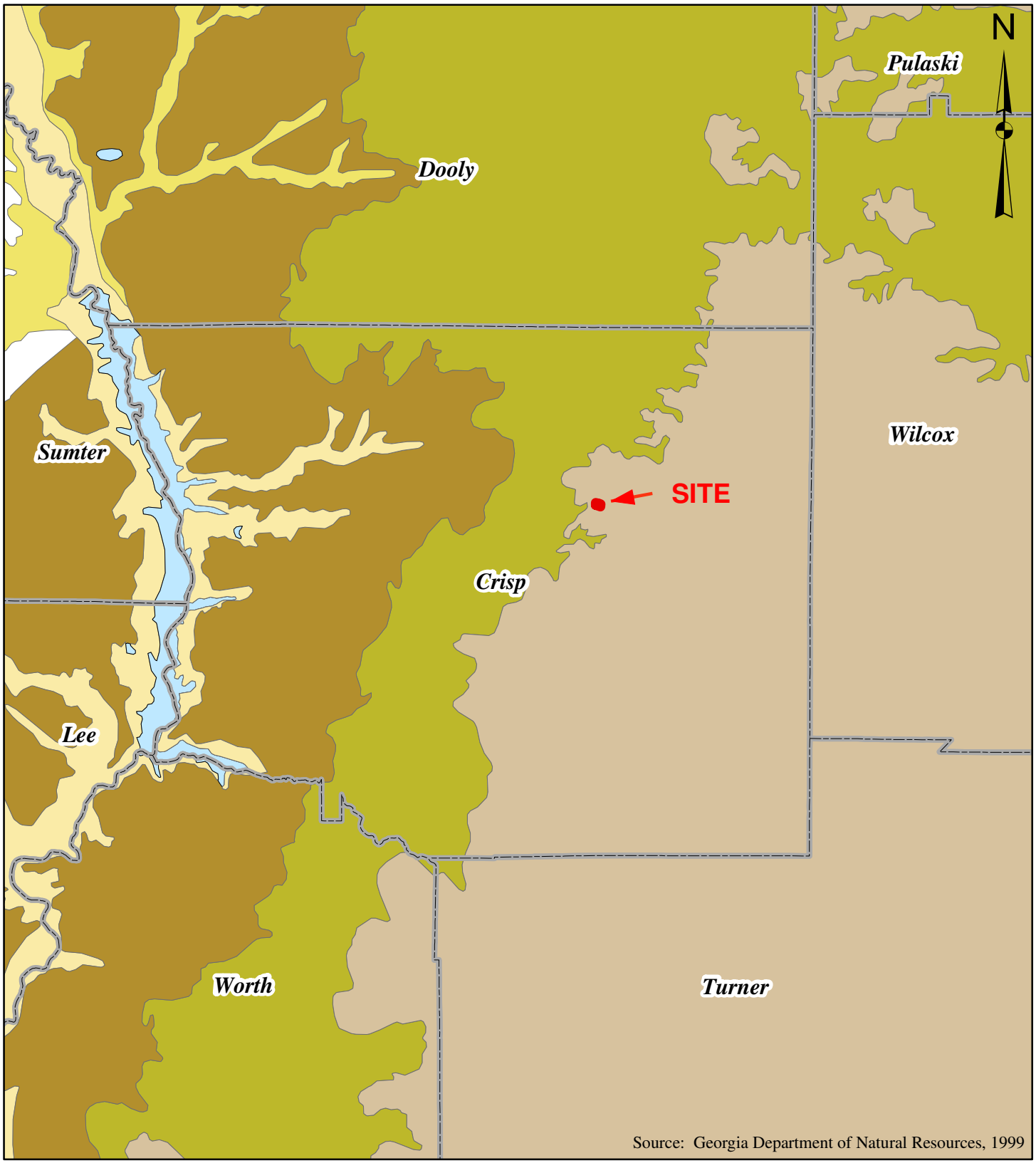
Figure No.4

Geologic Map
Drexel Cordele



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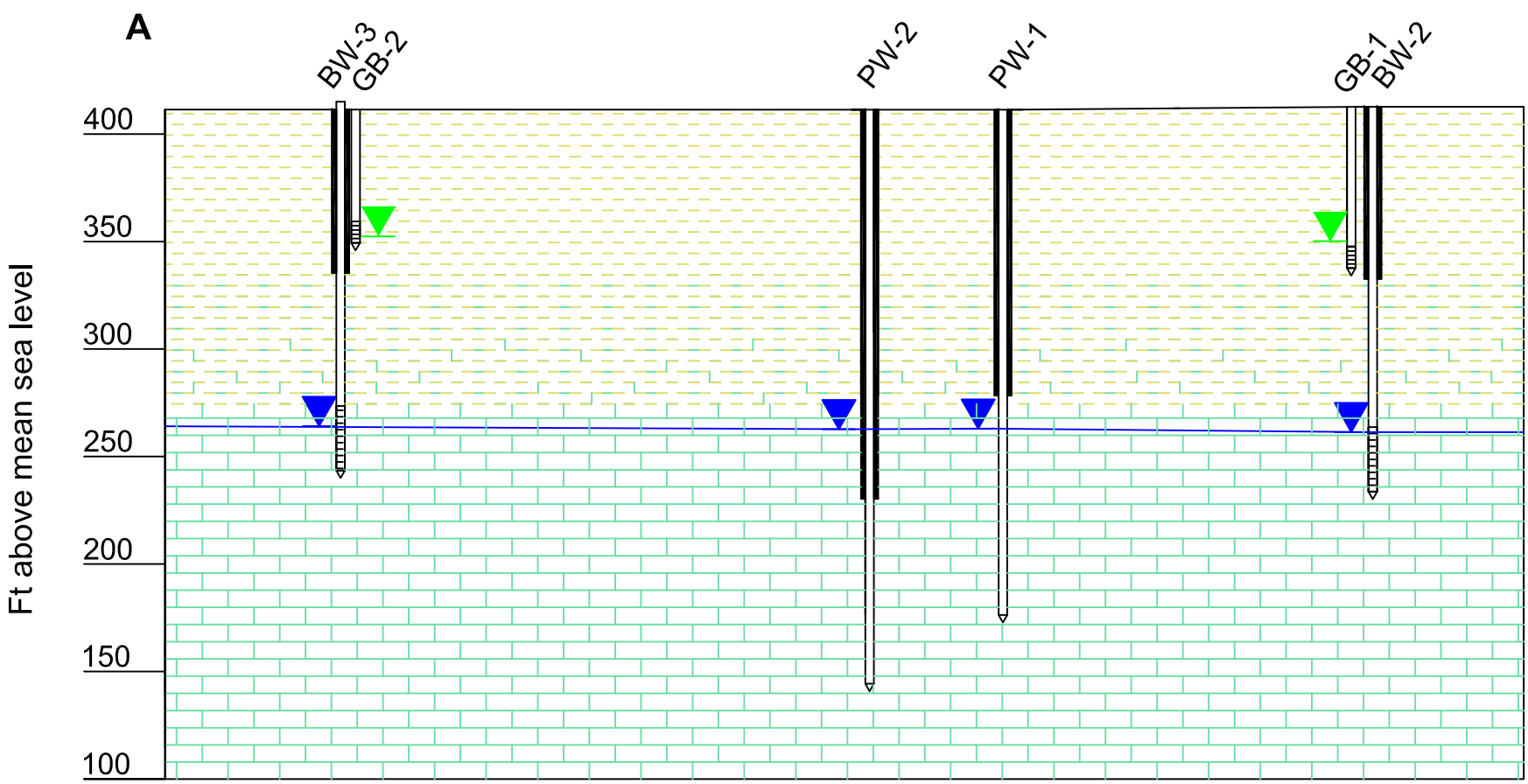
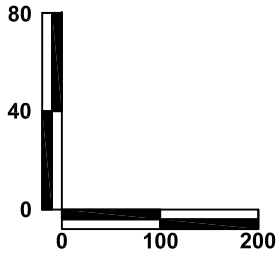
F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_Geologic Map.mxd

Figure No.5

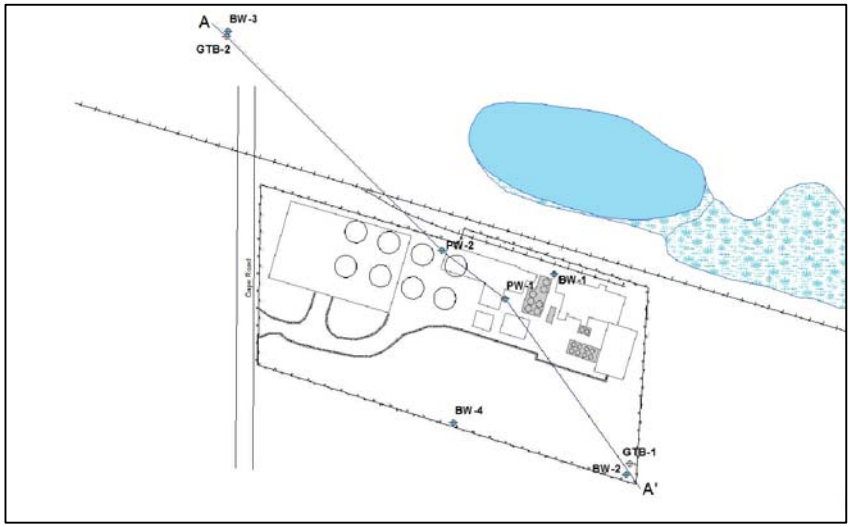


Scale



Legend

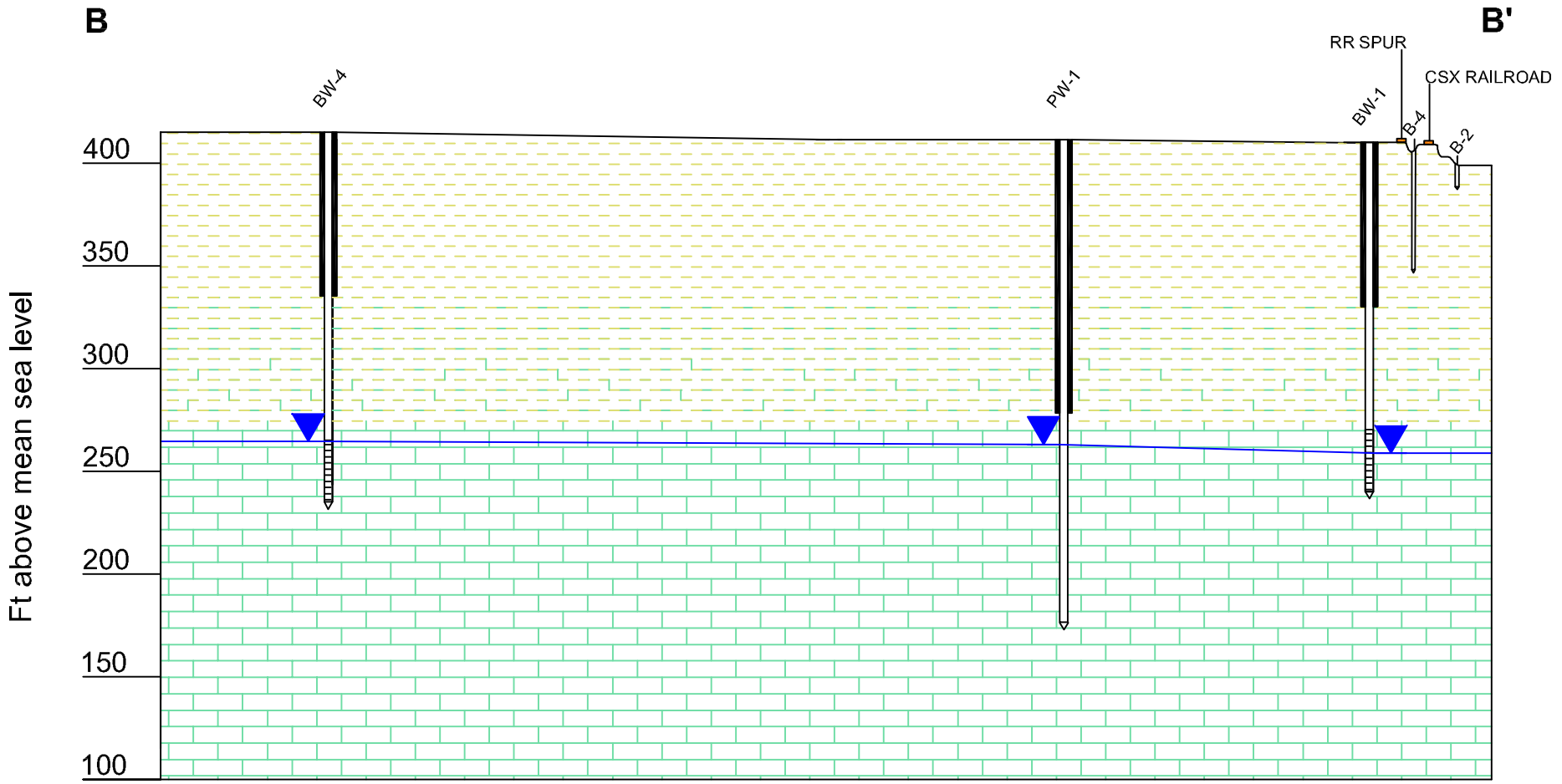
- Clay
- Highly Weathered Limestone
- Loosely Consolidated Limestone
- Competent Limestone
- Open Hole Interval
- Screened Interval
- Outer Casing
- Water Table
- Perched Water



Cross-Section A-A'

Environmental Planning Specialists, Inc.

Figure No. 6



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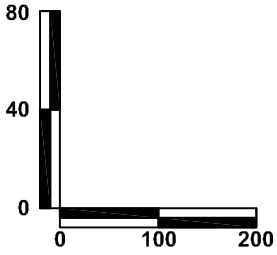
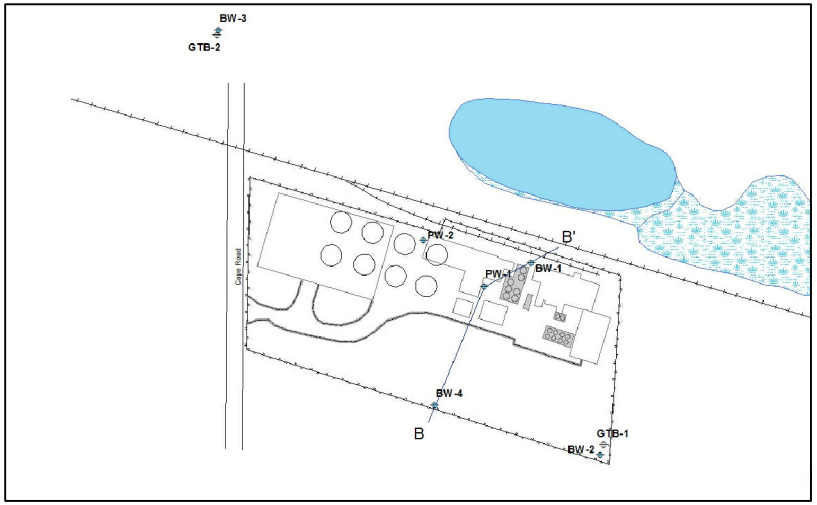
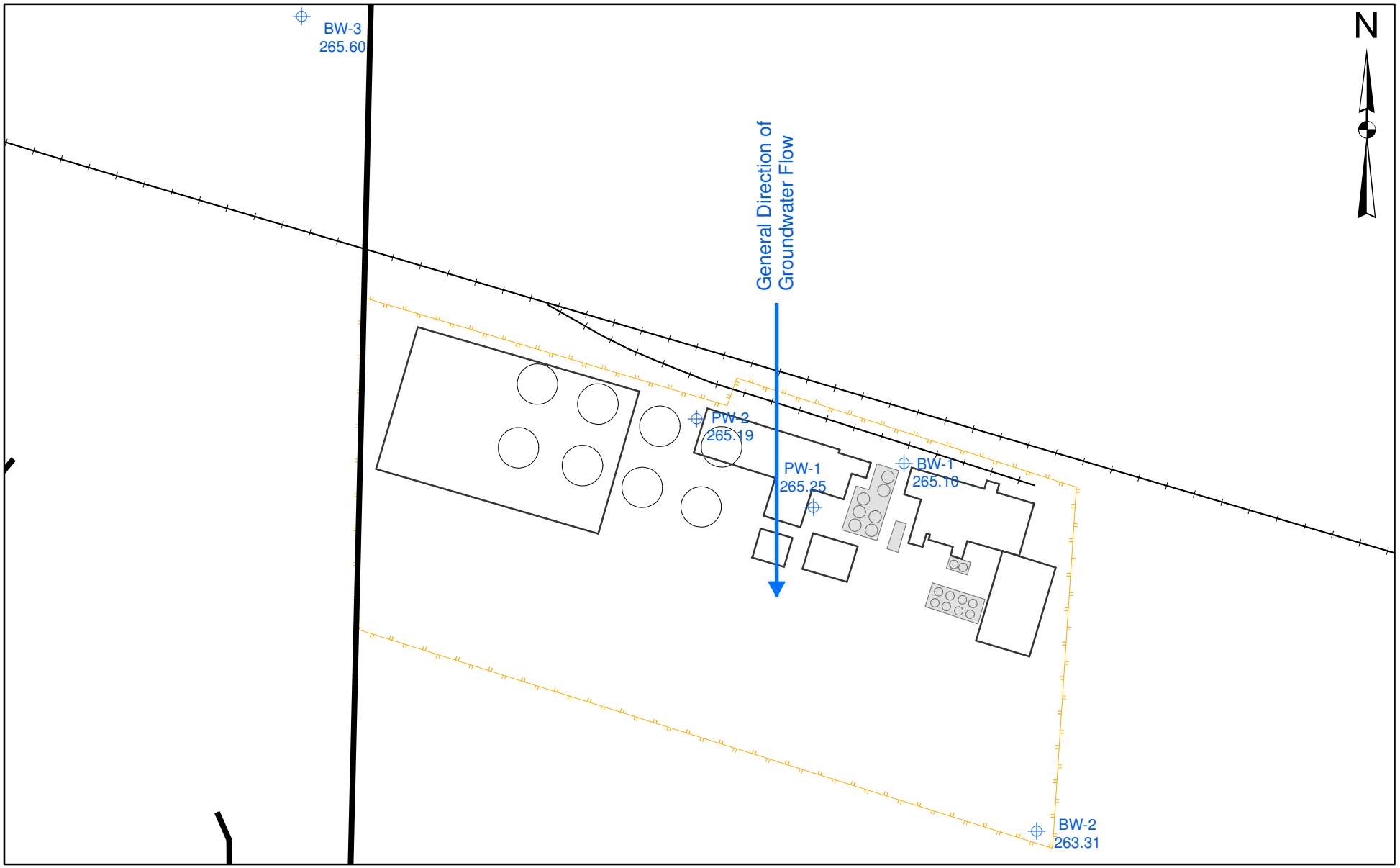


Legend

- Clay
- Highly Weathered Limestone
- Loosely Consolidated Limestone
- Competent Limestone
- Open Hole Interval
- Screened Interval
- Outer Casing
- Water Table



Cross-Section B-B'

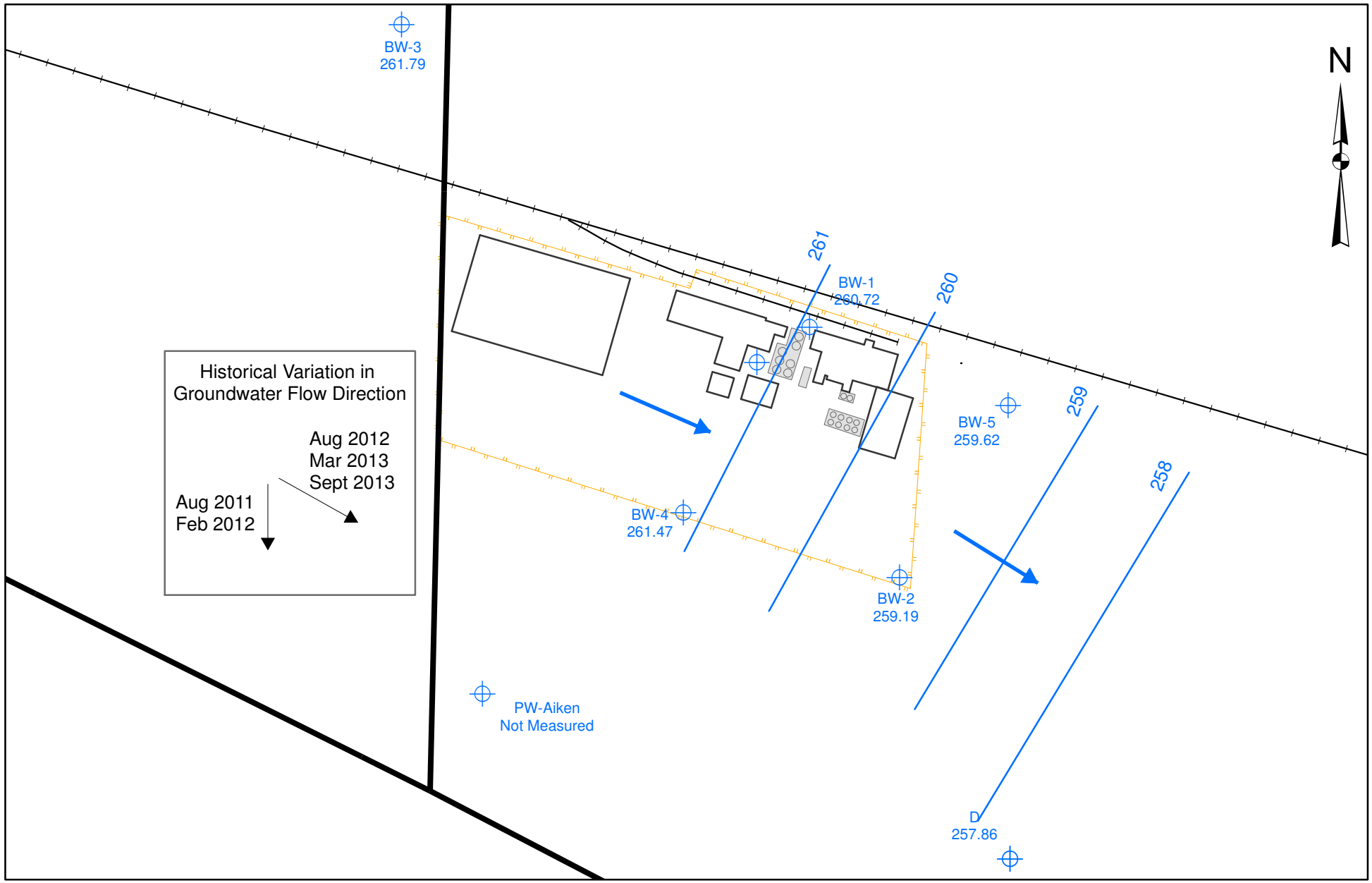


Groundwater Elevations - November 2005

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_Pot_map_2005.mxd

Figure No.8



Potentiometric Surface - September 2013

EPS

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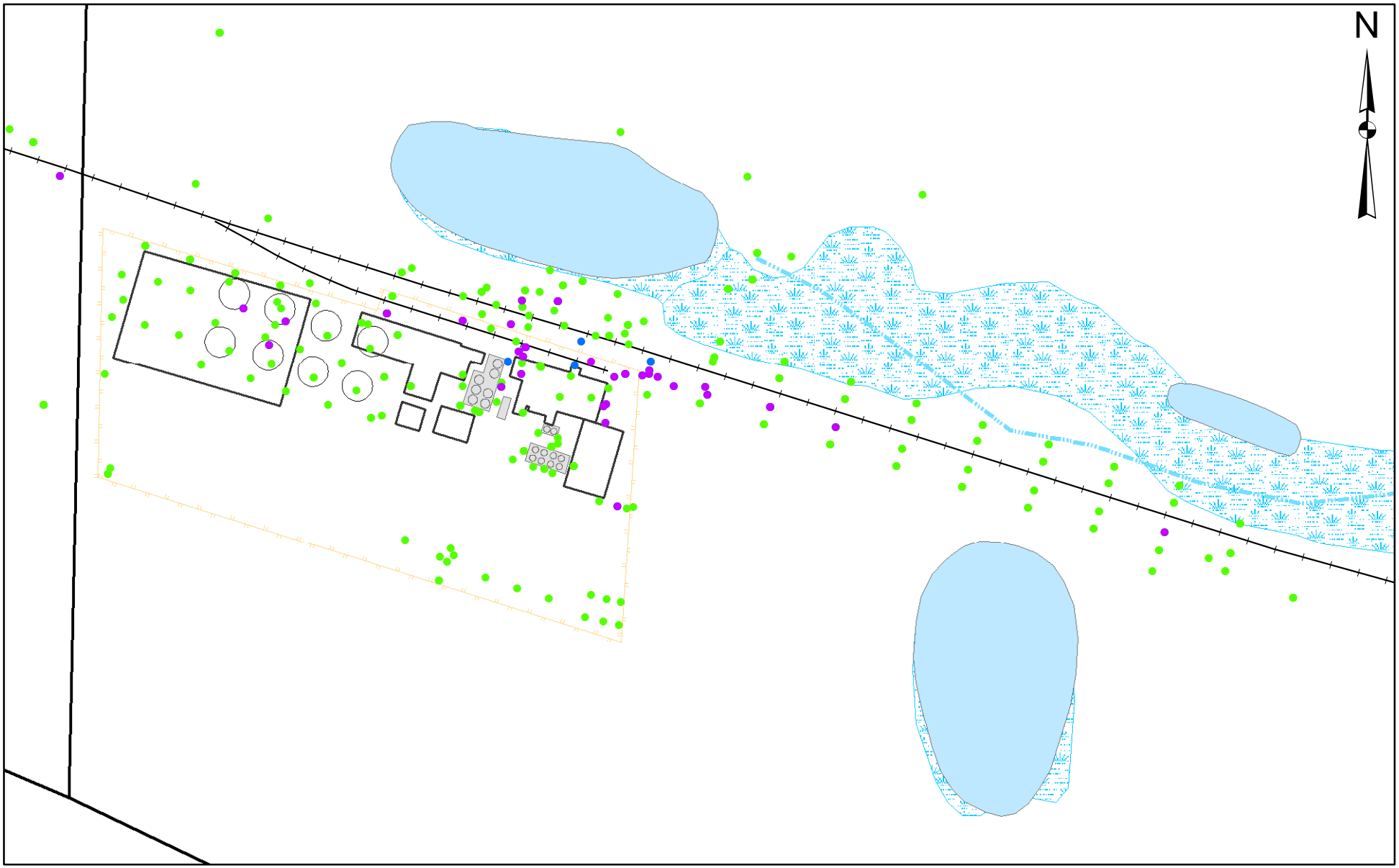
Figure No. 9

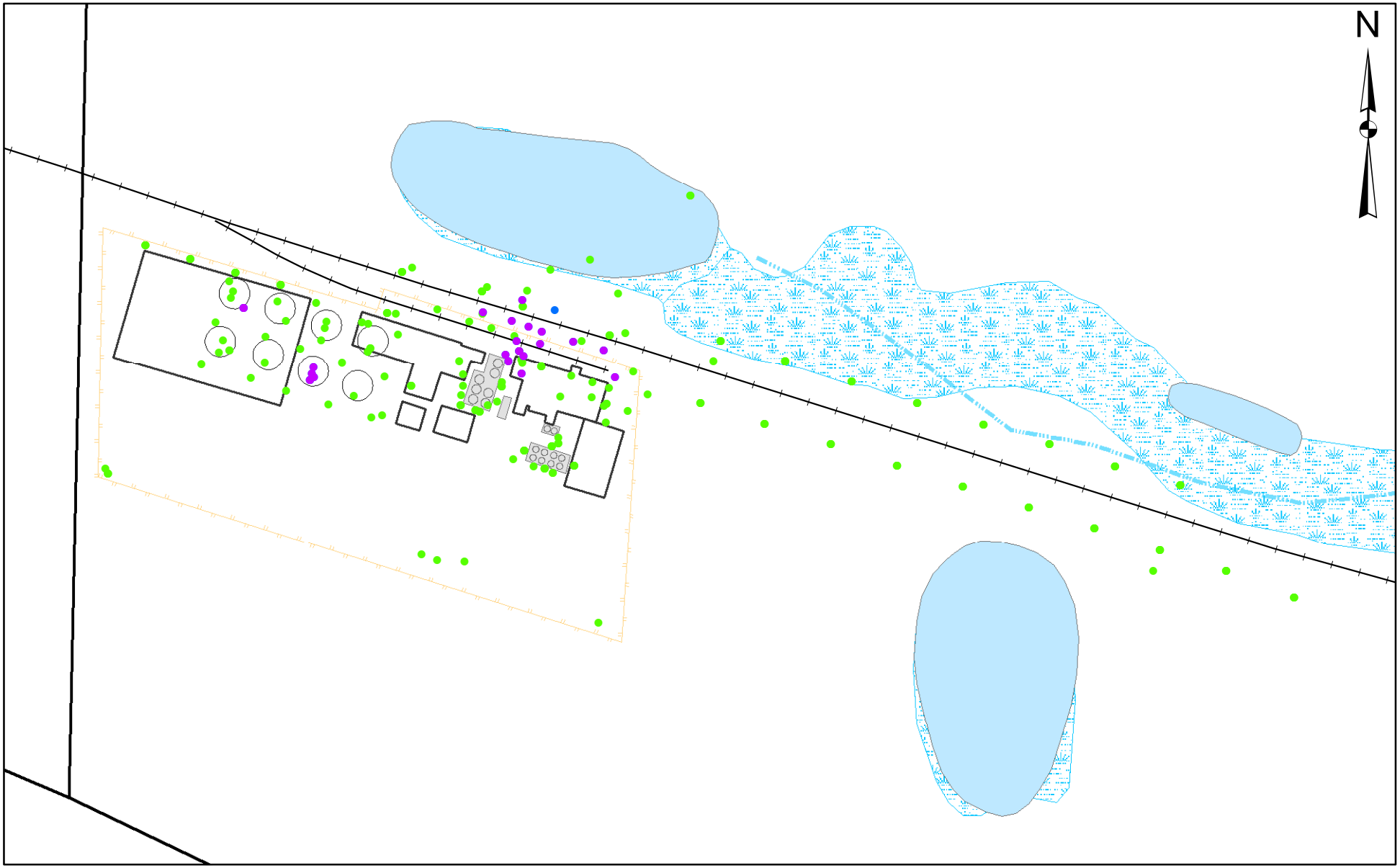


Comparison of Surface Soils from 0 to 2 ft to RRS

EPS

F:\Drexel Cordele\VRP Program\GIS\5th Progress Report\CSM_0-2_RRS.mxd

Figure No.10



Comparison of Subsurface Soils from 2 to 5 ft to RRS

EPS

F:\Drexel Cordele\VRP Program\GIS\5th Progress Report\CSM_2-5_RRS.mxd

Figure No.11

Comparison of Subsurface Soils from 5 to 10 ft to RRS

EPS

F:\Drexel Cordele\VRP Program\GIS\5th Progress Report\CSM_5-10_RRS.mxd

Figure No.12

Comparison of Subsurface Soils from 10 to 20 ft to RRS

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_10-20_RRS.mxd

Figure No.13

Comparison of Subsurface Soils from 20 to 30 ft to RRS

EPS

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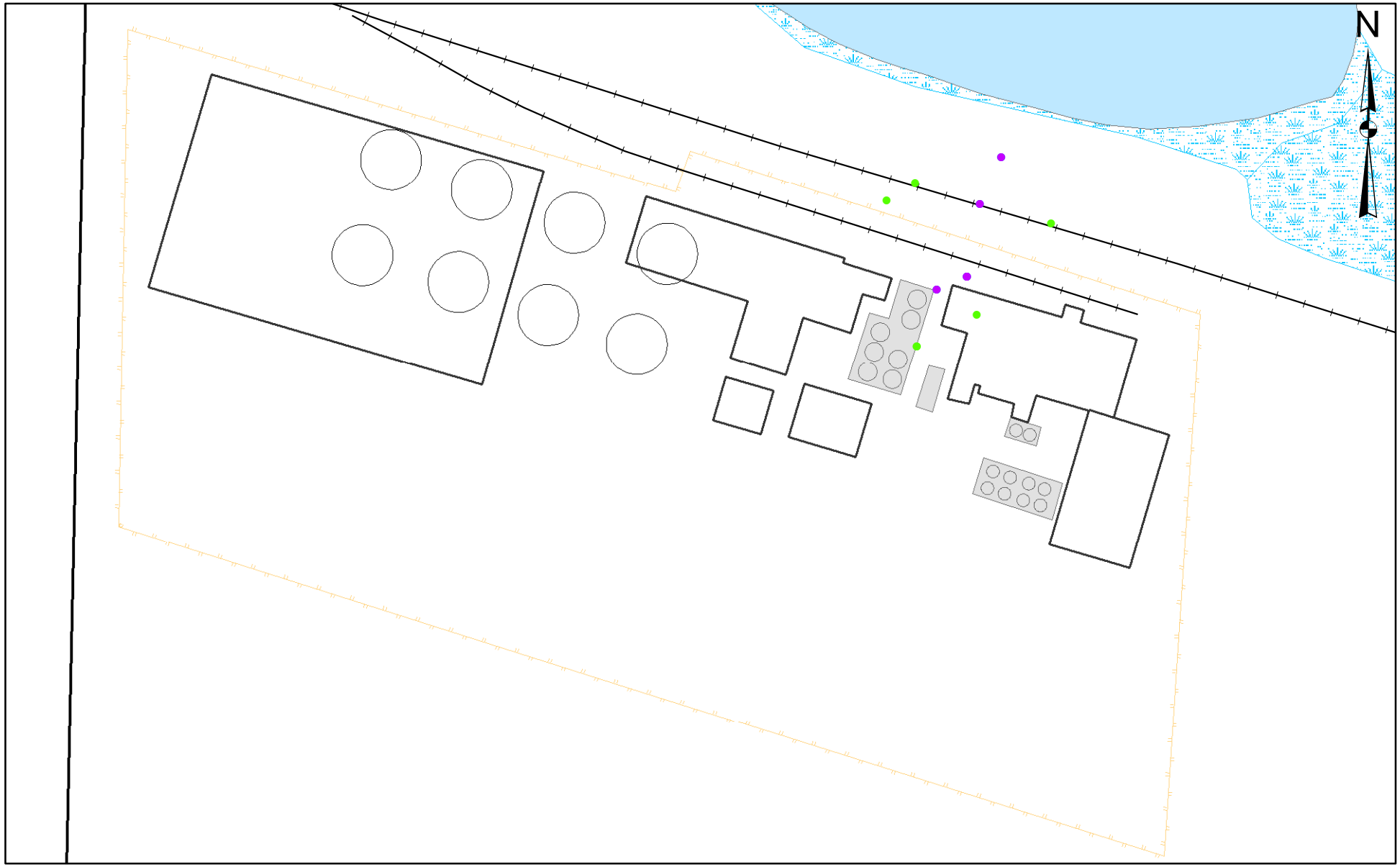
Figure No.14



Comparison of Subsurface Soils from 30 to 40 ft to RRS

EPS

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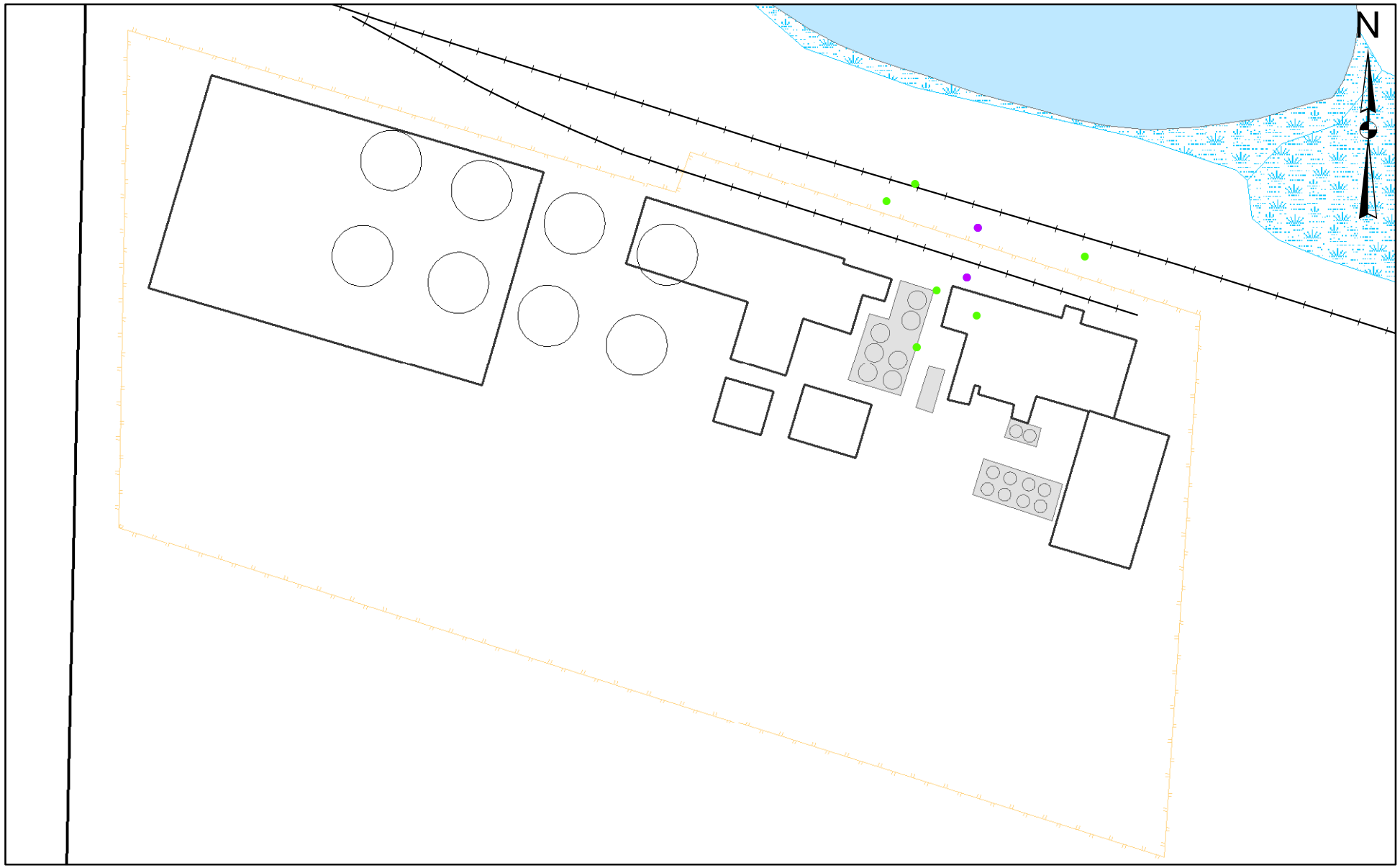
Figure No.15

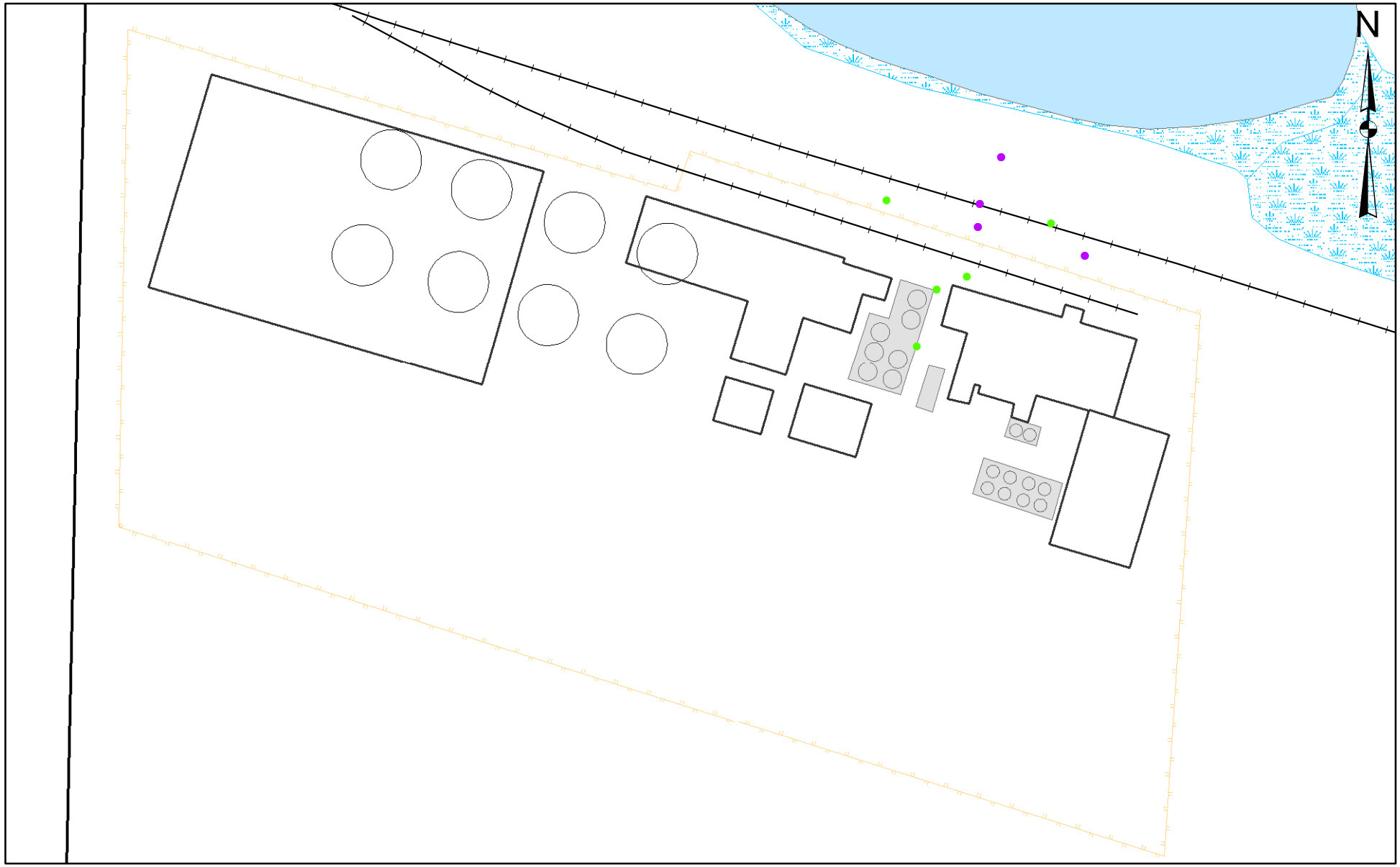


Comparison of Subsurface Soils from 40 to 50 ft to RRS

EPS

F:\Drexel Cordele\VRP Program\GIS\5th Progress Report\CSM_40-50_RRS.mxd

Figure No.16



Comparison of Subsurface Soils from 50 to 60 ft to RRS

EPS

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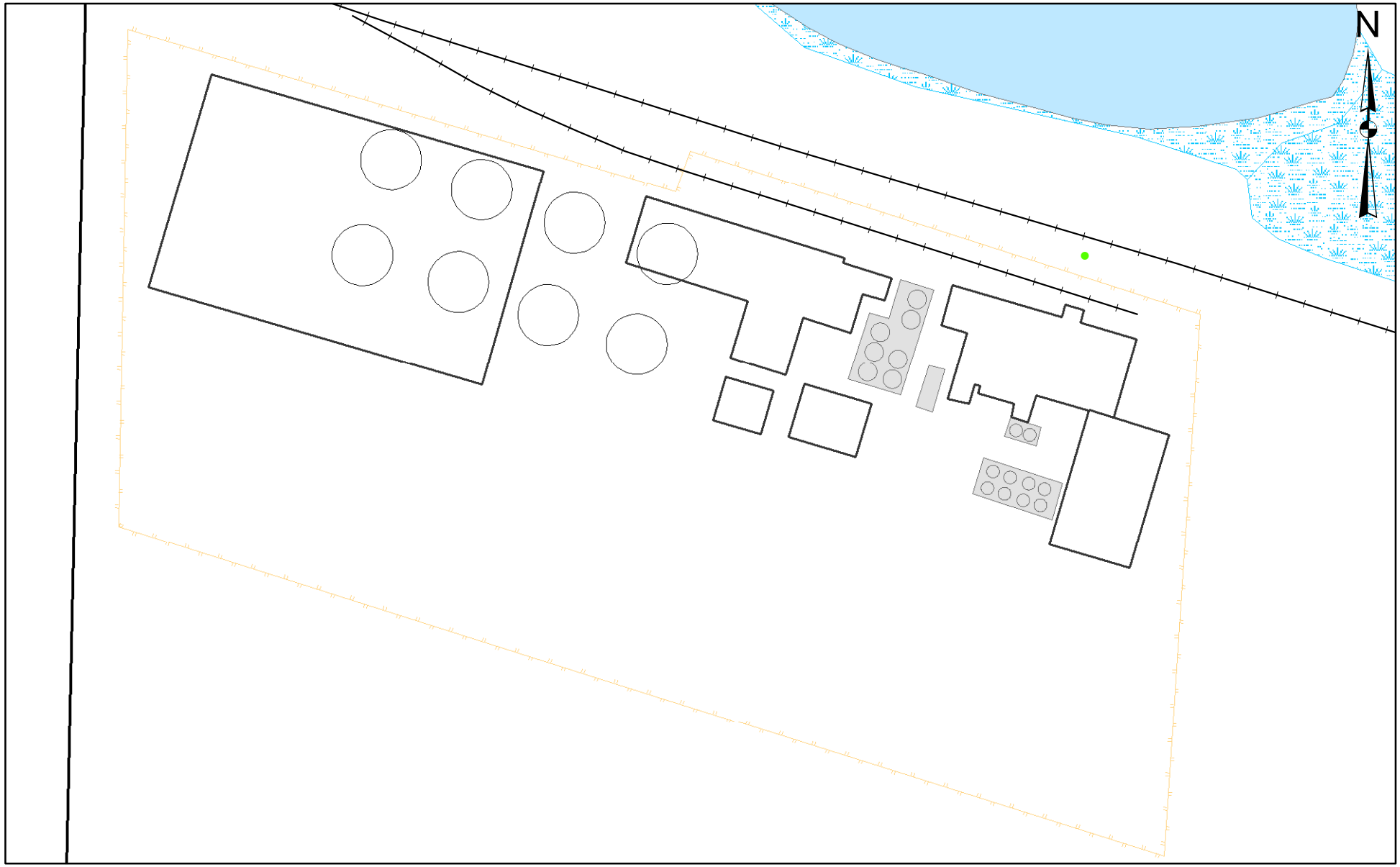
Figure No.17



Comparison of Subsurface Soils greater than 60 ft to RRS

EPS

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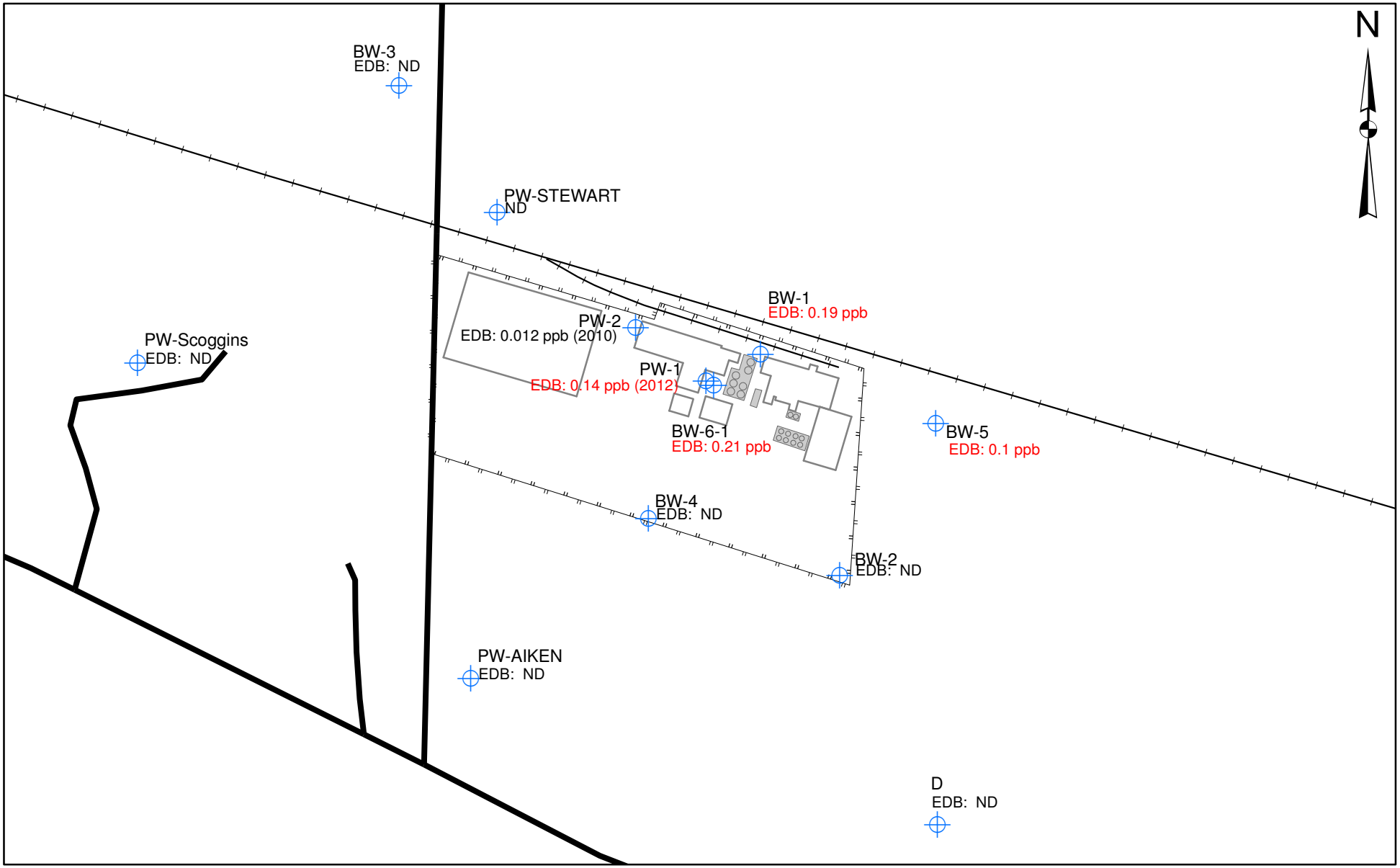
Figure No.18



Comparison to Groundwater Residential RRSs

EPS

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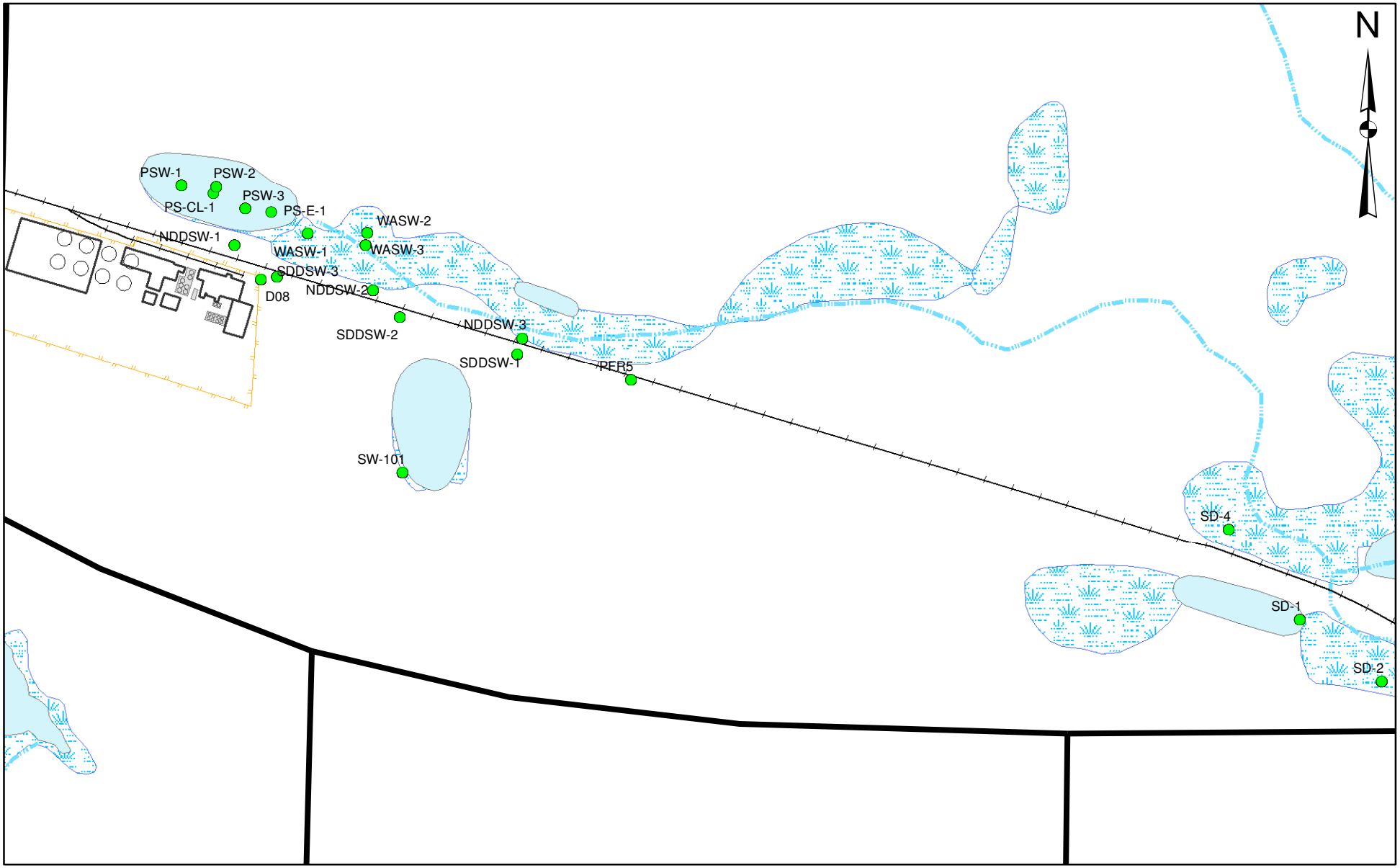
Figure No.19

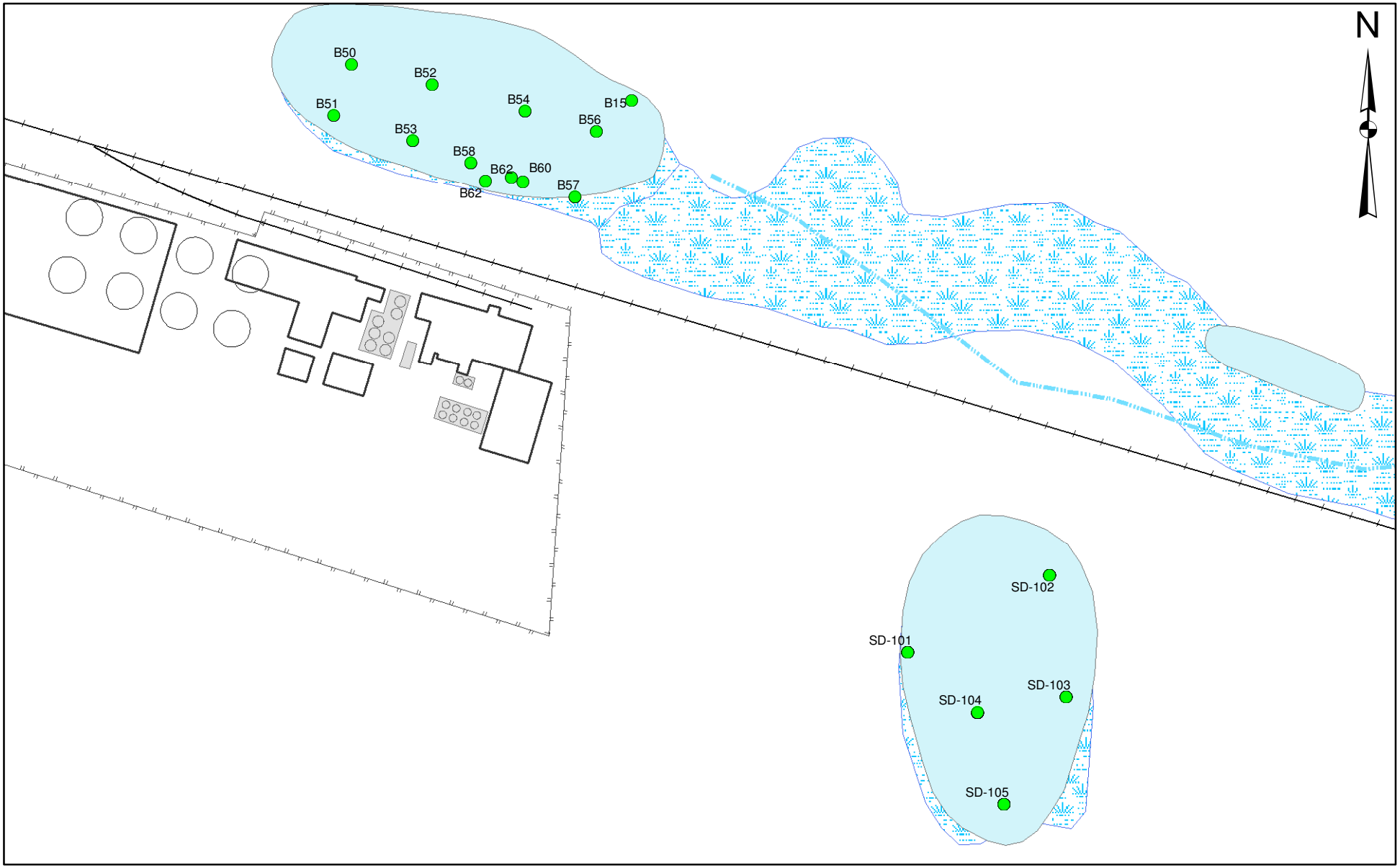


Surface Water Sample Locations

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_SW_rev.mxd

Figure No.20



Sediment Sample Locations

EPS

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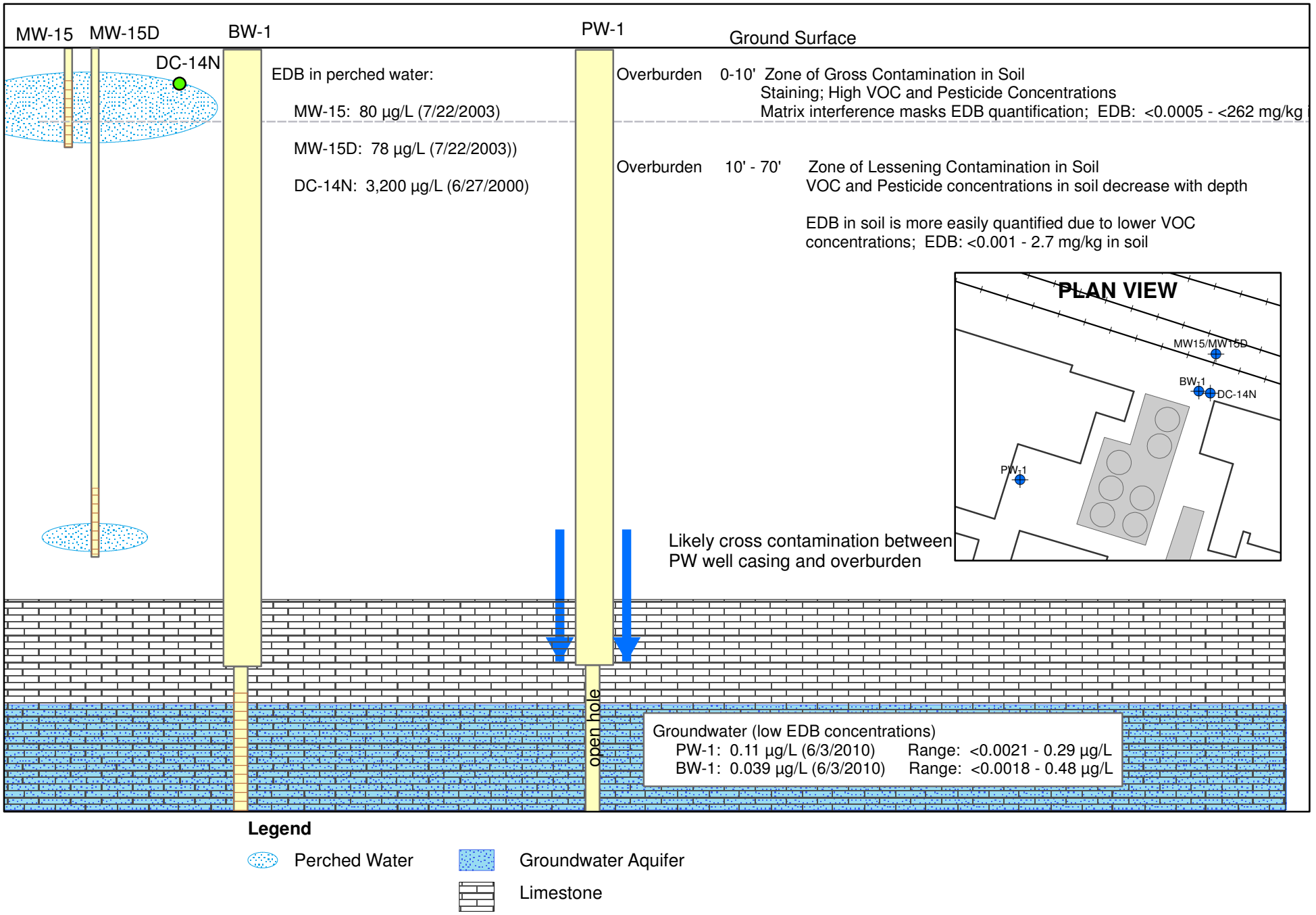
Figure No.21



Conceptual Site Model

EPS

F:\Drexel Cordele\VRP Program\GIS\4th Progress Report\CSM_CSM_rev.mxd

Figure No.22

APPENDIX C

WELL CONSTRUCTION DIAGRAMS AND SOIL BORING LOGS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Ground Surface Elevation (ft): N/A	
0				Brown gray silty sand with trace of organics	4" Stick-up vault
5				Orange tan sandy clay with trace of organics	
10					
15				Orange tan clay with trace of sand	
20					

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
25				Light orange tan clay with trace of sand	
30					
35					
40				Gray sandy clay (swelling)	
45					

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
50					
55				Gray clay with some sand	
60				Gray clay with little to no sand	
65					Grout 0-129 ft-bls

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
70				Tan, orange, gray sandy clay	
75				Dark orange gravel/clay/sand	
80					
85					
90					

EPS

PROJECT: **Drexel**

Log of Boring No. BW-5

SITE LOCATION: Cordele, GA		TOP OF CASING ELEVATION (ft): N/A	
DRILLING CONTRACTOR: Southern Sonic Sollutions		DATE STARTED: 1/21/2013	DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic		TOTAL DEPTH (ft.): 170	SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic		DEPTH TO WATER AT TIME OF BORING (ft.): N/A	CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings		BOREHOLE DIAMETER (In.): 8.25	WELL DIAMETER (In.): 2
LOGGED BY: G. Henry			

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
95				Tan white gravelly weathered limestone (wet starting @ 97' bgs)	
100					
105					
110					

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
115					
120				Tan brown clay with limestone cobbles	
125					
130					Bentonite 129-134 ft-bls.
135					

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation (ft): N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
140				Tan white clay and coarse weathered limestone (Marl) (wet)	Filter Sand 171.5-134 ft-bls.
145					
150					
155					

EPS

PROJECT: **Drexel**	**Log of Boring No. BW-5**
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/21/2013 / DATE FINISHED: 1/23/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 170 / SCREEN INTERVAL (ft.): 140-170
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-140
SAMPLING METHOD: Soil Cuttings	BOREHOLE DIAMETER (In.): 8.25 / WELL DIAMETER (In.): 2
LOGGED BY: G. Henry	

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				Ground Surface Elevation (ft): N/A	
160					
165				White tan saturated marl	
170					Boring terminated at 171.5 ft-bls. Backfilled with sand from 171.5-170. Installed well using 30 ft of 2-inch screen.
175					
180					

EPS

Project: Drexel	**Log of Boring No.** BW-6
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/24/2013 / DATE FINISHED: 4/21/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 402 / SCREEN INTERVAL (ft.): 180-190, 280-290, 380-390
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-180, 190-280, 290-380,
SAMPLING METHOD: Soil Cuttings	LOGGED BY: G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation: N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0				Concrete/gravel	2'x2' Heavy Duty Well Vault
				Tan sand	
				Red, orange, tan and gray sandy clay	
20				Red, orange, tan and gray sandy clay with a strong odor	
				Tan coarse sand and clay with a strong odor	
40				Pink, red, tan sandy clay	
				Tan, gray claywith a trace of sand (no odor)	
				Tan, orange clay with trace of sand	
60				Gray, slight orange clay with some sand and limestone cobbles	
				Tan coarse sand with wome clay	
				White clayey weathered limestone	
80				Gray, white clay and gravelly weathered limestone	

Project: Drexel	**Log of Boring No.** BW-6
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/24/2013 / DATE FINISHED: 4/21/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 402 / SCREEN INTERVAL (ft.): 180-190, 280-290, 380-390
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-180, 190-280, 290-380,
SAMPLING METHOD: Soil Cuttings	LOGGED BY: G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation: N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
				White, gray limestone and chert (very hard)	
				Orange, tan weathered chert	
100				Tan, gray, white marl (30% recovery)	
				Tan, white marl	8 inch outer casing grout into place
120				Brown, white marl (<10% recovery)	
				Brown, tan siff plastic clay	
140				White weathered gravelly limestone (wet beginning around 145 ft-bls)	
160					

Project: Drexel	**Log of Boring No.** BW-6
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/24/2013 / DATE FINISHED: 4/21/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 402 / SCREEN INTERVAL (ft.): 180-190, 280-290, 380-390
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-180, 190-280, 290-380,
SAMPLING METHOD: Soil Cuttings	LOGGED BY: G. Henry

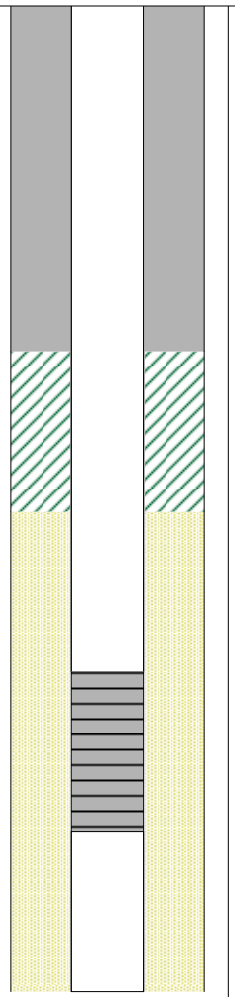
DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation: N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
180				White weathered limestone with chert (wet)	Well is screened from 180-190 ft-bls. With sand pack set between 170-200 ft-bls.
200				White, tan clay and weathered limestone (dry)	
220				White gravelly limestone mixed with chert (20% recovery) Noticeable fractures during drilling, wet	
240					

Project: Drexel	**Log of Boring No.** BW-6
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/24/2013 / DATE FINISHED: 4/21/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 402 / SCREEN INTERVAL (ft.): 180-190, 280-290, 380-390
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-180, 190-280, 290-380,
SAMPLING METHOD: Soil Cuttings	LOGGED BY: G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation: N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
260				White weathered limestone. Very soft, saturated	
280				Gray mix of weathered limestone clay and chert fragments, Stiff, drier	Well is screened from 280-290 ft-bls. With sand pack set between 270-300 ft-bls.
300					
320				Gray clay (stiff) with weathered limestone with occasional larger limestone cobbles	

Project: Drexel	**Log of Boring No.** BW-6
SITE LOCATION: Cordele, GA	TOP OF CASING ELEVATION (ft): N/A
DRILLING CONTRACTOR: Southern Sonic Sollutions	DATE STARTED: 1/24/2013 / DATE FINISHED: 4/21/2013
DRILLING METHOD: Sonic	TOTAL DEPTH (ft.): 402 / SCREEN INTERVAL (ft.): 180-190, 280-290, 380-390
DRILLING EQUIPMENT: Terra Sonic	DEPTH TO WATER AT TIME OF BORING (ft.): N/A / CASING (ft.): 0-180, 190-280, 290-380,
SAMPLING METHOD: Soil Cuttings	LOGGED BY: G. Henry

DEPTH (feet)	SAMPLES: Sample No. Location	SAMPLES: Blows/ Foot	PID Reading	DESCRIPTION (Ground Surface Elevation: N/A)	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
340					
				Gray, tan silty clay with weathered limestone and visible shell fragments	
360					
				Limestone with shell fragments, very hard, pulverized during drilling	
380					
				Gray sandy clay, stiff	
400					
420					



Well is screened from 380-390 ft-bls. With sand pack set between 370-400 ft-bls. The screened intervals are isolated in the annulus between the sand packs with a bentonite and portland grout seal. The interior of the well was completed with a FLUTe interval sampling system.

6 Easy Street
Santa Fe, NM. 87506
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Email: info@flut.com
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FLUTe™
Flexible Liner Underground Technologies, Ltd. Co.
A medley of innovative designs

THE COMPANY
APPLICATIONS
METHODS
SYSTEMS
PROCEDURES
AUXILIARY EQUIPMENT
COMPARISONS
PRICES
REFERENCES
EXPERIENCE
PUBLICATIONS
INSTALLATION SUPPORT
NEWSLETTER
CAREERS
CONTACT US

SYSTEMS

WATER FLUTe™

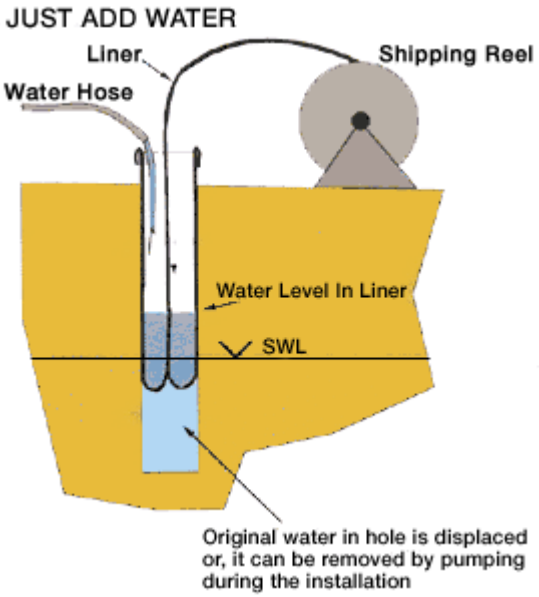
Purpose

The Water FLUTe system is a multi level water sampling system. The general characteristics are as follows:

- Quickly emplaced from a shipping reel by eversion into the hole.
- Seals the entire borehole with a pressurized flexible liner of polyurethane coated Nylon fabric. The sealing pressure is provided by excess water head in the liner.
- Defines the sampling interval for each port with an exterior permeable surround called a "spacer."
- Draws the pore liquid into the central pumping system directly from the formation.
- Allows the water level for each port to be tagged from the surface
- Provides 1-3 gals, typically, from each port per stroke.
- All ports can be purged and sampled simultaneously.
- Is relatively easy to remove for repairs, replacement, etc…

Emplacement

The flexible liner is emplaced from a shipping reel. The top of the liner is attached to the surface casing (see the drawing, "Just Add Water") and the liner is then pushed down inside the casing a short distance. Water is added to the interior of the liner, driving the liner deeper into the hole, pulling the inside-out liner from the reel. The interior water pressure on the everting end of the liner is the driving force of the installation. Once the liner is fully extended in the hole, the geometry looks like that in the drawing below for a single port system.



The installation of a Water FLUTe is affected by the depth and diameter of the hole, the relative transmissivity of the hole, the depth to the water table, and the rate at which water can be supplied to fill the liner.

The installation procedure describes the difference when installing in a tight hole versus one that allows water to flow freely into the formation. If the hole is too tight to allow the liner to push the water into the formation, the water can be pumped from beneath the liner using a pump tube emplaced in the hole before the liner installation.

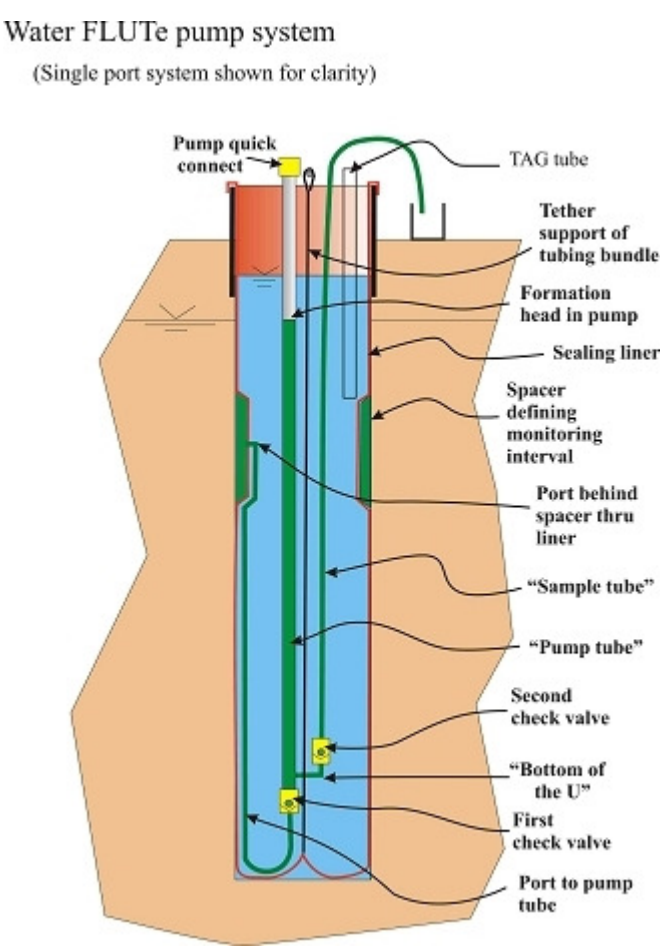
In most situations, the Water FLUTe installation takes less than one day. Some installations have required less than one hour. A recent installation to 880 ft. required one day to complete.

Water FLUTe systems are usually installed in uncased core holes. Installations into multi-screened cased holes are also common. Varying hole diameters are accommodated. The Water FLUTe can be installed through smaller casing into larger open holes below the casing, or into "telescoped" casing.

The liner is completely heat welded without the use of any glues. The tubing is usually PVDF (polyvinylidene fluoride). Other types of tubing can be used.

Sample pumping system

The water flows from the formation into the spacer, through the port, into the tube which lies on the inside surface of the liner. The water flows from the port via the tube, to the bottom of the hole, and then upward through a steel check valve into the "U" shaped tube. The water rises in both legs of the U tube. In the larger (1/2"id) tube, the water level can be tagged from the surface. A gas pressure is applied to the large tube to drive the sample water through the second check valve to the surface. After purging the tubing, the sample water does not contact the drive gas. The large tube and pumping hardware are not everted into the hole, but simply lowered as a tubing bundle following the liner to the bottom. Note that all the water in the hole is isolated inside the liner.



The spacer, port, tubing and pump system shown are duplicated for each port. The liner is pressed against the hole wall by the excess head in the liner above the local water table.

Pressure transducers are often attached to the sampling tubing just below the first check valve to measure the head in the formation at the port location. The transducer is upstream of the valves in the pumping system. The pressure transducer can be calibrated to the head measured in the sampling system with a tag line.

Our experience with Water FLUTe systems now spans 10 years. Water FLUTe systems have been installed in 40 states in the U.S., and in Canada. More detailed descriptions and publications are available at Publications.

A typical installation of a 15 port system is shown in the photo. This installation took about 4 hrs., including the attachment of the surface hardware. The wellhead for the 15 port system with 15 pressure transducers is shown in the second photo. The simultaneous purging of all 15 ports took about 5 minutes.

FAQ Water Flute (pdf)

15 Ports in 6" Hole to 330 ft.

Purging 15 ports simultaneously

APPENDIX D

LABORATORY DATA REPORTS
(ON CD)

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

September 03, 2013

Timmerly Bullman
Environmental Planning Specialists, Inc.
1050 Crown Pointe Parkway, Suite 550
Atlanta GA 30338

TEL: (404) 315-9113
FAX: (404) 315-8509

RE: Drexel

Dear Timmerly Bullman: Order No: 1308K46

Analytical Environmental Services, Inc. received 35 samples on 8/23/2013 1:10:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/13-06/30/14.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/15.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Dorothy deBruyn
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 130PK46

Date: 8-23-13 Page 2 of 3

COMPANY: EAS Inc

ADDRESS: 1050 Crown Pointe Pkwy Ste 550 ATL, GA 30338

PHONE: 404-315-9113

FAX:

SAMPLED BY: G. Henry

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Chlordanes	Heptachlor	DDD	DDT	Endosulfan I	Toxaphene	EDB	o-Xylene					REMARKS	No # of Containers
							PRESERVATION (See codes)													
1	13233-B-7-10	8-21-13	1155	X		SO	/	/	/	/	/	/		·						1
2	13233-B-8-2	8-21-13	1630	X		SO	/	/	/	/	/	/								1
3	13233-B-8-6	8-21-13	1632	X		SO	/	/	/	/	/	/								1
4	13233-B-8-10	8-21-13	1634	X		SO	/	/	/	/	/	/								1
5	13233-B-8-20	8-21-13	1636	X		SO	/	/	/	/	/	/		X	X					4
6	13233-B-8-40	8-21-13	1638	X		SO	/	/	/	/	/	/		X	X					4
7	13233-B-8-47	8-21-13	1640	X		SO	/	/	/	/	/	/		X	X					4
8	13234-B-9-2	8-22-13	1300	X		SO	/	/	/	/	/	/								1
9	13234-B-9-6	8-22-13	1302	X		SO	/	/	/	/	/	/								1
10	13234-B-9-10	8-22-13	1304	X		SO	/	/	/	/	/	/								1
11	13234-B-9-20	8-22-13	1306	X		SO	/	/	/	/	/	/		X	X					4
12	13234-B-9-40	8-22-13	1308	X		SO	/	/	/	/	/	/		X	X					4
13	13234-B-9-60	8-22-13	1310	X		SO	/	/	/	/	/	/		X	X					4
14	13234-B-10-2	8-22-13	1750	X		SO	/	/	/	/	/	/								1

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

ANALYSIS REQUESTED

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	8.23.13/1310	1:	8/23/13 1:10
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: DREXEL

PROJECT #:

SITE ADDRESS: CORDELE, GA

SEND REPORT TO: TBELLMAN@exxplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers: 32

Turnaround Time Request
- Standard 5 Business Days
- 3-DAY 2 Business Day Rush
- Next Business Day Rush
- Same Day Rush (auth req.)
- Other

STATE PROGRAM (if any):

E-mail? Y / N; Fax? Y / N

DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS: 3-DAY TAT

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

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ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1308K46

Date: 8-23-13 Page 1 of 3

COMPANY: EAS Inc.
ADDRESS: 1050 Crown Pointe Pkwy Ste. 550 Atl, GA 30338
PHONE: 404-315-9113
FAX:
SAMPLED BY: G. Henry
SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Chlordane	Heptachlor	DDD	DDT	Endosulfan I	Toxaphene	EDB	o-Xylene					No # of Containers
	PRESERVATION (See codes)																		
1	13232-B-13-2	8-20-13	1600	X		SO	X	X	X	X	X	X							1
2	13232-B-13-6	8-20-13	1602	X		SO	X	X	X	X	X	X							1
3	13232-B-13-10	8-20-13	1604	X		SO	X	X	X	X	X	X							1
4	13232-B-13-20	8-20-13	1606	X		SO	X	X	X	X	X	X		X	X				4
5	13232-B-13-40	8-20-13	1608	X		SO	X	X	X	X	X	X		X	X				4
6	13232-B-13-60	8-20-13	1610	X		SO	X	X	X	X	X	X		X	X				4
7	13233-B-11-2	8-21-13	1130	X		SO	X	X	X	X	X	X							1
8	13233-B-11-6	8-21-13	1132	X		SO	X	X	X	X	X	X							1
9	13233-B-11-10	8-21-13	1134	X		SO	X	X	X	X	X	X							1
10	13233-B-12-2	8-21-13	1136	X		SO	X	X	X	X	X	X							1
11	13233-B-12-6	8-21-13	1138	X		SO	X	X	X	X	X	X							1
12	13233-B-12-10	8-21-13	1140	X		SO	X	X	X	X	X	X							1
13	13233-B-7-2	8-21-13	1150	X		SO	X	X	X	X	X	X							1
14	13233-B-7-6	8-21-13	1152	X		SO	X	X	X	X	X	X							1

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

REMARKS

RELINQUISHED BY / DATE/TIME
1: 8/23/13 1310
2:
3:

RECEIVED BY / DATE/TIME
1: 8/23/13 1:10
2:
3:

PROJECT INFORMATION
PROJECT NAME: DREXEL
PROJECT #:
SITE ADDRESS: Covington, GA
SEND REPORT TO: TBULLMAN@engdanning.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 23

Turnaround Time Request
- Standard 5 Business Days
- 3-DAY 2 Business Day Rush
- Next Business Day Rush
- Same Day Rush (auth req.)
- Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS:
3-DAY TAT

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

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ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1308k46

Date: 8/23/13 Page 3 of 3

COMPANY: EPS Inc.	ADDRESS: 1050 Crown Pointe Pkwy Ste 550 Atl, GA 30338
PHONE: 404-315-9113	FAX:
SAMPLED BY: C. Hinry	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Chlordane	Heptachlor	DDD	DDT	Endosulfan	Toxaphene	CDB	o-Xylene					No # of Containers
	PRESERVATION (See codes)																		
1	13234-B-10-6	8-22-13	1752	X		SO	X	X	X	X	X	X							1
2	13234-B-10-10	8-22-13	1754	X		SO	X	X	X	X	X	X							1
3	13234-B-10-20	8-22-13	1756	X		SO	X	X	X	X	X	X		X	X				4
4	13234-B-10-40	8-22-13	~~1800~~ 1758	X		SO	X	X	X	X	X	X		X	X				4
5	13234-B-10-52	8-22-13	1800	X		SO	X	X	X	X	X	X		X	X				4
6	13233-DUP1	8-21-13	—	X		SO	X	X	X	X	X	X							1
7	~~13234-B-~~ QC																		
8	13234-DUP2	8-22-13	—	X		SO	X	X	X	X	X	X		X	X				4
9																			
10																			
11																			
12																			
13																			
14																			

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

REMARKS

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	8-23-13 1310	1:	8/25/13 1510
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

3 DAY TAT

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER_____

PROJECT INFORMATION

PROJECT NAME: Drexel

PROJECT #:

SITE ADDRESS: Cordele, Ga

SEND REPORT TO: TBilbro@emplanning.com

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #:_____ PO#:_____

RECEIPT

Total # of Containers: 19

Turnaround Time Request

- Standard 5 Business Days
- 3-Day
- 2 Business Day Rush
- Next Business Day Rush
- Same Day Rush (auth req.)
- Other _____

STATE PROGRAM (if any): _____

E-mail? Y / N; Fax? Y / N

DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-2
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:00:00 PM
Lab ID:	1308K46-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	86	3.7		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
4,4´-DDT	140	19		ug/Kg-dry	180285	5	08/28/2013 00:03	KD
Chlordane	110	37		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
Endosulfan I	19	1.9		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
Endosulfan II	14	3.7		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
Endosulfan sulfate	6.3	3.7		ug/Kg-dry	180285	1	08/26/2013 19:25	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
Toxaphene	530	190		ug/Kg-dry	180285	1	08/27/2013 23:52	KD
Surr: Decachlorobiphenyl	68.2	25.1-119		%REC	180285	1	08/27/2013 23:52	KD
Surr: Tetrachloro-m-xylene	49.8	28.4-116		%REC	180285	1	08/27/2013 23:52	KD
PERCENT MOISTURE D2216								
Percent Moisture	10.9	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-6
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:02:00 PM
Lab ID:	1308K46-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
4,4´-DDT	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Chlordane	BRL	39		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Endosulfan II	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Endosulfan sulfate	BRL	3.9		ug/Kg-dry	180285	1	08/26/2013 19:36	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 00:14	KD
Surr: Decachlorobiphenyl	65.5	25.1-119		%REC	180285	1	08/28/2013 00:14	KD
Surr: Tetrachloro-m-xylene	78.6	28.4-116		%REC	180285	1	08/28/2013 00:14	KD
PERCENT MOISTURE D2216								
Percent Moisture	15.3	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-10
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:04:00 PM
Lab ID:	1308K46-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/26/2013 19:46	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 00:25	KD
Surr: Decachlorobiphenyl	62.2	25.1-119		%REC	180285	1	08/28/2013 00:25	KD
Surr: Tetrachloro-m-xylene	56.7	28.4-116		%REC	180285	1	08/28/2013 00:25	KD
PERCENT MOISTURE D2216								
Percent Moisture	16.5	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-20
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:06:00 PM
Lab ID:	1308K46-004	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0031		mg/Kg-dry	180382	1	08/27/2013 14:31	MD
o-Xylene	0.0058	0.0031		mg/Kg-dry	180382	1	08/27/2013 14:31	MD
Surr: 4-Bromofluorobenzene	92.3	63.8-133		%REC	180382	1	08/27/2013 14:31	MD
Surr: Dibromofluoromethane	105	74.3-130		%REC	180382	1	08/27/2013 14:31	MD
Surr: Toluene-d8	95.1	72.8-122		%REC	180382	1	08/27/2013 14:31	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/26/2013 19:57	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 00:36	KD
Surr: Decachlorobiphenyl	64	25.1-119		%REC	180285	1	08/28/2013 00:36	KD
Surr: Tetrachloro-m-xylene	59.4	28.4-116		%REC	180285	1	08/28/2013 00:36	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.6	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-40
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:08:00 PM
Lab ID:	1308K46-005	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	0.020	0.0028		mg/Kg-dry	180382	1	08/27/2013 17:25	MD
o-Xylene	2.6	0.25		mg/Kg-dry	180394	100	08/28/2013 04:25	NP
Surr: 4-Bromofluorobenzene	145	63.8-133	S	%REC	180382	1	08/27/2013 17:25	MD
Surr: 4-Bromofluorobenzene	99.1	63.8-133		%REC	180394	100	08/28/2013 04:25	NP
Surr: Dibromofluoromethane	112	74.3-130		%REC	180382	1	08/27/2013 17:25	MD
Surr: Dibromofluoromethane	99.3	74.3-130		%REC	180394	100	08/28/2013 04:25	NP
Surr: Toluene-d8	99	72.8-122		%REC	180382	1	08/27/2013 17:25	MD
Surr: Toluene-d8	99	72.8-122		%REC	180394	100	08/28/2013 04:25	NP
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
4,4´-DDT	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Chlordane	BRL	38		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180285	1	08/26/2013 20:08	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 00:46	KD
Surr: Decachlorobiphenyl	68.9	25.1-119		%REC	180285	1	08/28/2013 00:46	KD
Surr: Tetrachloro-m-xylene	67.1	28.4-116		%REC	180285	1	08/28/2013 00:46	KD
PERCENT MOISTURE D2216								
Percent Moisture	13.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13232-B-13-60
Project Name:	Drexel	**Collection Date:**	8/20/2013 4:10:00 PM
Lab ID:	1308K46-006	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	0.015	0.0028		mg/Kg-dry	180382	1	08/27/2013 15:00	MD
o-Xylene	0.058	0.0028		mg/Kg-dry	180382	1	08/27/2013 15:00	MD
Surr: 4-Bromofluorobenzene	97.1	63.8-133		%REC	180382	1	08/27/2013 15:00	MD
Surr: Dibromofluoromethane	111	74.3-130		%REC	180382	1	08/27/2013 15:00	MD
Surr: Toluene-d8	96.9	72.8-122		%REC	180382	1	08/27/2013 15:00	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/26/2013 20:19	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 00:57	KD
Surr: Decachlorobiphenyl	68.1	25.1-119		%REC	180285	1	08/28/2013 00:57	KD
Surr: Tetrachloro-m-xylene	62.2	28.4-116		%REC	180285	1	08/28/2013 00:57	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.7	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-11-2
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:30:00 AM
Lab ID:	1308K46-007	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Chlordane	BRL	37		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Endosulfan II	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Endosulfan sulfate	BRL	3.7		ug/Kg-dry	180285	1	08/26/2013 20:30	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 01:08	KD
Surr: Decachlorobiphenyl	64	25.1-119		%REC	180285	1	08/28/2013 01:08	KD
Surr: Tetrachloro-m-xylene	65.7	28.4-116		%REC	180285	1	08/28/2013 01:08	KD
PERCENT MOISTURE D2216								
Percent Moisture	11.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-11-6
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:32:00 AM
Lab ID:	1308K46-008	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	3100	400		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
4,4´-DDT	8000	400		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Chlordane	19000	4000		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Endosulfan I	2900	200		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Endosulfan II	970	400		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Endosulfan sulfate	BRL	400		ug/Kg-dry	180285	100	08/28/2013 20:57	KD
Heptachlor	BRL	200		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Toxaphene	55000	20000		ug/Kg-dry	180285	100	08/28/2013 01:19	KD
Surr: Decachlorobiphenyl	0	25.1-119	S	%REC	180285	100	08/28/2013 01:19	KD
Surr: Tetrachloro-m-xylene	0	28.4-116	S	%REC	180285	100	08/28/2013 01:19	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.5	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-11-10
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:34:00 AM
Lab ID:	1308K46-009	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	11	4.2		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
4,4´-DDT	8.0	4.2		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Chlordane	87	42		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Endosulfan I	6.4	2.1		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Endosulfan II	5.7	4.2		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Endosulfan sulfate	BRL	4.2		ug/Kg-dry	180285	1	08/26/2013 20:52	KD
Heptachlor	BRL	2.1		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Toxaphene	BRL	210		ug/Kg-dry	180285	1	08/28/2013 01:41	KD
Surr: Decachlorobiphenyl	68	25.1-119		%REC	180285	1	08/28/2013 01:41	KD
Surr: Tetrachloro-m-xylene	54.4	28.4-116		%REC	180285	1	08/28/2013 01:41	KD
PERCENT MOISTURE D2216								
Percent Moisture	20.5	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-12-2
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:36:00 AM
Lab ID:	1308K46-010	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
4,4´-DDT	5.0	3.8		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Chlordane	BRL	38		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:08	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 01:51	KD
Surr: Decachlorobiphenyl	66.1	25.1-119		%REC	180285	1	08/28/2013 01:51	KD
Surr: Tetrachloro-m-xylene	51.7	28.4-116		%REC	180285	1	08/28/2013 01:51	KD
PERCENT MOISTURE D2216								
Percent Moisture	11.8	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-12-6
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:38:00 AM
Lab ID:	1308K46-011	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
4,4´-DDT	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Chlordane	BRL	39		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Endosulfan II	BRL	3.9		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Endosulfan sulfate	BRL	3.9		ug/Kg-dry	180285	1	08/26/2013 21:02	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 02:02	KD
Surr: Decachlorobiphenyl	71.6	25.1-119		%REC	180285	1	08/28/2013 02:02	KD
Surr: Tetrachloro-m-xylene	63.6	28.4-116		%REC	180285	1	08/28/2013 02:02	KD
PERCENT MOISTURE D2216								
Percent Moisture	14.8	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-12-10
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:40:00 AM
Lab ID:	1308K46-012	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/26/2013 21:13	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 02:13	KD
Surr: Decachlorobiphenyl	72.2	25.1-119		%REC	180285	1	08/28/2013 02:13	KD
Surr: Tetrachloro-m-xylene	67.5	28.4-116		%REC	180285	1	08/28/2013 02:13	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.6	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-14-2
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:50:00 AM
Lab ID:	1308K46-013	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Chlordane	BRL	37		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Endosulfan II	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Endosulfan sulfate	BRL	3.7		ug/Kg-dry	180285	1	08/26/2013 21:24	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 02:24	KD
Surr: Decachlorobiphenyl	73	25.1-119		%REC	180285	1	08/28/2013 02:24	KD
Surr: Tetrachloro-m-xylene	43.7	28.4-116		%REC	180285	1	08/28/2013 02:24	KD
PERCENT MOISTURE D2216								
Percent Moisture	11.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-14-6
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:52:00 AM
Lab ID:	1308K46-014	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/26/2013 21:35	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 02:35	KD
Surr: Decachlorobiphenyl	73.4	25.1-119		%REC	180285	1	08/28/2013 02:35	KD
Surr: Tetrachloro-m-xylene	31.4	28.4-116		%REC	180285	1	08/28/2013 02:35	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-14-10
Project Name:	Drexel	**Collection Date:**	8/21/2013 11:55:00 AM
Lab ID:	1308K46-015	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.1		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
4,4´-DDT	BRL	4.1		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Chlordane	BRL	41		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Endosulfan I	BRL	2.1		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Endosulfan II	BRL	4.1		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Endosulfan sulfate	BRL	4.1		ug/Kg-dry	180285	1	08/26/2013 21:46	KD
Heptachlor	BRL	2.1		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Toxaphene	BRL	210		ug/Kg-dry	180285	1	08/28/2013 02:46	KD
Surr: Decachlorobiphenyl	75.5	25.1-119		%REC	180285	1	08/28/2013 02:46	KD
Surr: Tetrachloro-m-xylene	59.9	28.4-116		%REC	180285	1	08/28/2013 02:46	KD
PERCENT MOISTURE D2216								
Percent Moisture	19.6	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-2
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:30:00 PM
Lab ID:	1308K46-016	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Chlordane	BRL	37		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Endosulfan II	BRL	3.7		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Endosulfan sulfate	BRL	3.7		ug/Kg-dry	180285	1	08/26/2013 21:57	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 02:57	KD
Surr: Decachlorobiphenyl	70.5	25.1-119		%REC	180285	1	08/28/2013 02:57	KD
Surr: Tetrachloro-m-xylene	65.3	28.4-116		%REC	180285	1	08/28/2013 02:57	KD
PERCENT MOISTURE D2216								
Percent Moisture	10.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-6
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:32:00 PM
Lab ID:	1308K46-017	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
4,4´-DDT	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Chlordane	BRL	38		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 21:19	KD
Surr: Decachlorobiphenyl	80.3	25.1-119		%REC	180285	1	08/28/2013 21:19	KD
Surr: Tetrachloro-m-xylene	54.9	28.4-116		%REC	180285	1	08/28/2013 21:19	KD
PERCENT MOISTURE D2216								
Percent Moisture	13.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-10
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:34:00 PM
Lab ID:	1308K46-018	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	59	20		ug/Kg-dry	180285	5	08/28/2013 15:11	KD
4,4´-DDT	400	20		ug/Kg-dry	180285	5	08/28/2013 15:11	KD
Chlordane	710	200		ug/Kg-dry	180285	5	08/28/2013 04:23	KD
Endosulfan I	69	10		ug/Kg-dry	180285	5	08/28/2013 15:11	KD
Endosulfan II	90	4.1		ug/Kg-dry	180285	1	08/28/2013 04:12	KD
Endosulfan sulfate	92	4.1		ug/Kg-dry	180285	1	08/28/2013 04:12	KD
Heptachlor	10.0	2.0		ug/Kg-dry	180285	1	08/28/2013 04:12	KD
Toxaphene	11000	4100		ug/Kg-dry	180285	20	08/28/2013 04:34	KD
Surr: Decachlorobiphenyl	88.1	25.1-119		%REC	180285	1	08/28/2013 04:12	KD
Surr: Tetrachloro-m-xylene	55.8	28.4-116		%REC	180285	1	08/28/2013 04:12	KD
PERCENT MOISTURE D2216								
Percent Moisture	18.2	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-20
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:36:00 PM
Lab ID:	1308K46-019	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0026		mg/Kg-dry	180382	1	08/27/2013 15:29	MD
o-Xylene	BRL	0.0026		mg/Kg-dry	180382	1	08/27/2013 15:29	MD
Surr: 4-Bromofluorobenzene	102	63.8-133		%REC	180382	1	08/27/2013 15:29	MD
Surr: Dibromofluoromethane	114	74.3-130		%REC	180382	1	08/27/2013 15:29	MD
Surr: Toluene-d8	97.3	72.8-122		%REC	180382	1	08/27/2013 15:29	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
4,4´-DDT	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Chlordane	BRL	38		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Toxaphene	BRL	190		ug/Kg-dry	180285	1	08/28/2013 21:29	KD
Surr: Decachlorobiphenyl	83.6	25.1-119		%REC	180285	1	08/28/2013 21:29	KD
Surr: Tetrachloro-m-xylene	67.4	28.4-116		%REC	180285	1	08/28/2013 21:29	KD
PERCENT MOISTURE D2216								
Percent Moisture	13.4	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-40
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:38:00 PM
Lab ID:	1308K46-020	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0030		mg/Kg-dry	180382	1	08/27/2013 15:58	MD
o-Xylene	BRL	0.0030		mg/Kg-dry	180382	1	08/27/2013 15:58	MD
Surr: 4-Bromofluorobenzene	90.4	63.8-133		%REC	180382	1	08/27/2013 15:58	MD
Surr: Dibromofluoromethane	114	74.3-130		%REC	180382	1	08/27/2013 15:58	MD
Surr: Toluene-d8	95.6	72.8-122		%REC	180382	1	08/27/2013 15:58	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Chlordane	BRL	40		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Toxaphene	BRL	200		ug/Kg-dry	180285	1	08/28/2013 21:40	KD
Surr: Decachlorobiphenyl	75.5	25.1-119		%REC	180285	1	08/28/2013 21:40	KD
Surr: Tetrachloro-m-xylene	43.6	28.4-116		%REC	180285	1	08/28/2013 21:40	KD
PERCENT MOISTURE D2216								
Percent Moisture	16.4	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-B-8-47
Project Name:	Drexel	**Collection Date:**	8/21/2013 4:40:00 PM
Lab ID:	1308K46-021	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0036		mg/Kg-dry	180382	1	08/27/2013 16:56	MD
o-Xylene	BRL	0.0036		mg/Kg-dry	180382	1	08/27/2013 16:56	MD
Surr: 4-Bromofluorobenzene	79.7	63.8-133		%REC	180382	1	08/27/2013 16:56	MD
Surr: Dibromofluoromethane	106	74.3-130		%REC	180382	1	08/27/2013 16:56	MD
Surr: Toluene-d8	93.2	72.8-122		%REC	180382	1	08/27/2013 16:56	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	11	4.5		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
4,4´-DDT	14	4.5		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Chlordane	BRL	45		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Endosulfan I	BRL	2.3		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Endosulfan II	BRL	4.5		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Endosulfan sulfate	BRL	4.5		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Heptachlor	BRL	2.3		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Toxaphene	BRL	230		ug/Kg-dry	180287	1	08/28/2013 13:22	KD
Surr: Decachlorobiphenyl	61.6	25.1-119		%REC	180287	1	08/28/2013 13:22	KD
Surr: Tetrachloro-m-xylene	45.1	28.4-116		%REC	180287	1	08/28/2013 13:22	KD
PERCENT MOISTURE D2216								
Percent Moisture	26.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-2
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:00:00 PM
Lab ID:	1308K46-022	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	6.7	4.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
4,4´-DDT	100	4.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Chlordane	BRL	41		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Endosulfan I	BRL	2.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Endosulfan II	6.2	4.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Endosulfan sulfate	4.2	4.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Heptachlor	BRL	2.1		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Toxaphene	440	210		ug/Kg-dry	180287	1	08/28/2013 12:16	KD
Surr: Decachlorobiphenyl	119	25.1-119		%REC	180287	1	08/28/2013 12:16	KD
Surr: Tetrachloro-m-xylene	45.4	28.4-116		%REC	180287	1	08/28/2013 12:16	KD
PERCENT MOISTURE D2216								
Percent Moisture	19.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-6
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:02:00 PM
Lab ID:	1308K46-023	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	9900	380		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
4,4´-DDT	4300	380		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Chlordane	17000	3800		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Endosulfan I	2300	190		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Endosulfan II	680	380		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Endosulfan sulfate	BRL	380		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Heptachlor	BRL	190		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Toxaphene	58000	19000		ug/Kg-dry	180287	100	08/28/2013 12:27	KD
Surr: Decachlorobiphenyl	83	25.1-119		%REC	180287	1	08/27/2013 20:15	KD
Surr: Tetrachloro-m-xylene	56	28.4-116		%REC	180287	1	08/27/2013 20:15	KD
PERCENT MOISTURE D2216								
Percent Moisture	12.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-10
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:04:00 PM
Lab ID:	1308K46-024	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	390		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
4,4´-DDT	3300	390		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Chlordane	5600	3900		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Endosulfan I	470	200		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Endosulfan II	490	390		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Endosulfan sulfate	470	390		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Heptachlor	230	200		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Toxaphene	36000	20000		ug/Kg-dry	180287	100	08/28/2013 12:38	KD
Surr: Decachlorobiphenyl	129	25.1-119	S	%REC	180287	1	08/27/2013 20:26	KD
Surr: Tetrachloro-m-xylene	77.1	28.4-116		%REC	180287	1	08/27/2013 20:26	KD
PERCENT MOISTURE D2216								
Percent Moisture	15.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-20
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:06:00 PM
Lab ID:	1308K46-025	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0031		mg/Kg-dry	180382	1	08/27/2013 17:54	MD
o-Xylene	4.0	0.31		mg/Kg-dry	180394	100	08/28/2013 04:50	NP
Surr: 4-Bromofluorobenzene	144	63.8-133	S	%REC	180382	1	08/27/2013 17:54	MD
Surr: 4-Bromofluorobenzene	101	63.8-133		%REC	180394	100	08/28/2013 04:50	NP
Surr: Dibromofluoromethane	110	74.3-130		%REC	180382	1	08/27/2013 17:54	MD
Surr: Dibromofluoromethane	97.8	74.3-130		%REC	180394	100	08/28/2013 04:50	NP
Surr: Toluene-d8	95.7	72.8-122		%REC	180382	1	08/27/2013 17:54	MD
Surr: Toluene-d8	101	72.8-122		%REC	180394	100	08/28/2013 04:50	NP
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.1		ug/Kg-dry	180287	1	08/27/2013 20:37	KD
4,4´-DDT	BRL	4.1		ug/Kg-dry	180287	1	08/27/2013 20:37	KD
Chlordane	BRL	41		ug/Kg-dry	180287	1	08/28/2013 13:33	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180287	1	08/27/2013 20:37	KD
Endosulfan II	BRL	4.1		ug/Kg-dry	180287	1	08/28/2013 13:33	KD
Endosulfan sulfate	BRL	4.1		ug/Kg-dry	180287	1	08/28/2013 13:33	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180287	1	08/27/2013 20:37	KD
Toxaphene	BRL	200		ug/Kg-dry	180287	1	08/27/2013 20:37	KD
Surr: Decachlorobiphenyl	61.5	25.1-119		%REC	180287	1	08/27/2013 20:37	KD
Surr: Tetrachloro-m-xylene	88.8	28.4-116		%REC	180287	1	08/27/2013 20:37	KD
PERCENT MOISTURE D2216								
Percent Moisture	18.4	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-40
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:08:00 PM
Lab ID:	1308K46-026	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	0.20	0.17		mg/Kg-dry	180394	100	08/28/2013 05:14	NP
o-Xylene	2.8	0.29		mg/Kg-dry	180394	100	08/28/2013 05:14	NP
Surr: 4-Bromofluorobenzene	96.8	63.8-133		%REC	180394	100	08/28/2013 05:14	NP
Surr: Dibromofluoromethane	98.1	74.3-130		%REC	180394	100	08/28/2013 05:14	NP
Surr: Toluene-d8	99.8	72.8-122		%REC	180394	100	08/28/2013 05:14	NP
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180287	1	08/27/2013 20:48	KD
4,4´-DDT	BRL	3.8		ug/Kg-dry	180287	1	08/27/2013 20:48	KD
Chlordane	BRL	38		ug/Kg-dry	180287	1	08/28/2013 13:44	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 20:48	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180287	1	08/28/2013 13:44	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180287	1	08/28/2013 13:44	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 20:48	KD
Toxaphene	BRL	190		ug/Kg-dry	180287	1	08/27/2013 20:48	KD
Surr: Decachlorobiphenyl	60.4	25.1-119		%REC	180287	1	08/27/2013 20:48	KD
Surr: Tetrachloro-m-xylene	63.1	28.4-116		%REC	180287	1	08/27/2013 20:48	KD
PERCENT MOISTURE D2216								
Percent Moisture	12.3	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-9-60
Project Name:	Drexel	**Collection Date:**	8/22/2013 1:10:00 PM
Lab ID:	1308K46-027	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	0.096	0.0028		mg/Kg-dry	180382	1	08/27/2013 18:51	MD
o-Xylene	1.3	0.27		mg/Kg-dry	180394	100	08/28/2013 11:49	GK
Surr: 4-Bromofluorobenzene	121	63.8-133		%REC	180382	1	08/27/2013 18:51	MD
Surr: 4-Bromofluorobenzene	102	63.8-133		%REC	180394	100	08/28/2013 11:49	GK
Surr: Dibromofluoromethane	109	74.3-130		%REC	180382	1	08/27/2013 18:51	MD
Surr: Dibromofluoromethane	94.9	74.3-130		%REC	180394	100	08/28/2013 11:49	GK
Surr: Toluene-d8	106	72.8-122		%REC	180382	1	08/27/2013 18:51	MD
Surr: Toluene-d8	97.3	72.8-122		%REC	180394	100	08/28/2013 11:49	GK
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.8		ug/Kg-dry	180287	1	08/27/2013 20:59	KD
4,4´-DDT	BRL	3.8		ug/Kg-dry	180287	1	08/27/2013 20:59	KD
Chlordane	BRL	38		ug/Kg-dry	180287	1	08/28/2013 13:55	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 20:59	KD
Endosulfan II	BRL	3.8		ug/Kg-dry	180287	1	08/28/2013 13:55	KD
Endosulfan sulfate	BRL	3.8		ug/Kg-dry	180287	1	08/28/2013 13:55	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 20:59	KD
Toxaphene	BRL	190		ug/Kg-dry	180287	1	08/27/2013 20:59	KD
Surr: Decachlorobiphenyl	62.4	25.1-119		%REC	180287	1	08/27/2013 20:59	KD
Surr: Tetrachloro-m-xylene	39.6	28.4-116		%REC	180287	1	08/27/2013 20:59	KD
PERCENT MOISTURE D2216								
Percent Moisture	12.8	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-2
Project Name:	Drexel	**Collection Date:**	8/22/2013 5:50:00 PM
Lab ID:	1308K46-028	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	58	3.7		ug/Kg-dry	180287	1	08/27/2013 21:10	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180287	1	08/27/2013 21:10	KD
Chlordane	500	190		ug/Kg-dry	180287	5	08/28/2013 12:49	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 21:10	KD
Endosulfan II	BRL	19		ug/Kg-dry	180287	5	08/28/2013 12:49	KD
Endosulfan sulfate	BRL	19		ug/Kg-dry	180287	5	08/28/2013 12:49	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 21:10	KD
Toxaphene	BRL	190		ug/Kg-dry	180287	1	08/27/2013 21:10	KD
Surr: Decachlorobiphenyl	55.1	25.1-119		%REC	180287	1	08/27/2013 21:10	KD
Surr: Tetrachloro-m-xylene	55.3	28.4-116		%REC	180287	1	08/27/2013 21:10	KD
PERCENT MOISTURE D2216								
Percent Moisture	10.9	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-6
Project Name:	Drexel	**Collection Date:**	8/22/2013 5:52:00 PM
Lab ID:	1308K46-029	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	1200	76		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
4,4´-DDT	480	76		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Chlordane	4800	760		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Endosulfan I	BRL	38		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Endosulfan II	BRL	76		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Endosulfan sulfate	BRL	76		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Heptachlor	BRL	38		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Toxaphene	7600	3800		ug/Kg-dry	180287	20	08/28/2013 13:00	KD
Surr: Decachlorobiphenyl	82.2	25.1-119		%REC	180287	1	08/27/2013 21:20	KD
Surr: Tetrachloro-m-xylene	58.3	28.4-116		%REC	180287	1	08/27/2013 21:20	KD
PERCENT MOISTURE D2216								
Percent Moisture	13.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-10
Project Name:	Drexel	**Collection Date:**	8/22/2013 5:54:00 PM
Lab ID:	1308K46-030	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	39	3.9		ug/Kg-dry	180287	1	08/27/2013 21:31	KD
4,4´-DDT	19	3.9		ug/Kg-dry	180287	1	08/27/2013 21:31	KD
Chlordane	190	39		ug/Kg-dry	180287	1	08/28/2013 14:06	KD
Endosulfan I	18	2.0		ug/Kg-dry	180287	1	08/27/2013 21:31	KD
Endosulfan II	15	3.9		ug/Kg-dry	180287	1	08/28/2013 14:06	KD
Endosulfan sulfate	BRL	3.9		ug/Kg-dry	180287	1	08/28/2013 14:06	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180287	1	08/27/2013 21:31	KD
Toxaphene	460	200		ug/Kg-dry	180287	1	08/27/2013 21:31	KD
Surr: Decachlorobiphenyl	62.2	25.1-119		%REC	180287	1	08/27/2013 21:31	KD
Surr: Tetrachloro-m-xylene	56.5	28.4-116		%REC	180287	1	08/27/2013 21:31	KD
PERCENT MOISTURE D2216								
Percent Moisture	14.9	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-20
Project Name:	Drexel	**Collection Date:**	8/22/2013 5:56:00 PM
Lab ID:	1308K46-031	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0023		mg/Kg-dry	180382	1	08/27/2013 19:20	MD
o-Xylene	2.6	0.28		mg/Kg-dry	180394	100	08/28/2013 12:17	GK
Surr: 4-Bromofluorobenzene	147	63.8-133	S	%REC	180382	1	08/27/2013 19:20	MD
Surr: 4-Bromofluorobenzene	100	63.8-133		%REC	180394	100	08/28/2013 12:17	GK
Surr: Dibromofluoromethane	107	74.3-130		%REC	180382	1	08/27/2013 19:20	MD
Surr: Dibromofluoromethane	93.7	74.3-130		%REC	180394	100	08/28/2013 12:17	GK
Surr: Toluene-d8	101	72.8-122		%REC	180382	1	08/27/2013 19:20	MD
Surr: Toluene-d8	98.8	72.8-122		%REC	180394	100	08/28/2013 12:17	GK
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.7		ug/Kg-dry	180287	1	08/27/2013 21:42	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180287	1	08/27/2013 21:42	KD
Chlordane	BRL	37		ug/Kg-dry	180287	1	08/28/2013 14:17	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 21:42	KD
Endosulfan II	BRL	3.7		ug/Kg-dry	180287	1	08/28/2013 14:17	KD
Endosulfan sulfate	BRL	3.7		ug/Kg-dry	180287	1	08/28/2013 14:17	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 21:42	KD
Toxaphene	BRL	190		ug/Kg-dry	180287	1	08/27/2013 21:42	KD
Surr: Decachlorobiphenyl	64.9	25.1-119		%REC	180287	1	08/27/2013 21:42	KD
Surr: Tetrachloro-m-xylene	72.8	28.4-116		%REC	180287	1	08/27/2013 21:42	KD
PERCENT MOISTURE D2216								
Percent Moisture	11.1	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-40
Project Name:	Drexel	**Collection Date:**	8/22/2013 5:58:00 PM
Lab ID:	1308K46-032	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0032		mg/Kg-dry	180382	1	08/28/2013 03:31	MD
o-Xylene	BRL	0.0032		mg/Kg-dry	180382	1	08/28/2013 03:31	MD
Surr: 4-Bromofluorobenzene	99.7	63.8-133		%REC	180382	1	08/28/2013 03:31	MD
Surr: Dibromofluoromethane	103	74.3-130		%REC	180382	1	08/28/2013 03:31	MD
Surr: Toluene-d8	93.6	72.8-122		%REC	180382	1	08/28/2013 03:31	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.5		ug/Kg-dry	180287	1	08/27/2013 21:53	KD
4,4´-DDT	BRL	4.5		ug/Kg-dry	180287	1	08/27/2013 21:53	KD
Chlordane	BRL	45		ug/Kg-dry	180287	1	08/28/2013 14:28	KD
Endosulfan I	BRL	2.2		ug/Kg-dry	180287	1	08/27/2013 21:53	KD
Endosulfan II	BRL	4.5		ug/Kg-dry	180287	1	08/28/2013 14:28	KD
Endosulfan sulfate	BRL	4.5		ug/Kg-dry	180287	1	08/28/2013 14:28	KD
Heptachlor	BRL	2.2		ug/Kg-dry	180287	1	08/27/2013 21:53	KD
Toxaphene	BRL	220		ug/Kg-dry	180287	1	08/27/2013 21:53	KD
Surr: Decachlorobiphenyl	64.6	25.1-119		%REC	180287	1	08/27/2013 21:53	KD
Surr: Tetrachloro-m-xylene	68	28.4-116		%REC	180287	1	08/27/2013 21:53	KD
PERCENT MOISTURE D2216								
Percent Moisture	25.4	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-B-10-52
Project Name:	Drexel	**Collection Date:**	8/22/2013 6:00:00 PM
Lab ID:	1308K46-033	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0028		mg/Kg-dry	180382	1	08/28/2013 04:00	MD
o-Xylene	BRL	0.0028		mg/Kg-dry	180382	1	08/28/2013 04:00	MD
Surr: 4-Bromofluorobenzene	85.9	63.8-133		%REC	180382	1	08/28/2013 04:00	MD
Surr: Dibromofluoromethane	103	74.3-130		%REC	180382	1	08/28/2013 04:00	MD
Surr: Toluene-d8	92.4	72.8-122		%REC	180382	1	08/28/2013 04:00	MD
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	4.0		ug/Kg-dry	180287	1	08/27/2013 22:04	KD
4,4´-DDT	BRL	4.0		ug/Kg-dry	180287	1	08/27/2013 22:04	KD
Chlordane	BRL	40		ug/Kg-dry	180287	1	08/28/2013 14:39	KD
Endosulfan I	BRL	2.0		ug/Kg-dry	180287	1	08/27/2013 22:04	KD
Endosulfan II	BRL	4.0		ug/Kg-dry	180287	1	08/28/2013 14:39	KD
Endosulfan sulfate	BRL	4.0		ug/Kg-dry	180287	1	08/28/2013 14:39	KD
Heptachlor	BRL	2.0		ug/Kg-dry	180287	1	08/27/2013 22:04	KD
Toxaphene	BRL	200		ug/Kg-dry	180287	1	08/27/2013 22:04	KD
Surr: Decachlorobiphenyl	64.6	25.1-119		%REC	180287	1	08/27/2013 22:04	KD
Surr: Tetrachloro-m-xylene	61.2	28.4-116		%REC	180287	1	08/27/2013 22:04	KD
PERCENT MOISTURE D2216								
Percent Moisture	17.6	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13233-DUP1
Project Name:	Drexel	**Collection Date:**	8/21/2013
Lab ID:	1308K46-034	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	52	4.2		ug/Kg-dry	180287	1	08/27/2013 22:15	KD
4,4´-DDT	460	21		ug/Kg-dry	180287	5	08/28/2013 14:50	KD
Chlordane	700	210		ug/Kg-dry	180287	5	08/28/2013 14:50	KD
Endosulfan I	51	2.1		ug/Kg-dry	180287	1	08/27/2013 22:15	KD
Endosulfan II	52	21		ug/Kg-dry	180287	5	08/28/2013 14:50	KD
Endosulfan sulfate	49	21		ug/Kg-dry	180287	5	08/28/2013 14:50	KD
Heptachlor	4.8	2.1		ug/Kg-dry	180287	1	08/27/2013 22:15	KD
Toxaphene	5000	1100		ug/Kg-dry	180287	5	08/28/2013 14:50	KD
Surr: Decachlorobiphenyl	67.1	25.1-119		%REC	180287	1	08/27/2013 22:15	KD
Surr: Tetrachloro-m-xylene	63.9	28.4-116		%REC	180287	1	08/27/2013 22:15	KD
PERCENT MOISTURE D2216								
Percent Moisture	21.6	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 3-Sep-13

Client:	Environmental Planning Specialists, Inc.	**Client Sample ID:**	13234-DUP2
Project Name:	Drexel	**Collection Date:**	8/22/2013
Lab ID:	1308K46-035	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromoethane	BRL	0.0026		mg/Kg-dry	180382	1	08/28/2013 04:29	MD
o-Xylene	2.4	0.25		mg/Kg-dry	180394	100	08/28/2013 12:46	GK
Surr: 4-Bromofluorobenzene	135	63.8-133	S	%REC	180382	1	08/28/2013 04:29	MD
Surr: 4-Bromofluorobenzene	102	63.8-133		%REC	180394	100	08/28/2013 12:46	GK
Surr: Dibromofluoromethane	102	74.3-130		%REC	180382	1	08/28/2013 04:29	MD
Surr: Dibromofluoromethane	93.6	74.3-130		%REC	180394	100	08/28/2013 12:46	GK
Surr: Toluene-d8	96.6	72.8-122		%REC	180382	1	08/28/2013 04:29	MD
Surr: Toluene-d8	98.6	72.8-122		%REC	180394	100	08/28/2013 12:46	GK
CHLORINATED PESTICIDES SW8081B				**(SW3550C)**				
4,4´-DDD	BRL	3.7		ug/Kg-dry	180287	1	08/27/2013 22:26	KD
4,4´-DDT	BRL	3.7		ug/Kg-dry	180287	1	08/27/2013 22:26	KD
Chlordane	BRL	37		ug/Kg-dry	180287	1	08/29/2013 12:16	KD
Endosulfan I	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 22:26	KD
Endosulfan II	BRL	3.7		ug/Kg-dry	180287	1	08/28/2013 21:51	KD
Endosulfan sulfate	BRL	3.7		ug/Kg-dry	180287	1	08/28/2013 21:51	KD
Heptachlor	BRL	1.9		ug/Kg-dry	180287	1	08/27/2013 22:26	KD
Toxaphene	BRL	190		ug/Kg-dry	180287	1	08/27/2013 22:26	KD
Surr: Decachlorobiphenyl	63.4	25.1-119		%REC	180287	1	08/27/2013 22:26	KD
Surr: Tetrachloro-m-xylene	62.4	28.4-116		%REC	180287	1	08/27/2013 22:26	KD
PERCENT MOISTURE D2216								
Percent Moisture	11.0	0		wt%	R250910	1	08/28/2013 15:18	EH

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client EPS Work Order Number 1308K46

Checklist completed by MY 8/23/13
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1° Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes __ No __

Water - pH acceptable upon receipt? Yes __ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180285

Sample ID: **MB-180285**	Client ID:				Units: **ug/Kg**		Prep Date: **08/26/2013**		Run No: **250860**	
SampleType: **MBLK**	TestCode: **CHLORINATED PESTICIDES SW8081B**				BatchID: **180285**		Analysis Date: **08/27/2013**		Seq No: **5262656**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	BRL	3.3									
4,4´-DDT	BRL	3.3									
Chlordane	BRL	33									
Endosulfan I	BRL	1.7									
Endosulfan II	BRL	3.3									
Heptachlor	BRL	1.7									
Toxaphene	BRL	170									
Surr: Decachlorobiphenyl	10.24	0	16.67		61.4	25.1	119				
Surr: Tetrachloro-m-xylene	8.077	0	16.67		48.5	28.4	116				

Sample ID: **MB-180285**	Client ID:				Units: **ug/Kg**		Prep Date: **08/26/2013**		Run No: **250943**	
SampleType: **MBLK**	TestCode: **CHLORINATED PESTICIDES SW8081B**				BatchID: **180285**		Analysis Date: **08/26/2013**		Seq No: **5264043**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Endosulfan sulfate	BRL	3.3									

Sample ID: **LCS-180285**	Client ID:				Units: **ug/Kg**		Prep Date: **08/26/2013**		Run No: **250860**	
SampleType: **LCS**	TestCode: **CHLORINATED PESTICIDES SW8081B**				BatchID: **180285**		Analysis Date: **08/27/2013**		Seq No: **5262659**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	29.01	3.3	33.33		87.0	41.7	134				
Heptachlor	24.60	1.7	33.33		73.8	41.1	117				
Surr: Decachlorobiphenyl	11.50	0	16.67		69.0	25.1	119				
Surr: Tetrachloro-m-xylene	10.14	0	16.67		60.8	28.4	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180285

Sample ID: **1308K46-013AMS**	Client ID: **13233-B-14-2**	Units: **ug/Kg-dry**	Prep Date: **08/26/2013**	Run No: **251218**
SampleType: **MS**	TestCode: **CHLORINATED PESTICIDES SW8081B**	BatchID: **180285**	Analysis Date: **08/30/2013**	Seq No: **5269513**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	36.92	3.7	37.45		98.6	28.4	130				
Heptachlor	31.71	1.9	37.45		84.7	32	122				
Surr: Decachlorobiphenyl	15.85	0	18.73		84.6	25.1	119				
Surr: Tetrachloro-m-xylene	13.92	0	18.73		74.3	28.4	116				

Sample ID: **1308K46-013AMSD**	Client ID: **13233-B-14-2**	Units: **ug/Kg-dry**	Prep Date: **08/26/2013**	Run No: **251218**
SampleType: **MSD**	TestCode: **CHLORINATED PESTICIDES SW8081B**	BatchID: **180285**	Analysis Date: **08/30/2013**	Seq No: **5269516**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	38.93	3.7	37.45		104	28.4	130	36.92	5.30	28.6	
Heptachlor	34.19	1.9	37.45		91.3	32	122	31.71	7.53	28.9	
Surr: Decachlorobiphenyl	16.43	0	18.73		87.8	25.1	119	15.85	0	30	
Surr: Tetrachloro-m-xylene	14.06	0	18.73		75.1	28.4	116	13.92	0	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180287

Sample ID: **MB-180287** Client ID: Units: **ug/Kg** Prep Date: **08/26/2013** Run No: **250929**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES SW8081B** BatchID: **180287** Analysis Date: **08/28/2013** Seq No: **5263482**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	BRL	3.3									
4,4´-DDT	BRL	3.3									
Chlordane	BRL	33									
Endosulfan I	BRL	1.7									
Endosulfan II	BRL	3.3									
Endosulfan sulfate	BRL	3.3									
Heptachlor	BRL	1.7									
Toxaphene	BRL	170									
Surr: Decachlorobiphenyl	10.98	0	16.67		65.8	25.1	119				
Surr: Tetrachloro-m-xylene	8.360	0	16.67		50.2	28.4	116				

Sample ID: **LCS-180287** Client ID: Units: **ug/Kg** Prep Date: **08/26/2013** Run No: **250929**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES SW8081B** BatchID: **180287** Analysis Date: **08/28/2013** Seq No: **5263484**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	26.02	3.3	33.33		78.1	41.7	134				
Heptachlor	21.98	1.7	33.33		66.0	41.1	117				
Surr: Decachlorobiphenyl	11.01	0	16.67		66.0	25.1	119				
Surr: Tetrachloro-m-xylene	7.941	0	16.67		47.6	28.4	116				

Sample ID: **1308K46-023AMS** Client ID: **13234-B-9-6** Units: **ug/Kg-dry** Prep Date: **08/26/2013** Run No: **250929**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES SW8081B** BatchID: **180287** Analysis Date: **08/28/2013** Seq No: **5264384**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	3116	380	37.88	4347	-3250	28.4	130				S
Heptachlor	BRL	190	37.88	37.19	364	32	122				S
Surr: Decachlorobiphenyl	0	0	18.95		0	25.1	119				S
Surr: Tetrachloro-m-xylene	0	0	18.95		0	28.4	116				S

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180287

Sample ID: **1308K46-023AMSD** Client ID: **13234-B-9-6** Units: **ug/Kg-dry** Prep Date: **08/26/2013** Run No: **250929**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES SW8081B** BatchID: **180287** Analysis Date: **08/28/2013** Seq No: **5264393**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	4567	380	37.79	4347	582	28.4	130	3116	37.8	28.6	SR
Heptachlor	197.4	190	37.79	37.19	424	32	122	174.9	12.1	28.9	S
Surr: Decachlorobiphenyl	0	0	18.90		0	25.1	119	0	0	30	S
Surr: Tetrachloro-m-xylene	0	0	18.90		0	28.4	116	0	0	30	S

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180382

Sample ID: **MB-180382**	Client ID:	Units: **mg/Kg**	Prep Date: **08/27/2013**	Run No: **250823**
SampleType: **MBLK**	TestCode: **TCL VOLATILE ORGANICS SW8260B**	BatchID: **180382**	Analysis Date: **08/27/2013**	Seq No: **5261560**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	0.0050									
1,1,2,2-Tetrachloroethane	BRL	0.0050									
1,1,2-Trichloroethane	BRL	0.0050									
1,1-Dichloroethane	BRL	0.0050									
1,1-Dichloroethene	BRL	0.0050									
1,2,4-Trichlorobenzene	BRL	0.0050									
1,2-Dibromo-3-chloropropane	BRL	0.0050									
1,2-Dibromoethane	BRL	0.0050									
1,2-Dichlorobenzene	BRL	0.0050									
1,2-Dichloroethane	BRL	0.0050									
1,2-Dichloropropane	BRL	0.0050									
1,3-Dichlorobenzene	BRL	0.0050									
1,4-Dichlorobenzene	BRL	0.0050									
2-Butanone	BRL	0.050									
2-Hexanone	BRL	0.010									
4-Methyl-2-pentanone	BRL	0.010									
Acetone	BRL	0.10									
Benzene	BRL	0.0050									
Bromodichloromethane	BRL	0.0050									
Bromoform	BRL	0.0050									
Bromomethane	BRL	0.0050									
Carbon disulfide	BRL	0.010									
Carbon tetrachloride	BRL	0.0050									
Chlorobenzene	BRL	0.0050									
Chloroethane	BRL	0.010									
Chloroform	BRL	0.0050									
Chloromethane	BRL	0.010									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180382

Sample ID: **MB-180382** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250823**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180382** Analysis Date: **08/27/2013** Seq No: **5261560**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	0.0050									
cis-1,3-Dichloropropene	BRL	0.0050									
Cyclohexane	BRL	0.0050									
Dibromochloromethane	BRL	0.0050									
Dichlorodifluoromethane	BRL	0.010									
Ethylbenzene	BRL	0.0050									
Freon-113	BRL	0.010									
Isopropylbenzene	BRL	0.0050									
m,p-Xylene	BRL	0.0050									
Methyl acetate	BRL	0.0050									
Methyl tert-butyl ether	BRL	0.0050									
Methylcyclohexane	BRL	0.0050									
Methylene chloride	BRL	0.020									
o-Xylene	BRL	0.0050									
Styrene	BRL	0.0050									
Tetrachloroethene	BRL	0.0050									
Toluene	BRL	0.0050									
trans-1,2-Dichloroethene	BRL	0.0050									
trans-1,3-Dichloropropene	BRL	0.0050									
Trichloroethene	BRL	0.0050									
Trichlorofluoromethane	BRL	0.0050									
Vinyl chloride	BRL	0.010									
Surr: 4-Bromofluorobenzene	0.03925	0	0.0500		78.5	63.8	133				
Surr: Dibromofluoromethane	0.04835	0	0.0500		96.7	74.3	130				
Surr: Toluene-d8	0.04646	0	0.0500		92.9	72.8	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180382

Sample ID: **LCS-180382**	Client ID:		Units: **mg/Kg**	Prep Date: **08/27/2013**	Run No: **250823**
SampleType: **LCS**	TestCode: **TCL VOLATILE ORGANICS SW8260B**		BatchID: **180382**	Analysis Date: **08/27/2013**	Seq No: **5261553**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.04493	0.0050	0.0500		89.9	63.1	140				
Benzene	0.04410	0.0050	0.0500		88.2	70.2	130				
Chlorobenzene	0.04025	0.0050	0.0500		80.5	70	126				
Toluene	0.04517	0.0050	0.0500		90.3	70.5	130				
Trichloroethene	0.04125	0.0050	0.0500		82.5	70	135				
Surr: 4-Bromofluorobenzene	0.05099	0	0.0500		102	63.8	133				
Surr: Dibromofluoromethane	0.05143	0	0.0500		103	74.3	130				
Surr: Toluene-d8	0.05666	0	0.0500		113	72.8	122				

Sample ID: **1308K46-004AMS**	Client ID: **13232-B-13-20**		Units: **mg/Kg-dry**	Prep Date: **08/27/2013**	Run No: **250823**
SampleType: **MS**	TestCode: **TCL VOLATILE ORGANICS SW8260B**		BatchID: **180382**	Analysis Date: **08/27/2013**	Seq No: **5261556**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.05357	0.0061	0.0607		88.2	58.8	157				
Benzene	0.05453	0.0061	0.0607		89.8	66.3	139				
Chlorobenzene	0.04897	0.0061	0.0607		80.7	67.8	131				
Toluene	0.05918	0.0061	0.0607		97.5	66	138				
Trichloroethene	0.05052	0.0061	0.0607		83.2	72.5	141				
Surr: 4-Bromofluorobenzene	0.06320	0	0.0607		104	63.8	133				
Surr: Dibromofluoromethane	0.06314	0	0.0607		104	74.3	130				
Surr: Toluene-d8	0.06900	0	0.0607		114	72.8	122				

Sample ID: **1308K46-004AMSD**	Client ID: **13232-B-13-20**		Units: **mg/Kg-dry**	Prep Date: **08/27/2013**	Run No: **250823**
SampleType: **MSD**	TestCode: **TCL VOLATILE ORGANICS SW8260B**		BatchID: **180382**	Analysis Date: **08/27/2013**	Seq No: **5261558**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.05912	0.0061	0.0607		97.4	58.8	157	0.05357	9.85	21.9	
Benzene	0.06236	0.0061	0.0607		103	66.3	139	0.05453	13.4	22.3	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180382

Sample ID: **1308K46-004AMSD** Client ID: **13232-B-13-20** Units: **mg/Kg-dry** Prep Date: **08/27/2013** Run No: **250823**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180382** Analysis Date: **08/27/2013** Seq No: **5261558**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	0.05385	0.0061	0.0607		88.7	67.8	131	0.04897	9.49	17.3	
Toluene	0.06350	0.0061	0.0607		105	66	138	0.05918	7.05	18.1	
Trichloroethene	0.05651	0.0061	0.0607		93.1	72.5	141	0.05052	11.2	18.7	
Surr: 4-Bromofluorobenzene	0.06055	0	0.0607		99.7	63.8	133	0.06320	0	0	
Surr: Dibromofluoromethane	0.06302	0	0.0607		104	74.3	130	0.06314	0	0	
Surr: Toluene-d8	0.06960	0	0.0607		115	72.8	122	0.06900	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180394

Sample ID: **MB-180394** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250839**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180394** Analysis Date: **08/27/2013** Seq No: **5262122**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	0.25									
1,1,2,2-Tetrachloroethane	BRL	0.25									
1,1,2-Trichloroethane	BRL	0.25									
1,1-Dichloroethane	BRL	0.25									
1,1-Dichloroethene	BRL	0.25									
1,2,4-Trichlorobenzene	BRL	0.25									
1,2-Dibromo-3-chloropropane	BRL	0.25									
1,2-Dibromoethane	BRL	0.25									
1,2-Dichlorobenzene	BRL	0.25									
1,2-Dichloroethane	BRL	0.25									
1,2-Dichloropropane	BRL	0.25									
1,3-Dichlorobenzene	BRL	0.25									
1,4-Dichlorobenzene	BRL	0.25									
2-Butanone	BRL	2.5									
2-Hexanone	BRL	0.50									
4-Methyl-2-pentanone	BRL	0.50									
Acetone	BRL	5.0									
Benzene	BRL	0.25									
Bromodichloromethane	BRL	0.25									
Bromoform	BRL	0.25									
Bromomethane	BRL	0.25									
Carbon disulfide	BRL	0.50									
Carbon tetrachloride	BRL	0.25									
Chlorobenzene	BRL	0.25									
Chloroethane	BRL	0.50									
Chloroform	BRL	0.25									
Chloromethane	BRL	0.50									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180394

Sample ID: **MB-180394** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250839**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180394** Analysis Date: **08/27/2013** Seq No: **5262122**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	0.25									
cis-1,3-Dichloropropene	BRL	0.25									
Cyclohexane	BRL	0.25									
Dibromochloromethane	BRL	0.25									
Dichlorodifluoromethane	BRL	0.50									
Ethylbenzene	BRL	0.25									
Freon-113	BRL	0.50									
Isopropylbenzene	BRL	0.25									
m,p-Xylene	BRL	0.25									
Methyl acetate	BRL	0.25									
Methyl tert-butyl ether	BRL	0.25									
Methylcyclohexane	BRL	0.25									
Methylene chloride	BRL	1.0									
o-Xylene	BRL	0.25									
Styrene	BRL	0.25									
Tetrachloroethene	BRL	0.25									
Toluene	BRL	0.25									
trans-1,2-Dichloroethene	BRL	0.25									
trans-1,3-Dichloropropene	BRL	0.25									
Trichloroethene	BRL	0.25									
Trichlorofluoromethane	BRL	0.25									
Vinyl chloride	BRL	0.50									
Surr: 4-Bromofluorobenzene	2.572	0	2.500		103	63.8	133				
Surr: Dibromofluoromethane	2.464	0	2.500		98.6	74.3	130				
Surr: Toluene-d8	2.401	0	2.500		96.0	72.8	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180394

Sample ID: **LCS-180394** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250839**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180394** Analysis Date: **08/27/2013** Seq No: **5262119**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2.507	0.25	2.500		100	63.1	140				
Benzene	2.422	0.25	2.500		96.9	70.2	130				
Chlorobenzene	2.526	0.25	2.500		101	70	126				
Toluene	2.440	0.25	2.500		97.6	70.5	130				
Trichloroethene	2.632	0.25	2.500		105	70	135				
Surr: 4-Bromofluorobenzene	2.560	0	2.500		102	63.8	133				
Surr: Dibromofluoromethane	2.500	0	2.500		100.0	74.3	130				
Surr: Toluene-d8	2.472	0	2.500		98.9	72.8	122				

Sample ID: **1308K47-041AMS** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250874**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180394** Analysis Date: **08/28/2013** Seq No: **5263007**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	40940	4000	40320		102	58.8	157				
Benzene	39540	4000	40320		98.1	66.3	139				
Chlorobenzene	41200	4000	40320		102	67.8	131				
Toluene	40050	4000	40320		99.3	66	138				
Trichloroethene	42690	4000	40320		106	72.5	141				
Surr: 4-Bromofluorobenzene	40870	0	40320		101	63.8	133				
Surr: Dibromofluoromethane	39940	0	40320		99.1	74.3	130				
Surr: Toluene-d8	40230	0	40320		99.8	72.8	122				

Sample ID: **1308K47-041AMSD** Client ID: Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250874**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **180394** Analysis Date: **08/28/2013** Seq No: **5263009**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	42040	4000	40320		104	58.8	157	40940	2.66	21.9	
Benzene	39990	4000	40320		99.2	66.3	139	39540	1.14	22.3	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Environmental Planning Specialists, Inc.
Project Name: Drexel
Workorder: 1308K46

ANALYTICAL QC SUMMARY REPORT

BatchID: 180394

Sample ID: **1308K47-041AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **mg/Kg** Prep Date: **08/27/2013** Run No: **250874**
BatchID: **180394** Analysis Date: **08/28/2013** Seq No: **5263009**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	41440	4000	40320		103	67.8	131	41200	0.585	17.3	
Toluene	40980	4000	40320		102	66	138	40050	2.31	18.1	
Trichloroethene	42980	4000	40320		107	72.5	141	42690	0.678	18.7	
Surr: 4-Bromofluorobenzene	40770	0	40320		101	63.8	133	40870	0	0	
Surr: Dibromofluoromethane	40150	0	40320		99.6	74.3	130	39940	0	0	
Surr: Toluene-d8	39770	0	40320		98.6	72.8	122	40230	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

July 30, 2013 Analytical Report for Service Request No: K1306566

Sofie Weber-Snapp
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Sofie:

Enclosed are the results of the samples submitted to our laboratory on July 08, 2013. For your reference, these analyses have been assigned our service request number K1306566.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at Gregory.Salata@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Project Manager

GS/tj Page 1 of _____

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Environmental Planning Specialists	**Service Request No.:**	K1306566
Project:	Drexel	**Date Received:**	07/08/13
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier III deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seventeen water samples were received for analysis at ALS Environmental on 07/08/13. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

EDB by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Approved by_____

CHAIN OF CUSTODY

ALS Environmental

1317 South 13th Ave., Kelso, WA 98626 | 360.577.7222 | 800.695.7222 | 360.636.1068 (fax)

SR# K1306564

PAGE 1 OF 2 COC#

PROJECT NAME: Drexel
PROJECT NUMBER:
PROJECT MANAGER:
COMPANY NAME: EPS Inc
ADDRESS: 1050 Crown Pointe Parkway Suite 350
CITY/STATE/ZIP: Atlanta GA 30338
E-MAIL ADDRESS: awilliams@enviplanning.com
PHONE #: 678 336 8537 FAX #:
SAMPLER'S SIGNATURE: Anna Williams

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐	Hydrocarbons Gas☐ Diesel☐ Oil☐ (*see below)	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO_2☐ Methane☐ Ethane☐ Ethene☐	EDB 504.1			REMARKS
13182-BW6-1	7/1/13	17:30		GW	3																	X			
13182-BW6-2	7/1/13	17:35			3																	X			
13182-BW6-3	7/1/13	17:40			3																	X			
13182-DUP1	7/1/13	—			3																	X			
13183-INF-1	7/2/13	12:00			3																	X			
13183-INF-2		14:00			3																	X			
13183-INF-3		16:35			3																	X			
13183-EFF1.25A		12:15 12:30			3																	X			
13183-EFF1.25B		12:45			3																	X			
13183-EFF1.25C		13:15			3																	X			

REPORT REQUIREMENTS

- X I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- X V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
X Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Anna Williams	Signature:	Signature:	Signature:
Date/Time: 7/2/13	Date/Time: 7/2/13 2000	Date/Time: 7/5/13 1300	Date/Time: 7/6/13 1000
Printed Name: Anna Williams	Printed Name: Gregg Thomas	Printed Name: Gregg Thomas	Printed Name:
Firm: EPS	Firm: EPS	Firm: EPS	Firm:

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CHAIN OF CUSTODY

SR# K1306966

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PAGE 2 OF 2 COC#

PROJECT NAME: Drexel
PROJECT NUMBER:
PROJECT MANAGER:
COMPANY NAME: EPS Inc
ADDRESS: 1050 Crown Pointe Parkway Suite 550
CITY/STATE/ZIP: Atlanta GA 30338
E-MAIL ADDRESS: awilliams@enuplanning.com
PHONE #: 678 336 8537 FAX #:
SAMPLER'S SIGNATURE:

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Arocolors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity ☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO_2☐ Methane☐ Ethane☐ Ethene☐	EDB 504.1			REMARKS
13183-EFF-1.5A	7/2/13	14:30		GW	3																	X			
13183-EFF-1.5B		15:30			3																	X			
13183-EFF-1.5C		16 30			3																	X			
13183-EFF-1.5D		1730			3																	X			
13183-EFF-DUP1		—			3																	X			
~~13183-EFF~~																									
13183-INF-4	↓	1740		↓	3																	X			

REPORT REQUIREMENTS

- X I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- X V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.
___ 5 day
X Standard (15 working days)
___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: ___ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Aaron Williams	Signature: Gregg Henry	Signature: Gregg Henry	Signature:
Date/Time: 7/2/13	Date/Time: 7/2/13 20:04	Date/Time: 7/5/13 1300	Date/Time: 7/6/13 1000
Printed Name: Aaron Williams	Printed Name: Gregg Henry	Printed Name: Gregg Henry	Printed Name:
Firm: EPS	Firm: EPS	Firm: EPS	Firm:

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PC Greg

Cooler Receipt and Preservation Form

Client / Project: Environmental Planning Service Request *K13* 060606

Received: 7/6/13 Opened: 7/6/13 By: BT Unloaded: 7/6/13 By: BT

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
2.4	2.4	1.7	1.7	0	322		8023 0056 6742	

4. Packing material: (*Inserts*) (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

8 Trip Blanks rec'd. Not on COC.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13182-BW6-1	**Units:**	ug/L
Lab Code:	K1306566-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.21**		0.0097	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13182-BW6-2	**Units:**	ug/L
Lab Code:	K1306566-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13182-BW6-3	**Units:**	ug/L
Lab Code:	K1306566-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13182-DUP1	**Units:**	ug/L
Lab Code:	K1306566-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-INF-1	**Units:**	ug/L
Lab Code:	K1306566-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.25**		0.0096	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-INF-2	**Units:**	ug/L
Lab Code:	K1306566-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.26**		0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-INF-3	**Units:**	ug/L
Lab Code:	K1306566-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.26**		0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.25A	**Units:**	ug/L
Lab Code:	K1306566-008	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.25B	**Units:**	ug/L
Lab Code:	K1306566-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF1.25C	**Units:**	ug/L
Lab Code:	K1306566-010	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.5A	**Units:**	ug/L
Lab Code:	K1306566-011	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.5B	**Units:**	ug/L
Lab Code:	K1306566-012	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0098	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.5C	**Units:**	ug/L
Lab Code:	K1306566-013	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-1.5D	**Units:**	ug/L
Lab Code:	K1306566-014	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-EFF-DUP1	**Units:**	ug/L
Lab Code:	K1306566-015	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	13183-INF-4	**Units:**	ug/L
Lab Code:	K1306566-016	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.22**		0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013

EPA Method 504.1

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1306566-017	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	07/11/13	07/12/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

EPA Method 504.1

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1306788-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	07/11/13	07/11/13	KWG1306788	

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013

Matrix Spike Summary
EPA Method 504.1

Sample Name:	13182-BW6-1	**Units:**	ug/L
Lab Code:	K1306566-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1306788

		13182-BW6-1MS KWG1306788-1 Matrix Spike			
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.21	0.397	0.242	77	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	504.1	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1306788

	Lab Control Sample KWG1306788-2 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.246	0.250	98	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	504.1	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1306788

	Lab Control Sample KWG1306788-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.233	0.250	93	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013
		Time Analyzed:	21:03

Method Blank Summary
EPA Method 504.1

Sample Name:	Method Blank	**Instrument ID:**	GC33
Lab Code:	KWG1306788-4	**File ID:**	J:\GC33\DATA\071113-504\0711015.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1306788

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1306788-2	J:\GC33\DATA\071113-504\0711013.D	07/11/13	20:07
Lab Control Sample	KWG1306788-3	J:\GC33\DATA\071113-504\0711014.D	07/11/13	20:35
13182-BW6-1	K1306566-001	J:\GC33\DATA\071113-504\0711016.D	07/11/13	21:31
13182-BW6-1MS	KWG1306788-1	J:\GC33\DATA\071113-504\0711017.D	07/11/13	21:59
13182-BW6-2	K1306566-002	J:\GC33\DATA\071113-504\0711018.D	07/11/13	22:27
13182-BW6-3	K1306566-003	J:\GC33\DATA\071113-504\0711019.D	07/11/13	22:55
13182-DUP1	K1306566-004	J:\GC33\DATA\071113-504\0711020.D	07/11/13	23:23
13183-INF-1	K1306566-005	J:\GC33\DATA\071113-504\0711021.D	07/11/13	23:51
13183-INF-2	K1306566-006	J:\GC33\DATA\071113-504\0711024.D	07/12/13	01:15
13183-INF-3	K1306566-007	J:\GC33\DATA\071113-504\0711025.D	07/12/13	01:43
13183-EFF-1.25A	K1306566-008	J:\GC33\DATA\071113-504\0711026.D	07/12/13	02:11
13183-EFF-1.25B	K1306566-009	J:\GC33\DATA\071113-504\0711027.D	07/12/13	02:39
13183-EFF1.25C	K1306566-010	J:\GC33\DATA\071113-504\0711028.D	07/12/13	03:07
13183-EFF-1.5A	K1306566-011	J:\GC33\DATA\071113-504\0711029.D	07/12/13	03:35
13183-EFF-1.5B	K1306566-012	J:\GC33\DATA\071113-504\0711030.D	07/12/13	04:03
13183-EFF-1.5C	K1306566-013	J:\GC33\DATA\071113-504\0711031.D	07/12/13	04:32
13183-EFF-1.5D	K1306566-014	J:\GC33\DATA\071113-504\0711032.D	07/12/13	05:00
13183-EFF-DUP1	K1306566-015	J:\GC33\DATA\071113-504\0711035.D	07/12/13	06:24
13183-INF-4	K1306566-016	J:\GC33\DATA\071113-504\0711036.D	07/12/13	06:51
Trip Blank	K1306566-017	J:\GC33\DATA\071113-504\0711037.D	07/12/13	07:19

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013
		Time Analyzed:	20:07

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1306788-2	**File ID:**	J:\GC33\DATA\071113-504\0711013.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1306788

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1306788-4	J:\GC33\DATA\071113-504\0711015.D	07/11/13	21:03
13182-BW6-1	K1306566-001	J:\GC33\DATA\071113-504\0711016.D	07/11/13	21:31
13182-BW6-1MS	KWG1306788-1	J:\GC33\DATA\071113-504\0711017.D	07/11/13	21:59
13182-BW6-2	K1306566-002	J:\GC33\DATA\071113-504\0711018.D	07/11/13	22:27
13182-BW6-3	K1306566-003	J:\GC33\DATA\071113-504\0711019.D	07/11/13	22:55
13182-DUP1	K1306566-004	J:\GC33\DATA\071113-504\0711020.D	07/11/13	23:23
13183-INF-1	K1306566-005	J:\GC33\DATA\071113-504\0711021.D	07/11/13	23:51
13183-INF-2	K1306566-006	J:\GC33\DATA\071113-504\0711024.D	07/12/13	01:15
13183-INF-3	K1306566-007	J:\GC33\DATA\071113-504\0711025.D	07/12/13	01:43
13183-EFF-1.25A	K1306566-008	J:\GC33\DATA\071113-504\0711026.D	07/12/13	02:11
13183-EFF-1.25B	K1306566-009	J:\GC33\DATA\071113-504\0711027.D	07/12/13	02:39
13183-EFF1.25C	K1306566-010	J:\GC33\DATA\071113-504\0711028.D	07/12/13	03:07

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water	**Date Analyzed:**	07/11/2013
		Time Analyzed:	20:35

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1306788-3	**File ID:**	J:\GC33\DATA\071113-504\0711014.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1306788

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
13183-EFF-1.5A	K1306566-011	J:\GC33\DATA\071113-504\0711029.D	07/12/13	03:35
13183-EFF-1.5B	K1306566-012	J:\GC33\DATA\071113-504\0711030.D	07/12/13	04:03
13183-EFF-1.5C	K1306566-013	J:\GC33\DATA\071113-504\0711031.D	07/12/13	04:32
13183-EFF-1.5D	K1306566-014	J:\GC33\DATA\071113-504\0711032.D	07/12/13	05:00
13183-EFF-DUP1	K1306566-015	J:\GC33\DATA\071113-504\0711035.D	07/12/13	06:24
13183-INF-4	K1306566-016	J:\GC33\DATA\071113-504\0711036.D	07/12/13	06:51
Trip Blank	K1306566-017	J:\GC33\DATA\071113-504\0711037.D	07/12/13	07:19

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1306566
Project: Drexel **Calibration Date:** 06/11/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12522 **Column:** RTX-CLP
Instrument ID: GC33

Level ID	File ID	Level ID	File ID
A	J:\GC33\Data\061113-504\0611002.D	F	J:\GC33\Data\061113-504\0611007.D
B	J:\GC33\Data\061113-504\0611003.D	G	J:\GC33\Data\061113-504\0611008.D
C	J:\GC33\Data\061113-504\0611004.D	H	J:\GC33\Data\061113-504\0611009.D
D	J:\GC33\Data\061113-504\0611005.D		
E	J:\GC33\Data\061113-504\0611006.D		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.38E+7	B	0.13	1.47E+7	C	0.25	1.98E+7	D	0.63	2.04E+7	E	1.3	1.85E+7
	F	3.8	1.80E+7	G	5.0	1.78E+7	H	10	1.70E+7						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1306566
Project: Drexel **Calibration Date:** 06/11/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12522 **Column:** RTX-CLP
Instrument ID: GC33

		Calibration Evaluation					
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	13.1		≤ 20	

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1306566
Calibration Date: 06/11/2013
Date Analyzed: 06/11/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12522
Units: ppb

File ID: J:\GC33\Data\061113-504\0611010.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	17500000	18300000	5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Environmental Planning Specialists **Service Request:** K1306566
Project: Drexel **Calibration Date:** 06/11/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12522 **Column:** RTX-CLP2
Instrument ID: GC33

Level ID	File ID	Level ID	File ID
A	J:\GC33\Data\061113-504\0611002.D\0611002c.d	F	J:\GC33\Data\061113-504\0611007.D\0611007c.d
B	J:\GC33\Data\061113-504\0611003.D\0611003c.d	G	J:\GC33\Data\061113-504\0611008.D\0611008c.d
C	J:\GC33\Data\061113-504\0611004.D\0611004c.d	H	J:\GC33\Data\061113-504\0611009.D\0611009c.d
D	J:\GC33\Data\061113-504\0611005.D\0611005c.d		
E	J:\GC33\Data\061113-504\0611006.D\0611006c.d		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	3.13E+5	B	0.13	1.55E+6	C	0.25	2.89E+6	D	0.63	3.08E+6	E	1.3	3.11E+6
	F	3.8	3.04E+6	G	5.0	2.96E+6	H	10	2.92E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1306566
Project: Drexel **Calibration Date:** 06/11/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12522 **Column:** RTX-CLP2
Instrument ID: GC33

Analyte Name	Compound Type	Calibration Evaluation: Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	Linear	R2	0.998		≥ 0.99

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1306566
Calibration Date: 06/11/2013
Date Analyzed: 06/11/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12522
Units: ppb

File ID: J:\GC33\Data\061113-504\0611010.D\0611010c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	2480000	2890000	NA	0	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Analyzed:**	07/11/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	**Calibration Date:**	06/11/2013
Analysis Method:	504.1	**Calibration ID:**	CAL12522
		Analysis Lot:	KWG1306831
		Units:	ppb
File ID:	J:\GC33\DATA\071113-504\0711011.D	**Column ID:**	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	17500000	16600000	-5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Analyzed:**	07/11/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	**Calibration Date:**	06/11/2013
Analysis Method:	504.1	**Calibration ID:**	CAL12522
		Analysis Lot:	KWG1306831
		Units:	ppb
File ID:	J:\GC33\DATA\071113-504\0711011.D\0711011C.D	**Column ID:**	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.5	2480000	3410000	NA	17	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Analyzed:**	07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	**Calibration Date:**	06/11/2013
Analysis Method:	504.1	**Calibration ID:**	CAL12522
		Analysis Lot:	KWG1306831
		Units:	ppb
File ID:	J:\GC33\DATA\071113-504\0711022.D	**Column ID:**	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.6	17500000	16000000	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Service Request: K1306566
Date Analyzed: 07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1
Calibration Date: 06/11/2013
Calibration ID: CAL12522
Analysis Lot: KWG1306831
Units: ppb
File ID: J:\GC33\DATA\071113-504\0711022.D\0711022C.D
Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.9	2480000	3500000	NA	17	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1306566
Date Analyzed: 07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 06/11/2013
Calibration ID: CAL12522
Analysis Lot: KWG1306831
Units: ppb

File ID: J:\GC33\DATA\071113-504\0711033.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.1	17500000	15700000	-11	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Analyzed:**	07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	**Calibration Date:**	06/11/2013
Analysis Method:	504.1	**Calibration ID:**	CAL12522
		Analysis Lot:	KWG1306831
		Units:	ppb
File ID:	J:\GC33\DATA\071113-504\0711033.D\0711033C.D	**Column ID:**	RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	2480000	3260000	NA	12	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Analyzed:**	07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type:	External Standard	**Calibration Date:**	06/11/2013
Analysis Method:	504.1	**Calibration ID:**	CAL12522
		Analysis Lot:	KWG1306831
		Units:	ppb
File ID:	J:\GC33\DATA\071113-504\0711041.D	**Column ID:**	RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	4.7	17500000	16300000	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1306566
Date Analyzed: 07/12/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 06/11/2013
Calibration ID: CAL12522
Analysis Lot: KWG1306831
Units: ppb

File ID: J:\GC33\DATA\071113-504\0711041.D\0711041C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.6	2480000	3370000	NA	13	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1306566
Project: Drexel

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1306831
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0711011.D	Continuing Calibration Verification	KWG1306831-1	7/11/2013	19:11		7/11/2013	19:33
\0711013.D	Lab Control Sample	KWG1306788-2	7/11/2013	20:07		7/11/2013	20:29
\0711014.D	Lab Control Sample	KWG1306788-3	7/11/2013	20:35		7/11/2013	20:57
\0711015.D	Method Blank	KWG1306788-4	7/11/2013	21:03		7/11/2013	21:25
\0711016.D	13182-BW6-1	K1306566-001	7/11/2013	21:31		7/11/2013	21:53
\0711017.D	13182-BW6-1MS	KWG1306788-1	7/11/2013	21:59		7/11/2013	22:21
\0711018.D	13182-BW6-2	K1306566-002	7/11/2013	22:27		7/11/2013	22:49
\0711019.D	13182-BW6-3	K1306566-003	7/11/2013	22:55		7/11/2013	23:17
\0711020.D	13182-DUP1	K1306566-004	7/11/2013	23:23		7/11/2013	23:45
\0711021.D	13183-INF-1	K1306566-005	7/11/2013	23:51		7/12/2013	00:13
\0711022.D	Continuing Calibration Verification	KWG1306831-2	7/12/2013	00:19		7/12/2013	00:41
\0711024.D	13183-INF-2	K1306566-006	7/12/2013	01:15		7/12/2013	01:37
\0711025.D	13183-INF-3	K1306566-007	7/12/2013	01:43		7/12/2013	02:05
\0711026.D	13183-EFF-1.25A	K1306566-008	7/12/2013	02:11		7/12/2013	02:33
\0711027.D	13183-EFF-1.25B	K1306566-009	7/12/2013	02:39		7/12/2013	03:01
\0711028.D	13183-EFF1.25C	K1306566-010	7/12/2013	03:07		7/12/2013	03:29
\0711029.D	13183-EFF-1.5A	K1306566-011	7/12/2013	03:35		7/12/2013	03:57
\0711030.D	13183-EFF-1.5B	K1306566-012	7/12/2013	04:03		7/12/2013	04:25
\0711031.D	13183-EFF-1.5C	K1306566-013	7/12/2013	04:32		7/12/2013	04:53
\0711032.D	13183-EFF-1.5D	K1306566-014	7/12/2013	05:00		7/12/2013	05:21
\0711033.D	Continuing Calibration Verification	KWG1306831-3	7/12/2013	05:27		7/12/2013	05:49
\0711035.D	13183-EFF-DUP1	K1306566-015	7/12/2013	06:24		7/12/2013	06:45
\0711036.D	13183-INF-4	K1306566-016	7/12/2013	06:51		7/12/2013	07:13
\0711037.D	Trip Blank	K1306566-017	7/12/2013	07:19		7/12/2013	07:41
\0711038.D	ZZZZZZ	ZZZZZZ	7/12/2013	07:47		7/12/2013	08:09
\0711039.D	ZZZZZZ	ZZZZZZ	7/12/2013	08:16		7/12/2013	08:37
\0711040.D	ZZZZZZ	ZZZZZZ	7/12/2013	08:44		7/12/2013	09:05
\0711041.D	Continuing Calibration Verification	KWG1306831-4	7/12/2013	09:12		7/12/2013	09:33

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

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QA/QC Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Extracted:**	07/11/2013
Sample Matrix:	Water		

Extraction Prep Log
EPA Method 504.1

Extraction Method:	METHOD	**Extraction Lot:**	KWG1306788
Analysis Method:	504.1	**Level:**	Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13182-BW6-1	K1306566-001	07/01/13	07/08/13	36.02ml	2ml	NA	
13182-BW6-2	K1306566-002	07/01/13	07/08/13	35.84ml	2ml	NA	
13182-BW6-3	K1306566-003	07/01/13	07/08/13	35.93ml	2ml	NA	
13182-DUP1	K1306566-004	07/01/13	07/08/13	35.84ml	2ml	NA	
13183-INF-1	K1306566-005	07/02/13	07/08/13	36.16ml	2ml	NA	
13183-INF-2	K1306566-006	07/02/13	07/08/13	36.02ml	2ml	NA	
13183-INF-3	K1306566-007	07/02/13	07/08/13	36.01ml	2ml	NA	
13183-EFF-1.25A	K1306566-008	07/02/13	07/08/13	36.00ml	2ml	NA	
13183-EFF-1.25B	K1306566-009	07/02/13	07/08/13	36.13ml	2ml	NA	
13183-EFF1.25C	K1306566-010	07/02/13	07/08/13	35.61ml	2ml	NA	
13183-EFF-1.5A	K1306566-011	07/02/13	07/08/13	36.10ml	2ml	NA	
13183-EFF-1.5B	K1306566-012	07/02/13	07/08/13	35.69ml	2ml	NA	
13183-EFF-1.5C	K1306566-013	07/02/13	07/08/13	35.86ml	2ml	NA	
13183-EFF-1.5D	K1306566-014	07/02/13	07/08/13	35.94ml	2ml	NA	
13183-EFF-DUP1	K1306566-015	07/02/13	07/08/13	36.02ml	2ml	NA	
13183-INF-4	K1306566-016	07/02/13	07/08/13	36.07ml	2ml	NA	
Trip Blank	K1306566-017	07/01/13	07/08/13	35.97ml	2ml	NA	
Method Blank	KWG1306788-4	NA	NA	35.00ml	2ml	NA	
13182-BW6-1MS	KWG1306788-1	07/01/13	07/08/13	36.23ml	2ml	NA	
Lab Control Sample	KWG1306788-2	NA	NA	35.00ml	2ml	NA	
Lab Control Sample	KWG1306788-3	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/01/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013
		Date Extracted:	07/11/2013

EPA Method 504.1

Sample Name:	13182-BW6-1	**Units:**	ug/L
Lab Code:	K1306566-001	**Basis:**	NA
		Level:	Low
Extraction Method:	METHOD		
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.21	0.26	21.3		1	07/11/13

Confirmation Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013
		Date Extracted:	07/11/2013

EPA Method 504.1

Sample Name:	13183-INF-1	**Units:**	ug/L
Lab Code:	K1306566-005	**Basis:**	NA
		Level:	Low
Extraction Method:	METHOD		
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.25	0.31	21.4		1	07/11/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1306566
Date Collected: 07/02/2013
Date Received: 07/08/2013
Date Extracted: 07/11/2013

EPA Method 504.1

Sample Name: 13183-INF-2
Lab Code: K1306566-006

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.26	0.32	20.7		1	07/12/13

ALS Group USA, Corp. dba ALS Environmental

Confirmation Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013
		Date Extracted:	07/11/2013

EPA Method 504.1

Sample Name:	13183-INF-3	**Units:**	ug/L
Lab Code:	K1306566-007	**Basis:**	NA
		Level:	Low
Extraction Method:	METHOD		
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.26	0.32	20.7		1	07/12/13

Confirmation Results

Client:	Environmental Planning Specialists	**Service Request:**	K1306566
Project:	Drexel	**Date Collected:**	07/02/2013
Sample Matrix:	Water	**Date Received:**	07/08/2013
		Date Extracted:	07/11/2013

EPA Method 504.1

Sample Name:	13183-INF-4	**Units:**	ug/L
Lab Code:	K1306566-016	**Basis:**	NA
		Level:	Low
Extraction Method:	METHOD		
Analysis Method:	504.1		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.22	0.26	16.7		1	07/12/13

November 12, 2013

Analytical Report for Service Request No: K1309638
Revised Service Request No: K1309638.01

Sofie Weber-Snapp
Environmental Planning Specialists
1050 Crown Pointe Parkway
Suite 550
Atlanta, GA 30338

RE: Drexel

Dear Sofie:

Enclosed is the revised page for the samples submitted to our laboratory on September 14, 2013. For your reference, these analyses have been assigned our service request number K1309638.

The reporting list for 13255-BW-5 has been corrected.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3376. You may also contact me via Email at Gregory.Salata@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Project Manager

GS/lb

REVISED
6:29 pm, Nov 12, 2013

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Summary Package

Case Narrative

ALS ENVIRONMENTAL

Client:	Environmental Planning Specialist	**Service Request No.:**	K1309638
Project:	Drexel	**Date Received:**	09/14/13
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Twelve water samples were received for analysis at ALS Environmental on 09/14/13. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Calcium for sample 13254-BW-4 were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

EDB and DBCP by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Pesticides and Polychlorinated Biphenyls by EPA Method 508.1

Elevated Detection Limits:
The detection limit was elevated for Heptachlor Epoxide in the samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the normal limit. The results were flagged to indicate the matrix interference.

Matrix Spike Recovery Exceptions:
The control criteria for the matrix spike recovery of Heptachlor Epoxide for sample 13254-BW-4 were not applicable. The chromatogram indicated non-target matrix background components contributed to the reported matrix spike concentrations. Thus, the reported recoveries contained a high bias. Based on the magnitude of background contribution, the interference appeared to be minimal.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ 10/17/13

Chlorinated Acides by EPA Method 515.4

Second Source Exceptions:
The analysis of Chlorinated Acids by EPA Method 515.4 requires the use of dual column confirmation. When the Initial Calibration Verification (ICV) criteria are met for both columns, the lower of the two sample results is generally reported. The data quality was not affected. No further corrective action was necessary.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 525.2

Internal Standard Exceptions:
The control criteria were exceeded for the following Internal Standard in sample 13254-BW-2 due to suspected matrix interferences: Chrysene-d12. The sample contained particulate matter that collected on the extraction disk during sample elution. Historical results have shown that particulate matter can cause low recoveries for this internal standard. The control criteria are designed for drinking water matrices and can only be used as default limits for wastewaters. No further corrective action was appropriate.

Surrogate Exceptions:
The control criteria were exceeded for the following surrogate in several samples due to suspected matrix interferences: Perylene-d12. The sample contained particulate matter that collected on the extraction disk during sample elution. Historical results have shown that particulate matter can cause low recoveries for this surrogate. The control criteria are designed for drinking water matrices and can only be used as default limits for wastewaters. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Benzo(a)pyrene for sample Batch Qc was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

No anomalies associated with the analysis of these samples were observed.

Chlorinated Pesticides by GC/MS/MS

Lab Control Sample Exceptions:
The recoveries of Demeton-O,S, Naled, Monocrotophos, Dimethoate, Fensulfothion, and Azinphos-methyl in the associated Laboratory Control Samples (LCS,DLCS) KWG1310066-1, and KWG1310066-2 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Second Source Exceptions:
The ICV result for Merphos, and Merphos oxone were outside of the %D criteria of 25%. The combined result for Merphos, Total met the criteria. No corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Carbamates by EPA Method 531.1

This analysis was performed at ALS Environmental, Middletown, PA. The data for this analysis is included in the corresponding section of this report.

Approved by _____ 10/17/13

Chain of Custody

ALS Environmental

CHAIN OF CUSTODY
42716

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# K1309638

COC Set____of____

COC#_____

Project Name: Drexel	Project Number:
Project Manager: Timmerly Bullman	
Company: EPS Inc.	
Address: 1050 Crown Pointe Pkwy, Ste 550, Atlanta, GA 30338	
Phone #: 404-315-7113	email: tbullman@epsplanning.com
Sampler Signature:	Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13254-BW-4		9.11.13	1120	GW		X	X	X	X	X	X	X	X	X						
2. 13254-BW-2		9.11.13	1545	GW		X	X	X	X	X	X	X	X	X						
3. TRIP BLANK 2		9.5.13		W		X														
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- __ II. Report Dup., MS, MSD as required
- __ III. CLP Like Summary (no raw data)
- __ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name: Robbin	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9.13.13 1200	Date/Time: 9/14/13 0900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental

CHAIN OF CUSTODY
42716

SR# K1309163S

COC Set____of____

COC#_____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name: Drexel	Project Number:
Project Manager: Timmerly Bultman	
Company: EPS Inc	
Address: 1050 Crown Pointe Pkwy, St. 550 ATL GA 30338	
Phone #: 404-315-9113	email: TBultman@epsnrptenn.org.com
Sampler Signature:	Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13253-BW-3		9.18.13	1030	GW	13	X	X	X	X	X	X	X	X	X						
2. 13253-Well D		9.10.13	1605	GW	13	X	X	X	X	X	X	X	X	X						
3. Trip Blank 1		9.10.13	1200	W	1	X														
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

Report Requirements

- [X] I. Routine Report: Method Blank, Surrogate, as required
- [X] II. Report Dup., MS, MSD as required
- [ ] III. CLP Like Summary (no raw data)
- [ ] IV. Data Validation Report
- [X] V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

- ___ 24 hr. ___ 48 hr.
- ___ 5 Day
- [X] Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc	Firm	Firm	Firm	Firm	Firm
Date/Time: 9.13.13 1200	Date/Time: 9/14/13 900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental

CHAIN OF CUSTODY
42716

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# K1309658

COC Set____of____

COC#_____

Project Name	Drexel
Project Number:	
Project Manager	T. Bellman
Company	EPS Inc.
Address	1050 Crown Pointe Pkwy, St. 550, Atlanta GA
Phone #	404.315.9113
email	tbellman@envplanning.com
Sampler Signature	
Sampler Printed Name	Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13255-BW-5		9.12.13	1125	GW	3			X												
2. 13255-BW-1		9.12.13	1415	GW	13	X	X	X	X	X	X	X	X	X						
3. TRIP BLANK 5		9.5.13		W		X														
4.																				
5.																				
6.																				
7.																				
8. 12																				
9.																				
10.																				

Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 1200 9.13.13	Date/Time: 9/14/13 900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental

CHAIN OF CUSTODY

42716

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# K1309638

COC Set____of____

COC#_____

Project Name	Project Number:
Project Manager	
Company	
Address	
Phone #	email
Sampler Signature	Sampler Printed Name

Project Name: Drexel
Project Manager: Timmerly Bruhman
Company: EPS Inc.
Address: 1650 Crown Pointe Pkwy, St. 550, Atl. GA 30338
Phone #: 404-315-9113
email: TBullman@erydanning.com
Sampler Signature: [signature]
Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13255-DUP		9.12.13		GW	13	X	X	X	X	X	X	X	X	X						
2. 13255-Rinse		9.12.13	1200	W	13	X	X	X	X	X	X	X	X	X						
3. Trip Blank 4		9.5.13		W	1	X														
4.																				
5.																				
6.																				
7.																				
8. 13																				
9.																				
10.																				

Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- __ II. Report Dup., MS, MSD as required
- __ III. CLP Like Summary (no raw data)
- __ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____
Bill To:_____

Turnaround Requirements

____ 24 hr. ____ 48 hr.
____ 5 Day
X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name: BTBullman	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9.13.13 1120	Date/Time: 9/14/13 9:58	Date/Time	Date/Time	Date/Time	Date/Time

PC GS

Cooler Receipt and Preservation Form

Client / Project: EPS Service Request *K13* 9638

Received: 9-14-13 Opened: 9-14-13 By: MJ Unloaded: 9-14-13 By: MJ

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) / N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
1.4	1.5	0.3	0.4	+0.1	340		8037 4336 5086	
1.9	1.9	2.3	2.3	Ø	343		8037 4336 5123	
4.0	3.9	2.1	2.0	-0.1	259		8037 4336 5101	
0.4	0.5	0.2	0.3	+0.1	319		8037 4336 5112	

4. Packing material: *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* MJ 9/14/13 (NA) (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y (N)
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: Most all VOAs have headspace

Page ____ *of* ____

Metals

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialists
Project Name: Drexel
Project No.:

Service Request: K1309638

Sample Name:	Lab Code:
13254-BW-4	K1309638-001
13254-BW-4D	K1309638-001D
13254-BW-4S	K1309638-001S
13254-BW-2	K1309638-002
13253-BW-3	K1309638-004
13253-Well D	K1309638-005
13255-BW-1	K1309638-008
13255-DUP	K1309638-010
13255-Rinse	K1309638-011
Method Blank	K1309638-MB

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/11/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	30.6		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.09	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	95.6		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.027		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.7	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.013	J	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	76400		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	2.27		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.063		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.80		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	141		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.123		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	1140		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	6.70		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.17		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.70		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	647		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	3060		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	63.4		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	5.2		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.749		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.95		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/11/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	4.0	0.4	1.0	09/27/13	10/04/13	4760		
Antimony	200.8	0.10	0.02	1.0	09/27/13	10/04/13	0.02	J	
Arsenic	200.8	1.00	0.10	1.0	09/27/13	10/04/13	6.02		
Barium	200.8	0.10	0.01	1.0	09/27/13	10/04/13	226		
Beryllium	200.8	0.040	0.016	1.0	09/27/13	10/04/13	3.970		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	12.4	J	
Cadmium	200.8	0.040	0.010	1.0	09/27/13	10/04/13	1.72		
Calcium	200.7	200	9.0	10.0	09/25/13	09/26/13	874000		
Chromium	200.8	0.40	0.04	1.0	09/27/13	10/04/13	144		
Cobalt	200.8	0.040	0.012	1.0	09/27/13	10/04/13	49.1		
Copper	200.8	0.20	0.06	1.0	09/27/13	10/04/13	14.1		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	12900		
Lead	200.8	0.040	0.004	1.0	09/27/13	10/04/13	15.5		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	3300		
Manganese	200.8	0.10	0.01	1.0	09/27/13	10/04/13	1300		
Molybdenum	200.8	0.10	0.02	1.0	09/27/13	10/04/13	3.19		
Nickel	200.8	0.40	0.08	1.0	09/27/13	10/04/13	94.3		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	1110		
Selenium	200.8	2.0	0.8	1.0	09/27/13	10/04/13	10.5		
Silver	200.8	0.040	0.010	1.0	09/27/13	10/04/13	4.04		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	3790		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	355		
Thallium	200.8	0.040	0.004	1.0	09/27/13	10/04/13	0.313		
Tin	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.08	J	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	109		
Vanadium	200.8	0.400	0.100	1.0	09/27/13	10/04/13	25.4		
Zinc	200.8	1.00	0.18	1.0	09/27/13	10/04/13	23.0		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/10/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	11.7		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.09	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	118		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.031		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.2	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	54700		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	1.46		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.019	J	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.63		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	16.7	J	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.045		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	717		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	2.21		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.16		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.37		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	265		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	2440		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	51.6		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.003	J	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	2.2		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.742		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.04		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/10/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13253-Well D
Lab Code: K1309638-005

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	30.8		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.39	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	101		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.082		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.9	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.006	J	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	60800		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	1.66		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.203		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.66		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	983		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.140		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	1210		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	15.5		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.11		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.66		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	455		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	1.0		
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1930		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	98.3		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.005	J	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	6.6		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.780		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	13.0		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/12/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	23.9		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.12	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	87.9		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.026		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	6.4	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.082		
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	92000		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	3.79		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.573		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.57		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	74.6		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.153		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	713		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	43.1		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.32		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	1.57		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	245		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.062		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1810		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	59.5		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.049		
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	4.3		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.100		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.85		

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/12/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13255-DUP **Lab Code:** K1309638-010

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	23.2		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.10	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	90.6		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.019	J	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	6.5	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.052		
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	78800		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	3.63		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.493		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.59		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	58.0		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.114		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	701		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	27.8		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.31		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	1.54		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	283		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.041		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1840		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	55.6		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.052		
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	4.1		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.030		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.47		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/12/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	2.1		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.05	U	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.02	J	
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.008	U	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	4.0	U	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	16.6	J	
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.09	J	
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.006	U	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.09	J	
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	3.0	U	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	0.3	U	
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.02	J	
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.10	J	
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	60.0	U	
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	20.0	U	
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	0.16	J	
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	0.8	U	
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.050	U	
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	0.30	J	

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Date Collected:**

Project Name: Drexel **Date Received:**

Matrix: WATER **Units:** ug/L

Basis: NA

Sample Name: Method Blank **Lab Code:** K1309638-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	0.3	J	
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.05	U	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.008	U	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	4.0	U	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	0.9	U	
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.02	U	
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.006	U	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.03	U	
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	3.0	U	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	0.3	U	
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	J	
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.04	U	
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	60.0	U	
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	20.0	U	
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	0.09	U	
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	0.8	U	
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.050	U	
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	0.13	J	

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Units:** UG/L

Project Name: Drexel **Basis:** NA

Matrix: WATER

Sample Name: 13254-BW-4S **Lab Code:** K1309638-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	70 - 130	125.3		30.6		100.0	94.7		200.8
Antimony	70 - 130	54.08		0.01	U	50.0	108.2		200.8
Arsenic	70 - 130	50.82		0.09	J	50.0	101.5		200.8
Barium	70 - 130	202.00		95.58		100.0	106.4		200.8
Beryllium	70 - 130	2.401		0.027		2.5	95.0		200.8
Boron	70 - 130	991		8.7	J	1000.00	98.2		200.7
Cadmium	70 - 130	24.313		0.013	J	25.0	97.2		200.8
Calcium		85300		76400		10000.00	89.0		200.7
Chromium	70 - 130	12.85		2.27		10.0	105.8		200.8
Cobalt	70 - 130	25.093		0.063		25.0	100.1		200.8
Copper	70 - 130	12.49		0.80		12.5	93.5		200.8
Iron	70 - 130	1180		141		1000.00	103.9		200.7
Lead	70 - 130	49.865		0.123		50.0	99.5		200.8
Magnesium	70 - 130	11000		0.3	U	10000.00	110.0		200.7
Manganese	70 - 130	32.24		6.70		25.0	102.2		200.8
Molybdenum	70 - 130	21.14		0.17		20.0	104.8		200.8
Nickel	70 - 130	25.22		0.70		25.0	98.1		200.8
Potassium	70 - 130	10600		647		10000.00	99.5		200.7
Selenium	70 - 130	51.9		0.4	U	50.0	103.8		200.8
Silver	70 - 130	12.677		0.005	U	12.5	101.4		200.8
Sodium	70 - 130	12900		3060		10000.00	98.4		200.7
Strontium	70 - 130	10000		63.4		10000.00	99.4		200.7
Thallium	70 - 130	52.321		0.002	U	50.0	104.6		200.8
Tin	70 - 130	18.521		0.010	U	20.0	92.6		200.8
Titanium	70 - 130	10200		5.2		10000.00	101.9		200.7
Vanadium	70 - 130	26.837		0.749		25.0	104.4		200.8
Zinc	70 - 130	26.79		1.95		25.0	99.4		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Units:** UG/L

Project Name: Drexel **Basis:** NA

Matrix: WATER

Sample Name: 13254-BW-4D **Lab Code:** K1309638-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	30.6		31.6		3.2		200.8
Antimony		0.01	U	0.01	U			200.8
Arsenic		0.09	J	0.10	J	10.5		200.8
Barium	20	95.58		95.39		0.2		200.8
Beryllium		0.027		0.027		0.0		200.8
Boron		8.7	J	7.2	J	18.9		200.7
Cadmium		0.013	J	0.013	J	0.0		200.8
Calcium	20	76400		75900		0.7		200.7
Chromium	20	2.27		2.29		0.9		200.8
Cobalt		0.063		0.061		3.2		200.8
Copper	20	0.80		0.75		6.5		200.8
Iron	20	141		135		4.3		200.7
Lead	20	0.123		0.127		3.2		200.8
Magnesium	20	1140		1120		1.8		200.7
Manganese	20	6.70		6.72		0.3		200.8
Molybdenum		0.17		0.17		0.0		200.8
Nickel		0.70		0.71		1.4		200.8
Potassium		647		642		0.8		200.7
Selenium		0.4	U	0.4	U			200.8
Silver		0.005	U	0.005	U			200.8
Sodium	20	3060		2970		3.0		200.7
Strontium	20	63.4		61.0		3.9		200.7
Thallium		0.002	U	0.003	J	200.0		200.8
Tin		0.010	U	0.010	U			200.8
Titanium		5.2		4.3		18.9		200.7
Vanadium		0.749		0.711		5.2		200.8
Zinc		1.95		2.15		9.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	100.0	100.9	100.9					
Antimony	50.0	55.2	110.4					
Arsenic	50.0	50.2	100.4					
Barium	100.0	103.8	103.8					
Beryllium	2.5	2.5	100.0					
Boron	1000	977	97.7					
Cadmium	25.0	25.7	102.8					
Calcium	12500	12300	98.4					
Chromium	10.0	10.0	100.0					
Cobalt	25.0	24.5	98.0					
Copper	12.5	12.3	98.4					
Iron	2500	2480	99.2					
Lead	50.0	52.4	104.8					
Magnesium	12500	12400	99.2					
Manganese	25.0	25.1	100.4					
Molybdenum	20.0	19.9	99.5					
Nickel	25.0	24.6	98.4					
Potassium	12500	12200	97.6					
Selenium	50.0	54.1	108.2					
Silver	12.5	12.8	102.4					
Sodium	12500	12200	97.6					
Strontium	10000	9760	97.6					
Thallium	50.0	53.2	106.4					
Tin	20.0	21.1	105.5					
Titanium	10000	9990	99.9					
Vanadium	25.0	23.5	94.0					
Zinc	25.0	26.6	106.4					

EPA Method 504.1

Organic Analysis:
EPA Method 504.1

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Cover Page - Organic Analysis Data Package
EPA Method 504.1

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
13255-BW-5	K1309638-007	09/12/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013
13254-BW-4MS	KWG1310054-1	09/11/2013	09/14/2013
13254-BW-4DMS	KWG1310054-2	09/11/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Lora E Portnoy

Name: Lora Portnoy

Date: 10/10/13

Title:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0095	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.096	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0095	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0095	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.096	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0095	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-BW-5
Lab Code: K1309638-007

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.10**		0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	

Comments:

REVISED
6:28 pm, Nov 12, 2013

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.19**		0.0097	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.098	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0097	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.19**		0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.098	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0097	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1310054-5

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	09/16/13	09/16/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.10	0.037	1	09/16/13	09/16/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0099	0.00360	1	09/16/13	09/16/13	KWG1310054	

Comments:

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/17/2013

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310054

		13254-BW-4MS KWG1310054-1 Matrix Spike			13254-BW-4DMS KWG1310054-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,2-Dibromoethane (EDB)	ND	0.249	0.242	103	0.253	0.245	103	65-135	2	30
1,2,3-Trichloropropane	ND	0.233	0.242	97	0.238	0.245	97	65-135	2	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.222	0.242	92	0.232	0.245	95	65-135	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310054

	Lab Control Sample KWG1310054-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.254	0.250	102	70-130
1,2,3-Trichloropropane	0.237	0.250	95	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.232	0.250	93	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310054

	Lab Control Sample KWG1310054-4 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.250	0.250	100	70-130
1,2,3-Trichloropropane	0.239	0.250	95	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.230	0.250	92	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013
Time Analyzed: 23:18

Method Blank Summary
EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1310054-5

Instrument ID: GC33
File ID: J:\GC33\DATA\091613-504\0916015.D

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low
Extraction Lot: KWG1310054

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310054-3	J:\GC33\DATA\091613-504\0916013.D	09/16/13	22:28
Lab Control Sample	KWG1310054-4	J:\GC33\DATA\091613-504\0916014.D	09/16/13	22:53
13254-BW-4	K1309638-001	J:\GC33\DATA\091613-504\0916022.D	09/17/13	02:13
13254-BW-4MS	KWG1310054-1	J:\GC33\DATA\091613-504\0916023.D	09/17/13	02:38
13254-BW-4DMS	KWG1310054-2	J:\GC33\DATA\091613-504\0916024.D	09/17/13	03:04
13254-BW-2	K1309638-002	J:\GC33\DATA\091613-504\0916027.D	09/17/13	04:19
13253-BW-3	K1309638-004	J:\GC33\DATA\091613-504\0916028.D	09/17/13	04:44
13253-Well D	K1309638-005	J:\GC33\DATA\091613-504\0916029.D	09/17/13	05:09
13255-BW-5	K1309638-007	J:\GC33\DATA\091613-504\0916030.D	09/17/13	05:34
13255-BW-1	K1309638-008	J:\GC33\DATA\091613-504\0916031.D	09/17/13	05:59
13255-DUP	K1309638-010	J:\GC33\DATA\091613-504\0916032.D	09/17/13	06:25
13255-Rinse	K1309638-011	J:\GC33\DATA\091613-504\0916033.D	09/17/13	06:50

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/16/2013
Sample Matrix:	Water	**Date Analyzed:**	09/16/2013
		Time Analyzed:	22:28

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1310054-3	**File ID:**	J:\GC33\DATA\091613-504\0916013.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1310054

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310054-5	J:\GC33\DATA\091613-504\0916015.D	09/16/13	23:18

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013
Time Analyzed: 22:53

Lab Control Sample Summary
EPA Method 504.1

Sample Name: Lab Control Sample
Lab Code: KWG1310054-4

Extraction Method: METHOD
Analysis Method: 504.1

Instrument ID: GC33
File ID: J:\GC33\DATA\091613-504\0916014.D

Level: Low
Extraction Lot: KWG1310054

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
13254-BW-4	K1309638-001	J:\GC33\DATA\091613-504\0916022.D	09/17/13	02:13
13254-BW-4MS	KWG1310054-1	J:\GC33\DATA\091613-504\0916023.D	09/17/13	02:38
13254-BW-4DMS	KWG1310054-2	J:\GC33\DATA\091613-504\0916024.D	09/17/13	03:04
13254-BW-2	K1309638-002	J:\GC33\DATA\091613-504\0916027.D	09/17/13	04:19
13253-BW-3	K1309638-004	J:\GC33\DATA\091613-504\0916028.D	09/17/13	04:44
13253-Well D	K1309638-005	J:\GC33\DATA\091613-504\0916029.D	09/17/13	05:09
13255-BW-5	K1309638-007	J:\GC33\DATA\091613-504\0916030.D	09/17/13	05:34
13255-BW-1	K1309638-008	J:\GC33\DATA\091613-504\0916031.D	09/17/13	05:59
13255-DUP	K1309638-010	J:\GC33\DATA\091613-504\0916032.D	09/17/13	06:25
13255-Rinse	K1309638-011	J:\GC33\DATA\091613-504\0916033.D	09/17/13	06:50

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID
A	J:\GC33\Data\091213-504\0912009.D
B	J:\GC33\Data\091213-504\0912010.D
C	J:\GC33\Data\091213-504\0912011.D
D	J:\GC33\Data\091213-504\0912012.D
E	J:\GC33\Data\091213-504\0912013.D
F	J:\GC33\Data\091213-504\0912014.D
G	J:\GC33\Data\091213-504\0912015.D
H	J:\GC33\Data\091213-504\0912016.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.20E+7	B	0.13	1.33E+7	C	0.25	1.48E+7	D	0.63	1.51E+7	E	1.3	1.53E+7
	F	3.8	1.54E+7	G	5.0	1.53E+7	H	10	1.43E+7						
1,2,3-Trichloropropane										D	0.63	2.20E+6	E	1.3	2.14E+6
	F	3.8	2.06E+6	G	5.0	2.08E+6	H	10	1.88E+6						
1,2-Dibromo-3-chloropropane (DBCP	A	0.075	3.54E+7	B	0.13	3.04E+7	C	0.25	2.94E+7	D	0.63	2.77E+7	E	1.3	2.72E+7
	F	3.8	2.76E+7	G	5.0	2.91E+7	H	10	2.76E+7						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	8.3		≤ 20
1,2,3-Trichloropropane	MS	AverageRF	% RSD	5.8		≤ 20
1,2-Dibromo-3-chloropropane (DBCP)	MS	AverageRF	% RSD	9.2		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013
Date Analyzed: 09/12/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12774
Units: ppb

File ID: J:\GC33\Data\091213-504\0912017.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14800000	3	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2190000	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	29300000	28400000	-3	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID
A	J:\GC33\Data\091213-504\0912009.D\0912009c.d
B	J:\GC33\Data\091213-504\0912010.D\0912010c.d
C	J:\GC33\Data\091213-504\0912011.D\0912011c.d
D	J:\GC33\Data\091213-504\0912012.D\0912012c.d
E	J:\GC33\Data\091213-504\0912013.D\0912013c.d
F	J:\GC33\Data\091213-504\0912014.D\0912014c.d
G	J:\GC33\Data\091213-504\0912015.D\0912015c.d
H	J:\GC33\Data\091213-504\0912016.D\0912016c.d

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	2.14E+6	B	0.13	1.97E+6	C	0.25	2.43E+6	D	0.63	2.41E+6	E	1.3	2.28E+6
	F	3.8	2.27E+6	G	5.0	2.25E+6	H	10	2.28E+6						
1,2,3-Trichloropropane										D	0.63	5.43E+5	E	1.3	3.74E+5
	F	3.8	3.12E+5	G	5.0	3.06E+5	H	10	3.19E+5						
1,2-Dibromo-3-chloropropane (DBCP	A	0.075	5.18E+6	B	0.13	4.49E+6	C	0.25	5.18E+6	D	0.63	5.00E+6	E	1.3	4.72E+6
	F	3.8	4.58E+6	G	5.0	4.55E+6	H	10	4.92E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	6.6		≤ 20
1,2,3-Trichloropropane	MS	Linear	R2	0.995		≥ 0.99
1,2-Dibromo-3-chloropropane (DBCP)	MS	AverageRF	% RSD	5.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013
Date Analyzed: 09/12/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12774
Units: ppb

File ID: J:\GC33\Data\091213-504\0912017.D\0912017c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	2250000	2180000	-3	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.1	371000	369000	NA	-10	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	4830000	4720000	-2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/16/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916011.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14700000	2	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2100000	1	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.1	29300000	26400000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/16/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916011.D\0916011C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.5	2250000	2620000	16	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.4	371000	444000	NA	16	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.3	4830000	5190000	7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916025.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.4	14400000	15600000	8	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	5.0	5.2	2070000	2150000	4	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	5.0	5.1	29300000	29800000	2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb
Column ID: RTX-CLP2

File ID: J:\GC33\DATA\091613-504\0916025.D\0916025C.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.9	2250000	2660000	18	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	5.0	6.1	371000	383000	NA	22	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	5.0	5.9	4830000	5690000	18	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916035.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14700000	1	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2160000	4	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	29300000	27200000	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916035.D\0916035C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	2250000	2560000	14	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.5	371000	449000	NA	17	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.4	4830000	5240000	8	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Analysis Run Log
EPA Method 504.1

Analysis Method: 504.1

Analysis Lot: KWG1310084
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0916011.D	Continuing Calibration Verification	KWG1310084-1	9/16/2013	21:37		9/16/2013	21:56
\0916013.D	Lab Control Sample	KWG1310054-3	9/16/2013	22:28		9/16/2013	22:46
\0916014.D	Lab Control Sample	KWG1310054-4	9/16/2013	22:53		9/16/2013	23:11
\0916015.D	Method Blank	KWG1310054-5	9/16/2013	23:18		9/16/2013	23:36
\0916016.D	ZZZZZZ	ZZZZZZ	9/16/2013	23:43		9/17/2013	00:01
\0916017.D	ZZZZZZ	ZZZZZZ	9/17/2013	00:08		9/17/2013	00:26
\0916018.D	ZZZZZZ	ZZZZZZ	9/17/2013	00:33		9/17/2013	00:52
\0916019.D	ZZZZZZ	ZZZZZZ	9/17/2013	00:58		9/17/2013	01:17
\0916020.D	ZZZZZZ	ZZZZZZ	9/17/2013	01:23		9/17/2013	01:42
\0916021.D	ZZZZZZ	ZZZZZZ	9/17/2013	01:48		9/17/2013	02:07
\0916022.D	13254-BW-4	K1309638-001	9/17/2013	02:13		9/17/2013	02:32
\0916023.D	13254-BW-4MS	KWG1310054-1	9/17/2013	02:38		9/17/2013	02:57
\0916024.D	13254-BW-4DMS	KWG1310054-2	9/17/2013	03:04		9/17/2013	03:22
\0916025.D	Continuing Calibration Verification	KWG1310084-2	9/17/2013	03:29		9/17/2013	03:47
\0916027.D	13254-BW-2	K1309638-002	9/17/2013	04:19		9/17/2013	04:37
\0916028.D	13253-BW-3	K1309638-004	9/17/2013	04:44		9/17/2013	05:02
\0916029.D	13253-Well D	K1309638-005	9/17/2013	05:09		9/17/2013	05:28
\0916030.D	13255-BW-5	K1309638-007	9/17/2013	05:34		9/17/2013	05:53
\0916031.D	13255-BW-1	K1309638-008	9/17/2013	05:59		9/17/2013	06:18
\0916032.D	13255-DUP	K1309638-010	9/17/2013	06:25		9/17/2013	06:43
\0916033.D	13255-Rinse	K1309638-011	9/17/2013	06:50		9/17/2013	07:08
\0916034.D	ZZZZZZ	ZZZZZZ	9/17/2013	07:15		9/17/2013	07:33
\0916035.D	Continuing Calibration Verification	KWG1310084-3	9/17/2013	07:40		9/17/2013	07:59

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013

Extraction Prep Log
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Extraction Lot: KWG1310054
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	36.53ml	2ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	36.16ml	2ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	36.56ml	2ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	36.34ml	2ml	NA	
13255-BW-5	K1309638-007	09/12/13	09/14/13	36.35ml	2ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	35.88ml	2ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	36.23ml	2ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	36.08ml	2ml	NA	
Method Blank	KWG1310054-5	NA	NA	35.00ml	2ml	NA	
13254-BW-4MS	KWG1310054-1	09/11/13	09/14/13	36.18ml	2ml	NA	
13254-BW-4DMS	KWG1310054-2	09/11/13	09/14/13	35.70ml	2ml	NA	
Lab Control Sample	KWG1310054-3	NA	NA	35.00ml	2ml	NA	
Lab Control Sample	KWG1310054-4	NA	NA	35.00ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/16/2013

EPA Method 504.1

Sample Name: 13255-BW-5
Lab Code: K1309638-007

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.10	0.11	9.5		1	09/17/13
1,2-Dibromo-3-chloropropane (DBCP	0.0096	0.00360	0.019	0.020	5.1		1	09/17/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/16/2013

EPA Method 504.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0097	0.00300	0.19	0.19	0.0		1	09/17/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/16/2013

EPA Method 504.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
1,2-Dibromoethane (EDB)	0.0096	0.00300	0.19	0.22	14.6		1	09/17/13

Pesticides/PCBs

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Cover Page - Organic Analysis Data Package
Pesticides/PCBs by EPA method 508.1

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013
13254-BW-4MS	KWG1310289-1	09/11/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Tom E Attwood

Name: Tom D Attwood

Date: 10/15/13

Title:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.029	0.029	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	101	70-130	09/26/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.13	0.13	5	09/20/13	10/08/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	**0.0046**	J	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	**0.0079**	J	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	101	70-130	09/26/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.092	0.092	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	96	70-130	09/26/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13253-Well D
Lab Code: K1309638-005

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.041	0.041	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	99	70-130	09/26/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.025	0.025	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	**0.0012**	JP	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	100	70-130	09/27/13	Acceptable

Comments:

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.016	0.016	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	**0.0011**	JP	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	98	70-130	09/27/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.013	0.013	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	**0.19**	P	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	92	70-130	09/27/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Pesticides/PCBs by EPA method 508.1

Sample Name: Method Blank
Lab Code: KWG1310289-5

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.010	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.010	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	U	0.010	0.00060	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	**0.0029**	JP	0.010	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.010	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.010	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.010	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.050	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.10	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.10	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	99	70-130	09/26/13	Acceptable

Comments:

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Pesticides/PCBs by EPA method 508.1

Extraction Method: METHOD
Analysis Method: 508.1

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
13254-BW-4	K1309638-001	101
13254-BW-2	K1309638-002	101
13253-BW-3	K1309638-004	96
13253-Well D	K1309638-005	99
13255-BW-1	K1309638-008	100
13255-DUP	K1309638-010	98
13255-Rinse	K1309638-011	92
Method Blank	KWG1310289-5	99
13254-BW-4MS	KWG1310289-1	93
Lab Control Sample	KWG1310289-3	89

Surrogate Recovery Control Limits (%)

Sur1 = 4,4'-Dibromooctafluorobiphenyl 70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013

Matrix Spike Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310289

13254-BW-4MS
KWG1310289-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
gamma-BHC (Lindane)	ND	0.0893	0.0971	92	65-135
Heptachlor	ND	0.0923	0.0971	95	65-135
Heptachlor Epoxide	ND	0.102	0.0971	105 #	65-135
gamma-Chlordane	ND	0.0948	0.0971	98	65-135
alpha-Chlordane	ND	0.0947	0.0971	98	65-135
Endrin	ND	0.102	0.0971	105	65-135
Methoxychlor	ND	0.120	0.0971	124	65-135
Aroclor 1248	ND	0.433	0.485	89	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013

Lab Control Spike Summary
Pesticides/PCBs by EPA method 508.1

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310289

Lab Control Sample
KWG1310289-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
gamma-BHC (Lindane)	0.0917	0.100	92	70-130
Heptachlor	0.0982	0.100	98	70-130
Heptachlor Epoxide	0.0996	0.100	100	70-130
gamma-Chlordane	0.0979	0.100	98	70-130
alpha-Chlordane	0.0982	0.100	98	70-130
Endrin	0.107	0.100	107	70-130
Methoxychlor	0.116	0.100	116	70-130
Aroclor 1248	0.449	0.500	90	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013
Time Analyzed: 20:42

Method Blank Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: Method Blank
Lab Code: KWG1310289-5

Instrument ID: GC33
File ID: J:\GC33\DATA\092613-508\0926012.D

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low
Extraction Lot: KWG1310289

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310289-3	J:\GC33\DATA\092613-508\0926010.D	09/26/13	19:48
Lab Control Sample	KWG1310289-3	J:\GC33\DATA\092613-508\0926011.D	09/26/13	20:15
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013
Time Analyzed: 19:48

Lab Control Sample Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: Lab Control Sample
Lab Code: KWG1310289-3

Extraction Method: METHOD
Analysis Method: 508.1

Instrument ID: GC33
File ID: J:\GC33\DATA\092613-508\0926010.D

Level: Low
Extraction Lot: KWG1310289

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310289-5	J:\GC33\DATA\092613-508\0926012.D	09/26/13	20:42
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013
Time Analyzed: 20:15

Lab Control Sample Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: Lab Control Sample
Lab Code: KWG1310289-3

Extraction Method: METHOD
Analysis Method: 508.1

Instrument ID: GC33
File ID: J:\GC33\DATA\092613-508\0926011.D

Level: Low
Extraction Lot: KWG1310289

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310289-5	J:\GC33\DATA\092613-508\0926012.D	09/26/13	20:42
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID
A	J:\GC33\Data\081513-ICAL2\0815104.D
B	J:\GC33\Data\081513-ICAL2\0815105.D
C	J:\GC33\Data\081513-ICAL2\0815106.D
D	J:\GC33\Data\081513-ICAL2\0815107.D
E	J:\GC33\Data\081513-ICAL2\0815108.D
F	J:\GC33\Data\081513-ICAL2\0815109.D
G	J:\GC33\Data\081513-ICAL2\0815111.D
H	J:\GC33\Data\081513-ICAL2\0815112.D
I	J:\GC33\Data\081513-ICAL2\0815113.D
J	J:\GC33\Data\081513-ICAL2\0815114.D
K	J:\GC33\Data\081513-ICAL2\0815115.D
L	J:\GC33\Data\081513-ICAL2\0815116.D
M	J:\GC33\Data\081513-ICAL2\0815118.D
N	J:\GC33\Data\081513-ICAL2\0815119.D
O	J:\GC33\Data\081513-ICAL2\0815120.D
P	J:\GC33\Data\081513-ICAL2\0815121.D
Q	J:\GC33\Data\081513-ICAL2\0815122.D
R	J:\GC33\Data\081513-ICAL2\0815123.D
S	J:\GC33\Data\081513-ICAL2\0815125.D
T	J:\GC33\Data\081513-ICAL2\0815126.D
U	J:\GC33\Data\081513-ICAL2\0815127.D
V	J:\GC33\Data\081513-ICAL2\0815128.D
W	J:\GC33\Data\081513-ICAL2\0815129.D
X	J:\GC33\Data\081513-ICAL2\0815130.D
Y	J:\GC33\Data\081513-ICAL2\0815132.D
Z	J:\GC33\Data\081513-ICAL2\0815133.D
AA	J:\GC33\Data\081513-ICAL2\0815134.D
AB	J:\GC33\Data\081513-ICAL2\0815135.D
AC	J:\GC33\Data\081513-ICAL2\0815136.D
AD	J:\GC33\Data\081513-ICAL2\0815137.D
AE	J:\GC33\Data\081513-ICAL2\0815139.D
AF	J:\GC33\Data\081513-ICAL2\0815140.D
AG	J:\GC33\Data\081513-ICAL2\0815141.D
AH	J:\GC33\Data\081513-ICAL2\0815142.D
AI	J:\GC33\Data\081513-ICAL2\0815143.D
AJ	J:\GC33\Data\081513-ICAL2\0815144.D
AK	J:\GC33\Data\081513-ICAL2\0815146.D
AL	J:\GC33\Data\081513-ICAL2\0815147.D
AM	J:\GC33\Data\081513-ICAL2\0815148.D
AN	J:\GC33\Data\081513-ICAL2\0815149.D
AO	J:\GC33\Data\081513-ICAL2\0815150.D
AP	J:\GC33\Data\081513-ICAL2\0815151.D
AQ	J:\GC33\Data\081513-ICAL2\0815153.D
AR	J:\GC33\Data\081513-ICAL2\0815154.D
AS	J:\GC33\Data\081513-ICAL2\0815155.D
AT	J:\GC33\Data\081513-ICAL2\0815156.D
AU	J:\GC33\Data\081513-ICAL2\0815157.D
AV	J:\GC33\Data\081513-ICAL2\0815158.D
AW	J:\GC33\Data\081513-ICAL2\0815159.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
4,4'-Dibromooctafluorobiphenyl															
							AQ	2.0	0.321	AR	5.0	0.328	AS	20	0.323
	AT	50	0.326	AU	75	0.328	AV	100	0.325	AW	200	0.313			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
gamma-BHC (Lindane)							AQ	2.0	0.288	AR	5.0	0.310	AS	20	0.351
	AT	50	0.380	AU	75	0.393	AV	100	0.398	AW	200	0.399			
Heptachlor							AQ	2.0	0.289	AR	5.0	0.292	AS	20	0.312
	AT	50	0.323	AU	75	0.329	AV	100	0.325	AW	200	0.310			
Heptachlor Epoxide							AQ	2.0	0.245	AR	5.0	0.258	AS	20	0.266
	AT	50	0.268	AU	75	0.270	AV	100	0.266	AW	200	0.252			
gamma-Chlordane							AQ	2.0	0.246	AR	5.0	0.251	AS	20	0.259
	AT	50	0.265	AU	75	0.271	AV	100	0.268	AW	200	0.258			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
alpha-Chlordane															
							AQ	2.0	0.240	AR	5.0	0.246	AS	20	0.247
	AT	50	0.251	AU	75	0.255	AV	100	0.252	AW	200	0.242			
Endrin															
							AQ	2.0	0.149	AR	5.0	0.156	AS	20	0.163
	AT	50	0.174	AU	75	0.179	AV	100	0.185	AW	200	0.185			
Methoxychlor															
							AQ	2.0	0.0668	AR	5.0	0.0721	AS	20	0.0704
	AT	50	0.0706	AU	75	0.0706	AV	100	0.0710	AW	200	0.0709			
Aroclor 1016															
							M	25	0.0306	N	50	0.0310	O	200	0.0322
	P	500	0.0293	Q	1000	0.0275	R	2000	0.0254						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1221															
										S	50	0.0141	T	100	0.0137
	U	200	0.0141	V	500	0.0133	W	1000	0.0128	X	2000	0.0118			
Aroclor 1232															
													Y	50	0.0193
	Z	100	0.0191	AA	200	0.0191	AB	500	0.0185	AC	1000	0.0180	AD	2000	0.0166
Aroclor 1242															
	AE	50	0.0145	AF	100	0.0146	AG	200	0.0144	AH	500	0.0142	AI	1000	0.0140
	AJ	2000	0.0134												
Aroclor 1248															
				AK	50	0.0259	AL	100	0.0252	AM	200	0.0244	AN	500	0.0239
	AO	1000	0.0229	AP	2000	0.0220									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1254										S	50	0.0336	T	100	0.0315
	U	200	0.0304	V	500	0.0289	W	1000	0.0280	X	2000	0.0270			
Aroclor 1260							M	25	0.0370	N	50	0.0353	O	200	0.0352
	P	500	0.0315	Q	1000	0.0308	R	2000	0.0300						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4,4'-Dibromooctafluorobiphenyl	SURR	AverageRF	% RSD	1.6		≤ 30	0.323		
gamma-BHC (Lindane)	MS	Linear	R2	0.999		≥ 0.990	0.360		
Heptachlor	MS	AverageRF	% RSD	5.0		≤ 30	0.312		
Heptachlor Epoxide	MS	AverageRF	% RSD	3.5		≤ 30	0.261		
gamma-Chlordane	MS	AverageRF	% RSD	3.4		≤ 30	0.260		
alpha-Chlordane	MS	AverageRF	% RSD	2.1		≤ 30	0.248		
Endrin	MS	AverageRF	% RSD	8.5		≤ 30	0.170		
Methoxychlor	MS	AverageRF	% RSD	2.3		≤ 30	0.0703		
Aroclor 1016	TRG	Linear	R2	0.995		≥ 0.990	0.0293		
Aroclor 1221	TRG	Linear	R2	0.997		≥ 0.990	0.0133		
Aroclor 1232	TRG	AverageRF	% RSD	5.4		≤ 30	0.0184		
Aroclor 1242	TRG	AverageRF	% RSD	3.3		≤ 30	0.0142		
Aroclor 1248	MS	AverageRF	% RSD	5.9		≤ 30	0.0241		
Aroclor 1254	TRG	Linear	R2	0.999		≥ 0.990	0.0299		
Aroclor 1260	TRG	Linear	R2	0.999		≥ 0.990	0.0333		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/16/2013 - 08/17/2013

Second Source Calibration Verification
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration ID: CAL12714
Units: ug/L

File ID:
J:\GC33\Data\081513-ICAL2\0815110.D
J:\GC33\Data\081513-ICAL2\0815117.D
J:\GC33\Data\081513-ICAL2\0815124.D
J:\GC33\Data\081513-ICAL2\0815138.D
J:\GC33\Data\081513-ICAL2\0815160.D
J:\GC33\Data\081513-ICAL2\0815164.D
J:\GC33\Data\081513-ICAL2\0815165.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	50	51	0.360	0.396	NA	1	± 30 %	Linear
Heptachlor	50	53	0.312	0.327	5	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	53	0.261	0.274	5	NA	± 30 %	AverageRF
gamma-Chlordane	50	52	0.260	0.271	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52	0.248	0.257	4	NA	± 30 %	AverageRF
Endrin	50	53	0.170	0.180	6	NA	± 30 %	AverageRF
Methoxychlor	50	51	0.0703	0.0711	1	NA	± 30 %	AverageRF
Aroclor 1016	500	480	0.0293	0.0259	NA	-4	± 30 %	Linear
Aroclor 1232	500	510	0.0184	0.0187	1	NA	± 30 %	AverageRF
Aroclor 1242	500	480	0.0142	0.0135	-5	NA	± 30 %	AverageRF
Aroclor 1248	500	450	0.0241	0.0218	-9	NA	± 30 %	AverageRF
Aroclor 1260	500	610	0.0333	0.0376	NA	22	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID
A	J:\GC33\Data\081513-ICAL2\0815104.D\0815104c.d
B	J:\GC33\Data\081513-ICAL2\0815105.D\0815105c.d
C	J:\GC33\Data\081513-ICAL2\0815106.D\0815106c.d
D	J:\GC33\Data\081513-ICAL2\0815107.D\0815107c.d
E	J:\GC33\Data\081513-ICAL2\0815108.D\0815108c.d
F	J:\GC33\Data\081513-ICAL2\0815109.D\0815109c.d
G	J:\GC33\Data\081513-ICAL2\0815111.D\0815111c.d
H	J:\GC33\Data\081513-ICAL2\0815112.D\0815112c.d
I	J:\GC33\Data\081513-ICAL2\0815113.D\0815113c.d
J	J:\GC33\Data\081513-ICAL2\0815114.D\0815114c.d
K	J:\GC33\Data\081513-ICAL2\0815115.D\0815115c.d
L	J:\GC33\Data\081513-ICAL2\0815116.D\0815116c.d
M	J:\GC33\Data\081513-ICAL2\0815118.D\0815118c.d
N	J:\GC33\Data\081513-ICAL2\0815119.D\0815119c.d
O	J:\GC33\Data\081513-ICAL2\0815120.D\0815120c.d
P	J:\GC33\Data\081513-ICAL2\0815121.D\0815121c.d
Q	J:\GC33\Data\081513-ICAL2\0815122.D\0815122c.d
R	J:\GC33\Data\081513-ICAL2\0815123.D\0815123c.d
S	J:\GC33\Data\081513-ICAL2\0815125.D\0815125c.d
T	J:\GC33\Data\081513-ICAL2\0815126.D\0815126c.d
U	J:\GC33\Data\081513-ICAL2\0815127.D\0815127c.d
V	J:\GC33\Data\081513-ICAL2\0815128.D\0815128c.d
W	J:\GC33\Data\081513-ICAL2\0815129.D\0815129c.d
X	J:\GC33\Data\081513-ICAL2\0815130.D\0815130c.d
Y	J:\GC33\Data\081513-ICAL2\0815132.D\0815132c.d
Z	J:\GC33\Data\081513-ICAL2\0815133.D\0815133c.d
AA	J:\GC33\Data\081513-ICAL2\0815134.D\0815134c.d
AB	J:\GC33\Data\081513-ICAL2\0815135.D\0815135c.d
AC	J:\GC33\Data\081513-ICAL2\0815136.D\0815136c.d
AD	J:\GC33\Data\081513-ICAL2\0815137.D\0815137c.d
AE	J:\GC33\Data\081513-ICAL2\0815139.D\0815139c.d
AF	J:\GC33\Data\081513-ICAL2\0815140.D\0815140c.d
AG	J:\GC33\Data\081513-ICAL2\0815141.D\0815141c.d
AH	J:\GC33\Data\081513-ICAL2\0815142.D\0815142c.d
AI	J:\GC33\Data\081513-ICAL2\0815143.D\0815143c.d
AJ	J:\GC33\Data\081513-ICAL2\0815144.D\0815144c.d
AK	J:\GC33\Data\081513-ICAL2\0815146.D\0815146c.d
AL	J:\GC33\Data\081513-ICAL2\0815147.D\0815147c.d
AM	J:\GC33\Data\081513-ICAL2\0815148.D\0815148c.d
AN	J:\GC33\Data\081513-ICAL2\0815149.D\0815149c.d
AO	J:\GC33\Data\081513-ICAL2\0815150.D\0815150c.d
AP	J:\GC33\Data\081513-ICAL2\0815151.D\0815151c.d
AQ	J:\GC33\Data\081513-ICAL2\0815153.D\0815153c.d
AR	J:\GC33\Data\081513-ICAL2\0815154.D\0815154c.d
AS	J:\GC33\Data\081513-ICAL2\0815155.D\0815155c.d
AT	J:\GC33\Data\081513-ICAL2\0815156.D\0815156c.d
AU	J:\GC33\Data\081513-ICAL2\0815157.D\0815157c.d
AV	J:\GC33\Data\081513-ICAL2\0815158.D\0815158c.d
AW	J:\GC33\Data\081513-ICAL2\0815159.D\0815159c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
4,4'-Dibromooctafluorobiphenyl															
							AQ	2.0	0.295	AR	5.0	0.304	AS	20	0.320
	AT	50	0.316	AU	75	0.322	AV	100	0.329	AW	200	0.314			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
gamma-BHC (Lindane)															
							AQ	2.0	0.480	AR	5.0	0.635	AS	20	0.511
	AT	50	0.463	AU	75	0.466	AV	100	0.456	AW	200	0.440			
Heptachlor															
							AQ	2.0	0.287	AR	5.0	0.311	AS	20	0.339
	AT	50	0.353	AU	75	0.359	AV	100	0.358	AW	200	0.339			
Heptachlor Epoxide															
							AQ	2.0	0.270	AR	5.0	0.303	AS	20	0.332
	AT	50	0.342	AU	75	0.346	AV	100	0.336	AW	200	0.316			
gamma-Chlordane															
							AQ	2.0	0.299	AR	5.0	0.318	AS	20	0.338
	AT	50	0.347	AU	75	0.356	AV	100	0.352	AW	200	0.341			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
alpha-Chlordane															
							AQ	2.0	0.280	AR	5.0	0.300	AS	20	0.323
	AT	50	0.331	AU	75	0.338	AV	100	0.335	AW	200	0.324			
Endrin															
							AQ	2.0	0.186	AR	5.0	0.204	AS	20	0.223
	AT	50	0.237	AU	75	0.244	AV	100	0.250	AW	200	0.246			
Methoxychlor															
							AQ	2.0	0.0862	AR	5.0	0.0921	AS	20	0.0950
	AT	50	0.0964	AU	75	0.0975	AV	100	0.0976	AW	200	0.0964			
Aroclor 1016															
							M	25	0.0253	N	50	0.0252	O	200	0.0273
	P	500	0.0256	Q	1000	0.0249	R	2000	0.0242						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1221										S	50	0.0137	T	100	0.0142
	U	200	0.0140	V	500	0.0138	W	1000	0.0134	X	2000	0.0126			
Aroclor 1232													Y	50	0.0149
	Z	100	0.0147	AA	200	0.0151	AB	500	0.0149	AC	1000	0.0145	AD	2000	0.0137
Aroclor 1242															
	AE	50	0.0215	AF	100	0.0222	AG	200	0.0219	AH	500	0.0226	AI	1000	0.0222
	AJ	2000	0.0222												
Aroclor 1248															
				AK	50	0.0339	AL	100	0.0337	AM	200	0.0328	AN	500	0.0330
	AO	1000	0.0332	AP	2000	0.0322									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1254										S	50	0.0453	T	100	0.0428
	U	200	0.0422	V	500	0.0418	W	1000	0.0417	X	2000	0.0406			
Aroclor 1260															
							M	25	0.0477	N	50	0.0473	O	200	0.0498
	P	500	0.0464	Q	1000	0.0450	R	2000	0.0446						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4,4'-Dibromooctafluorobiphenyl	SURR	AverageRF	% RSD	3.7		≤ 30	0.314		
gamma-BHC (Lindane)	MS	Quadratic	COD	1.000		≥ 0.990	0.493		
Heptachlor	MS	AverageRF	% RSD	8.0		≤ 30	0.335		
Heptachlor Epoxide	MS	AverageRF	% RSD	8.4		≤ 30	0.321		
gamma-Chlordane	MS	AverageRF	% RSD	6.1		≤ 30	0.336		
alpha-Chlordane	MS	AverageRF	% RSD	6.6		≤ 30	0.319		
Endrin	MS	Linear	R2	1.000		≥ 0.990	0.227		
Methoxychlor	MS	AverageRF	% RSD	4.3		≤ 30	0.0945		
Aroclor 1016	TRG	AverageRF	% RSD	4.2		≤ 30	0.0254		
Aroclor 1221	TRG	AverageRF	% RSD	4.2		≤ 30	0.0136		
Aroclor 1232	TRG	AverageRF	% RSD	3.3		≤ 30	0.0146		
Aroclor 1242	TRG	AverageRF	% RSD	1.8		≤ 30	0.0221		
Aroclor 1248	MS	AverageRF	% RSD	1.9		≤ 30	0.0331		
Aroclor 1254	TRG	AverageRF	% RSD	3.7		≤ 30	0.0424		
Aroclor 1260	TRG	AverageRF	% RSD	4.1		≤ 30	0.0468		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/16/2013 - 08/17/2013

Second Source Calibration Verification
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration ID: CAL12714
Units: ug/L

File ID:
J:\GC33\Data\081513-ICAL2\0815110.D\0815110c.d
J:\GC33\Data\081513-ICAL2\0815117.D\0815117c.d
J:\GC33\Data\081513-ICAL2\0815124.D\0815124c.d
J:\GC33\Data\081513-ICAL2\0815138.D\0815138c.d
J:\GC33\Data\081513-ICAL2\0815160.D\0815160c.d
J:\GC33\Data\081513-ICAL2\0815164.D\0815164c.d
J:\GC33\Data\081513-ICAL2\0815165.D\0815165c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	50	52	0.493	0.489	NA	3	± 30 %	Quadratic
Heptachlor	50	53	0.335	0.354	6	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54	0.321	0.349	9	NA	± 30 %	AverageRF
gamma-Chlordane	50	53	0.336	0.356	6	NA	± 30 %	AverageRF
alpha-Chlordane	50	53	0.319	0.339	6	NA	± 30 %	AverageRF
Endrin	50	51	0.227	0.247	NA	2	± 30 %	Linear
Methoxychlor	50	52	0.0945	0.0982	4	NA	± 30 %	AverageRF
Aroclor 1016	500	440	0.0254	0.0226	-11	NA	± 30 %	AverageRF
Aroclor 1232	500	520	0.0146	0.0151	3	NA	± 30 %	AverageRF
Aroclor 1242	500	480	0.0221	0.0214	-3	NA	± 30 %	AverageRF
Aroclor 1248	500	450	0.0331	0.0298	-10	NA	± 30 %	AverageRF
Aroclor 1260	500	570	0.0468	0.0535	14	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/26/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L
Column ID: RTX-CLP

File ID: J:\GC33\DATA\092613-508\0926004.D
J:\GC33\DATA\092613-508\0926006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.329	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.360	0.366	NA	-6	± 30 %	Linear
Heptachlor	50	54		0.312	0.337	8	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	51		0.261	0.265	2	NA	± 30 %	AverageRF
gamma-Chlordane	50	53		0.260	0.274	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.248	0.258	4	NA	± 30 %	AverageRF
Endrin	50	52		0.170	0.178	5	NA	± 30 %	AverageRF
Methoxychlor	50	44		0.0703	0.0621	-12	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0241	0.0254	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/26/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L

File ID: J:\GC33\DATA\092613-508\0926004.D\0926004C.D
J:\GC33\DATA\092613-508\0926006.D\0926006C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	48		0.314	0.303	-4	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.493	0.451	NA	-5	± 30 %	Quadratic
Heptachlor	50	55		0.335	0.370	10	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	53		0.321	0.341	6	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.350	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.319	0.331	4	NA	± 30 %	AverageRF
Endrin	50	48		0.227	0.232	NA	-4	± 30 %	Linear
Methoxychlor	50	47		0.0945	0.0889	-6	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0345	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/27/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L

File ID: J:\GC33\DATA\092613-508\0926024.D
J:\GC33\DATA\092613-508\0926025.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.329	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.360	0.363	NA	-7	± 30 %	Linear
Heptachlor	50	54		0.312	0.338	8	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	51		0.261	0.265	2	NA	± 30 %	AverageRF
gamma-Chlordane	50	53		0.260	0.274	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.248	0.260	5	NA	± 30 %	AverageRF
Endrin	50	52		0.170	0.177	4	NA	± 30 %	AverageRF
Methoxychlor	50	48		0.0703	0.0674	-4	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0241	0.0256	7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/27/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L

File ID: J:\GC33\DATA\092613-508\0926024.D\0926024C.D
J:\GC33\DATA\092613-508\0926025.D\0926025C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.314	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.493	0.451	NA	-5	± 30 %	Quadratic
Heptachlor	50	56		0.335	0.374	12	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.344	7	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.350	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.319	0.334	5	NA	± 30 %	AverageRF
Endrin	50	47		0.227	0.228	NA	-6	± 30 %	Linear
Methoxychlor	50	53		0.0945	0.0993	5	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0348	5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L
Column ID: RTX-CLP

File ID: J:\GC33\DATA\100813-508\1008004.D
J:\GC33\DATA\100813-508\1008006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	52		0.323	0.336	4	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	45		0.360	0.352	NA	-10	± 30 %	Linear
Heptachlor	50	50		0.312	0.311	0	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	47		0.261	0.244	-6	NA	± 30 %	AverageRF
gamma-Chlordane	50	48		0.260	0.249	-4	NA	± 30 %	AverageRF
alpha-Chlordane	50	47		0.248	0.234	-6	NA	± 30 %	AverageRF
Endrin	50	50		0.170	0.170	0	NA	± 30 %	AverageRF
Methoxychlor	50	46		0.0703	0.0652	-7	NA	± 30 %	AverageRF
Aroclor 1248	200	190		0.0241	0.0232	-3	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L
Column ID: RTX-CLP2

File ID: J:\GC33\DATA\100813-508\1008004.D\1008004C.D
J:\GC33\DATA\100813-508\1008006.D\1008006C.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.315	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	49		0.493	0.465	NA	-2	± 30 %	Quadratic
Heptachlor	50	51		0.335	0.339	1	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.349	9	NA	± 30 %	AverageRF
gamma-Chlordane	50	54		0.336	0.360	7	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.319	0.339	6	NA	± 30 %	AverageRF
Endrin	50	50		0.227	0.244	NA	0	± 30 %	Linear
Methoxychlor	50	47		0.0945	0.0896	-5	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0345	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013 - 10/09/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL127I4
Analysis Lot: KWG1311188
Units: ug/L

File ID: J:\GC33\DATA\100813-508\1008021.D
J:\GC33\DATA\100813-508\1008022.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.331	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	44		0.360	0.344	NA	-12	± 30 %	Linear
Heptachlor	50	52		0.312	0.321	3	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	46		0.261	0.242	-7	NA	± 30 %	AverageRF
gamma-Chlordane	50	49		0.260	0.255	-2	NA	± 30 %	AverageRF
alpha-Chlordane	50	49		0.248	0.241	-3	NA	± 30 %	AverageRF
Endrin	50	55		0.170	0.185	9	NA	± 30 %	AverageRF
Methoxychlor	50	53		0.0703	0.0739	5	NA	± 30 %	AverageRF
Aroclor 1248	200	200		0.0241	0.0244	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013 - 10/09/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L

File ID: J:\GC33\DATA\100813-508\1008021.D\1008021C.D
J:\GC33\DATA\100813-508\1008022.D\1008022C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.314	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	48		0.493	0.453	NA	-5	± 30 %	Quadratic
Heptachlor	50	52		0.335	0.348	4	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.344	7	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.353	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.319	0.335	5	NA	± 30 %	AverageRF
Endrin	50	53		0.227	0.259	NA	6	± 30 %	Linear
Methoxychlor	50	54		0.0945	0.102	8	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0346	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Analysis Run Log
Pesticides/PCBs by EPA method 508.1

Analysis Method: 508.1

Analysis Lot: KWG1310845
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\0926004.D	Continuing Calibration Verification	KWG1310845-1	9/26/2013	17:09		9/26/2013	17:30
\0926006.D	Continuing Calibration Verification	KWG1310845-1	9/26/2013	18:00		9/26/2013	18:22
\0926010.D	Lab Control Sample	KWG1310289-3	9/26/2013	19:48		9/26/2013	20:09
\0926011.D	Lab Control Sample	KWG1310289-3	9/26/2013	20:15		9/26/2013	20:36
\0926012.D	Method Blank	KWG1310289-5	9/26/2013	20:42		9/26/2013	21:03
\0926013.D	ZZZZZZ	ZZZZZZ	9/26/2013	21:08		9/26/2013	21:30
\0926014.D	13254-BW-4	K1309638-001	9/26/2013	21:35		9/26/2013	21:56
\0926015.D	13254-BW-4MS	KWG1310289-1	9/26/2013	22:01		9/26/2013	22:23
\0926016.D	13254-BW-4MS	KWG1310289-1	9/26/2013	22:28		9/26/2013	22:50
\0926017.D	13254-BW-2	K1309638-002	9/26/2013	22:55		9/26/2013	23:17
\0926018.D	13253-BW-3	K1309638-004	9/26/2013	23:22		9/26/2013	23:43
\0926019.D	13253-Well D	K1309638-005	9/26/2013	23:49		9/27/2013	00:11
\0926020.D	13255-BW-1	K1309638-008	9/27/2013	00:16		9/27/2013	00:38
\0926021.D	13255-DUP	K1309638-010	9/27/2013	00:43		9/27/2013	01:05
\0926022.D	13255-Rinse	K1309638-011	9/27/2013	01:10		9/27/2013	01:32
\0926024.D	Continuing Calibration Verification	KWG1310845-2	9/27/2013	02:05		9/27/2013	02:27
\0926025.D	Continuing Calibration Verification	KWG1310845-2	9/27/2013	02:32		9/27/2013	02:54

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Analysis Run Log
Pesticides/PCBs by EPA method 508.1

Analysis Method: 508.1

Analysis Lot: KWG1311188
Instrument ID: GC33
Column: RTX-CLP

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
\1008004.D	Continuing Calibration Verification	KWG1311188-1	10/8/2013	15:46		10/8/2013	16:08
\1008006.D	Continuing Calibration Verification	KWG1311188-1	10/8/2013	16:40		10/8/2013	17:02
\1008010.D	13254-BW-2	K1309638-002	10/8/2013	18:28		10/8/2013	18:50
\1008011.D	ZZZZZZ	ZZZZZZ	10/8/2013	18:57		10/8/2013	19:18
\1008012.D	ZZZZZZ	ZZZZZZ	10/8/2013	19:27		10/8/2013	19:49
\1008013.D	ZZZZZZ	ZZZZZZ	10/8/2013	19:54		10/8/2013	20:16
\1008014.D	ZZZZZZ	ZZZZZZ	10/8/2013	20:21		10/8/2013	20:43
\1008015.D	ZZZZZZ	ZZZZZZ	10/8/2013	20:48		10/8/2013	21:09
\1008016.D	ZZZZZZ	ZZZZZZ	10/8/2013	21:15		10/8/2013	21:36
\1008017.D	ZZZZZZ	ZZZZZZ	10/8/2013	21:42		10/8/2013	22:04
\1008018.D	ZZZZZZ	ZZZZZZ	10/8/2013	22:09		10/8/2013	22:31
\1008019.D	ZZZZZZ	ZZZZZZ	10/8/2013	22:36		10/8/2013	22:58
\1008021.D	Continuing Calibration Verification	KWG1311188-2	10/8/2013	23:30		10/8/2013	23:52
\1008022.D	Continuing Calibration Verification	KWG1311188-2	10/9/2013	00:01		10/9/2013	00:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013

Extraction Prep Log
Pesticides/PCBs by EPA method 508.1

Extraction Method: METHOD
Analysis Method: 508.1

Extraction Lot: KWG1310289
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	1030ml	2ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	1030ml	2ml	NA	
13254-BW-2DL	K1309638-002	09/11/13	09/14/13	1030ml	2ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	1030ml	2ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	1030ml	2ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	1030ml	2ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	1030ml	2ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	1030ml	2ml	NA	
Method Blank	KWG1310289-5	NA	NA	1000ml	2ml	NA	
13254-BW-4MS	KWG1310289-1	09/11/13	09/14/13	1030ml	2ml	NA	
Lab Control Sample	KWG1310289-3	NA	NA	1000ml	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013
Date Extracted: 09/20/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endrin	0.0098	0.00077	0.0046	0.0049	6.3	J	1	09/26/13
Methoxychlor	0.0098	0.0013	0.0079	0.011	32.8	J	1	09/26/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/20/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	0.0098	0.00083	0.0012	0.0034	95.7	JP	1	09/27/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/20/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	0.0098	0.00083	0.0011	0.0029	90.0	JP	1	09/27/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013
Date Extracted: 09/20/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1242	0.098	0.012	0.19	0.29	41.7	P	1	09/27/13

Confirmation Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA
Date Extracted: 09/20/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: Method Blank
Lab Code: KWG1310289-5

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-Chlordane	0.010	0.00083	0.0029	0.00039	152.6	JP	1	09/26/13

Chlorinated Acids

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Cover Page - Organic Analysis Data Package
Chlorinated Acids by EPA Method 515.4

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013
13254-BW-4MS	KWG1310098-1	09/11/2013	09/14/2013
13254-BW-4DMS	KWG1310098-2	09/11/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Lora E Portwood

Name: Lora Portwood

Date: 10/15/13

Title:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	110	70-130	09/21/13	Acceptable

Comments:

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	94	70-130	09/21/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	108	70-130	09/21/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	120	70-130	09/21/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	107	70-130	09/21/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	102	70-130	09/21/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	105	70-130	09/21/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Chlorinated Acids by EPA Method 515.4

Sample Name: Method Blank
Lab Code: KWG1310098-4

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	101	70-130	09/21/13	Acceptable

Comments:

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Chlorinated Acids by EPA Method 515.4

Extraction Method: METHOD
Analysis Method: 515.4

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
13254-BW-4	K1309638-001	110
13254-BW-2	K1309638-002	94
13253-BW-3	K1309638-004	108
13253-Well D	K1309638-005	120
13255-BW-1	K1309638-008	107
13255-DUP	K1309638-010	102
13255-Rinse	K1309638-011	105
Method Blank	KWG1310098-4	101
13254-BW-4MS	KWG1310098-1	111
13254-BW-4DMS	KWG1310098-2	109
Lab Control Sample	KWG1310098-3	107

Surrogate Recovery Control Limits (%)

Sur1 = 2,4-Dichlorophenylacetic Acid 70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 23:03

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200015.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-1
Analysis Lot: KWG1310789
Column : RTX-CLP2

		4'-Dibromooctafluorobiphen	
		Area	**RT**
	ICAL Average ==>	1,192,736	14.74
	Upper Limit ==>	1,789,104	15.24
	Lower Limit ==>	596,368	14.24
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-1	1,183,245	14.74
Lab Control Sample	KWG1310098-3	1,132,578	14.74
Method Blank	KWG1310098-4	1,172,353	14.74
13254-BW-4	K1309638-001	1,154,499	14.74
13254-BW-4MS	KWG1310098-1	1,143,301	14.74
13254-BW-4DMS	KWG1310098-2	1,154,787	14.74
13254-BW-2	K1309638-002	1,183,413	14.74
13253-BW-3	K1309638-004	1,152,905	14.74
13253-Well D	K1309638-005	1,174,957	14.74
13255-BW-1	K1309638-008	1,151,344	14.74
13255-DUP	K1309638-010	1,153,395	14.74
13255-Rinse	K1309638-011	1,142,108	14.74

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 23:03

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200015.D\09200015C.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-1
Analysis Lot: KWG1310789
Column : ZB-XLB-HT

		4'-Dibromooctafluorobiphen	
		Area	**RT**
	ICAL Average ==>	1,146,157	15.13
	Upper Limit ==>	1,719,236	15.63
	Lower Limit ==>	573,079	14.63
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-1	1,154,917	15.13
Lab Control Sample	KWG1310098-3	1,099,330	15.13
Method Blank	KWG1310098-4	1,125,568	15.13
13254-BW-4	K1309638-001	1,094,325	15.13
13254-BW-4MS	KWG1310098-1	1,074,530	15.13
13254-BW-4DMS	KWG1310098-2	1,107,971	15.13
13254-BW-2	K1309638-002	1,127,754	15.13
13253-BW-3	K1309638-004	1,096,659	15.12
13253-Well D	K1309638-005	1,120,435	15.13
13255-BW-1	K1309638-008	1,088,225	15.13
13255-DUP	K1309638-010	1,076,029	15.12
13255-Rinse	K1309638-011	1,077,972	15.13

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013
Time Analyzed: 06:02

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200029.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-3
Analysis Lot: KWG1310789
Column : RTX-CLP2

		4'-Dibromooctafluorobiphen	
		Area	**RT**
ICAL Average ==>		1,192,736	14.74
Upper Limit ==>		1,789,104	15.24
Lower Limit ==>		596,368	14.24
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-3	1,167,725	14.74

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013
Time Analyzed: 06:02

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200029.D\09200029C.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-3
Analysis Lot: KWG1310789
Column : ZB-XLB-HT

		4'-Dibromooctafluorobiphen	
		Area	**RT**
ICAL Average ==>		1,146,157	15.13
Upper Limit ==>		1,719,236	15.63
Lower Limit ==>		573,079	14.63
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-3	1,113,285	15.13

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/21/2013

Matrix Spike/Duplicate Matrix Spike Summary
Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 515.4

Level: Low
Extraction Lot: KWG1310098

		13254-BW-4MS KWG1310098-1 Matrix Spike			13254-BW-4DMS KWG1310098-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dalapon	ND	4.86	4.97	98	4.85	4.96	98	70-130	0	30
2,4-D	ND	4.70	4.97	95	4.61	4.96	93	70-130	2	30
Pentachlorophenol	ND	4.84	4.97	97	4.76	4.96	96	70-130	2	30
2,4,5-TP (Silvex)	ND	3.98	4.97	80	3.86	4.96	78	70-130	3	30
Dinoseb	ND	4.13	4.97	83	4.08	4.96	82	70-130	1	30
Picloram	ND	4.46	4.97	90	4.42	4.96	89	70-130	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/21/2013

Lab Control Spike Summary
Chlorinated Acids by EPA Method 515.4

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310098

	Lab Control Sample KWG1310098-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dalapon	4.87	5.00	97	70-130
2,4-D	4.89	5.00	98	70-130
Pentachlorophenol	4.81	5.00	96	70-130
2,4,5-TP (Silvex)	4.15	5.00	83	70-130
Dinoseb	4.26	5.00	85	70-130
Picloram	4.46	5.00	89	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	09/21/2013
		Time Analyzed:	00:33

Method Blank Summary
Chlorinated Acids by EPA Method 515.4

Sample Name:	Method Blank	**Instrument ID:**	GC24
Lab Code:	KWG1310098-4	**File ID:**	J:\GC24\DATA\092013.515\09200018.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	515.4	**Extraction Lot:**	KWG1310098

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310098-3	J:\GC24\DATA\092013.515\09200017.D	09/21/13	00:03
13254-BW-4	K1309638-001	J:\GC24\DATA\092013.515\09200020.D	09/21/13	01:33
13254-BW-4MS	KWG1310098-1	J:\GC24\DATA\092013.515\09200021.D	09/21/13	02:03
13254-BW-4DMS	KWG1310098-2	J:\GC24\DATA\092013.515\09200022.D	09/21/13	02:33
13254-BW-2	K1309638-002	J:\GC24\DATA\092013.515\09200023.D	09/21/13	03:03
13253-BW-3	K1309638-004	J:\GC24\DATA\092013.515\09200024.D	09/21/13	03:33
13253-Well D	K1309638-005	J:\GC24\DATA\092013.515\09200025.D	09/21/13	04:02
13255-BW-1	K1309638-008	J:\GC24\DATA\092013.515\09200026.D	09/21/13	04:32
13255-DUP	K1309638-010	J:\GC24\DATA\092013.515\09200027.D	09/21/13	05:02
13255-Rinse	K1309638-011	J:\GC24\DATA\092013.515\09200028.D	09/21/13	05:32

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	09/21/2013
		Time Analyzed:	00:03

Lab Control Sample Summary
Chlorinated Acids by EPA Method 515.4

Sample Name:	Lab Control Sample	**Instrument ID:**	GC24
Lab Code:	KWG1310098-3	**File ID:**	J:\GC24\DATA\092013.515\09200017.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	515.4	**Extraction Lot:**	KWG1310098

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310098-4	J:\GC24\DATA\092013.515\09200018.D	09/21/13	00:33
13254-BW-4	K1309638-001	J:\GC24\DATA\092013.515\09200020.D	09/21/13	01:33
13254-BW-4MS	KWG1310098-1	J:\GC24\DATA\092013.515\09200021.D	09/21/13	02:03
13254-BW-4DMS	KWG1310098-2	J:\GC24\DATA\092013.515\09200022.D	09/21/13	02:33
13254-BW-2	K1309638-002	J:\GC24\DATA\092013.515\09200023.D	09/21/13	03:03
13253-BW-3	K1309638-004	J:\GC24\DATA\092013.515\09200024.D	09/21/13	03:33
13253-Well D	K1309638-005	J:\GC24\DATA\092013.515\09200025.D	09/21/13	04:02
13255-BW-1	K1309638-008	J:\GC24\DATA\092013.515\09200026.D	09/21/13	04:32
13255-DUP	K1309638-010	J:\GC24\DATA\092013.515\09200027.D	09/21/13	05:02
13255-Rinse	K1309638-011	J:\GC24\DATA\092013.515\09200028.D	09/21/13	05:32

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: RTX-CLP2

Level ID	File ID
A	J:\GC24\DATA\092013.515\09200003.D
B	J:\GC24\DATA\092013.515\09200004.D
C	J:\GC24\DATA\092013.515\09200005.D
D	J:\GC24\DATA\092013.515\09200006.D
E	J:\GC24\DATA\092013.515\09200007.D
F	J:\GC24\DATA\092013.515\09200008.D
G	J:\GC24\DATA\092013.515\09200009.D
H	J:\GC24\DATA\092013.515\09200010.D
I	J:\GC24\DATA\092013.515\09200011.D
J	J:\GC24\DATA\092013.515\09200012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dalapon							C	2.0	0.381	D	5.0	0.304	E	10	0.261
	F	20	0.225	G	50	0.240	H	60	0.230	I	100	0.236			
2,4-Dichlorophenylacetic Acid							C	4.0	0.195	D	10	0.170	E	20	0.158
	F	40	0.142	G	100	0.130	H	120	0.128	I	200	0.125	J	400	0.120
2,4-D				B	1.0	0.255	C	2.0	0.263	D	5.0	0.214	E	10	0.195
	F	20	0.172	G	50	0.162	H	60	0.153	I	100	0.152			
Pentachlorophenol	A	0.40	3.63	B	1.0	2.76	C	2.0	2.71	D	5.0	2.40	E	10	2.29
	F	20	2.21	G	50	2.10	H	60	2.06	I	100	2.04	J	200	1.95
2,4,5-TP (Silvex)	A	0.40	0.982	B	1.0	0.804	C	2.0	0.850	D	5.0	0.724	E	10	0.688
	F	20	0.652	G	50	0.633	H	60	0.599	I	100	0.598	J	200	0.552
Dinoseb							C	2.0	0.974	D	5.0	0.545	E	10	0.497
	F	20	0.418	G	50	0.389	H	60	0.359	I	100	0.355	J	200	0.327
Picloram				B	1.0	0.362	C	2.0	0.416	D	5.0	0.340	E	10	0.313
	F	20	0.276	G	50	0.295	H	60	0.278	I	100	0.282			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dalapon	MS	AverageRF	% RSD	21.0		≤ 30	0.268		
2,4-Dichlorophenylacetic Acid	SURR	AverageRF	% RSD	18.0		≤ 30	0.146		
2,4-D	MS	Linear	R2	0.996		≥ 0.99	0.196		
Pentachlorophenol	MS	Linear	R2	0.999		≥ 0.99	2.41		
2,4,5-TP (Silvex)	MS	AverageRF	% RSD	19.0		≤ 30	0.708		
Dinoseb	MS	Linear	R2	0.997		≥ 0.99	0.483		
Picloram	MS	Linear	R2	0.998		≥ 0.99	0.320		

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013
Date Analyzed: 09/20/2013

Second Source Calibration Verification
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration ID: CAL12806
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200013.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift		Criteria	Curve Fit
Dalapon	25	27	0.268	0.293	9	NA		± 30 %	AverageRF
2,4-D	25	30	0.196	0.193	NA	20		± 30 %	Linear
Pentachlorophenol	2.5	7.9	2.41	6.73	NA	216	*	± 30 %	Linear
2,4,5-TP (Silvex)	6.3	6.9	0.708	0.785	11	NA		± 30 %	AverageRF
Dinoseb	25	27	0.483	0.419	NA	10		± 30 %	Linear
Picloram	25	31	0.320	0.350	NA	22		± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: ZB-XLB-HT

Level ID	File ID
A	J:\GC24\DATA\092013.515\09200003.D\09200003c.d
B	J:\GC24\DATA\092013.515\09200004.D\09200004c.d
C	J:\GC24\DATA\092013.515\09200005.D\09200005c.d
D	J:\GC24\DATA\092013.515\09200006.D\09200006c.d
E	J:\GC24\DATA\092013.515\09200007.D\09200007c.d
F	J:\GC24\DATA\092013.515\09200008.D\09200008c.d
G	J:\GC24\DATA\092013.515\09200009.D\09200009c.d
H	J:\GC24\DATA\092013.515\09200010.D\09200010c.d
I	J:\GC24\DATA\092013.515\09200011.D\09200011c.d
J	J:\GC24\DATA\092013.515\09200012.D\09200012c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dalapon							C	2.0	0.384	D	5.0	0.334	E	10	0.340
	F	20	0.243	G	50	0.236	H	60	0.233	I	100	0.239			
2,4-Dichlorophenylacetic Acid							C	4.0	0.228	D	10	0.175	E	20	0.154
	F	40	0.140	G	100	0.132	H	120	0.130	I	200	0.128	J	400	0.126
2,4-D				B	1.0	0.297	C	2.0	0.288	D	5.0	0.219	E	10	0.196
	F	20	0.170	G	50	0.161	H	60	0.154	I	100	0.155			
Pentachlorophenol	A	0.40	2.47	B	1.0	2.04	C	2.0	2.04	D	5.0	1.90	E	10	1.89
	F	20	1.91	G	50	1.93	H	60	1.90	I	100	1.95	J	200	1.95
2,4,5-TP (Silvex)	A	0.40	1.35	B	1.0	0.917	C	2.0	0.864	D	5.0	0.711	E	10	0.673
	F	20	0.641	G	50	0.635	H	60	0.611	I	100	0.620	J	200	0.596
Dinoseb							C	2.0	0.461	D	5.0	0.412	E	10	0.375
	F	20	0.351	G	50	0.354	H	60	0.330	I	100	0.343	J	200	0.331
Picloram				B	1.0	0.384	C	2.0	0.394	D	5.0	0.311	E	10	0.288
	F	20	0.253	G	50	0.284	H	60	0.272	I	100	0.286	J	200	0.296

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: ZB-XLB-HT

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dalapon	MS	Linear	R2	0.994		≥ 0.99	0.287		
2,4-Dichlorophenylacetic Acid	SURR	Linear	R2	1.000		≥ 0.99	0.152		
2,4-D	MS	Linear	R2	0.997		≥ 0.99	0.205		
Pentachlorophenol	MS	AverageRF	% RSD	8.8		≤ 30	2.00		
2,4,5-TP (Silvex)	MS	Linear	R2	0.999		≥ 0.99	0.762		
Dinoseb	MS	AverageRF	% RSD	12.3		≤ 30	0.370		
Picloram	MS	AverageRF	% RSD	15.9		≤ 30	0.307		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013
Date Analyzed: 09/20/2013

Second Source Calibration Verification
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration ID: CAL12806
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200013.D\09200013c.d

Column ID: ZB-XLB-HT

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	25	31	0.287	0.310	NA	26	± 30 %	Linear
2,4-D	25	30	0.205	0.193	NA	19	± 30 %	Linear
Pentachlorophenol	2.5	2.7	2.00	2.17	8	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	6.3	7.2	0.762	0.757	NA	15	± 30 %	Linear
Dinoseb	25	27	0.370	0.397	8	NA	± 30 %	AverageRF
Picloram	25	28	0.307	0.343	12	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200015.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	10	9.8		0.268	0.264	-2	NA	± 30 %	AverageRF
2,4-Dichlorophenylacetic Acid	20	22		0.146	0.160	9	NA	± 30 %	AverageRF
2,4-D	10	11		0.196	0.186	NA	9	± 30 %	Linear
Pentachlorophenol	10	11		2.41	2.27	NA	8	± 30 %	Linear
2,4,5-TP (Silvex)	10	9.0		0.708	0.641	-10	NA	± 30 %	AverageRF
Dinoseb	10	11		0.483	0.500	NA	10	± 30 %	Linear
Picloram	10	9.9		0.320	0.295	NA	-1	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200015.D\09200015C.D

Column ID: ZB-XLB-HT

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	10	11		0.287	0.304	NA	13	± 30 %	Linear
2,4-Dichlorophenylacetic Acid	20	22		0.152	0.161	NA	10	± 30 %	Linear
2,4-D	10	11		0.205	0.185	NA	6	± 30 %	Linear
Pentachlorophenol	10	9.5		2.00	1.90	-5	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	10	9.7		0.762	0.625	NA	-3	± 30 %	Linear
Dinoseb	10	9.1		0.370	0.335	-9	NA	± 30 %	AverageRF
Picloram	10	8.7		0.307	0.268	-13	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb
Column ID: RTX-CLP2

File ID: J:\GC24\DATA\092013.515\09200029.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	20	18		0.268	0.246	-8	NA	± 30 %	AverageRF
2,4-Dichlorophenylacetic Acid	40	42		0.146	0.153	5	NA	± 30 %	AverageRF
2,4-D	20	17		0.196	0.144	NA	-13	± 30 %	Linear
Pentachlorophenol	20	21		2.41	2.19	NA	6	± 30 %	Linear
2,4,5-TP (Silvex)	20	15		0.708	0.538	-24	NA	± 30 %	AverageRF
Dinoseb	20	16		0.483	0.330	NA	-21	± 30 %	Linear
Picloram	20	17		0.320	0.245	NA	-16	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb
Column ID: ZB-XLB-HT

File ID: J:\GC24\DATA\092013.515\09200029.D\09200029C.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	20	24		0.287	0.295	NA	18	± 30 %	Linear
2,4-Dichlorophenylacetic Acid	40	44		0.152	0.151	NA	11	± 30 %	Linear
2,4-D	20	17		0.205	0.144	NA	-14	± 30 %	Linear
Pentachlorophenol	20	19		2.00	1.93	-4	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	20	17		0.762	0.526	NA	-16	± 30 %	Linear
Dinoseb	20	17		0.370	0.306	-17	NA	± 30 %	AverageRF
Picloram	20	15		0.307	0.234	-24	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists **Service Request:** K1309638
Project: Drexel

Analysis Run Log
Chlorinated Acids by EPA Method 515.4

Analysis Method: 515.4

Analysis Lot: KWG1310789
Instrument ID: GC24
Column: RTX-CLP2

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
09200015.D	Continuing Calibration Verification	KWG1310789-1	9/20/2013	23:03		9/20/2013	23:26
09200016.D	Instrument Blank	KWG1310789-2	9/20/2013	23:33		9/20/2013	23:56
09200017.D	Lab Control Sample	KWG1310098-3	9/21/2013	00:03		9/21/2013	00:26
09200018.D	Method Blank	KWG1310098-4	9/21/2013	00:33		9/21/2013	00:56
09200019.D	ZZZZZZ	ZZZZZZ	9/21/2013	01:03		9/21/2013	01:27
09200020.D	13254-BW-4	K1309638-001	9/21/2013	01:33		9/21/2013	01:56
09200021.D	13254-BW-4MS	KWG1310098-1	9/21/2013	02:03		9/21/2013	02:27
09200022.D	13254-BW-4DMS	KWG1310098-2	9/21/2013	02:33		9/21/2013	02:56
09200023.D	13254-BW-2	K1309638-002	9/21/2013	03:03		9/21/2013	03:26
09200024.D	13253-BW-3	K1309638-004	9/21/2013	03:33		9/21/2013	03:56
09200025.D	13253-Well D	K1309638-005	9/21/2013	04:02		9/21/2013	04:26
09200026.D	13255-BW-1	K1309638-008	9/21/2013	04:32		9/21/2013	04:56
09200027.D	13255-DUP	K1309638-010	9/21/2013	05:02		9/21/2013	05:26
09200028.D	13255-Rinse	K1309638-011	9/21/2013	05:32		9/21/2013	05:56
09200029.D	Continuing Calibration Verification	KWG1310789-3	9/21/2013	06:02		9/21/2013	06:25
09200030.D	Instrument Blank	KWG1310789-4	9/21/2013	06:32		9/21/2013	06:55

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013

Extraction Prep Log
Chlorinated Acids by EPA Method 515.4

Extraction Method: METHOD
Analysis Method: 515.4

Extraction Lot: KWG1310098
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	40.26ml	4ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	40.13ml	4ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	40.05ml	4ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	40.24ml	4ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	40.32ml	4ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	40.22ml	4ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	40.20ml	4ml	NA	
Method Blank	KWG1310098-4	NA	NA	40.00ml	4ml	NA	
13254-BW-4MS	KWG1310098-1	09/11/13	09/14/13	40.28ml	4ml	NA	
13254-BW-4DMS	KWG1310098-2	09/11/13	09/14/13	40.33ml	4ml	NA	
Lab Control Sample	KWG1310098-3	NA	NA	40.00ml	4ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Semi-Volatile Organic Compounds

Organic Analysis:
Semivolatile Organics by EPA method 525.2

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Cover Page - Organic Analysis Data Package
Semivolatile Organics by EPA method 525.2

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Lon E Portwood

Name: Lon Portwood

Date: 10/15/13

Title:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	**0.033**	J	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	**0.025**	J	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.14**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	68	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	**0.028**	J	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	**0.14**		0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	**0.017**	J	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	*
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	*
Bis(2-ethylhexyl) Phthalate	**0.19**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	*
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	85	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	41	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.13**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	68	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.25**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	89	70-130	09/21/13	Acceptable
Triphenyl Phosphate	96	70-130	09/21/13	Acceptable
Perylene-d12	54	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.19**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	79	70-130	09/21/13	Acceptable
Triphenyl Phosphate	92	70-130	09/21/13	Acceptable
Perylene-d12	67	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/23/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/23/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/23/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/23/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/23/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/23/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/23/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.16**	J	0.59	0.060	1	09/20/13	09/23/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/23/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/23/13	Acceptable
Triphenyl Phosphate	87	70-130	09/23/13	Acceptable
Perylene-d12	71	70-130	09/23/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	**0.071**	J	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.17**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	84	70-130	09/21/13	Acceptable
Triphenyl Phosphate	95	70-130	09/21/13	Acceptable
Perylene-d12	55	70-130	09/21/13	Outside Control Limits

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Semivolatile Organics by EPA method 525.2

Sample Name: Method Blank
Lab Code: KWG1310290-3

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 525.2

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.10	0.020	1	09/20/13	09/20/13	KWG1310290	
Hexachlorobenzene	ND	U	0.10	0.0050	1	09/20/13	09/20/13	KWG1310290	
Simazine	ND	U	0.050	0.0090	1	09/20/13	09/20/13	KWG1310290	
Atrazine	ND	U	0.10	0.0060	1	09/20/13	09/20/13	KWG1310290	
Alachlor	ND	U	0.072	0.0060	1	09/20/13	09/20/13	KWG1310290	
trans-Nonachlor	ND	U	0.10	0.0080	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.60	0.030	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.14**	J	0.60	0.060	1	09/20/13	09/20/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/20/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	83	70-130	09/20/13	Acceptable
Triphenyl Phosphate	93	70-130	09/20/13	Acceptable
Perylene-d12	74	70-130	09/20/13	Acceptable

Comments:

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1309638

Surrogate Recovery Summary
Semivolatile Organics by EPA method 525.2

Extraction Method: METHOD
Analysis Method: 525.2

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
Batch QC	K1309458-001	84	87	99	
13254-BW-4	K1309638-001	82	93	68	*
13254-BW-2	K1309638-002	85	93	41	*
13253-BW-3	K1309638-004	82	93	68	*
13253-Well D	K1309638-005	89	96	54	*
13255-BW-1	K1309638-008	79	92	67	*
13255-DUP	K1309638-010	82	87	71	
13255-Rinse	K1309638-011	84	95	55	*
Method Blank	KWG1310290-3	83	93	74	
Batch QCMS	KWG1310290-2	88	97	72	
Lab Control Sample	KWG1310290-1	79	96	78	

Surrogate Recovery Control Limits (%)

Sur1 =	1,3-Dimethyl-2-nitrobenzene	70-130
Sur2 =	Triphenyl Phosphate	70-130
Sur3 =	Perylene-d12	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013

Matrix Spike Summary
Semivolatile Organics by EPA method 525.2

Sample Name: Batch QC
Lab Code: K1309458-001

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310290

Batch QCMS
KWG1310290-2
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Hexachlorocyclopentadiene	ND	0.857	0.980	87	70-130
Hexachlorobenzene	ND	0.863	0.980	88	70-130
Simazine	ND	0.951	0.980	97	70-130
Atrazine	ND	0.933	0.980	95	70-130
Alachlor	ND	1.04	0.980	106	70-130
trans-Nonachlor	ND	0.715	0.980	73	70-130
Bis(2-ethylhexyl) Adipate	ND	0.940	0.980	96	70-130
Bis(2-ethylhexyl) Phthalate	0.25	1.04	0.980	81	70-130
Benzo(a)pyrene	ND	0.285	0.980	29 *	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013

Lab Control Spike Summary
Semivolatile Organics by EPA method 525.2

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310290

Lab Control Sample
KWG1310290-1
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Hexachlorocyclopentadiene	0.776	1.00	78	70-130
Hexachlorobenzene	0.916	1.00	92	70-130
Simazine	0.935	1.00	93	70-130
Atrazine	0.962	1.00	96	70-130
Alachlor	1.03	1.00	103	70-130
trans-Nonachlor	0.746	1.00	75	70-130
Bis(2-ethylhexyl) Adipate	0.937	1.00	94	70-130
Bis(2-ethylhexyl) Phthalate	0.998	1.00	100	70-130
Benzo(a)pyrene	0.914	1.00	91	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013
Time Analyzed: 22:26

Method Blank Summary
Semivolatile Organics by EPA method 525.2

Sample Name: Method Blank
Lab Code: KWG1310290-3

Extraction Method: METHOD
Analysis Method: 525.2

Instrument ID: MS22
File ID: J:\MS22\DATA\092013-525\0920JLE006.D

Level: Low
Extraction Lot: KWG1310290

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310290-1	J:\MS22\DATA\092013-525\0920JLE004.D	09/20/13	21:03
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/13	23:13
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/13	23:59
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/13	00:46
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/13	01:32
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/13	02:18
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/13	03:05
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/13	03:51
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/13	04:38
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/13	18:49

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013
Time Analyzed: 21:03

Lab Control Sample Summary
Semivolatile Organics by EPA method 525.2

Sample Name: Lab Control Sample
Lab Code: KWG1310290-1

Extraction Method: METHOD
Analysis Method: 525.2

Instrument ID: MS22
File ID: J:\MS22\DATA\092013-525\0920JLE004.D

Level: Low
Extraction Lot: KWG1310290

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310290-3	J:\MS22\DATA\092013-525\0920JLE006.D	09/20/13	22:26
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/13	23:13
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/13	23:59
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/13	00:46
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/13	01:32
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/13	02:18
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/13	03:05
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/13	03:51
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/13	04:38
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/13	18:49

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 18:22

Tune Summary
Semivolatile Organics by EPA method 525.2

File ID: J:\MS22\DATA\092013-525\0920JLE002.D
Instrument ID: MS22
Column:

Analysis Method: 525.2
Analysis Lot: KWG130474

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.0	7115	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	18.1	2801	PASS
70	69	0	2	1.9	54	PASS
127	198	10	80	30.8	4763	PASS
197	198	0	2	0.4	67	PASS
198	198	100	100	100.0	15466	PASS
199	198	5	9	8.7	1339	PASS
275	198	10	60	39.5	6104	PASS
365	198	1	100	2.3	361	PASS
441	443	0	100	92.1	1772	PASS
442	198	50	150	56.6	8751	PASS
443	442	15	24	22.0	1924	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310474-1	J:\MS22\DATA\092013-525\0920JLE003.D	09/20/2013	19:08	
Lab Control Sample	KWG1310290-1	J:\MS22\DATA\092013-525\0920JLE004.D	09/20/2013	21:03	
Method Blank	KWG1310290-3	J:\MS22\DATA\092013-525\0920JLE006.D	09/20/2013	22:26	
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/2013	23:13	
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/2013	23:59	
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/2013	00:46	
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/2013	01:32	
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/2013	02:18	
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/2013	03:05	
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/2013	03:51	
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/2013	04:38	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/23/2013
Time Analyzed: 16:26

Tune Summary
Semivolatile Organics by EPA method 525.2

File ID: J:\MS22\DATA\092313-525\0923JLE002.D
Instrument ID: MS22
Column:

Analysis Method: 525.2
Analysis Lot: KWG130474

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.3	13038	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	20.7	6529	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	42.2	13307	PASS
197	198	0	2	0.2	54	PASS
198	198	100	100	100.0	31541	PASS
199	198	5	9	7.3	2288	PASS
275	198	10	60	36.2	11410	PASS
365	198	1	100	2.2	702	PASS
441	443	0	100	92.7	3443	PASS
442	198	50	150	60.2	18975	PASS
443	442	15	24	19.6	3714	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310516-2	J:\MS22\DATA\092313-525\0923JLE003.D	09/23/2013	17:12	
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/2013	18:49	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Semivolatile Organics by EPA method 525.2

Calibration ID: CAL12715
Instrument ID: MS22

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS22\DATA\081513-525\0815DV202.D\0815DV201.d	F	J:\MS22\DATA\081513-525\0815DV207.D
B	J:\MS22\DATA\081513-525\0815DV203.D	G	J:\MS22\DATA\081513-525\0815DV208.D
C	J:\MS22\DATA\081513-525\0815DV204.D	H	J:\MS22\DATA\081513-525\0815DV209.D
D	J:\MS22\DATA\081513-525\0815DV205.D	I	J:\MS22\DATA\081513-525\0815DV210.D
E	J:\MS22\DATA\081513-525\0815DV206.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,3-Dimethyl-2-nitrobenzene	A	20	0.233	B	50	0.282	C	100	0.373	D	200	0.316	E	500	0.318
	F	1000	0.354	G	2000	0.391	H	4000	0.385	I	6000	0.387			
Hexachlorocyclopentadiene				B	50	0.132	C	100	0.133	D	200	0.134	E	500	0.153
	F	1000	0.156	G	2000	0.206	H	4000	0.188						
Hexachlorobenzene				B	50	0.255	C	100	0.232	D	200	0.231	E	500	0.257
	F	1000	0.239	G	2000	0.262	H	4000	0.209	I	6000	0.206			
Simazine	A	20	0.0445	B	50	0.0810	C	100	0.0902	D	200	0.0897	E	500	0.0920
	F	1000	0.104	G	2000	0.112	H	4000	0.110	I	6000	0.119			
Atrazine	A	20	0.0325	B	50	0.0623	C	100	0.0597	D	200	0.0675	E	500	0.0717
	F	1000	0.0774	G	2000	0.0827	H	4000	0.0794	I	6000	0.0810			
Alachlor	A	20	0.140	B	50	0.253	C	100	0.277	D	200	0.281	E	500	0.306
	F	1000	0.348	G	2000	0.360	H	4000	0.365	I	6000	0.412			
trans-Nonachlor				B	50	0.0644	C	100	0.0620	D	200	0.0653	E	500	0.0691
	F	1000	0.0747	G	2000	0.0852	H	4000	0.0699	I	6000	0.0610			
Bis(2-ethylhexyl) Adipate				B	50	0.158	C	100	0.162	D	200	0.202	E	500	0.319
	F	1000	0.366	G	2000	0.492	H	4000	0.489	I	6000	0.489			
Triphenyl Phosphate	A	20	0.0402	B	50	0.0592	C	100	0.103	D	200	0.105	E	500	0.125
	F	1000	0.143	G	2000	0.161	H	4000	0.151	I	6000	0.161			
Bis(2-ethylhexyl) Phthalate							C	100	0.351	D	200	0.404	E	500	0.629
	F	1000	0.755	G	2000	1.03	H	4000	1.07	I	6000	1.06			
Benzo(a)pyrene	A	20	0.372	B	50	0.542	C	100	0.571	D	200	0.637	E	500	0.825
	F	1000	0.904	G	2000	1.14	H	4000	1.08						
Perylene-d12				B	50	0.420	C	100	0.654	D	200	0.647	E	500	0.701
	F	1000	0.845	G	2000	0.954	H	4000	0.931	I	6000	0.918			

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Semivolatile Organics by EPA method 525.2

Calibration ID: CAL12715
Instrument ID: MS22

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
1,3-Dimethyl-2-nitrobenzene	SURR	Linear	R2	0.998		≥0.99	0.338		
Hexachlorocyclopentadiene	MS	Quadratic	COD	0.992		≥0.99	0.158		
Hexachlorobenzene	MS	Quadratic	COD	0.996		≥0.99	0.236		
Simazine	MS	Quadratic	COD	0.999		≥0.99	0.0936		
Atrazine	MS	Quadratic	COD	1.000		≥0.99	0.0682		
Alachlor	MS	Quadratic	COD	0.999		≥0.99	0.305		
trans-Nonachlor	MS	Quadratic	COD	0.997		≥0.99	0.0690		
Bis(2-ethylhexyl) Adipate	MS	Quadratic	COD	0.997		≥0.99	0.335		
Triphenyl Phosphate	SURR	Quadratic	COD	0.999		≥0.99	0.116		
Bis(2-ethylhexyl) Phthalate	MS	Quadratic	COD	0.997		≥0.99	0.757		
Benzo(a)pyrene	MS	Quadratic	COD	0.994		≥0.99	0.759		
Perylene-d12	SURR	Quadratic	COD	0.999		≥0.99	0.759		

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/26/2013

Second Source Calibration Verification
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration ID: CAL12715
Units: ug/L

File ID: J:\MS22\DATA\081513-525\0815DV213.D
J:\MS22\DATA\082613-525\0826DV003.D
J:\MS22\DATA\082613-525\0826DV006.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Hexachlorocyclopentadiene	1000	700	0.158	0.121	NA	-30	± 30 %	Quadratic
Hexachlorobenzene	1000	870	0.236	0.216	NA	-13	± 30 %	Quadratic
Simazine	1000	830	0.0936	0.0854	NA	-17	± 30 %	Quadratic
Atrazine	1000	860	0.0682	0.0668	NA	-14	± 30 %	Quadratic
Alachlor	1000	910	0.305	0.302	NA	-9	± 30 %	Quadratic
trans-Nonachlor	1000	800	0.0690	0.0643	NA	-20	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	1000	730	0.335	0.295	NA	-27	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	1000	760	0.757	0.639	NA	-24	± 30 %	Quadratic
Benzo(a)pyrene	1000	880	0.759	0.835	NA	-12	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration Date: 08/15/2013
Calibration ID: CAL12715
Analysis Lot: KWG130474
Units: ug/L

File ID: J:\MS22\DATA\092013-525\0920JLE003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,3-Dimethyl-2-nitrobenzene	500	410		0.338	0.307	NA	-18	± 30 %	Linear
Hexachlorocyclopentadiene	500	450		0.158	0.151	NA	-10	± 30 %	Quadratic
Hexachlorobenzene	500	540		0.236	0.272	NA	7	± 30 %	Quadratic
Simazine	500	500		0.0936	0.101	NA	0	± 30 %	Quadratic
Atrazine	500	480		0.0682	0.0736	NA	-4	± 30 %	Quadratic
Alachlor	500	510		0.305	0.329	NA	2	± 30 %	Quadratic
trans-Nonachlor	500	430		0.0690	0.0691	NA	-13	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	500	510		0.335	0.400	NA	3	± 30 %	Quadratic
Triphenyl Phosphate	500	480		0.116	0.134	NA	-4	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	500	510		0.757	0.802	NA	2	± 30 %	Quadratic
Benzo(a)pyrene	500	490		0.759	0.896	NA	-2	± 30 %	Quadratic
Perylene-d12	500	450		0.759	0.754	NA	-10	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/23/2013

Continuing Calibration Verification Summary
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration Date: 08/15/2013
Calibration ID: CAL12715
Analysis Lot: KWG130474
Units: ug/L

File ID: J:\MS22\DATA\092313-525\0923JLE003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,3-Dimethyl-2-nitrobenzene	500	470		0.338	0.347	NA	-7	± 30 %	Linear
Hexachlorocyclopentadiene	500	480		0.158	0.162	NA	-4	± 30 %	Quadratic
Hexachlorobenzene	500	530		0.236	0.269	NA	6	± 30 %	Quadratic
Simazine	500	480		0.0936	0.0958	NA	-5	± 30 %	Quadratic
Atrazine	500	480		0.0682	0.0728	NA	-5	± 30 %	Quadratic
Alachlor	500	510		0.305	0.327	NA	2	± 30 %	Quadratic
trans-Nonachlor	500	450		0.0690	0.0717	NA	-10	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	500	530		0.335	0.410	NA	5	± 30 %	Quadratic
Triphenyl Phosphate	500	500		0.116	0.139	NA	0	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	500	530		0.757	0.836	NA	6	± 30 %	Quadratic
Benzo(a)pyrene	500	500		0.759	0.918	NA	0	± 30 %	Quadratic
Perylene-d12	500	450		0.759	0.756	NA	-9	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound**

‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Analysis Run Log
Semivolatile Organics by EPA method 525.2

Analysis Method: 525.2

Analysis Lot: KWG130474
Instrument ID: MS22

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
20JLE002.D	GC/MS Tuning - Decafluorotriphenylpl	KWG1310474-4	9/20/2013	18:22		9/20/2013	18:57
20JLE003.D	Continuing Calibration Verification	KWG1310474-1	9/20/2013	19:08		9/20/2013	19:43
20JLE004.D	Lab Control Sample	KWG1310290-1	9/20/2013	21:03		9/20/2013	21:38
20JLE006.D	Method Blank	KWG1310290-3	9/20/2013	22:26		9/20/2013	23:01
20JLE007.D	Batch QC	K1309458-001	9/20/2013	23:13		9/20/2013	23:48
20JLE008.D	Batch QCMS	KWG1310290-2	9/20/2013	23:59		9/21/2013	00:34
20JLE009.D	13253-BW-3	K1309638-004	9/21/2013	00:46		9/21/2013	01:21
20JLE010.D	13255-Rinse	K1309638-011	9/21/2013	01:32		9/21/2013	02:07
20JLE011.D	13254-BW-4	K1309638-001	9/21/2013	02:18		9/21/2013	02:53
20JLE012.D	13254-BW-2	K1309638-002	9/21/2013	03:05		9/21/2013	03:40
20JLE013.D	13253-Well D	K1309638-005	9/21/2013	03:51		9/21/2013	04:26
20JLE014.D	13255-BW-1	K1309638-008	9/21/2013	04:38		9/21/2013	05:13
23JLE002.D	GC/MS Tuning - Decafluorotriphenylpl	KWG1310516-1	9/23/2013	16:26		9/23/2013	17:01
23JLE003.D	Continuing Calibration Verification	KWG1310516-2	9/23/2013	17:12		9/23/2013	17:47
23JLE004.D	13255-DUP	K1309638-010	9/23/2013	18:49		9/23/2013	19:24

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013

Extraction Prep Log
Semivolatile Organics by EPA method 525.2

Extraction Method: METHOD
Analysis Method: 525.2

Extraction Lot: KWG1310290
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	1030ml	1ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	1030ml	1ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	1030ml	1ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	1030ml	1ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	1030ml	1ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	1030ml	1ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	1030ml	1ml	NA	
Method Blank	KWG1310290-3	NA	NA	1000ml	1ml	NA	
Batch QC	K1309458-001	NA	NA	1020ml	1ml	NA	
Batch QCMS	KWG1310290-2	NA	NA	1020ml	1ml	NA	
Lab Control Sample	KWG1310290-1	NA	NA	1000ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Volatile Organic Compounds

Organic Analysis:
Volatile Organic Compounds

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel
Service Request: K1309638

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
Trip Blank 2	K1309638-003	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
Trip Blank 1	K1309638-006	09/10/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
Trip Blank 3	K1309638-009	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013
Trip Blank 4	K1309638-012	09/12/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Jeff Grindstaff

Date: 9/19/13 Title: Laboratory Director

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Volatile Organic Compounds

Sample Name:	13254-BW-4	**Units:**	ug/L
Lab Code:	K1309638-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.080**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	101	65-144	09/17/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Volatile Organic Compounds

Sample Name:	13254-BW-2	**Units:**	ug/L
Lab Code:	K1309638-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.14**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	96	73-122	09/17/13	Acceptable
Toluene-d8	100	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 2
Lab Code: K1309638-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.10**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/10/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Volatile Organic Compounds

Sample Name:	13253-Well D	**Units:**	ug/L
Lab Code:	K1309638-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	**0.51**		0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.60**		0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	**0.16**	J	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	**0.30**	J	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	**0.13**	J	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 1
Lab Code: K1309638-006

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**0.20**	J	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**0.12**	J	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.080**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 3
Lab Code: K1309638-009

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	100	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**0.21**	J	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**0.11**	J	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.090**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.29**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 4
Lab Code: K1309638-012

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	91	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1310087-4

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1309439-003	96	94	99
13254-BW-4	K1309638-001	95	95	101
13254-BW-2	K1309638-002	96	96	100
Trip Blank 2	K1309638-003	95	93	99
13253-BW-3	K1309638-004	96	95	99
13253-Well D	K1309638-005	98	92	99
Trip Blank 1	K1309638-006	95	92	98
13255-BW-1	K1309638-008	94	93	99
Trip Blank 3	K1309638-009	96	93	100
13255-DUP	K1309638-010	93	93	99
13255-Rinse	K1309638-011	96	95	99
Trip Blank 4	K1309638-012	96	91	98
Method Blank	KWG1310087-4	94	92	98
Batch QCMS	KWG1310087-1	99	92	100
Batch QCDMS	KWG1310087-2	99	94	99
Lab Control Sample	KWG1310087-3	97	94	102

Surrogate Recovery Control Limits (%)

Sur1	= 4-Bromofluorobenzene	68-117
Sur2	= Dibromofluoromethane	73-122
Sur3	= Toluene-d8	65-144

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013
Time Analyzed: 09:20

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\091713\0917F003.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1310078-1
Analysis Lot: KWG1310078

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	965,184	6.43	393,203	9.61	332,735	11.94
	Upper Limit ==>	1,930,368	6.93	786,406	10.11	665,470	12.44
	Lower Limit ==>	482,592	5.93	196,602	9.11	166,368	11.44
	ICAL Result ==>	1,118,048	6.43	448,052	9.61	377,387	11.94
Associated Analyses							
Lab Control Sample	KWG1310087-3	1,019,868	6.42	421,891	9.60	349,368	11.94
Batch QCMS	KWG1310087-1	998,870	6.43	401,105	9.60	344,722	11.93
Batch QCDMS	KWG1310087-2	1,018,995	6.43	409,462	9.60	352,669	11.94
Method Blank	KWG1310087-4	965,738	6.43	384,125	9.60	302,091	11.94
Batch QC	K1309439-003	956,578	6.43	381,430	9.61	307,804	11.94
Trip Blank 2	K1309638-003	959,356	6.43	382,822	9.61	302,257	11.94
Trip Blank 1	K1309638-006	944,688	6.43	372,768	9.61	290,366	11.94
13253-BW-3	K1309638-004	963,631	6.43	387,525	9.60	304,769	11.94
13253-Well D	K1309638-005	956,435	6.43	378,924	9.61	304,475	11.94
Trip Blank 3	K1309638-009	946,548	6.43	382,521	9.61	298,727	11.94
Trip Blank 4	K1309638-012	964,476	6.43	382,324	9.61	295,496	11.94
13254-BW-4	K1309638-001	941,389	6.42	378,151	9.60	297,261	11.94
13254-BW-2	K1309638-002	933,441	6.43	377,453	9.61	286,268	11.94
13255-BW-1	K1309638-008	947,480	6.43	374,962	9.60	294,692	11.94
13255-DUP	K1309638-010	952,501	6.43	379,038	9.60	289,795	11.94
13255-Rinse	K1309638-011	941,827	6.43	379,110	9.61	295,408	11.94

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: Batch QC
Lab Code: K1309439-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310087

		Batch QCMS KWG1310087-1 Matrix Spike			Batch QCDMS KWG1310087-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	10.4	10.0	104	9.80	10.0	98	49-136	6	30
1,1-Dichloroethene	ND	11.8	10.0	118	11.1	10.0	111	59-171	7	30
Carbon Tetrachloride	ND	9.41	10.0	94	9.08	10.0	91	53-161	4	30
Benzene	ND	10.2	10.0	102	9.72	10.0	97	63-144	5	30
Trichloroethene (TCE)	ND	10.1	10.0	101	9.41	10.0	94	53-139	7	30
Toluene	0.10	10.5	10.0	104	9.93	10.0	98	71-136	5	30
Chlorobenzene	ND	10.2	10.0	102	9.74	10.0	97	69-126	4	30
Ethylbenzene	ND	10.2	10.0	102	9.63	10.0	96	66-136	6	30
1,2-Dichlorobenzene	ND	10.3	10.0	103	9.89	10.0	99	72-119	4	30
1,1,2-Trichloroethane	ND	10.2	10.0	102	10.0	10.0	100	74-124	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310087

Lab Control Sample
KWG1310087-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	8.04	10.0	80	55-123
Methylene Chloride	9.33	10.0	93	71-122
trans-1,2-Dichloroethene	8.47	10.0	85	67-125
1,1-Dichloroethene	9.47	10.0	95	66-129
cis-1,2-Dichloroethene	8.53	10.0	85	71-118
Carbon Tetrachloride	7.51	10.0	75	55-140
Benzene	8.52	10.0	85	69-124
1,2-Dichloroethane (EDC)	8.59	10.0	86	56-142
Trichloroethene (TCE)	8.44	10.0	84	67-128
1,2-Dichloropropane	9.42	10.0	94	67-126
Toluene	8.73	10.0	87	69-124
Tetrachloroethene (PCE)	7.39	10.0	74	62-126
Chlorobenzene	8.59	10.0	86	72-116
Ethylbenzene	8.30	10.0	83	67-121
Styrene	8.53	10.0	85	74-121
m,p-Xylenes	17.2	20.0	86	69-121
o-Xylene	8.41	10.0	84	71-119
1,1,1-Trichloroethane (TCA)	7.47	10.0	75	59-136
1,4-Dichlorobenzene	8.67	10.0	87	73-115
1,2-Dichlorobenzene	9.02	10.0	90	72-115
1,2,4-Trichlorobenzene	8.53	10.0	85	58-126
1,1,2-Trichloroethane	8.33	10.0	83	74-118

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013
Time Analyzed: 12:57

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1310087-4

Instrument ID: MS27
File ID: J:\MS27\DATA\091713\0917F009.D

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low
Extraction Lot: KWG1310087

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310087-3	J:\MS27\DATA\091713\0917F004.D	09/17/13	10:41
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/13	11:08
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/13	11:35
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/13	13:24
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/13	14:19
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/13	14:46
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/13	15:13
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/13	15:40
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/13	16:08
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/13	16:35
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/13	17:49
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/13	18:16
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/13	18:44
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/13	19:11
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/13	19:38

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	09/17/2013
		Time Analyzed:	10:41

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS27
Lab Code:	KWG1310087-3	**File ID:**	J:\MS27\DATA\091713\0917F004.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1310087

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/13	11:08
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/13	11:35
Method Blank	KWG1310087-4	J:\MS27\DATA\091713\0917F009.D	09/17/13	12:57
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/13	13:24
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/13	14:19
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/13	14:46
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/13	15:13
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/13	15:40
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/13	16:08
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/13	16:35
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/13	17:49
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/13	18:16
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/13	18:44
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/13	19:11
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/13	19:38

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013
Time Analyzed: 08:52

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\091713\0917F002.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1310078

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.9	8434	PASS
75	95	30	60	49.9	23480	PASS
95	95	100	100	100.0	47101	PASS
96	95	5	9	6.6	3086	PASS
173	174	0	2	0.5	193	PASS
174	95	50	120	87.7	41296	PASS
175	174	5	9	6.9	2857	PASS
176	174	95	101	95.9	39600	PASS
177	176	5	9	6.0	2378	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310078-1	J:\MS27\DATA\091713\0917F003.D	09/17/2013	09:20	
Lab Control Sample	KWG1310087-3	J:\MS27\DATA\091713\0917F004.D	09/17/2013	10:41	
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/2013	11:08	
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/2013	11:35	
Method Blank	KWG1310087-4	J:\MS27\DATA\091713\0917F009.D	09/17/2013	12:57	
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/2013	13:24	
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/2013	14:19	
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/2013	14:46	
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/2013	15:13	
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/2013	15:40	
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/2013	16:08	
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/2013	16:35	
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/2013	17:49	
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/2013	18:16	
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/2013	18:44	
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/2013	19:11	
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/2013	19:38	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS27\DATA\081213\0812F007.D	G	J:\MS27\DATA\081213\0812F013.D
B	J:\MS27\DATA\081213\0812F008.D	H	J:\MS27\DATA\081213\0812F014.D
C	J:\MS27\DATA\081213\0812F009.D	I	J:\MS27\DATA\081213\0812F015.D
D	J:\MS27\DATA\081213\0812F010.D	J	J:\MS27\DATA\081213\0812F016.D
E	J:\MS27\DATA\081213\0812F011.D	K	J:\MS27\DATA\081213\0812F017.D
F	J:\MS27\DATA\081213\0812F012.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Vinyl Chloride	A	0.10	0.331	B	0.20	0.315	C	0.50	0.311	D	1.0	0.306	E	2.0	0.281
	F	5.0	0.315	G	10	0.315	H	20	0.295	I	40	0.303	J	60	0.300
	K	80	0.310												
Methylene Chloride							C	0.50	0.262	D	1.0	0.261	E	2.0	0.227
	F	5.0	0.252	G	10	0.246	H	20	0.234	I	40	0.238	J	60	0.237
	K	80	0.242												
trans-1,2-Dichloroethene				B	0.20	0.243	C	0.50	0.272	D	1.0	0.263	E	2.0	0.235
	F	5.0	0.255	G	10	0.256	H	20	0.242	I	40	0.248	J	60	0.247
	K	80	0.257												
1,1-Dichloroethene				B	0.20	0.202	C	0.50	0.199	D	1.0	0.179	E	2.0	0.171
	F	5.0	0.199	G	10	0.197	H	20	0.187	I	40	0.191	J	60	0.188
	K	80	0.198												
cis-1,2-Dichloroethene	A	0.10	0.299	B	0.20	0.272	C	0.50	0.310	D	1.0	0.278	E	2.0	0.259
	F	5.0	0.286	G	10	0.289	H	20	0.278	I	40	0.283	J	60	0.286
	K	80	0.293												
Carbon Tetrachloride							C	0.50	0.308	D	1.0	0.344	E	2.0	0.318
	F	5.0	0.365	G	10	0.374	H	20	0.357	I	40	0.371	J	60	0.369
	K	80	0.387												
Benzene	A	0.10	1.02	B	0.20	1.09	C	0.50	1.04	D	1.0	1.07	E	2.0	0.951
	F	5.0	1.06	G	10	1.06	H	20	1.01	I	40	1.03	J	60	1.03
	K	80	1.06												
1,2-Dichloroethane (EDC)	A	0.10	0.237	B	0.20	0.325	C	0.50	0.323	D	1.0	0.327	E	2.0	0.292
	F	5.0	0.329	G	10	0.326	H	20	0.308	I	40	0.317	J	60	0.316
	K	80	0.325												
Trichloroethene (TCE)				B	0.20	0.250	C	0.50	0.272	D	1.0	0.283	E	2.0	0.262
	F	5.0	0.292	G	10	0.296	H	20	0.280	I	40	0.283	J	60	0.284
	K	80	0.293												
1,2-Dichloropropane	A	0.10	0.237	B	0.20	0.220	C	0.50	0.272	D	1.0	0.257	E	2.0	0.241
	F	5.0	0.275	G	10	0.273	H	20	0.265	I	40	0.265	J	60	0.268
	K	80	0.275												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toluene	A	0.10	0.582	B	0.20	0.610	C	0.50	0.648	D	1.0	0.652	E	2.0	0.607
	F	5.0	0.662	G	10	0.667	H	20	0.638	I	40	0.659	J	60	0.670
	K	80	0.681												
Tetrachloroethene (PCE)							C	0.50	0.639	D	1.0	0.610	E	2.0	0.564
	F	5.0	0.628	G	10	0.609	H	20	0.596	I	40	0.605	J	60	0.598
	K	80	0.631												
Chlorobenzene	A	0.10	1.58	B	0.20	1.64	C	0.50	1.91	D	1.0	1.78	E	2.0	1.68
	F	5.0	1.88	G	10	1.88	H	20	1.83	I	40	1.86	J	60	1.85
	K	80	1.92												
Ethylbenzene	A	0.10	0.889	B	0.20	0.927	C	0.50	0.992	D	1.0	0.992	E	2.0	0.928
	F	5.0	0.991	G	10	0.987	H	20	0.968	1	40	0.976	J	60	0.993
	K	80	1.03												
Styrene				B	0.20	0.834	C	0.50	0.855	D	1.0	0.879	E	2.0	0.798
	F	5.0	0.946	G	10	0.932	H	20	0.918	I	40	0.947	J	60	0.940
	K	80	0.977												
m,p-Xylenes	A	0.20	0.997	B	0.40	1.02	C	1.0	1.18	D	2.0	1.19	E	4.0	1.07
	F	10	1.21	G	20	1.20	H	40	1.18	I	80	1.21	J	120	1.21
o-Xylene	A	0.10	1.25	B	0.20	1.01	C	0.50	1.16	D	1.0	1.15	E	2.0	1.06
	F	5.0	1.18	G	10	1.17	H	20	1.15	I	40	1.16	J	60	1.17
	K	80	1.20												
1,1,1-Trichloroethane (TCA)				B	0.20	0.435	C	0.50	0.420	D	1.0	0.411	E	2.0	0.396
	F	5.0	0.429	G	10	0.440	H	20	0.416	1	40	0.423	J	60	0.420
	K	80	0.438												
1,4-Dichlorobenzene	A	0.10	1.63	B	0.20	1.71	C	0.50	1.68	D	1.0	1.61	E	2.0	1.50
	F	5.0	1.64	G	10	1.68	H	20	1.59	I	40	1.58	J	60	1.61
	K	80	1.67												
1,2-Dichlorobenzene	A	0.10	1.13	B	0.20	1.27	C	0.50	1.43	D	1.0	1.37	E	2.0	1.31
	F	5.0	1.52	G	10	1.53	H	20	1.45	I	40	1.42	J	60	1.45
	K	80	1.49												
1,2,4-Trichlorobenzene													E	2.0	0.406
	F	5.0	0.688	G	10	0.810	H	20	0.875	1	40	0.912	J	60	0.953
	K	80	1.01												
4-Bromofluorobenzene	A	10	0.835	B	10	0.838	C	10	0.861	D	10	0.868	E	10	0.865
	F	10	0.896	G	10	0.887	H	10	0.908	1	10	0.918	J	10	0.912
	K	10	0.916												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibromofluoromethane	A	10	0.266	B	10	0.272	C	10	0.271	D	10	0.274	E	10	0.270
	F	10	0.274	G	10	0.270	H	10	0.265	1	10	0.272	J	10	0.265
	K	10	0.269												
1,1,2-Trichloroethane				B	0.20	0.377	C	0.50	0.419	D	1.0	0.458	E	2.0	0.390
	F	5.0	0.423	G	10	0.407	H	20	0.405	I	40	0.405	J	60	0.402
	K	80	0.419												
Toluene-d8	A	10	0.984	B	10	0.977	C	10	0.977	D	10	0.976	E	10	0.975
	F	10	0.983	G	10	0.987	H	10	0.973	I	10	1.00	J	10	1.01
	K	10	1.00												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Vinyl Chloride	MS	AverageRF	% RSD	4.2		≤ 20	0.307		0.100
Methylene Chloride	TRG	AverageRF	% RSD	5.0		≤ 20	0.244		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.3		≤ 20	0.252		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	5.3		≤ 20	0.191		0.100
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.8		≤ 20	0.285		0.100
Carbon Tetrachloride	MS	AverageRF	% RSD	7.5		≤ 20	0.355		0.100
Benzene	MS	AverageRF	% RSD	3.5		≤ 20	1.04		0.500
1,2-Dichloroethane (EDC)	TRG	AverageRF	% RSD	8.6		≤ 20	0.311		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	5.2		≤ 20	0.279		0.200
1,2-Dichloropropane	TRG	AverageRF	% RSD	7.1		≤ 20	0.259		0.100
Toluene	MS	AverageRF	% RSD	4.8		≤ 20	0.643		0.400
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	3.7		≤ 20	0.609		0.200
Chlorobenzene	MS	AverageRF	% RSD	6.4		≤ 20	1.80		0.500
Ethylbenzene	MS	AverageRF	% RSD	4.1		≤ 20	0.970		0.100
Styrene	TRG	AverageRF	% RSD	6.4		≤ 20	0.902		0.300
m,p-Xylenes	TRG	AverageRF	% RSD	7.2		≤ 20	1.15		0.100
o-Xylene	TRG	AverageRF	% RSD	5.5		≤ 20	1.15		0.300
1,1,1-Trichloroethane (TCA)	TRG	AverageRF	% RSD	3.2		≤ 20	0.423		0.100
1,4-Dichlorobenzene	TRG	AverageRF	% RSD	3.6		≤ 20	1.63		0.500
1,2-Dichlorobenzene	MS	AverageRF	% RSD	8.6		≤ 20	1.40		0.400
1,2,4-Trichlorobenzene	TRG	Quadratic(0,0)	COD	1.000		≥ 0.990	0.808		0.200
4-Bromofluorobenzene	SURR	AverageRF	% RSD	3.5		≤ 20	0.882		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	1.2		≤ 20	0.270		0.01
1,1,2-Trichloroethane	MS	AverageRF	% RSD	5.3		≤ 20	0.410		0.100
Toluene-d8	SURR	AverageRF	% RSD	1.3		≤ 20	0.986		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013
Date Analyzed: 08/12/2013

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL12690
Units: PPB

File ID: J:\MS27\DATA\081213\0812F020.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	10	0.307	0.310	1	NA	± 30 %	AverageRF
Methylene Chloride	10	10	0.244	0.250	2	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.252	0.261	4	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	12	0.191	0.231	21	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.7	0.285	0.277	-3	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	10	0.355	0.365	3	NA	± 30 %	AverageRF
Benzene	10	9.7	1.04	1.01	-3	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.311	0.321	3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	10	0.279	0.284	2	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	10	0.259	0.265	2	NA	± 30 %	AverageRF
Toluene	10	9.9	0.643	0.635	-1	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.4	0.609	0.570	-6	NA	± 30 %	AverageRF
Chlorobenzene	10	9.7	1.80	1.74	-3	NA	± 30 %	AverageRF
Ethylbenzene	10	9.6	0.970	0.936	-4	NA	± 30 %	AverageRF
Styrene	10	9.7	0.902	0.880	-3	NA	± 30 %	AverageRF
m,p-Xylenes	20	20	1.15	1.12	-2	NA	± 30 %	AverageRF
o-Xylene	10	9.5	1.15	1.09	-5	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	0.423	0.423	0	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.7	1.63	1.58	-3	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	9.9	1.40	1.38	-1	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	8.6	0.808	0.712	NA	-14	± 30 %	)uadratic(0,(
1,1,2-Trichloroethane	10	9.5	0.410	0.388	-5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 08/12/2013
Calibration ID: CAL12690
Analysis Lot: KWG1310078
Units: PPB

File ID: J:\MS27\DATA\091713\0917F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	9.7	0.100	0.307	0.298	-3	NA	± 20 %	AverageRF
Methylene Chloride	10	11	0.100	0.244	0.259	6	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	9.5	0.100	0.252	0.238	-5	NA	± 20 %	AverageRF
1,1-Dichloroethene	10	9.1	0.100	0.191	0.174	-9	NA	± 20 %	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.100	0.285	0.271	-5	NA	± 20 %	AverageRF
Carbon Tetrachloride	10	8.3	0.100	0.355	0.294	-17	NA	± 20 %	AverageRF
Benzene	10	10	0.500	1.04	1.04	1	NA	± 20 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.100	0.311	0.321	3	NA	± 20 %	AverageRF
Trichloroethene (TCE)	10	9.4	0.200	0.279	0.263	-6	NA	± 20 %	AverageRF
1,2-Dichloropropane	10	11	0.100	0.259	0.287	11	NA	± 20 %	AverageRF
Toluene	10	10	0.400	0.643	0.665	3	NA	± 20 %	AverageRF
Tetrachloroethene (PCE)	10	8.5	0.200	0.609	0.515	-15	NA	± 20 %	AverageRF
Chlorobenzene	10	10	0.500	1.80	1.85	3	NA	± 20 %	AverageRF
Ethylbenzene	10	9.7	0.100	0.970	0.938	-3	NA	± 20 %	AverageRF
Styrene	10	10	0.300	0.902	0.938	4	NA	± 20 %	AverageRF
m,p-Xylenes	20	20	0.100	1.15	1.15	1	NA	± 20 %	AverageRF
o-Xylene	10	9.8	0.300	1.15	1.13	-2	NA	± 20 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	8.7	0.100	0.423	0.366	-13	NA	± 20 %	AverageRF
1,4-Dichlorobenzene	10	10	0.500	1.63	1.67	2	NA	± 20 %	AverageRF
1,2-Dichlorobenzene	10	11	0.400	1.40	1.54	10	NA	± 20 %	AverageRF
1,2,4-Trichlorobenzene	10	11	0.200	0.808	0.879	NA	6	± 20 %	Quadratic(0,0
4-Bromofluorobenzene	10	9.8	0.01	0.882	0.861	-2	NA	± 20 %	AverageRF
Dibromofluoromethane	10	9.5	0.01	0.270	0.257	-5	NA	± 20 %	AverageRF
Toluene-d8	10	10	0.01	0.986	0.992	1	NA	± 20 %	AverageRF
1,1,2-Trichloroethane	10	10	0.100	0.410	0.431	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C

Analysis Lot: KWG1310078
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0917F002.D	GC/MS Tuning - Generic	KWG1310078-2	9/17/2013	08:52		9/17/2013	09:09
0917F003.D	Continuing Calibration Verification	KWG1310078-1	9/17/2013	09:20		9/17/2013	09:37
0917F004.D	Lab Control Sample	KWG1310087-3	9/17/2013	10:41		9/17/2013	10:58
0917F005.D	Batch QCMS	KWG1310087-1	9/17/2013	11:08		9/17/2013	11:25
0917F006.D	Batch QCDMS	KWG1310087-2	9/17/2013	11:35		9/17/2013	11:52
0917F009.D	Method Blank	KWG1310087-4	9/17/2013	12:57		9/17/2013	13:14
0917F010.D	Batch QC	K1309439-003	9/17/2013	13:24		9/17/2013	13:41
0917F012.D	Trip Blank 2	K1309638-003	9/17/2013	14:19		9/17/2013	14:36
0917F013.D	Trip Blank 1	K1309638-006	9/17/2013	14:46		9/17/2013	15:03
0917F014.D	13253-BW-3	K1309638-004	9/17/2013	15:13		9/17/2013	15:30
0917F015.D	13253-Well D	K1309638-005	9/17/2013	15:40		9/17/2013	15:57
0917F016.D	Trip Blank 3	K1309638-009	9/17/2013	16:08		9/17/2013	16:25
0917F017.D	Trip Blank 4	K1309638-012	9/17/2013	16:35		9/17/2013	16:52
0917F018.D	13254-BW-4	K1309638-001	9/17/2013	17:49		9/17/2013	18:06
0917F019.D	13254-BW-2	K1309638-002	9/17/2013	18:16		9/17/2013	18:33
0917F020.D	13255-BW-1	K1309638-008	9/17/2013	18:44		9/17/2013	19:01
0917F021.D	13255-DUP	K1309638-010	9/17/2013	19:11		9/17/2013	19:28
0917F022.D	13255-Rinse	K1309638-011	9/17/2013	19:38		9/17/2013	19:55
0917F023.D	ZZZZZZ	ZZZZZZ	9/17/2013	20:05		9/17/2013	20:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1309638
Project: Drexel

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1310078
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0917F002.D	GC/MS Tuning - Generic	KWG1310078-2	9/17/2013	08:52		9/17/2013	09:09
0917F003.D	Continuing Calibration Verification	KWG1310078-1	9/17/2013	09:20		9/17/2013	09:37
0917F004.D	Lab Control Sample	KWG1310087-3	9/17/2013	10:41		9/17/2013	10:58
0917F005.D	Batch QCMS	KWG1310087-1	9/17/2013	11:08		9/17/2013	11:25
0917F006.D	Batch QCDMS	KWG1310087-2	9/17/2013	11:35		9/17/2013	11:52
0917F009.D	Method Blank	KWG1310087-4	9/17/2013	12:57		9/17/2013	13:14
0917F010.D	Batch QC	K1309439-003	9/17/2013	13:24		9/17/2013	13:41
0917F012.D	Trip Blank 2	K1309638-003	9/17/2013	14:19		9/17/2013	14:36
0917F013.D	Trip Blank 1	K1309638-006	9/17/2013	14:46		9/17/2013	15:03
0917F014.D	13253-BW-3	K1309638-004	9/17/2013	15:13		9/17/2013	15:30
0917F015.D	13253-Well D	K1309638-005	9/17/2013	15:40		9/17/2013	15:57
0917F016.D	Trip Blank 3	K1309638-009	9/17/2013	16:08		9/17/2013	16:25
0917F017.D	Trip Blank 4	K1309638-012	9/17/2013	16:35		9/17/2013	16:52
0917F018.D	13254-BW-4	K1309638-001	9/17/2013	17:49		9/17/2013	18:06
0917F019.D	13254-BW-2	K1309638-002	9/17/2013	18:16		9/17/2013	18:33
0917F020.D	13255-BW-1	K1309638-008	9/17/2013	18:44		9/17/2013	19:01
0917F021.D	13255-DUP	K1309638-010	9/17/2013	19:11		9/17/2013	19:28
0917F022.D	13255-Rinse	K1309638-011	9/17/2013	19:38		9/17/2013	19:55
0917F023.D	ZZZZZZ	ZZZZZZ	9/17/2013	20:05		9/17/2013	20:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1310087
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	10ml	10ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	10ml	10ml	NA	
Trip Blank 2	K1309638-003	09/11/13	09/14/13	10ml	10ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	10ml	10ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	10ml	10ml	NA	
Trip Blank 1	K1309638-006	09/10/13	09/14/13	10ml	10ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	10ml	10ml	NA	
Trip Blank 3	K1309638-009	09/12/13	09/14/13	10ml	10ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	10ml	10ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	10ml	10ml	NA	
Trip Blank 4	K1309638-012	09/12/13	09/14/13	10ml	10ml	NA	
Method Blank	KWG1310087-4	NA	NA	10ml	10ml	NA	
Batch QC	K1309439-003	NA	NA	10ml	10ml	NA	
Batch QCMS	KWG1310087-1	NA	NA	10ml	10ml	NA	
Batch QCDMS	KWG1310087-2	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1310087-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organophosphorus Pesticides

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Summary Package

Sample and QC Results

Client: Environmental Planning Specialists
Project: Drexel
Service Request: K1309638

Cover Page - Organic Analysis Data Package
Organophosphorus Pesticides by HRGC/MS/MS

Sample Name	Lab Code	Date Collected	Date Received
13254-BW-4	K1309638-001	09/11/2013	09/14/2013
13254-BW-2	K1309638-002	09/11/2013	09/14/2013
13253-BW-3	K1309638-004	09/10/2013	09/14/2013
13253-Well D	K1309638-005	09/10/2013	09/14/2013
13255-BW-1	K1309638-008	09/12/2013	09/14/2013
13255-DUP	K1309638-010	09/12/2013	09/14/2013
13255-Rinse	K1309638-011	09/12/2013	09/14/2013

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: Jerome Peterson

Date: 10-15-2013 Title: Scientist

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13254-BW-4	**Units:**	ng/L
Lab Code:	K1309638-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	43	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	81	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13254-BW-2	**Units:**	ng/L
Lab Code:	K1309638-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	50	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	78	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/10/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13253-BW-3	**Units:**	ng/L
Lab Code:	K1309638-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Boistar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	53	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	105	39-124	10/10/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: EPA 3535A
Analysis Method: GC/MS/MS

Units: ng/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	48	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	103	39-124	10/10/13	Acceptable

Comments:

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: EPA 3535A
Analysis Method: GC/MS/MS

Units: ng/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	47	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	101	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/12/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13255-DUP	**Units:**	ng/L
Lab Code:	K1309638-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	100	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	100	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	100	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	100	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	100	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	46	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	88	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/12/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13255-Rinse	**Units:**	ng/L
Lab Code:	K1309638-011	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	51	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	98	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KWG1310066-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	48	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	97	39-124	10/10/13	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Organophosphorus Pesticides by HRGC/MS/MS

Extraction Method: EPA 3535A
Analysis Method: GC/MS/MS

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2
13254-BW-4	K1309638-001	43	81
13254-BW-2	K1309638-002	50	78
13253-BW-3	K1309638-004	53	105
13253-Well D	K1309638-005	48	103
13255-BW-1	K1309638-008	47	101
13255-DUP	K1309638-010	46	88
13255-Rinse	K1309638-011	51	98
Method Blank	KWG1310066-3	48	97
Lab Control Sample	KWG1310066-1	52	99
Duplicate Lab Control Sample	KWG1310066-2	46	101

Surrogate Recovery Control Limits (%)

Sur1	= Dichlorvos-d6	15-96
Sur2	= Chlorpyrifos-d10	39-124

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/10/2013
Time Analyzed: 14:45

Internal Standard Area and RT Summary
Organophosphorus Pesticides by HRGC/MS/MS

File ID: J:\MS21\DATA\101013\1010F014.D
Instrument ID: MS21
Analysis Method: GC/MS/MS

Lab Code: KWG1311302-1
Analysis Lot: KWG1311302

		Phenanthrene-d10		Fluoranthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	73,438	12.41	66,736	15.79	81,155	18.66
	Upper Limit ==>	146,877	12.91	133,472	16.29	162,311	19.16
	Lower Limit ==>	36,719	11.91	33,368	15.29	40,578	18.16
	ICAL Result ==>	77,056	12.41	67,992	15.79	83,637	18.67
Associated Analyses							
Method Blank	KWG1310066-3	90,399	12.41	71,113	15.79	85,629	18.66
Lab Control Sample	KWG1310066-1	94,113	12.40	67,499	15.79	80,392	18.66
Duplicate Lab Control Sample	KWG1310066-2	98,470	12.40	73,323	15.78	88,205	18.66
13254-BW-4	K1309638-001	102,472	12.40	70,380	15.78	79,279	18.66
13254-BW-2	K1309638-002	84,250	12.40	70,254	15.78	81,828	18.66
13253-BW-3	K1309638-004	98,946	12.40	69,945	15.78	80,308	18.66
13253-Well D	K1309638-005	98,463	12.40	68,598	15.78	75,627	18.66
13255-BW-1	K1309638-008	100,588	12.40	71,019	15.78	80,095	18.66
13255-DUP	K1309638-010	97,476	12.40	70,315	15.78	80,341	18.66
13255-Rinse	K1309638-011	98,778	12.40	74,688	15.78	87,207	18.65

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 10/10/2013

Lab Control Spike/Duplicate Lab Control Spike Summary
Organophosphorus Pesticides by HRGC/MS/MS

Extraction Method: EPA 3535A
Analysis Method: GC/MS/MS

Units: ng/L
Basis: NA
Level: Low
Extraction Lot: KWG1310066

	Lab Control Sample KWG1310066-1 Lab Control Spike				Duplicate Lab Control Sample KWG1310066-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Demeton-O,S	727	1000	73		573	1000	57	*	70-120	24	30
Naled (Dibrom)	673	1000	67	*	655	1000	65	*	70-120	3	30
Phorate	1040	1000	104		1000	1000	100		70-120	4	30
Monocrotophos	ND	1000	0	*	ND	1000	0	*	70-120	NC	30
Dimethoate	108	1000	11	*	94.6	1000	9	*	70-120	13	30
Ronnel	992	1000	99		1020	1000	102		70-120	2	30
Methyl Parathion	856	1000	86		855	1000	86		70-120	0	30
Malathion	858	1000	86		871	1000	87		70-120	2	30
Fenthion	909	1000	91		909	1000	91		70-120	0	30
Trichloronate	936	1000	94		968	1000	97		70-120	3	30
Ethyl Parathion	923	1000	92		901	1000	90		70-120	2	30
Merphos, Total	726	1000	73		759	1000	76		70-120	4	30
Tokuthion	929	1000	93		956	1000	96		70-120	3	30
Fensulfothion	295	1000	29	*	259	1000	26	*	70-120	13	30
Bolstar (Sulprofos)	904	1000	90		913	1000	91		70-120	1	30
EPN	922	1000	92		967	1000	97		70-120	5	30
Azinphos-methyl	576	1000	58	*	542	1000	54	*	70-120	6	30
Coumaphos	842	1000	84		849	1000	85		70-120	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	10/10/2013
		Time Analyzed:	15:15

Method Blank Summary
Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	MS21
Lab Code:	KWG1310066-3	**File ID:**	J:\MS21\DATA\101013\1010F015.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS	**Extraction Lot:**	KWG1310066

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310066-1	J:\MS21\DATA\101013\1010F016.D	10/10/13	15:39
Duplicate Lab Control Sample	KWG1310066-2	J:\MS21\DATA\101013\1010F017.D	10/10/13	16:05
13254-BW-4	K1309638-001	J:\MS21\DATA\101013\1010F018.D	10/10/13	16:32
13254-BW-2	K1309638-002	J:\MS21\DATA\101013\1010F019.D	10/10/13	16:58
13253-BW-3	K1309638-004	J:\MS21\DATA\101013\1010F020.D	10/10/13	17:24
13253-Well D	K1309638-005	J:\MS21\DATA\101013\1010F021.D	10/10/13	17:50
13255-BW-1	K1309638-008	J:\MS21\DATA\101013\1010F022.D	10/10/13	18:16
13255-DUP	K1309638-010	J:\MS21\DATA\101013\1010F023.D	10/10/13	18:43
13255-Rinse	K1309638-011	J:\MS21\DATA\101013\1010F024.D	10/10/13	19:09

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	10/10/2013
		Time Analyzed:	15:39

Lab Control Sample Summary
Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	MS21
Lab Code:	KWG1310066-1	**File ID:**	J:\MS21\DATA\101013\1010F016.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS	**Extraction Lot:**	KWG1310066

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310066-3	J:\MS21\DATA\101013\1010F015.D	10/10/13	15:15
13254-BW-4	K1309638-001	J:\MS21\DATA\101013\1010F018.D	10/10/13	16:32
13254-BW-2	K1309638-002	J:\MS21\DATA\101013\1010F019.D	10/10/13	16:58
13253-BW-3	K1309638-004	J:\MS21\DATA\101013\1010F020.D	10/10/13	17:24
13253-Well D	K1309638-005	J:\MS21\DATA\101013\1010F021.D	10/10/13	17:50
13255-BW-1	K1309638-008	J:\MS21\DATA\101013\1010F022.D	10/10/13	18:16
13255-DUP	K1309638-010	J:\MS21\DATA\101013\1010F023.D	10/10/13	18:43
13255-Rinse	K1309638-011	J:\MS21\DATA\101013\1010F024.D	10/10/13	19:09

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21

Column: MS

Level ID	File ID
A	J:\MS21\Data\101013\1010F003.D
B	J:\MS21\Data\101013\1010F004.D
C	J:\MS21\Data\101013\1010F005.D
D	J:\MS21\Data\101013\1010F006.D
E	J:\MS21\Data\101013\1010F007.D
F	J:\MS21\Data\101013\1010F008.D

Level ID	File ID
G	J:\MS21\Data\101013\1010F009.D
H	J:\MS21\Data\101013\1010F010.D
I	J:\MS21\Data\101013\1010F011.D
J	J:\MS21\Data\101013\1010F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Demeton-O	A	5.0	0.0203	B	10	0.0199	C	20	0.0241	D	50	0.0206	E	80	0.0223
	F	100	0.0210	G	120	0.0206	H	160	0.0206	I	200	0.0222	J	300	0.0209
Demeton-S	A	5.0	0.0419	B	10	0.0373	C	20	0.0339	D	50	0.0362	E	80	0.0364
	F	100	0.0330	G	120	0.0328	H	160	0.0335	I	200	0.0323	J	300	0.0356
Naled (Dibrom)	A	5.0	0.00367	B	10	0.00983	C	20	0.00981	D	50	0.0121	E	80	0.0138
	F	100	0.0150	G	120	0.0146	H	160	0.0147	I	200	0.0173	J	300	0.0189
Phorate	A	5.0	0.106	B	10	0.114	C	20	0.124	D	50	0.109	E	80	0.118
	F	100	0.123	G	120	0.118	H	160	0.121	I	200	0.126	J	300	0.135
Monocrotophos	A	5.0	0.567	B	10	0.564	C	20	0.546	D	50	0.598	E	80	0.553
	F	100	0.561	G	120	0.553	H	160	0.603	I	200	0.619	J	300	0.734
Dimethoate	A	5.0	0.179	B	10	0.181	C	20	0.187	D	50	0.186	E	80	0.178
	F	100	0.182	G	120	0.175	H	160	0.179	I	200	0.182	J	300	0.195
Ronnel	A	5.0	0.728	B	10	0.747	C	20	0.758	D	50	0.800	E	80	0.813
	F	100	0.830	G	120	0.812	H	160	0.825	I	200	0.862	J	300	0.931
Methyl Parathion	A	5.0	0.278	B	10	0.271	C	20	0.286	D	50	0.272	E	80	0.265
	F	100	0.268	G	120	0.259	H	160	0.259	I	200	0.265	J	300	0.276
Malathion	A	5.0	0.481	B	10	0.506	C	20	0.499	D	50	0.519	E	80	0.525
	F	100	0.528	G	120	0.500	H	160	0.503	I	200	0.517	J	300	0.540
Fenthion	A	5.0	0.494	B	10	0.464	C	20	0.478	D	50	0.498	E	80	0.493
	F	100	0.500	G	120	0.475	H	160	0.473	I	200	0.482	J	300	0.501
Trichloronate	A	5.0	0.833	B	10	0.797	C	20	0.842	D	50	0.858	E	80	0.864
	F	100	0.868	G	120	0.810	H	160	0.802	I	200	0.795	J	300	0.829
Ethyl Parathion	A	5.0	0.158	B	10	0.173	C	20	0.180	D	50	0.176	E	80	0.177
	F	100	0.175	G	120	0.167	H	160	0.169	I	200	0.168	J	300	0.179
Merphos				B	10	0.0545	C	20	0.0853	D	50	0.223	E	80	0.255
	F	100	0.264	G	120	0.270	H	160	0.292	I	200	0.302	J	300	0.334
Tokuthion	A	5.0	0.580	B	10	0.573	C	20	0.595	D	50	0.621	E	80	0.622
	F	100	0.626	G	120	0.612	H	160	0.624	I	200	0.628	J	300	0.688

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Merphos oxone	A	5.0	0.264	B	10	0.258	C	20	0.267	D	50	0.276	E	80	0.278
	F	100	0.280	G	120	0.267	H	160	0.268	I	200	0.275	J	300	0.296
Fensulfothion	A	5.0	0.266	B	10	0.260	C	20	0.255	D	50	0.260	E	80	0.268
	F	100	0.272	G	120	0.272	H	160	0.288	I	200	0.304	J	300	0.342
Bolstar (Sulprofos)	A	5.0	0.655	B	10	0.663	C	20	0.643	D	50	0.694	E	80	0.718
	F	100	0.734	G	120	0.730	H	160	0.766	I	200	0.799	J	300	0.879
EPN	A	5.0	0.224	B	10	0.211	C	20	0.223	D	50	0.237	E	80	0.227
	F	100	0.234	G	120	0.229	H	160	0.243	I	200	0.259	J	300	0.281
Azinphos-methyl	A	5.0	0.350	B	10	0.385	C	20	0.361	D	50	0.384	E	80	0.386
	F	100	0.399	G	120	0.393	H	160	0.424	I	200	0.452	J	300	0.520
Coumaphos	A	5.0	0.214	B	10	0.196	C	20	0.199	D	50	0.207	E	80	0.212
	F	100	0.208	G	120	0.202	H	160	0.209	I	200	0.216	J	300	0.229
Dichlorvos-d6	A	5.0	0.0781	B	10	0.0699	C	20	0.0784	D	50	0.0774	E	80	0.0797
	F	100	0.0750	G	120	0.0753	H	160	0.0806	I	200	0.0802	J	300	0.0870
Chlorpyrifos-d10	A	5.0	0.649	B	10	0.619	C	20	0.629	D	50	0.669	E	80	0.673
	F	100	0.670	G	120	0.647	H	160	0.642	I	200	0.640	J	300	0.663

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Demeton-O	MULTI	AverageRF	% RSD	5.9		≤ 20	0.0212		0.01
Demeton-S	MULTI	AverageRF	% RSD	8.2		≤ 20	0.0353		0.01
Naled (Dibrom)	MS	Quadratic	COD	0.998		≥ 0.990	0.0130		0.01
Phorate	MS	AverageRF	% RSD	7.2		≤ 20	0.119		0.01
Monocrotophos	MS	AverageRF	% RSD	9.5		≤ 20	0.590		0.01
Dimethoate	MS	AverageRF	% RSD	3.2		≤ 20	0.182		0.01
Ronnel	MS	AverageRF	% RSD	7.3		≤ 20	0.811		0.01
Methyl Parathion	MS	AverageRF	% RSD	3.1		≤ 20	0.270		0.01
Malathion	MS	AverageRF	% RSD	3.4		≤ 20	0.512		0.01
Fenthion	MS	AverageRF	% RSD	2.7		≤ 20	0.486		0.01
Trichloronate	MS	AverageRF	% RSD	3.4		≤ 20	0.830		0.01
Ethyl Parathion	MS	AverageRF	% RSD	3.9		≤ 20	0.172		0.01
Merphos	MULTI	Quadratic	COD	1.000		≥ 0.990	0.231		0.01
Tokuthion	MS	AverageRF	% RSD	5.2		≤ 20	0.617		0.01
Merphos oxone	MULTI	AverageRF	% RSD	3.9		≤ 20	0.273		0.01
Fensulfothion	MS	AverageRF	% RSD	9.5		≤ 20	0.279		0.01
Bolstar (Sulprofos)	MS	AverageRF	% RSD	10.0		≤ 20	0.728		0.01
EPN	MS	AverageRF	% RSD	8.5		≤ 20	0.237		0.01
Azinphos-methyl	MS	AverageRF	% RSD	12.3		≤ 20	0.405		0.01
Coumaphos	MS	AverageRF	% RSD	4.6		≤ 20	0.209		0.01
Dichlorvos-d6	SURR	AverageRF	% RSD	5.7		≤ 20	0.0782		0.01
Chlorpyrifos-d10	SURR	AverageRF	% RSD	2.9		≤ 20	0.650		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013
Date Analyzed: 10/10/2013

Second Source Calibration Verification
Organophosphorus Pesticides by HRGC/MS/MS

Calibration Type: Internal Standard
Analysis Method: GC/MS/MS

Calibration ID: CAL12837
Units: ng/ml

File ID: J:\MS21\Data\101013\1010F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D		%Drift		Criteria	Curve Fit
Demeton-O	100	110	0.0212	0.0226	6		NA		± 25 %	AverageRF
Demeton-S	100	98	0.0353	0.0347	-2		NA		± 25 %	AverageRF
Demeton-O,S	100	100	NA	NA	NA		2		± 25 %	NA
Naled (Dibrom)	100	110	0.0130	0.0158	NA		9		± 25 %	Quadratic
Phorate	100	110	0.119	0.130	9		NA		± 25 %	AverageRF
Monocrotophos	100	100	0.590	0.592	0		NA		± 25 %	AverageRF
Dimethoate	100	97	0.182	0.176	-3		NA		± 25 %	AverageRF
Ronnel	100	100	0.811	0.812	0		NA		± 25 %	AverageRF
Methyl Parathion	100	97	0.270	0.263	-3		NA		± 25 %	AverageRF
Malathion	100	99	0.512	0.507	-1		NA		± 25 %	AverageRF
Fenthion	100	87	0.486	0.425	-13		NA		± 25 %	AverageRF
Trichloronate	100	100	0.830	0.841	1		NA		± 25 %	AverageRF
Ethyl Parathion	100	100	0.172	0.178	3		NA		± 25 %	AverageRF
Merphos	100	180	0.231	0.521	NA		77	*	± 25 %	Quadratic
Merphos, Total	100	120	NA	NA	NA		20		± 25 %	NA
Tokuthion	100	99	0.617	0.608	-1		NA		± 25 %	AverageRF
Merphos oxone	100	64	0.273	0.174	-36	*	NA		± 25 %	AverageRF
Fensulfothion	100	85	0.279	0.238	-15		NA		± 25 %	AverageRF
Bolstar (Sulprofos)	100	100	0.728	0.732	1		NA		± 25 %	AverageRF
EPN	100	99	0.237	0.234	-1		NA		± 25 %	AverageRF
Azinphos-methyl	100	96	0.405	0.389	-4		NA		± 25 %	AverageRF
Coumaphos	100	99	0.209	0.207	-1		NA		± 25 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/10/2013

Continuing Calibration Verification Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration Type: Internal Standard
Analysis Method: GC/MS/MS

Calibration Date: 10/10/2013
Calibration ID: CAL12837
Analysis Lot: KWG1311302
Units: ng/ml

File ID: J:\MS21\DATA\101013\1010F014.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Demeton-O	100	92	0.01	0.0212	0.0196	-8	NA	± 25 %	AverageRF
Demeton-S	100	87	0.01	0.0353	0.0306	-13	NA	± 25 %	AverageRF
Demeton-O,S	100	89		NA	NA	NA	-11	± 25 %	NA
Naled (Dibrom)	100	100	0.01	0.0130	0.0149	NA	4	± 25 %	Quadratic
Phorate	100	100	0.01	0.119	0.124	4	NA	± 25 %	AverageRF
Monocrotophos	100	95	0.01	0.590	0.563	-5	NA	± 25 %	AverageRF
Dimethoate	100	97	0.01	0.182	0.178	-3	NA	± 25 %	AverageRF
Ronnel	100	100	0.01	0.811	0.823	2	NA	± 25 %	AverageRF
Methyl Parathion	100	98	0.01	0.270	0.264	-2	NA	± 25 %	AverageRF
Malathion	100	99	0.01	0.512	0.506	-1	NA	± 25 %	AverageRF
Fenthion	100	100	0.01	0.486	0.485	0	NA	± 25 %	AverageRF
Trichloronate	100	100	0.01	0.830	0.827	0	NA	± 25 %	AverageRF
Ethyl Parathion	100	99	0.01	0.172	0.170	-1	NA	± 25 %	AverageRF
Merphos	100	100	0.01	0.231	0.267	NA	1	± 25 %	Quadratic
Merphos, Total	100	99		NA	NA	NA	-1	± 25 %	NA
Tokuthion	100	100	0.01	0.617	0.620	0	NA	± 25 %	AverageRF
Merphos oxone	100	97	0.01	0.273	0.265	-3	NA	± 25 %	AverageRF
Fensulfothion	100	95	0.01	0.279	0.264	-5	NA	± 25 %	AverageRF
Bolstar (Sulprofos)	100	98	0.01	0.728	0.716	-2	NA	± 25 %	AverageRF
EPN	100	100	0.01	0.237	0.241	2	NA	± 25 %	AverageRF
Azinphos-methyl	100	96	0.01	0.405	0.389	-4	NA	± 25 %	AverageRF
Coumaphos	100	97	0.01	0.209	0.203	-3	NA	± 25 %	AverageRF
Dichlorvos-d6	100	100	0.01	0.0782	0.0785	0	NA	± 25 %	AverageRF
Chlorpyrifos-d10	100	100	0.01	0.650	0.656	1	NA	± 25 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists **Service Request:** K1309638
Project: Drexel

Analysis Run Log
Organophosphorus Pesticides by HRGC/MS/MS

Analysis Method: GC/MS/MS **Analysis Lot:** KWG1311302
Instrument ID: MS21

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1010F014.D	Continuing Calibration Verification	KWG1311302-1	10/10/2013	14:45		10/10/2013	14:45
1010F015.D	Method Blank	KWG1310066-3	10/10/2013	15:15		10/10/2013	15:15
1010F016.D	Lab Control Sample	KWG1310066-1	10/10/2013	15:39		10/10/2013	15:39
1010F017.D	Duplicate Lab Control Sample	KWG1310066-2	10/10/2013	16:05		10/10/2013	16:05
1010F018.D	13254-BW-4	K1309638-001	10/10/2013	16:32		10/10/2013	16:32
1010F019.D	13254-BW-2	K1309638-002	10/10/2013	16:58		10/10/2013	16:58
1010F020.D	13253-BW-3	K1309638-004	10/10/2013	17:24		10/10/2013	17:24
1010F021.D	13253-Well D	K1309638-005	10/10/2013	17:50		10/10/2013	17:50
1010F022.D	13255-BW-1	K1309638-008	10/10/2013	18:16		10/10/2013	18:16
1010F023.D	13255-DUP	K1309638-010	10/10/2013	18:43		10/10/2013	18:43
1010F024.D	13255-Rinse	K1309638-011	10/10/2013	19:09		10/10/2013	19:09

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013

Extraction Prep Log
Organophosphorus Pesticides by HRGC/MS/MS

Extraction Method: EPA 3535A
Analysis Method: GC/MS/MS

Extraction Lot: KWG1310066
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
13254-BW-4	K1309638-001	09/11/13	09/14/13	1020ml	10ml	NA	
13254-BW-2	K1309638-002	09/11/13	09/14/13	1020ml	10ml	NA	
13253-BW-3	K1309638-004	09/10/13	09/14/13	1020ml	10ml	NA	
13253-Well D	K1309638-005	09/10/13	09/14/13	1020ml	10ml	NA	
13255-BW-1	K1309638-008	09/12/13	09/14/13	1020ml	10ml	NA	
13255-DUP	K1309638-010	09/12/13	09/14/13	1000ml	10ml	NA	
13255-Rinse	K1309638-011	09/12/13	09/14/13	1020ml	10ml	NA	
Method Blank	KWG1310066-3	NA	NA	1020ml	10ml	NA	
Lab Control Sample	KWG1310066-1	NA	NA	1000ml	10ml	NA	
Duplicate Lab Control Sample	KWG1310066-2	NA	NA	1000ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Carbamates and Carbamoyloximes

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

September 23, 2013

Ms. Chris Leaf
ALS Environmental - Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Certificate of Analysis

Project Name:	**SOCs**	Workorder:	**1048418**
Purchase Order:	**K1309638**	Workorder ID:	**K1309638**

Dear Ms. Leaf,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, September 17, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Kelli Wolfgang (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Kelli Wolfgang

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Kelli Wolfgang
Project Coordinator

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SAMPLE SUMMARY

Workorder: 1048418 K1309638 Discard Date: 10/07/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1048418001	K1309638-001	Drinking Water	9/11/13 11:20	9/17/13 09:20	Customer
1048418002	K1309638-002	Drinking Water	9/11/13 15:45	9/17/13 09:20	Customer
1048418003	K1309638-004	Drinking Water	9/10/13 10:30	9/17/13 09:20	Customer
1048418004	K1309638-005	Drinking Water	9/10/13 16:05	9/17/13 09:20	Customer
1048418005	K1309638-008	Drinking Water	9/12/13 14:15	9/17/13 09:20	Customer
1048418006	K1309638-010	Drinking Water	9/12/13 00:00	9/17/13 09:20	Customer
1048418007	K1309638-011	Drinking Water	9/12/13 12:00	9/17/13 09:20	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418001** Date Collected: 9/11/2013 11:20 Matrix: Drinking Water

Sample ID: **K1309638-001** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418002** Date Collected: 9/11/2013 15:45 Matrix: Drinking Water

Sample ID: **K1309638-002** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A

Sample Comments:

Samples for Method 531.1 are preserved to a pH of 3 at the time of sampling. This sample did not meet this preservation requirement when tested prior to analysis.

Kelli Wolfgang

Kelli Wolfgang
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418003** Date Collected: 9/10/2013 10:30 Matrix: Drinking Water

Sample ID: **K1309638-004** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418004** Date Collected: 9/10/2013 16:05 Matrix: Drinking Water

Sample ID: **K1309638-005** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418005** Date Collected: 9/12/2013 14:15 Matrix: Drinking Water

Sample ID: **K1309638-008** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418006** Date Collected: 9/12/2013 00:00 Matrix: Drinking Water

Sample ID: **K1309638-010** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418007** Date Collected: 9/12/2013 12:00 Matrix: Drinking Water

Sample ID: **K1309638-011** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

Validation Package

Case Narrative

ALS ENVIRONMENTAL

Client:	Environmental Planning Specialist	**Service Request No.:**	K1309638
Project:	Drexel	**Date Received:**	09/14/13
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Twelve water samples were received for analysis at ALS Environmental on 09/14/13. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Calcium for sample 13254-BW-4 were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

EDB and DBCP by EPA Method 504.1

No anomalies associated with the analysis of these samples were observed.

Pesticides and Polychlorinated Biphenyls by EPA Method 508.1

Elevated Detection Limits:
The detection limit was elevated for Heptachlor Epoxide in the samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the normal limit. The results were flagged to indicate the matrix interference.

Matrix Spike Recovery Exceptions:
The control criteria for the matrix spike recovery of Heptachlor Epoxide for sample 13254-BW-4 were not applicable. The chromatogram indicated non-target matrix background components contributed to the reported matrix spike concentrations. Thus, the reported recoveries contained a high bias. Based on the magnitude of background contribution, the interference appeared to be minimal.

No other anomalies associated with the analysis of these samples were observed.

Approved by: 10/17/13

Chlorinated Acides by EPA Method 515.4

Second Source Exceptions:
The analysis of Chlorinated Acids by EPA Method 515.4 requires the use of dual column confirmation. When the Initial Calibration Verification (ICV) criteria are met for both columns, the lower of the two sample results is generally reported. The data quality was not affected. No further corrective action was necessary.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 525.2

Internal Standard Exceptions:
The control criteria were exceeded for the following Internal Standard in sample 13254-BW-2 due to suspected matrix interferences: Chrysene-d12. The sample contained particulate matter that collected on the extraction disk during sample elution. Historical results have shown that particulate matter can cause low recoveries for this internal standard. The control criteria are designed for drinking water matrices and can only be used as default limits for wastewaters. No further corrective action was appropriate.

Surrogate Exceptions:
The control criteria were exceeded for the following surrogate in several samples due to suspected matrix interferences: Perylene-d12. The sample contained particulate matter that collected on the extraction disk during sample elution. Historical results have shown that particulate matter can cause low recoveries for this surrogate. The control criteria are designed for drinking water matrices and can only be used as default limits for wastewaters. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Benzo(a)pyrene for sample Batch Qc was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

No anomalies associated with the analysis of these samples were observed.

Chlorinated Pesticides by GC/MS/MS

Lab Control Sample Exceptions:
The recoveries of Demeton-O,S, Naled, Monocrotophos, Dimethoate, Fensulfothion, and Azinphos-methyl in the associated Laboratory Control Samples (LCS,DLCS) KWG1310066-1, and KWG1310066-2 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Second Source Exceptions:
The ICV result for Merphos, and Merphos oxone were outside of the %D criteria of 25%. The combined result for Merphos, Total met the criteria. No corrective action was required.

No other anomalies associated with the analysis of these samples were observed.

Carbamates by EPA Method 531.1

This analysis was performed at ALS Environmental, Middletown, PA. The data for this analysis is included in the corresponding section of this report.

Approved by _____ 10/17/13

Chain of Custody

ALS Environmental

CHAIN OF CUSTODY

42716

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# K1309638

COC Set____of____

COC#_____

Project Name: Drexel	Project Number:
Project Manager: Timmerly Bultman	
Company: EPS Inc.	
Address: 1050 Crown Pointe Pkwy, Ste 550, Atlanta, GA 30338	
Phone #: 404-315-9113	email: tbultman@envplanning.com
Sampler Signature:	Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13254-BW-4		9.11.13	1120	GW		X	X	X	X	X	X	X	X	X						
2. 13254-BW-2		9.11.13	1545	GW		X	X	X	X	X	X	X	X	X						
3. TRIP BLANK 2		9.5.13		W		X														
4.																				
5.																				
6.																				
7.																				
8. 236																				
9.																				
10.																				

Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- __ II. Report Dup., MS, MSD as required
- __ III. CLP Like Summary (no raw data)
- __ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

- __ 24 hr.
- __ 48 hr.
- __ 5 Day
- X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name: Rothlin	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9.13.13 1200	Date/Time: 9/14/13 900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental

CHAIN OF CUSTODY
42716

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SR# K1309163

COC Set____of____

COC#_____

Project Name: Drexel	Project Number:
Project Manager: Timmerly Bullman	
Company: EPS Inc	
Address: 1050 Crown Pointe Pkwy, St. 550 ATLANTA 30338	
Phone #: 404-315-9113	email: TBullman@enviroinn.ng.com
Sampler Signature:	Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13253-BW-3		9-12-13	1930	GW	13	X	X	X	X	X	X	X	X	X						
2. 13253-Well D		9-10-13	1605	GW	13	X	X	X	X	X	X	X	X	X						
3. Trip Blank 1		9-10-13	1200	W	1	X														
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

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Report Requirements

- [X] I. Routine Report: Method Blank, Surrogate, as required
- [X] II. Report Dup., MS, MSD as required
- [ ] III. CLP Like Summary (no raw data)
- [ ] IV. Data Validation Report
- [X] V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

- [ ] 24 hr.
- [ ] 48 hr.
- [ ] 5 Day
- [X] Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc	Firm	Firm	Firm	Firm	Firm
Date/Time: 9-13-13 1755	Date/Time: 9/14/13 900	Date/Time	Date/Time	Date/Time	Date/Time

ALS Environmental

CHAIN OF CUSTODY

42716

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

SR# K1309635

COC Set____of____

COC#_____

Project Name: Drexel	Project Number:
Project Manager: T. Burman	
Company: EPS Inc.	
Address: 1050 Crown Pointe Pkwy, St. 550, Atlanta GA	
Phone #: 404.315.9113	email: tburman@enviroplanning.com
Sampler Signature:	Sampler Printed Name: Gregg Henry, Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	7D: 8260C / VOC Unp	7D: 8270D / Pest OP	14D: 504.1 / EDB DBCP 123TCP	14D: 508.1 / PEST_CL	14D: 515.4 / CL_ACID_HERB	14D: 525.2 / SVO	28D: 531.1 / CARBAM	180D: 200.7 LL / Metals T	180D: 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13255-BW-5		9/12/13	1125	GW	3			X												
2. 13255-BW-1		9/12/13	1415	GW	13	X	X	X	X	X	X	X	X	X						
3. TKP Blank 5		9-5-13		W		X														
4.																				
5.																				
6.																				
7.																				
8. 238																				
9.																				
10.																				

Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- __ III. CLP Like Summary (no raw data)
- __ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____

Bill To:_____

Turnaround Requirements

- __ 24 hr.
- __ 48 hr.
- __ 5 Day
- X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 1200 9/13/13	Date/Time: 9/14/13 900	Date/Time	Date/Time	Date/Time	Date/Time

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www.alsglobal.com

SR# K1309638
COC Set____of____
COC#_____

Project Name	Project Number:
Project Manager	Timmerly Bowman
Company	EPS Inc.
Address	1455 Crown Point Pkwy, Ste 550, Atl. GA 30338
Phone #	email
404-315-9113	TBullman@enydenning.com
Sampler Signature	Sampler Printed Name
	Gregg Henry
	Jeff Dennis

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D 8260C / VOC Unp	7D 8270D / Pest OP	14D 504.1 / EDB DBCP 123TCP	14D 508.1 / PEST_CL	14D 515.4 / CL_ACID_HERB	14D 525.2 / SVO	28D 531.1 / CARBAM	180D 200.7 LL / Metals T	180D 200.8 / Metals T	1	2	3	4	5	Remarks
1. 13255-DUP		9.12.13		GW	13	X	X	X	X	X	X	X	X	X						
2. 13255-Rinse		9.12.13	1200	W	13	X	X	X	X	X	X	X	X	X						
3. Trip Blank 4		9.5.13		W	1	X														
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

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Report Requirements

- X I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- X V. EDD

Invoice Information

P.O.#_____
Bill To:_____

Turnaround Requirements

___ 24 hr. ___ 48 hr.
___ 5 Day
X Standard

Requested Report Date

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Special Instructions/Comments:

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other____(Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Gregg Henry	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: EPS Inc.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9.13.13 1200	Date/Time: 9/14/13 9:08	Date/Time	Date/Time	Date/Time	Date/Time

PC GS

Cooler Receipt and Preservation Form

Client / Project: EPS Service Request *K13* 9638

Received: 9-14-13 Opened: 9-14-13 By: MJ Unloaded: 9-14-13 By: MJ

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) / N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
1.4	1.5	0.3	0.4	+0.1	340		8037 4336 5086	
1.9	1.9	2.3	2.3	Ø	343		8037 4336 5123	
4.0	3.9	2.1	2.0	-0.1	259		8037 4336 5101	
0.4	0.5	0.2	0.3	+0.1	319		8037 4336 5112	

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* MJ 9/14/13 (NA) (Y) N
11. Were VOA vials received without headspace? *Indicate in the table below.* 9/14/13 (NA) Y (N)
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: Most all vials have headspace

Page ____ *of* ____

Metals

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialists
Project Name: Drexel
Project No.:
Service Request: K1309638

Sample Name:	Lab Code:
13254-BW-4	K1309638-001
13254-BW-4D	K1309638-001D
13254-BW-4S	K1309638-001S
13254-BW-2	K1309638-002
13253-BW-3	K1309638-004
13253-Well D	K1309638-005
13255-BW-1	K1309638-008
13255-DUP	K1309638-010
13255-Rinse	K1309638-011
Method Blank	K1309638-MB

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/11/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13254-BW-4 **Lab Code:** K1309638-001

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	30.6		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.09	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	95.6		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.027		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.7	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.013	J	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	76400		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	2.27		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.063		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.80		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	141		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.123		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	1140		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	6.70		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.17		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.70		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	647		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	3060		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	63.4		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	5.2		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.749		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.95		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/11/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13254-BW-2 **Lab Code:** K1309638-002

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	4.0	0.4	1.0	09/27/13	10/04/13	4760		
Antimony	200.8	0.10	0.02	1.0	09/27/13	10/04/13	0.02	J	
Arsenic	200.8	1.00	0.10	1.0	09/27/13	10/04/13	6.02		
Barium	200.8	0.10	0.01	1.0	09/27/13	10/04/13	226		
Beryllium	200.8	0.040	0.016	1.0	09/27/13	10/04/13	3.970		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	12.4	J	
Cadmium	200.8	0.040	0.010	1.0	09/27/13	10/04/13	1.72		
Calcium	200.7	200	9.0	10.0	09/25/13	09/26/13	874000		
Chromium	200.8	0.40	0.04	1.0	09/27/13	10/04/13	144		
Cobalt	200.8	0.040	0.012	1.0	09/27/13	10/04/13	49.1		
Copper	200.8	0.20	0.06	1.0	09/27/13	10/04/13	14.1		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	12900		
Lead	200.8	0.040	0.004	1.0	09/27/13	10/04/13	15.5		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	3300		
Manganese	200.8	0.10	0.01	1.0	09/27/13	10/04/13	1300		
Molybdenum	200.8	0.10	0.02	1.0	09/27/13	10/04/13	3.19		
Nickel	200.8	0.40	0.08	1.0	09/27/13	10/04/13	94.3		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	1110		
Selenium	200.8	2.0	0.8	1.0	09/27/13	10/04/13	10.5		
Silver	200.8	0.040	0.010	1.0	09/27/13	10/04/13	4.04		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	3790		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	355		
Thallium	200.8	0.040	0.004	1.0	09/27/13	10/04/13	0.313		
Tin	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.08	J	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	109		
Vanadium	200.8	0.400	0.100	1.0	09/27/13	10/04/13	25.4		
Zinc	200.8	1.00	0.18	1.0	09/27/13	10/04/13	23.0		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis
Project No.: NA
Project Name: Drexel
Matrix: WATER

Service Request: K1309638
Date Collected: 09/10/13
Date Received: 09/14/13
Units: ug/L
Basis: NA

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	11.7		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.09	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	118		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.031		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.2	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	54700		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	1.46		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.019	J	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.63		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	16.7	J	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.045		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	717		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	2.21		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.16		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.37		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	265		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	2440		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	51.6		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.003	J	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	2.2		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.742		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.04		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/10/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13253-Well D **Lab Code:** K1309638-005

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	30.8		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.39	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	101		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.082		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	8.9	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.006	J	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	60800		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	1.66		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.203		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.66		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	983		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.140		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	1210		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	15.5		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.11		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.66		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	455		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	1.0		
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1930		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	98.3		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.005	J	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	6.6		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.780		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	13.0		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/12/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13255-BW-1 **Lab Code:** K1309638-008

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	23.9		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.12	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	87.9		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.026		
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	6.4	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.082		
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	92000		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	3.79		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.573		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.57		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	74.6		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.153		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	713		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	43.1		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.32		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	1.57		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	245		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.062		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1810		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	59.5		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.049		
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	4.3		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.100		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.85		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/12/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13255-DUP **Lab Code:** K1309638-010

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	23.2		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.10	J	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	90.6		
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.019	J	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	6.5	J	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.052		
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	78800		
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	3.63		
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.493		
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.59		
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	58.0		
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.114		
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	701		
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	27.8		
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.31		
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	1.54		
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	283		
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.041		
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	1840		
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	55.6		
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.052		
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	4.1		
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	1.030		
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	1.47		

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Environmental Planning Specialis	**Service Request:**	K1309638
Project No.:	NA	**Date Collected:**	09/12/13
Project Name:	Drexel	**Date Received:**	09/14/13
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: 13255-Rinse **Lab Code:** K1309638-011

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	2.1		
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.05	U	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.02	J	
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.008	U	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	4.0	U	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	16.6	J	
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.09	J	
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.006	U	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.09	J	
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	3.0	U	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	0.3	U	
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.02	J	
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.10	J	
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	60.0	U	
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	20.0	U	
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	0.16	J	
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	0.8	U	
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.050	U	
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	0.30	J	

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Date Collected:**

Project Name: Drexel **Date Received:**

Matrix: WATER **Units:** ug/L

Basis: NA

Sample Name: Method Blank **Lab Code:** K1309638-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Aluminum	200.8	2.0	0.2	1.0	09/27/13	10/04/13	0.3	J	
Antimony	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Arsenic	200.8	0.50	0.05	1.0	09/27/13	10/04/13	0.05	U	
Barium	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Beryllium	200.8	0.020	0.008	1.0	09/27/13	10/04/13	0.008	U	
Boron	200.7	20.0	4.0	1.0	09/25/13	09/26/13	4.0	U	
Cadmium	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Calcium	200.7	20.0	0.9	1.0	09/25/13	09/26/13	0.9	U	
Chromium	200.8	0.20	0.02	1.0	09/27/13	10/04/13	0.02	U	
Cobalt	200.8	0.020	0.006	1.0	09/27/13	10/04/13	0.006	U	
Copper	200.8	0.10	0.03	1.0	09/27/13	10/04/13	0.03	U	
Iron	200.7	20.0	3.0	1.0	09/25/13	09/26/13	3.0	U	
Lead	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Magnesium	200.7	5.0	0.3	1.0	09/25/13	09/26/13	0.3	U	
Manganese	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	J	
Molybdenum	200.8	0.05	0.01	1.0	09/27/13	10/04/13	0.01	U	
Nickel	200.8	0.20	0.04	1.0	09/27/13	10/04/13	0.04	U	
Potassium	200.7	200	60.0	1.0	09/25/13	09/26/13	60.0	U	
Selenium	200.8	1.0	0.4	1.0	09/27/13	10/04/13	0.4	U	
Silver	200.8	0.020	0.005	1.0	09/27/13	10/04/13	0.005	U	
Sodium	200.7	200	20.0	1.0	09/25/13	09/26/13	20.0	U	
Strontium	200.7	1.00	0.09	1.0	09/25/13	09/26/13	0.09	U	
Thallium	200.8	0.020	0.002	1.0	09/27/13	10/04/13	0.002	U	
Tin	200.8	0.10	0.01	1.0	09/27/13	10/04/13	0.01	U	
Titanium	200.7	2.0	0.8	1.0	09/25/13	09/26/13	0.8	U	
Vanadium	200.8	0.200	0.050	1.0	09/27/13	10/04/13	0.050	U	
Zinc	200.8	0.50	0.09	1.0	09/27/13	10/04/13	0.13	J	

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

ICV Source: Inorganic Ventures CCV Source: CAS Mixed

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum	100.0	98.9	99	25.0	25.1	100	24.7	99	200.8
Antimony	25.0	25.7	103	25.0	24.6	98	25.1	100	200.8
Arsenic	25.0	24.1	96	25.0	24.7	99	25.0	100	200.8
Barium	100.0	96.4	96	25.0	24.7	99	25.0	100	200.8
Beryllium	2.5	2.4	96	25.0	24.5	98	24.3	97	200.8
Boron	2000	2033	102	250	248	99	247	99	200.7
Cadmium	12.5	12.2	98	25.0	24.6	98	24.2	97	200.8
Calcium	5000	5039	101	250	254	102	263	105	200.7
Calcium	12500	12680	101	10000	10010	100	10000	100	200.7
Chromium	10.0	9.8	98	25.0	25.2	101	25.9	104	200.8
Cobalt	25.0	24.0	96	25.0	24.5	98	24.8	99	200.8
Copper	12.5	12.4	99	25.0	25.0	100	24.5	98	200.8
Iron	2500	2507	100	10000	10040	100	10010	100	200.7
Lead	25.0	24.8	99	25.0	25.5	102	25.8	103	200.8
Magnesium	5000	5035	101	250	254	102	252	101	200.7
Magnesium	12500	12600	101	10000	10020	100	9753	98	200.7
Manganese	25.0	24.1	96	25.0	25.0	100	25.4	102	200.8
Molybdenum	25.0	24.5	98	25.0	24.8	99	24.5	98	200.8
Nickel	25.0	24.0	96	25.0	24.6	98	24.4	98	200.8
Potassium	12500	12270	98	10000	9924	99	9468	95	200.7
Selenium	25.0	25.3	101	25.0	25.4	102	26.2	105	200.8
Silver	12.5	12.8	102	25.0	24.8	99	24.9	100	200.8
Sodium	12500	12400	99	10000	9910	99	9364	94	200.7
Strontium	2000	2043	102	1000	994	99	988	99	200.7
Thallium	25.0	25.0	100	25.0	25.5	102	25.6	102	200.8
Tin	25.0	25.2	101	25.0	24.7	99	25.0	100	200.8
Titanium	2000	2044	102	250	252	101	250	100	200.7
Vanadium	25.0	23.9	96	25.0	24.5	98	25.2	101	200.8
Zinc	25.0	24.3	97	25.0	25.0	100	24.7	99	200.8

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICV Source: Inorganic Ventures CCV Source: CAS Mixed

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				25.0	24.4	98	24.5	98	200.8
Antimony				25.0	25.4	102	25.5	102	200.8
Arsenic				25.0	24.7	99	24.2	97	200.8
Barium				25.0	24.7	99	24.9	100	200.8
Beryllium				25.0	24.3	97	24.7	99	200.8
Boron				250	239	96	244	98	200.7
Cadmium				25.0	24.0	96	24.4	98	200.8
Calcium				10000	10070	101	9981	100	200.7
Calcium				250	251	100	252	101	200.7
Chromium				25.0	24.5	98	24.7	99	200.8
Cobalt				25.0	24.0	96	23.8	95	200.8
Copper				25.0	24.5	98	23.9	96	200.8
Iron				10000	10140	101	10060	101	200.7
Lead				25.0	25.7	103	25.9	104	200.8
Magnesium				10000	9931	99	9840	98	200.7
Magnesium				250	254	102	252	101	200.7
Manganese				25.0	25.6	102	25.3	101	200.8
Molybdenum				25.0	23.8	95	23.3	93	200.8
Nickel				25.0	24.1	96	23.9	96	200.8
Potassium				10000	9854	99	9598	96	200.7
Selenium				25.0	26.3	105	26.2	105	200.8
Silver				25.0	25.0	100	25.0	100	200.8
Sodium				10000	9836	98	9486	95	200.7
Strontium				1000	1000	100	979	98	200.7
Thallium				25.0	25.7	103	25.8	103	200.8
Tin				25.0	25.3	101	25.5	102	200.8
Titanium				250	250	100	250	100	200.7
Vanadium				25.0	24.5	98	24.5	98	200.8
Zinc				25.0	24.6	98	23.8	95	200.8

Metals
- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

ICV Source: Inorganic Ventures CCV Source: CAS Mixed

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Aluminum				25.0	24.7	99	24.6	98	200.8
Antimony				25.0	26.3	105	26.0	104	200.8
Arsenic				25.0	25.1	100	25.0	100	200.8
Barium				25.0	27.0	108	26.6	106	200.8
Beryllium				25.0	24.6	98	25.2	101	200.8
Boron				250	237	95			200.7
Cadmium				25.0	26.2	105	25.5	102	200.8
Calcium				10000	10330	103			200.7
Calcium				250	249	100			200.7
Chromium				25.0	23.6	94	24.2	97	200.8
Cobalt				25.0	23.5	94	23.8	95	200.8
Copper				25.0	23.9	96	23.7	95	200.8
Iron				10000	10150	102			200.7
Lead				25.0	27.0	108	27.1	108	200.8
Magnesium				10000	9628	96			200.7
Magnesium				250	251	100			200.7
Manganese				25.0	23.5	94	24.2	97	200.8
Molybdenum				25.0	25.0	100	24.7	99	200.8
Nickel				25.0	23.7	95	23.7	95	200.8
Potassium				10000	9535	95			200.7
Selenium				25.0	26.6	106	26.6	106	200.8
Silver				25.0	24.9	100	25.0	100	200.8
Sodium				10000	9391	94			200.7
Strontium				1000	975	98			200.7
Thallium				25.0	26.9	108	27.0	108	200.8
Tin				25.0	25.5	102	25.1	100	200.8
Titanium				250	251	100			200.7
Vanadium				25.0	23.1	92	24.1	96	200.8
Zinc				25.0	23.6	94	23.8	95	200.8

Metals

- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum				2.00	1.929	96		
Antimony				0.05	0.053	106		
Arsenic				0.50	0.446	89		
Barium				0.05	0.045	90		
Beryllium				0.02	0.022	110		
Boron				20.0	19.8	99		
Cadmium				0.02	0.021	105		
Calcium				20.0	20.0	100		
Chromium				0.20	0.224	112		
Cobalt				0.02	0.023	115		
Copper				0.10	0.086	86		
Iron				20.0	15.5	78		
Lead				0.02	0.018	90		
Magnesium				5.0	5.4	108		
Manganese				0.05	0.047	94		
Molybdenum				0.05	0.048	96		
Nickel				0.20	0.198	99		
Potassium				200.0	192.8	96		
Selenium				1.00	1.040	104		
Silver				0.02	0.023	115		
Sodium				200.0	170.1	85		
Strontium				1.0	1.0	100		
Thallium				0.02	0.019	95		
Tin				0.05	0.057	114		
Titanium				2.0	2.1	105		
Vanadium				0.20	0.211	106		
Zinc				0.50	0.516	103		

Metals

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BLANKS

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum	0.2	U	0.2	U	0.2	U	0.2	U	200.8
Antimony	0.02	J	0.01	U	0.01	J	0.01	J	200.8
Arsenic	0.05	U	0.05	U	0.05	U	0.05	U	200.8
Barium	0.01	U	0.01	U	0.01	U	0.01	U	200.8
Beryllium	0.008	U	0.008	U	0.008	U	0.008	U	200.8
Boron	4.0	U	4.0	U	4.0	U	4.0	U	200.7
Cadmium	0.005	U	0.005	U	0.005	U	0.005	U	200.8
Calcium	0.9	U	0.9	U	0.9	U	0.9	U	200.7
Chromium	0.02	U	0.02	U	0.02	U	0.02	U	200.8
Cobalt	0.006	U	0.006	U	0.006	U	0.006	U	200.8
Copper	0.03	U	0.03	U	0.03	U	0.03	U	200.8
Iron	-11.3	J	3.0	U	-6.8	J	-7.3	J	200.7
Lead	0.002	U	0.002	U	0.002	U	0.002	U	200.8
Magnesium	0.4	J	0.3	U	0.3	U	0.3	U	200.7
Manganese	0.01	U	0.01	U	0.01	U	0.01	J	200.8
Molybdenum	0.01	J	0.01	U	0.01	U	0.01	U	200.8
Nickel	0.04	U	0.04	U	0.04	U	0.04	U	200.8
Potassium	60.0	U	60.0	U	60.0	U	60.0	U	200.7
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	200.8
Silver	0.005	U	0.005	U	0.005	U	0.005	U	200.8
Sodium	20.0	U	20.0	U	20.0	U	20.0	U	200.7
Strontium	0.09	U	-0.09	J	0.22	J	0.09	U	200.7
Thallium	0.004	J	0.002	U	0.002	U	0.003	J	200.8
Tin	0.03	J	0.01	U	0.01	J	0.01	J	200.8
Titanium	0.8	U	0.8	U	0.8	U	0.8	U	200.7
Vanadium	0.050	U	0.050	U	0.050	U	0.050	U	200.8
Zinc	0.09	U	0.09	U	0.09	U	0.09	U	200.8

Metals

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BLANKS

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Aluminum			0.2	U	0.2	U	0.2	U	200.8
Antimony			0.01	J	0.02	J	0.01	U	200.8
Arsenic			0.05	U	0.05	U	0.05	U	200.8
Barium			0.01	U	0.01	U	0.01	U	200.8
Beryllium			0.008	U	0.008	U	0.008	U	200.8
Boron			4.0	U	4.0	U			200.7
Cadmium			0.005	U	0.005	U	0.005	U	200.8
Calcium			0.9	U	0.9	U			200.7
Chromium			0.02	U	0.02	U	0.02	U	200.8
Cobalt			0.006	U	0.006	U	0.006	U	200.8
Copper			0.03	U	0.03	U	0.03	U	200.8
Iron			-8.4	J	-4.2	J			200.7
Lead			0.002	U	0.002	U	0.002	U	200.8
Magnesium			0.6	J	0.3	U			200.7
Manganese			0.01	J	0.01	U	0.03	J	200.8
Molybdenum			0.01	U	0.01	U	0.01	U	200.8
Nickel			0.04	U	0.04	U	0.04	U	200.8
Potassium			60.0	U	60.0	U			200.7
Selenium			0.4	U	0.4	U	0.4	U	200.8
Silver			0.005	U	0.005	U	0.005	U	200.8
Sodium			20.0	U	20.0	U			200.7
Strontium			0.22	J	0.09	U			200.7
Thallium			0.002	J	0.004	J	0.002	U	200.8
Tin			0.01	U	0.01	J	0.01	U	200.8
Titanium			0.8	U	0.8	U			200.7
Vanadium			0.050	U	0.050	U	0.050	U	200.8
Zinc			0.09	U	0.09	U	0.19	J	200.8

Metals

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ICP INTERFERENCE CHECK SAMPLE

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Boron	0.0		9.8	9.4				
Calcium	500000.0	500000.0	495100.0	489700.0	98			
Iron	200000.0	200000.0	193200.0	191300.0	96			
Magnesium	500000.0	500000.0	426900.0	429200.0	86			
Potassium	0.0		-7.6	-4.4				
Sodium	0.0		18.5	13.4				
Strontium	0.0		2.3	2.3				
Titanium	0.0		6.6	6.6				

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Environmental Planning Specialis Service Request: K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-MS-04 ICS Source: Inorganic Ventures

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	0.0		18699.5	18825.0				
Antimony	0.0		0.3	0.3				
Arsenic	0.0	25.0	0.1	24.5	98			
Barium	0.0		3.4	3.4				
Beryllium	0.0		0.0	0.0				
Cadmium	0.0	25.0	0.1	21.7	87			
Chromium	0.0	50.0	0.4	55.1	110			
Cobalt	0.0	50.0	0.9	52.2	104			
Copper	0.0	50.0	0.2	44.1	88			
Lead	0.0		0.0	0.0				
Manganese	0.0	50.0	1.4	51.5	103			
Molybdenum	0.0		53.4	52.5				
Nickel	0.0	50.0	0.9	48.8	98			
Selenium	0.0	25.0	0.1	23.5	94			
Silver	0.0	12.5	0.0	12.0	96			
Thallium	0.0		0.0	0.0				
Tin	0.0		0.7	0.0				
Vanadium	0.0	50.0	0.0	56.7	113			
Zinc	0.0	25.0	0.8	22.1	88			

Metals
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SPIKE SAMPLE RECOVERY

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Units:** UG/L

Project Name: Drexel **Basis:** NA

Matrix: WATER

Sample Name: 13254-BW-4S **Lab Code:** K1309638-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Aluminum	70 - 130	125.3		30.6		100.0	94.7		200.8
Antimony	70 - 130	54.08		0.01	U	50.0	108.2		200.8
Arsenic	70 - 130	50.82		0.09	J	50.0	101.5		200.8
Barium	70 - 130	202.00		95.58		100.0	106.4		200.8
Beryllium	70 - 130	2.401		0.027		2.5	95.0		200.8
Boron	70 - 130	991		8.7	J	1000.00	98.2		200.7
Cadmium	70 - 130	24.313		0.013	J	25.0	97.2		200.8
Calcium		85300		76400		10000.00	89.0		200.7
Chromium	70 - 130	12.85		2.27		10.0	105.8		200.8
Cobalt	70 - 130	25.093		0.063		25.0	100.1		200.8
Copper	70 - 130	12.49		0.80		12.5	93.5		200.8
Iron	70 - 130	1180		141		1000.00	103.9		200.7
Lead	70 - 130	49.865		0.123		50.0	99.5		200.8
Magnesium	70 - 130	11000		0.3	U	10000.00	110.0		200.7
Manganese	70 - 130	32.24		6.70		25.0	102.2		200.8
Molybdenum	70 - 130	21.14		0.17		20.0	104.8		200.8
Nickel	70 - 130	25.22		0.70		25.0	98.1		200.8
Potassium	70 - 130	10600		647		10000.00	99.5		200.7
Selenium	70 - 130	51.9		0.4	U	50.0	103.8		200.8
Silver	70 - 130	12.677		0.005	U	12.5	101.4		200.8
Sodium	70 - 130	12900		3060		10000.00	98.4		200.7
Strontium	70 - 130	10000		63.4		10000.00	99.4		200.7
Thallium	70 - 130	52.321		0.002	U	50.0	104.6		200.8
Tin	70 - 130	18.521		0.010	U	20.0	92.6		200.8
Titanium	70 - 130	10200		5.2		10000.00	101.9		200.7
Vanadium	70 - 130	26.837		0.749		25.0	104.4		200.8
Zinc	70 - 130	26.79		1.95		25.0	99.4		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Units:** UG/L

Project Name: Drexel **Basis:** NA

Matrix: WATER

Sample Name: 13254-BW-4D **Lab Code:** K1309638-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Aluminum	20	30.6		31.6		3.2		200.8
Antimony		0.01	U	0.01	U			200.8
Arsenic		0.09	J	0.10	J	10.5		200.8
Barium	20	95.58		95.39		0.2		200.8
Beryllium		0.027		0.027		0.0		200.8
Boron		8.7	J	7.2	J	18.9		200.7
Cadmium		0.013	J	0.013	J	0.0		200.8
Calcium	20	76400		75900		0.7		200.7
Chromium	20	2.27		2.29		0.9		200.8
Cobalt		0.063		0.061		3.2		200.8
Copper	20	0.80		0.75		6.5		200.8
Iron	20	141		135		4.3		200.7
Lead	20	0.123		0.127		3.2		200.8
Magnesium	20	1140		1120		1.8		200.7
Manganese	20	6.70		6.72		0.3		200.8
Molybdenum		0.17		0.17		0.0		200.8
Nickel		0.70		0.71		1.4		200.8
Potassium		647		642		0.8		200.7
Selenium		0.4	U	0.4	U			200.8
Silver		0.005	U	0.005	U			200.8
Sodium	20	3060		2970		3.0		200.7
Strontium	20	63.4		61.0		3.9		200.7
Thallium		0.002	U	0.003	J	200.0		200.8
Tin		0.010	U	0.010	U			200.8
Titanium		5.2		4.3		18.9		200.7
Vanadium		0.749		0.711		5.2		200.8
Zinc		1.95		2.15		9.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals
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LABORATORY CONTROL SAMPLE

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

Aqueous LCS Source: Inorganic Ventures **Solid LCS Source:**

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R	True	Found	C	Limits	%R
Aluminum	100.0	100.9	100.9					
Antimony	50.0	55.2	110.4					
Arsenic	50.0	50.2	100.4					
Barium	100.0	103.8	103.8					
Beryllium	2.5	2.5	100.0					
Boron	1000	977	97.7					
Cadmium	25.0	25.7	102.8					
Calcium	12500	12300	98.4					
Chromium	10.0	10.0	100.0					
Cobalt	25.0	24.5	98.0					
Copper	12.5	12.3	98.4					
Iron	2500	2480	99.2					
Lead	50.0	52.4	104.8					
Magnesium	12500	12400	99.2					
Manganese	25.0	25.1	100.4					
Molybdenum	20.0	19.9	99.5					
Nickel	25.0	24.6	98.4					
Potassium	12500	12200	97.6					
Selenium	50.0	54.1	108.2					
Silver	12.5	12.8	102.4					
Sodium	12500	12200	97.6					
Strontium	10000	9760	97.6					
Thallium	50.0	53.2	106.4					
Tin	20.0	21.1	105.5					
Titanium	10000	9990	99.9					
Vanadium	25.0	23.5	94.0					
Zinc	25.0	26.6	106.4					

Metals

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ICP SERIAL DILUTIONS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Units:** UG/L

Project Name: Drexel

Sample Name: 13254-BW-4L **Lab Code:** K1309638-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Boron	8.7	J	20.0	U	100.0		P
Calcium	76420.0		76750.0		0.4		P
Iron	140.7		138.5		1.6		P
Magnesium	1137.0		1145.0		0.7		P
Potassium	646.7		655.5	J	1.4		P
Sodium	3057.0		3138.0		2.6		P
Strontium	63.42		61.85		2.5		P
Titanium	5.2		4.5	J	13.5		P

Metals

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DETECTION LIMITS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Boron	249.6		20.0	4.0	P
Calcium	393.3		20.0	0.9	P
Iron	259.9		20.0	3.0	P
Magnesium	279.5		5.0	0.3	P
Potassium	766.5		200.0	60.0	P
Sodium	589.5		200.0	20.0	P
Strontium	407.7		1.00	0.09	P
Titanium	336.1		2.0	0.8	P

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP/ICP-MS ID #: K-ICP-MS-04

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Aluminum	27		2.0	0.2	MS
Antimony	123		0.05	0.01	MS
Arsenic	75		0.50	0.05	MS
Barium	137		0.05	0.01	MS
Beryllium	9		0.020	0.008	MS
Cadmium	111		0.020	0.005	MS
Chromium	52		0.20	0.02	MS
Cobalt	59		0.020	0.006	MS
Copper	65		0.10	0.03	MS
Lead	208		0.020	0.002	MS
Manganese	55		0.05	0.01	MS
Molybdenum	98		0.05	0.01	MS
Nickel	60		0.20	0.04	MS
Selenium	78		1.0	0.4	MS
Silver	107		0.020	0.005	MS
Thallium	205		0.020	0.002	MS
Tin	118		0.100	0.010	MS
Vanadium	51		0.200	0.050	MS
Zinc	66		0.50	0.09	MS

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	B
Aluminum	394.401	0.0000000	0.0000860	0.0000220	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	-0.0000510	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000160	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0006270	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001170	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000760	0.0000000	0.0000350	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	260.569	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000340	0.0000000	0.0000000
Phosphorus	214.914	-0.0005600	0.0000000	0.0009130	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	-0.0002330	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	-0.0000150	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0001380	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ba	Cd	Co	Cr	Cu
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0002140	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0006790	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0015810	0.0003730	0.0000000
Cadmium	226.502	0.0000000	0.0000000	-0.0000500	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	-0.0001720	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0002610	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0009280
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	-0.0000130	0.0000000
Manganese	260.569	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0047620	0.0000000	0.0000000	0.0024520
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0033080	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000260	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	-0.0028060	-0.0000480
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0008980

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mn	Mo	Ni	Pb	Sb
Aluminum	394.401	0.0000000	0.0003080	0.0002320	0.0000000	0.0000000
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	-0.0003490	0.0017490	0.0000000	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	-0.0000660	-0.0004340	-0.0000130	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0020490	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000170	-0.0000320	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0001210	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	-0.0001460	0.0001550	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	-0.0006120	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0005170	0.0001080	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	-0.0001250	0.0000000	0.0000000	0.0000000
Manganese	260.569	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	-0.0001710
Phosphorus	214.914	0.0000000	0.0095090	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0005960	0.0002470	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0084430	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0001100	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	-0.0001110	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000230	0.0001060	0.0000000	0.0000000
Vanadium	292.402	-0.0001770	-0.0000590	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0000750	0.0065980	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04

Analyte	Wave-length (nm)	Interelement Correction Factors for: Si	Sn	Ti	V
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0003490
Antimony	217.581	0.0000000	0.0000000	0.0000000	0.0026010
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0001070
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	0.0000000	-0.0004470
Cadmium	226.502	0.0000000	0.0000000	0.0000630	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000470	-0.0001560
Cobalt	228.616	-0.0000060	0.0000000	0.0022220	0.0000000
Copper	327.396	0.0000000	0.0000000	-0.0002840	-0.0000510
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0004590	0.0000000	-0.0001300	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	-0.0003570
Manganese	260.569	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000770
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	-0.0003140	0.0016450
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000040	0.0000000	0.0000000	0.0001060
Vanadium	292.402	0.0000000	0.0000000	0.0005760	0.0000000
Zinc	213.856	0.0000000	0.0000000	-0.0002170	0.0000000

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-AES-04

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Boron	15.000	45000	200.7
Calcium	15.000	450000	200.7
Iron	15.000	360000	200.7
Magnesium	15.000	90000	200.7
Potassium	15.000	450000	200.7
Sodium	15.000	450000	200.7
Strontium	15.000	22500	200.7
Titanium	15.000	45000	200.7

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

ICP ID Number: K-ICP-MS-04

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Aluminum	45.000	9000	200.8
Antimony	45.000	3000	200.8
Arsenic	45.000	3000	200.8
Barium	45.000	3000	200.8
Beryllium	45.000	3000	200.8
Cadmium	45.000	3000	200.8
Chromium	45.000	3000	200.8
Cobalt	45.000	3000	200.8
Copper	45.000	3000	200.8
Lead	45.000	3000	200.8
Manganese	45.000	3000	200.8
Molybdenum	45.000	900	200.8
Nickel	45.000	3000	200.8
Selenium	45.000	900	200.8
Silver	45.000	900	200.8
Thallium	45.000	3000	200.8
Tin	45.000	900	200.8
Vanadium	45.000	3000	200.8
Zinc	45.000	3000	200.8

Comments: _____

Metals
-13-
PREPARATION LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1309638-001	09/25/13	50.0	50.0
K1309638-001D	09/25/13	50.0	50.0
K1309638-001S	09/25/13	50.0	50.0
K1309638-002	09/25/13	50.0	50.0
K1309638-004	09/25/13	50.0	50.0
K1309638-005	09/25/13	50.0	50.0
K1309638-008	09/25/13	50.0	50.0
K1309638-010	09/25/13	50.0	50.0
K1309638-011	09/25/13	50.0	50.0
K1309638-MB	09/25/13	50.0	50.0
LCSW	09/25/13	50.0	50.0

Metals
-13-
PREPARATION LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA

Project Name: Drexel

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1309638-001	09/27/13	50.0	50.0
K1309638-001D	09/27/13	50.0	50.0
K1309638-001S	09/27/13	50.0	50.0
K1309638-002	09/27/13	25.0	50.0
K1309638-004	09/27/13	50.0	50.0
K1309638-005	09/27/13	50.0	50.0
K1309638-008	09/27/13	50.0	50.0
K1309638-010	09/27/13	50.0	50.0
K1309638-011	09/27/13	50.0	50.0
K1309638-MB	09/27/13	50.0	50.0
LCSW	09/27/13	50.0	50.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 092613AICP04

Project Name: Drexel

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/26/13 **End Date:** 09/26/13

Sample No.	D/F	Time	% R	Analytes																											
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
BLK	1.0	11:25								X				X		X				X			X					*
STD A	1.0	11:27								X						X												*
STD B	1.0	11:30								X				X		X				X			X					*
ICV1	1.0	11:32								X						X												*
ICV1	1.0	11:35								X				X		X				X			X					*
ICB1	1.0	11:38								X				X		X				X			X					*
LLICV1	1.0	11:40								X				X		X				X			X					*
ZZZZZZ	1.0	11:43																											
ZZZZZZ	1.0	11:45																											
CCV1	1.0	11:48								X				X		X				X			X					*
CCV1	1.0	11:59								X						X												*
ZZZZZZ	1.0	12:03																											
CCB1	1.0	12:07								X				X		X				X			X					*
ICSA	1.0	12:09								X				X		X				X			X					*
ICSAB	1.0	12:12								X				X		X				X			X					*
K1309638-MB	1.0	12:41								X				X		X				X			X					*
LCSW	1.0	12:43								X				X		X				X			X					*
K1309638-001	1.0	12:46								X				X		X				X			X					*
K1309638-001L	5.0	12:48								X				X		X				X			X					*
K1309638-001D	1.0	12:51								X				X		X				X			X					*
K1309638-001S	1.0	12:53								X				X		X				X			X					*
K1309638-002	1.0	12:56												X		X				X			X					*
K1309638-004	1.0	12:58								X				X		X				X			X					*
K1309638-005	1.0	13:01								X				X		X				X			X					*
K1309638-008	1.0	13:03								X				X		X				X			X					*
CCV2	1.0	13:06								X				X		X				X			X					*
CCV2	1.0	13:08								X						X												*
CCB2	1.0	13:10								X				X		X				X			X					*
K1309638-010	1.0	13:13								X				X		X				X			X					*
K1309638-011	1.0	13:15								X				X		X				X			X					*
ZZZZZZ	1.0	13:18																											
ZZZZZZ	1.0	13:20																											

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 092613AICP04

Project Name: Drexel

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/26/13 **End Date:** 09/26/13

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
ZZZZZZ	1.0	13:23																												
ZZZZZZ	1.0	13:25																												
ZZZZZZ	1.0	13:28																												
ZZZZZZ	1.0	13:30																												
ZZZZZZ	1.0	13:33																												
ZZZZZZ	1.0	13:35																												
CCV3	1.0	13:38								X				X		X				X			X							*
CCV3	1.0	13:40								X						X														*
CCB3	1.0	13:43								X				X		X				X			X							*
ZZZZZZ	1.0	13:45																												
ZZZZZZ	1.0	13:48																												
ZZZZZZ	1.0	13:50																												
CCV4	1.0	13:52								X				X		X				X			X							*
CCV4	1.0	13:55								X						X														*
CCB4	1.0	13:57								X				X		X				X			X							*
ZZZZZZ	1.0	14:00																												
ZZZZZZ	1.0	14:02																												
ZZZZZZ	1.0	14:05																												
ZZZZZZ	1.0	14:07																												
K1309638-002	10.0	14:38								X																				
CCV5	1.0	14:40								X				X		X				X			X							*
CCV5	1.0	14:43								X						X														*
CCB5	1.0	14:45								X				X		X				X			X							*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 092613AICP04

Project Name: Drexel

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/26/13 **End Date:** 09/26/13

Sample No.	D/F	Time	% R	Analytes													
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
BLK	1.00	11:25		X											X	X	
STD A	1.00	11:27		X												X	
STD B	1.00	11:30													X		
ICV1	1.00	11:32		X											X		
ICV1	1.00	11:35														X	
ICB1	1.00	11:38		X											X	X	
LLICV1	1.00	11:40		X											X	X	
ZZZZZZ	1.00	11:43															
ZZZZZZ	1.00	11:45															
CCV1	1.00	11:48													X		
CCV1	1.00	11:59		X												X	
ZZZZZZ	1.00	12:03															
CCB1	1.00	12:07		X											X	X	
ICSA	1.00	12:09		X											X	X	
ICSAB	1.00	12:12		X											X	X	
K1309638-MB	1.00	12:41		X											X	X	
LCSW	1.00	12:43		X											X	X	
K1309638-001	1.00	12:46		X											X	X	
K1309638-001L	5.00	12:48		X											X	X	
K1309638-001D	1.00	12:51		X											X	X	
K1309638-001S	1.00	12:53		X											X	X	
K1309638-002	1.00	12:56		X											X	X	
K1309638-004	1.00	12:58		X											X	X	
K1309638-005	1.00	13:01		X											X	X	
K1309638-008	1.00	13:03		X											X	X	
CCV2	1.00	13:06													X		
CCV2	1.00	13:08		X												X	
CCB2	1.00	13:10		X											X	X	
K1309638-010	1.00	13:13		X											X	X	
K1309638-011	1.00	13:15		X											X	X	
ZZZZZZ	1.00	13:18															
ZZZZZZ	1.00	13:20															
ZZZZZZ	1.00	13:23															
ZZZZZZ	1.00	13:25															

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 092613AICP04

Project Name: Drexel

Instrument ID Number: K-ICP-AES-04 **Method:** P

Start Date: 09/26/13 **End Date:** 09/26/13

Sample No.	D/F	Time	% R	Analytes																												
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U															
ZZZZZZ	1.00	13:28																														
ZZZZZZ	1.00	13:30																														
ZZZZZZ	1.00	13:33																														
ZZZZZZ	1.00	13:35																														
CCV3	1.00	13:38													X																	
CCV3	1.00	13:40		X												X																
CCB3	1.00	13:43		X											X	X																
ZZZZZZ	1.00	13:45																														
ZZZZZZ	1.00	13:48																														
ZZZZZZ	1.00	13:50																														
CCV4	1.00	13:52													X																	
CCV4	1.00	13:55		X												X																
CCB4	1.00	13:57		X											X	X																
ZZZZZZ	1.00	14:00																														
ZZZZZZ	1.00	14:02																														
ZZZZZZ	1.00	14:05																														
ZZZZZZ	1.00	14:07																														
K1309638-002	10.00	14:38																														
CCV5	1.00	14:40													X																	
CCV5	1.00	14:43		X												X																
CCB5	1.00	14:45		X											X	X																

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Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/04/13 **End Date:** 10/04/13

Sample No.	D/F	Time	% R	Analytes																											
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Blank	1.0	10:30		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
Standard 1	1.0	10:35		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	10:40																													
ICV1	1.0	10:45		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCV1	1.0	10:51		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ICB1	1.0	10:56		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCB1	1.0	11:01		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
LLICV1	1.0	11:06		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ICS-A1	1.0	11:12		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ICS-AB1	1.0	11:17		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	11:22																													
ZZZZZZ	1.0	11:27																													
ZZZZZZ	1.0	11:33																													
ZZZZZZ	1.0	11:38																													
ZZZZZZ	1.0	11:43																													
ZZZZZZ	1.0	11:48																													
CCV2	1.0	11:53		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCB2	1.0	11:59		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	12:04																													
ZZZZZZ	1.0	12:10																													
ZZZZZZ	1.0	12:16																													
ZZZZZZ	1.0	12:21																													
ZZZZZZ	1.0	12:26																													
ZZZZZZ	1.0	12:31																													
ZZZZZZ	1.0	12:36																													
ZZZZZZ	1.0	12:42																													
ZZZZZZ	1.0	12:47																													
ZZZZZZ	1.0	12:52																													
ZZZZZZ	1.0	12:57																													
CCV3	1.0	13:03		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCB3	1.0	13:08		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	13:13																													

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/04/13 **End Date:** 10/04/13

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
ZZZZZZ	1.0	13:18																										
ZZZZZZ	1.0	13:23																										
ZZZZZZ	1.0	13:29																										
ZZZZZZ	1.0	13:34																										
ZZZZZZ	1.0	13:39																										
ZZZZZZ	1.0	13:44																										
ZZZZZZ	1.0	13:49																										
ZZZZZZ	1.0	13:55																										
CCV4	1.0	14:00		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCB4	1.0	14:05		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	14:10																										
ZZZZZZ	1.0	14:15																										
K1309638-MB	1.0	14:25		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-001	1.0	14:30		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-001D	1.0	14:35		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-001S	1.0	14:40		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
LCSW	1.0	14:45		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-002	1.0	14:51		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-004	1.0	14:56		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-005	1.0	15:01		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-008	1.0	15:06		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-010	1.0	15:11		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
CCV5	1.0	15:17		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	15:22																										
CCB5	1.0	15:27		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
K1309638-011	1.0	15:32		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*
ZZZZZZ	1.0	15:37																										
ZZZZZZ	1.0	15:42																										
ZZZZZZ	1.0	15:48																										
ZZZZZZ	1.0	15:53																										
ZZZZZZ	1.0	15:58																										
ZZZZZZ	1.0	16:03																										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/04/13 **End Date:** 10/04/13

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
ZZZZZZ	1.0	16:08																												
ZZZZZZ	1.0	16:14																												
ZZZZZZ	1.0	16:19																												
CCV6	1.0	16:24		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*	
CCB6	1.0	16:31		X	X	X	X	X	X		X	X	X		X		X		X	X	X	X		X		X		*	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/04/13 **End Date:** 10/04/13

| Sample No. | D/F | Time | % R | Analytes | | |

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS

Start Date: 10/04/13 **End Date:** 10/04/13

Sample No.	D/F	Time	% R	Analytes																												
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U															
ZZZZZZ	1.00	13:29																														
ZZZZZZ	1.00	13:34																														
ZZZZZZ	1.00	13:39																														
ZZZZZZ	1.00	13:44																														
ZZZZZZ	1.00	13:49																														
ZZZZZZ	1.00	13:55																														
CCV4	1.00	14:00					X							X																		
CCB4	1.00	14:05					X							X																		
ZZZZZZ	1.00	14:10																														
ZZZZZZ	1.00	14:15																														
K1309638-MB	1.00	14:25					X							X																		
K1309638-001	1.00	14:30					X							X																		
K1309638-001D	1.00	14:35					X							X																		
K1309638-001S	1.00	14:40					X							X																		
LCSW	1.00	14:45					X							X																		
K1309638-002	1.00	14:51					X							X																		
K1309638-004	1.00	14:56					X							X																		
K1309638-005	1.00	15:01					X							X																		
K1309638-008	1.00	15:06					X							X																		
K1309638-010	1.00	15:11					X							X																		
CCV5	1.00	15:17					X							X																		
ZZZZZZ	1.00	15:22																														
CCB5	1.00	15:27					X							X																		
K1309638-011	1.00	15:32					X							X																		
ZZZZZZ	1.00	15:37																														
ZZZZZZ	1.00	15:42																														
ZZZZZZ	1.00	15:48																														
ZZZZZZ	1.00	15:53																														
ZZZZZZ	1.00	15:58																														
ZZZZZZ	1.00	16:03																														
ZZZZZZ	1.00	16:08																														
ZZZZZZ	1.00	16:14																														
ZZZZZZ	1.00	16:19																														
CCV6	1.00	16:24					X							X																		

Metals
- 14 -
ANALYSIS RUN LOG

Client: Environmental Planning Specialis **Service Request:** K1309638

Project No.: NA **Run Number:** 100413b-sc

Project Name: Drexel

Instrument ID Number: K-ICP-MS-04 **Method:** MS
Start Date: 10/04/13 **End Date:** 10/04/13

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
CCB6	1.00	16:31					X							X													

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: _____

Lab Code: CASK Case No.: _____ NRAS No.: _____ SDG NO.: K1309638

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/04/2013 End Date: 10/04/2013

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Li-KED1_	Q	Element Ge-STD1_7	Q	Element Ge-KED2_72	Q	Element Ge-KED3_72	Q	Element Sc-KED1_45	Q	Element Rh-KED3	Q
Blank	Blank	1030	100		100		100		100		100		100	
Standard 1	Standard 1	1035	100		100		100		101		97		99	
ZZZZZZ	ZZZZZZ	1040												
ICV1	ICV	1045	105		104		104		105		99		102	
CCV1	CCV	1051	102		101		100		101		98		102	
ICB1	ICB	1056	100		99		99		101		98		98	
CCB1	CCB	1101	102		99		100		103		98		101	
LLICV1	LLICV1	1106	102		99		103		99		98		97	
ICS-A1	ICSA	1112	104		108		98		102		108		92	
ICS-AB1	ICSAB	1117	104		110		102		104		111		92	
ZZZZZZ	ZZZZZZ	1122												
ZZZZZZ	ZZZZZZ	1127												
ZZZZZZ	ZZZZZZ	1133												
ZZZZZZ	ZZZZZZ	1138												
ZZZZZZ	ZZZZZZ	1143												
ZZZZZZ	ZZZZZZ	1148												
CCV2	CCV	1153	105		106		107		110		105		105	
CCB2	CCB	1159	102		103		107		108		103		104	
ZZZZZZ	ZZZZZZ	1204												
ZZZZZZ	ZZZZZZ	1210												
ZZZZZZ	ZZZZZZ	1216												
ZZZZZZ	ZZZZZZ	1221												
ZZZZZZ	ZZZZZZ	1226												
ZZZZZZ	ZZZZZZ	1231												
ZZZZZZ	ZZZZZZ	1236												
ZZZZZZ	ZZZZZZ	1242												
ZZZZZZ	ZZZZZZ	1247												
ZZZZZZ	ZZZZZZ	1252												
ZZZZZZ	ZZZZZZ	1257												
CCV3	CCV	1303	110		108		112		116		110		109	
CCB3	CCB	1308	108		107		113		116		108		109	
ZZZZZZ	ZZZZZZ	1313												
ZZZZZZ	ZZZZZZ	1318												
ZZZZZZ	ZZZZZZ	1323												
ZZZZZZ	ZZZZZZ	1329												
ZZZZZZ	ZZZZZZ	1334												
ZZZZZZ	ZZZZZZ	1339												
ZZZZZZ	ZZZZZZ	1344												
ZZZZZZ	ZZZZZZ	1349												
ZZZZZZ	ZZZZZZ	1355												
CCV4	CCV	1400	113		106		117		118		110		111	
CCB4	CCB	1405	112		105		109		114		106		109	
ZZZZZZ	ZZZZZZ	1410												
ZZZZZZ	ZZZZZZ	1415												
K1309638-MB	Method Blank	1425	109		94		114		113		106		111	

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: _____

Lab Code: CASK Case No.: _____ NRAS No.: _____ SDG NO.: K1309638

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/04/2013 End Date: 10/04/2013

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Li-KED1_	Q	Element Ge-STD1_7	Q	Element Ge-KED2_72	Q	Element Ge-KED3_72	Q	Element Sc-KED1_45	Q	Element Rh-KED3	Q
K1309638-001	13254-BW-4	1430	110		100		105		109		117		101	
K1309638-001D	13254-BW-4D	1435	110		98		105		107		116		101	
K1309638-001S	13254-BW-4S	1440	111		97		105		108		116		101	
LCSW	LCSW	1445	108		102		110		113		103		111	
K1309638-002	13254-BW-2	1451	95		78		79		83		110		74	
K1309638-004	13253-BW-3	1456	105		88		100		103		96		100	
K1309638-005	13253-Well D	1501	106		90		98		103		95		99	
K1309638-008	13255-BW-1	1506	106		88		96		100		93		95	
K1309638-010	13255-DUP	1511	104		87		96		99		90		96	
CCV5	CCV	1517	104		90		100		105		85		106	
ZZZZZZ	ZZZZZZ	1522												
CCB5	CCB	1527	102		88		99		103		80		103	
K1309638-011	13255-Rinse	1532	102		90		99		103		83		105	
ZZZZZZ	ZZZZZZ	1537												
ZZZZZZ	ZZZZZZ	1542												
ZZZZZZ	ZZZZZZ	1548												
ZZZZZZ	ZZZZZZ	1553												
ZZZZZZ	ZZZZZZ	1558												
ZZZZZZ	ZZZZZZ	1603												
ZZZZZZ	ZZZZZZ	1608												
ZZZZZZ	ZZZZZZ	1614												
ZZZZZZ	ZZZZZZ	1619												
CCV6	CCV	1624	100		91		102		106		86		106	
CCB6	CCB	1631	100		90		101		104		83		104	

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: _____

Lab Code: CASK Case No.: _____ NRAS No.: _____ SDG NO.: K1309638

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/04/2013 End Date: 10/04/2013

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element In-KED1	Q	Element Lu-KED1	Q	Element Th-KED1	Q	Element	Q	Element	Q		
Blank	Blank	1030	100		100		100							
Standard 1	Standard 1	1035	99		102		102							
ZZZZZZ	ZZZZZZ	1040												
ICV1	ICV	1045	101		103		103							
CCV1	CCV	1051	101		100		102							
ICB1	ICB	1056	102		101		100							
CCB1	CCB	1101	99		100		100							
LLICV1	LLICV1	1106	99		101		101							
ICS-A1	ICSA	1112	89		98		103							
ICS-AB1	ICSAB	1117	91		99		104							
ZZZZZZ	ZZZZZZ	1122												
ZZZZZZ	ZZZZZZ	1127												
ZZZZZZ	ZZZZZZ	1133												
ZZZZZZ	ZZZZZZ	1138												
ZZZZZZ	ZZZZZZ	1143												
ZZZZZZ	ZZZZZZ	1148												
CCV2	CCV	1153	102		102		106							
CCB2	CCB	1159	101		101		103							
ZZZZZZ	ZZZZZZ	1204												
ZZZZZZ	ZZZZZZ	1210												
ZZZZZZ	ZZZZZZ	1216												
ZZZZZZ	ZZZZZZ	1221												
ZZZZZZ	ZZZZZZ	1226												
ZZZZZZ	ZZZZZZ	1231												
ZZZZZZ	ZZZZZZ	1236												
ZZZZZZ	ZZZZZZ	1242												
ZZZZZZ	ZZZZZZ	1247												
ZZZZZZ	ZZZZZZ	1252												
ZZZZZZ	ZZZZZZ	1257												
CCV3	CCV	1303	104		103		106							
CCB3	CCB	1308	103		102		105							
ZZZZZZ	ZZZZZZ	1313												
ZZZZZZ	ZZZZZZ	1318												
ZZZZZZ	ZZZZZZ	1323												
ZZZZZZ	ZZZZZZ	1329												
ZZZZZZ	ZZZZZZ	1334												
ZZZZZZ	ZZZZZZ	1339												
ZZZZZZ	ZZZZZZ	1344												
ZZZZZZ	ZZZZZZ	1349												
ZZZZZZ	ZZZZZZ	1355												
CCV4	CCV	1400	107		106		107							
CCB4	CCB	1405	104		104		105							
ZZZZZZ	ZZZZZZ	1410												
ZZZZZZ	ZZZZZZ	1415												
K1309638-MB	Method Blank	1425	107		106									

Metals

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: ALS Group USA, Corp. Contract: _____

Lab Code: CASK Case No.: _____ NRAS No.: _____ SDG NO.: K1309638

ICP-MS Instrument ID: K-ICP-MS-04 Start Date: 10/04/2013 End Date: 10/04/2013

Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element In-KED1	Q	Element Lu-KED1	Q	Element Th-KED1	Q	Element	Q	Element	Q		
K1309638-001	13254-BW-4	1430	100		105									
K1309638-001D	13254-BW-4D	1435	99		106									
K1309638-001S	13254-BW-4S	1440	98		105									
LCSW	LCSW	1445	104		108									
K1309638-002	13254-BW-2	1451	69		88									
K1309638-004	13253-BW-3	1456	95		106									
K1309638-005	13253-Well D	1501	92		107									
K1309638-008	13255-BW-1	1506	90		104									
K1309638-010	13255-DUP	1511	88		101									
CCV5	CCV	1517	95		106		112							
ZZZZZZ	ZZZZZZ	1522												
CCB5	CCB	1527	95		103		109							
K1309638-011	13255-Rinse	1532	96		105									
ZZZZZZ	ZZZZZZ	1537												
ZZZZZZ	ZZZZZZ	1542												
ZZZZZZ	ZZZZZZ	1548												
ZZZZZZ	ZZZZZZ	1553												
ZZZZZZ	ZZZZZZ	1558												
ZZZZZZ	ZZZZZZ	1603												
ZZZZZZ	ZZZZZZ	1608												
ZZZZZZ	ZZZZZZ	1614												
ZZZZZZ	ZZZZZZ	1619												
CCV6	CCV	1624	97		104		112							
CCB6	CCB	1631	96		103		110							

Preparation Information Benchsheet

Prep Run: 192510
Team: Metals
Analyst: Anna Cheatley

Prep Workflow: MetDigAqICP
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: NPDES

Status: Prepped
Current Step: Digestion

Prep Date: 09/25/2013 14:42
Due Date: 10/04/2013
Hold Date: 03/09/2014

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1310900-01	Method Blank		50 mL	50 mL			Metals T	1%HNO3, 5% HCl
KQ1310900-02	Lab Control Sample		50 mL	50 mL	0.5 mL 0.25 mL 0.25 mL 0.5 mL 0.25 mL	52525 60207 61875 62119 62429	Metals T	1%HNO3, 5% HCl
K1309638-001	13254-BW-4	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-001: KQ1310900-03	Duplicate	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-001: KQ1310900-04	Matrix Spike	.23	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL 0.5 mL	52525 60810 62118 62119 62120	Metals T	1%HNO3, 5% HCl
K1309638-002	13254-BW-2	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-004	13253-BW-3	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-005	13253-Well D	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-008	13255-BW-1	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-010	13255-DUP	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309638-011	13255-Rinse	.23	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309706-001	Well 4A/S04/Chlorination Building Tap	.04	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309757-001	MW-01-091713	.04	50 mL	50 mL			Metals D	1%HNO3, 5% HCl
K1309757-002	C-01-091713	.04	50 mL	50 mL			Metals D	1%HNO3, 5% HCl
K1309757-003	C-02-091713	.04	50 mL	50 mL			Metals D	1%HNO3, 5% HCl
K1309757-004	P-09-091713	.04	50 mL	50 mL			Metals D	1%HNO3, 5% HCl
K1309757-005	DUP-091713	.04	50 mL	50 mL			Metals D	1%HNO3, 5% HCl
K1309784-010	S9Z-Composite	.01	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309784-010: KQ1310900-05	Duplicate	.01	50 mL	50 mL			Metals T	1%HNO3, 5% HCl
K1309784-010: KQ1310900-06	Matrix Spike	.01	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL 0.5 mL	52525 60810 62118 62119 62120	Metals T	1%HNO3, 5% HCl
K1309830-001	U-01-091813	.04	50 mL	50 mL			Metals D	1%HNO3, 5%

								HCl
K1309833-002	MH 7045	.02	50 mL	50 mL			Metals T	1%HNO3, 5% HCl

22 Total Samples consisting of 16 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET QCP-CICV-1	Spike	61875	9/1/2014	K-MET SS3	Spike	62118	10/1/2013
K-MET QCP-CICV-2	Spike	60207	8/1/2014	K-MET SS4	Spike	62119	3/16/2014
K-MET QCP-CICV-3	Spike	62429	10/1/2014	K-MET SS5	Spike	62120	12/1/2013
K-MET SS1	Spike	60810	10/1/2013	Strontium 1000 ug/mL Sr	Spike	52525	12/10/2013

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	50828	Digestion	K-MET HNO3	61858
Digestion	K-MET HCL	58633			

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Temperature Thermo 211919567	93	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	25-SEP-13 14:42	25-SEP-13 17:34	Anna Cheatley		N	

Comments

KQ1310900-02 LCS, K1309638-001:KQ1310900-04 MS and K1309784-010:KQ1310900-06 MS also spiked with 0.5mL Ti (met2-29-D). Observed temperature=93C. Correction factor=0. Corrected temperature=93C.

Review

Reviewed by: BSJ Date: 9/27/13

Preparation Information Benchsheet

Prep Run: 192509
Team: Metals
Analyst: Anna Cheatley
Prep Workflow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 09/27/2013 09:06
Due Date: 09/30/2013
Hold Date: 03/09/2014

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1310899-01	Method Blank		50 mL	50 mL			Metals T	1%HNO3 ULTREX
KQ1310899-02	Lab Control Sample		50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.1 mL	59162 59721 60314 62111	Metals T	1%HNO3 ULTREX
K1309638-001	13254-BW-4	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-001: KQ1310899-03	Duplicate	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-001: KQ1310899-04	Matrix Spike	.23	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.1 mL	59162 59721 60314 62111	Metals T	1%HNO3 ULTREX
K1309638-002	13254-BW-2	.23	25 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-004	13253-BW-3	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-005	13253-Well D	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-008	13255-BW-1	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-010	13255-DUP	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309638-011	13255-Rinse	.23	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309706-001	Well 4A/S04/Chlorination Building Tap	.04	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309757-001	MW-01-091713	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309757-002	C-01-091713	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309757-003	C-02-091713	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309757-004	P-09-091713	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309757-005	DUP-091713	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309828-001	LCRS-091813	.05	50 mL	50 mL			Metals T	1%HNO3 ULTREX (pH<2)
K1309830-001	U-01-091813	.04	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309905-001	E. Fork Lewis	.02	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309905-001	E. Fork Lewis	.01	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309905-001: KQ1310899-05	Duplicate	.01	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309905-001:	Matrix Spike	.01	50 mL	50 mL	0.5 mL	59721	Metals T	1%HNO3 ULTREX

KQ1310899-06					0.5 mL 0.1 mL 0.5 mL	60314 62111 62478		
K1309905-002	Effluent	.03	50 mL	50 mL			Metals D	1%HNO3 ULTREX
K1309905-002	Effluent	.01	50 mL	50 mL			Metals T	1%HNO3 ULTREX
K1309946-001	312-01G-091913	.04	50 mL	50 mL			Metals T	1%HNO3 ULTREX

24 Total Samples consisting of 18 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Mo/U 10ppm	Spike	62111	3/3/2014
k-met 1/100 QCP CICV-1	Spike	59721	1/5/2014
k-met 1/100 QCP-CICV-3	Spike	59162	12/14/2013

Name	Type	ID	Expires
k-met 1/100 QCP-CICV-3	Spike	62478	3/25/2014
k-met Sb 5ug/mL Sb	Spike	60314	10/1/2013

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	50828

Step	Name	ID
Digestion	K-MET HNO3 ULTREX	60368

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Temperature Thermo 211919567	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	27-SEP-13 09:06	27-SEP-13 11:30	Anna Cheatley	E. McAllister	N	

Comments

K1309638-002 diluted due to particulate in sample. KQ1310899-02 LCS, K1309638-001:KQ1310899-04 MS and K1309905-001:KQ1310899-06 MS also spiked with 0.1mL Alt. 200.8 Sol. (ms16-35-A). Observed temperature=95C. Correction factor=0. Corrected temperature=95C.

Review

Reviewed by: BJS Date: 9/27/13

ICPMS LCSW AND SPIKING SOLUTIONS

5.00mL to 500mL Dilution of Inorganics Ventures QCP-CICV-1
K-Met 1/100 QCP-CCV-1

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Al	10000	100
Ba	10000	100
Co	2500	25
Mn	2500	25
Ni	2500	25
V	2500	25
Zn	2500	25
Cu	1250	12.5
Ag	1250	12.5
Cr	1000	10
Be	250	2.5

5.00mL to 500mL Dilution of Inorganics Ventures QCP-CICV-2
K-Met 1/100 QCP-CICV-2

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Sb	5000	50

5.00mL to 500mL Dilution of Inorganics Ventures QCP-CICV-3
K-Met 1/100 QCP-CICV-3

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
As	5000	50
Pb	5000	50
Se	5000	50
Tl	5000	50
Cd	2500	25

2.00mL to 200mL Dilution of 1,000 ppm Mo and 1,000 ppm U
K-Met Mo/U 10ppm

Analyte	Concentration in solution (ppb)	Concentration in digest (ppb)
Mo	10000	20
U	10000	20

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Concentration in the digest mg/L
K-MET SS1	HNO3	50.0	1000ml	-	
	Al	100*	1000ml	200	2
	Ag	100*	1000ml	5	0.05
	Ba	100*	1000ml	200	2
	Be	100*	1000ml	5	0.05
	Cd	100*	1000ml	5	0.05
	Co	100*	1000ml	50	0.5
	Cr	100*	1000ml	20	0.2
	Cu	100*	1000ml	25	0.25
	Fe	100*	1000ml	100	1
	Pb	100*	1000ml	50	0.5
	Mn	100*	1000ml	50	0.5
	Ni	100*	1000ml	50	0.5
	Sb	50	1000ml	50	0.5
	V	100*	1000ml	50	0.5
	Zn	100*	1000ml	50	0.5
K-MET SS2 GFAA SPIKE	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	0.04
	Cd	2.0	500ml	4	0.04
	Pb	2.0	500ml	4	0.04
	Se	2.0	500ml	4	0.04
	Tl	2.0	500ml	4	0.04
	Cu	2.0	500ml	4	0.04
K-MET SS3	HNO3	25.0	500ml	-	
	As	50.0	500ml	100	1
	Se	50.0	500ml	100	1
	Tl	50.0	500ml	100	1
K-MET SS4	HNO3	25	500ml	-	
	B	50	500ml	100	1
	Mo	50	500ml	100	1
K-MET SS5	HNO3	10.0	200ml	-	
	K**	20	200ml	1000	10
	Na**	20	200ml	1000	10
	Mg**	20	200ml	1000	10
	Ca**	20	200ml	1000	10

K-MET GFLCSW GFAA ONLY	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	0.025
	Cd	-	-	1.25	0.0125
	Cu	2.5	1000ml	2.5	0.025
K-MET QCP-CICV-1 ICP ONLY	Ca, Mg, Na, K	no dilution	-	2500	12.5
	Al, Ba	no dilution	-	1000	5
	Fe	no dilution	-	500	2.5
	Co, Mn, Ni, V, Zn	no dilution	-	250	1.25
	Cu, Ag	no dilution	-	125	0.625
	Cr	no dilution	-	100	0.5
	Be	no dilution	-	25	0.125
K-MET QCP-CICV-2 ICP ONLY	Sb	no dilution	-	500	2.5
K-MET QCP-CICV-3 ICP ONLY	As, Pb, Se, Tl	no dilution	-	500	2.5
	Cd	no dilution	-	250	1.25

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Service Request # K1309638

Instrument ID# K-ICP-AES-04

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI/LLICV standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	
13.Run terminated early		✓

Comments:

StarLIMS Run # 360385 Saved under 092613AICP04

6010C/200.7 Calibration.

6010C: MRL=2X for Cr, Cu, Fe, Se.

200.7: NR Mg2790.

Primary Review by [signature] Date 9/26/13

Secondary Review by [signature] Date 9/26/13

Sample Name: BLK Acquired: 9/26/2013 11:25:31 Type: Cal
Method: 2013C-ICP04(v15) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0018**	**-52.24**	**-.6266**	**.7366**	**.0415**	**.82286**	**2.618**	**.0003**
Stddev	.0000	2.50	.3708	.1273	.0065	.31737	.317	.0001
%RSD	1.799	4.793	59.18	17.28	15.75	38.569	12.12	27.47
#1	.0018	-54.01	-.8888	.6466	.0369	1.0473	2.843	.0002
#2	.0018	-50.47	-.3644	.8266	.0461	.59844	2.394	.0003

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0000**	**.0020**	**.0546**	**.0006**	**-.0010**	**.0000**	**-2.818**	**.0016**
Stddev	.0015	.0001	.0012	.0002	.0002	.0007	7.229	.0017
%RSD	7055.	6.754	2.235	24.37	18.52	2116.	256.6	106.5
#1	.0011	.0019	.0537	.0008	-.0008	.0005	-7.929	.0004
#2	-.0011	.0021	.0554	.0005	-.0011	-.0004	2.294	.0029

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0003**	**7.135**	**-.0003**	**.0005**	**-7.125**	**-.0001**	**.0004**	**.0013**
Stddev	.0006	5.106	.0004	.0004	4.490	.0000	.0001	.0001
%RSD	209.3	71.56	130.4	91.55	63.02	2.169	29.13	8.932
#1	.0001	10.75	.0000	.0002	-10.30	-.0001	.0003	.0012
#2	-.0007	3.525	-.0006	.0008	-3.950	-.0001	.0005	.0014

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	i **-.0017**	**-.0004**	**-38.51**	**.8099**	**-.0208**	**-10.02**	**-74.55**	**.00338**
Stddev	.0000	.0000	7.20	.5892	1.956	.28	.71	.00453
%RSD	1.899	8.003	18.70	72.75	9390.	2.814	.9485	134.07
#1	i -.0017	-.0004	-43.61	.3933	1.363	-9.824	-74.05	.00658
#2	i -.0018	-.0004	-33.42	1.227	-1.404	-10.22	-75.05	.00018

Sample Name: BLK Acquired: 9/26/2013 11:25:31 Type: Cal
Method: 2013C-ICP04(v15) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.0007**	**.0002**	**.0029**	**.0005**	**.0002**	**.7982**	i **.0004**	**4.770**
Stddev	.0003	.0003	.0002	.0002	.0001	.4431	.0009	.519
%RSD	44.46	143.4	6.610	39.77	47.98	55.51	247.2	10.88
#1	-.0005	.0000	.0031	.0006	.0003	1.112	i -.0003	4.403
#2	-.0009	.0004	.0028	.0004	.0001	.4849	i .0010	5.137

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	933.88	13763.	1988.5
Stddev	1.37	17.	6.3
%RSD	.14637	.12421	.31782
#1	934.85	13775.	1984.0
#2	932.92	13751.	1993.0

9/26/13

Sample Name: STD A Acquired: 9/26/2013 11:27:59 Type: Cal
Method: 2013C-ICP04(v15) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-Seq-A

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2144	Cd2265	Ca3933	Cr2677
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0728**	**61.64**	**4340.5**	**680.8**	**2.692**	**1.812**	**22.81**	**.1159**
Stddev	.0002	.46	6.8	1.3	.008	.001	.13	.0002
%RSD	.2618	.7493	.15692	.1859	.2821	.0450	.5680	.2150
#1	.0726	61.97	4345.3	679.9	2.687	1.811	22.90	.1157
#2	.0729	61.32	4335.6	681.6	2.698	1.812	22.72	.1160

Elem	Co2307	Cu2247	Cu3273	Pb2203	Mg2795	Mn2576	Mo2020	Ni2216
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.6740**	**.4047**	**1750.**	**.1607**	**3.523**	**.7546**	**.3858**	i **.7649**
Stddev	.0002	.0001	6.	.0007	.010	.0009	.0024	.0038
%RSD	.0230	.0215	.3367	.4417	.2964	.1191	.6177	.5031
#1	.6741	.4048	1754.	.1602	3.531	.7553	.3841	i .7622
#2	.6738	.4047	1746.	.1612	3.516	.7540	.3875	i .7677

Elem	Se1960	Ag3280	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**33.70**	**1951.**	**.0561**	**.1389**	**.6701**	**.1787**	**.8782**	**1167.**
Stddev	.81	9.	.0001	.0009	.0017	.0011	.0005	2.
%RSD	2.392	.4543	.1292	.6490	.2509	.6387	.0518	.1907
#1	33.13	1958.	.0560	.1396	.6712	.1795	.8779	1169.
#2	34.27	1945.	.0561	.1383	.6689	.1779	.8786	1166.

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**933.09**	**13714.**	**1955.8**
Stddev	.95	21.	13.1
%RSD	.10221	.15053	.67167
#1	933.76	13729.	1946.5
#2	932.41	13700.	1965.1

Sample Name: STD B Acquired: 9/26/2013 11:30:13 Type: Cal
Method: 2013C-ICP04(v15) Mode: IR Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-91-G

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Li6707	Mg2790	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**53410.**	**194.7**	**462.5**	**2.989**	**4.737**	**23610.**	**.5508**	**21270.**
Stddev	788.	.2	.6	.007	.012	188.	.0001	61.
%RSD	1.476	.1065	.1232	.2435	.2463	.7970	.0098	.2845
#1	53970.	194.8	462.1	2.994	4.729	23480.	.5508	21230.
#2	52860.	194.5	462.9	2.984	4.745	23750.	.5507	21310.

Elem	Mn2605	P_1782	K_7664	Si2516	Na5895	Sr4077	Bi2230	S_1820
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.2569**	**1.377**	**9747.**	**3405.**	**32990.**	**49.705**	i **.4339**	**94.68**
Stddev	.0019	.003	91.	16.	348.	.073	.0003	.24
%RSD	.7484	.1929	.9368	.4774	1.055	.14644	.0695	.2551
#1	.2555	1.375	9682.	3393.	32750.	49.654	i .4337	94.51
#2	.2582	1.379	9811.	3416.	33240.	49.757	i .4342	94.85

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	914.33	13292.	1963.4
Stddev	1.08	104.	10.2
%RSD	.11822	.77994	.51857
#1	913.57	13365.	1956.2
#2	915.10	13218.	1970.6

Sample Name: ICVB Acquired: 9/26/2013 11:32:47 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-87-C

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.049**	**1.118**	**.0037**	**-.0048**	**.0024**	**-.00024**	**2.033**	**.0001**
Stddev	.004	.001	.0014	.0031	.0004	.00042	.001	.0001
%RSD	.3843	.1129	37.39	63.76	15.68	174.88	.0599	77.10
#1	1.047	1.117	.0027	-.0070	.0027	-.00053	2.034	.0002
#2	1.052	1.118	.0047	-.0026	.0021	.00006	2.032	.0001
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**5.163**	**5.039**	**-.0009**	**-.0006**	**.0008**	**.0015**	**10.38**
Stddev	.0002	.036	.103	.0003	.0002	.0014	.0021	.09
%RSD	71.14	.6977	2.040	34.40	25.67	181.3	135.6	.8805
#1	-.0004	5.137	4.967	-.0011	-.0005	-.0002	.0030	10.31
#2	-.0001	5.188	5.112	-.0007	-.0007	.0018	.0001	10.44
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013**	**2.012**	**5.530**	**5.035**	**5.146**	**9.960**	**10.08**	**.0000**
Stddev	.0021	.008	.016	.032	.003	.002	.02	.000
%RSD	160.5	.3882	.2865	.6395	.0524	.0215	.2124	989.6
#1	.0028	2.006	5.519	5.012	5.148	9.958	10.09	-.0002
#2	-.0002	2.017	5.541	5.058	5.144	9.961	10.06	.0001
Check ?	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	None
Value								
Range								

Sample Name: ICVB Acquired: 9/26/2013 11:32:47 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0009**	**5.036**	**-.0037**	**.0001**	**5.050**	**.0008**	**-.0027**	**2.0428**
Stddev	.0003	.001	.0191	.0073	.002	.0006	.0080	.0110
%RSD	32.95	.0247	513.9	12760.	.0382	66.75	292.6	.53684
#1	-.0007	5.035	.0098	-.0051	5.048	.0004	-.0084	2.0350
#2	-.0011	5.037	-.0173	.0052	5.051	.0012	.0029	2.0505
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**5.091**	**.0002**	**.0004**	**.0011**	**.0009**	**5.211**	**4.897**
Stddev	.0012	.001	.0001	.0001	.0001	.0002	.003	.026
%RSD	103.0	.0105	28.32	37.63	10.05	25.83	.0511	.5260
#1	-.0003	5.091	.0003	.0005	.0012	.0011	5.213	4.915
#2	-.0020	5.090	.0002	.0003	.0010	.0007	5.209	4.878
Check ?	None	Chk Pass	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**908.36**	**13400.**	**1927.4**
Stddev	2.24	13.	6.4
%RSD	.24647	.09620	.33171
#1	909.95	13391.	1931.9
#2	906.78	13410.	1922.9

Sample Name: ICV Acquired: 9/26/2013 11:35:13 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-82-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.465**	**5.123**	**2.405**	**2.444**	**5.146**	**.12524**	**.0106**	**1.253**
Stddev	.007	.018	.001	.009	.013	.00030	.0028	.003
%RSD	.1642	.3579	.0524	.3559	.2526	.23613	26.22	.2392
#1	4.460	5.136	2.406	2.450	5.137	.12503	.0125	1.251
#2	4.470	5.110	2.404	2.438	5.155	.12545	.0086	1.255
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.257**	**12.68**	**12.11**	**.5042**	**1.262**	**.6342**	**.6157**	**2.507**
Stddev	.001	.06	.08	.0019	.002	.0024	.0051	.012
%RSD	.0752	.4773	.6226	.3712	.1622	.3775	.8205	.4699
#1	1.257	12.64	12.06	.5029	1.260	.6325	.6193	2.498
#2	1.258	12.73	12.16	.5056	1.263	.6359	.6122	2.515
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.431**	**.0020**	**13.05**	**12.21**	**12.60**	**1.250**	**1.257**	**2.063**
Stddev	.008	.0017	.04	.01	.05	.004	.006	.001
%RSD	.3176	83.49	.2901	.1070	.3878	.3155	.5173	.0644
#1	2.426	.0032	13.03	12.20	12.56	1.248	1.253	2.064
#2	2.437	.0008	13.08	12.22	12.63	1.253	1.262	2.062
Check ?	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: ICV Acquired: 9/26/2013 11:35:13 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.252**	**.0085**	**12.27**	**2.464**	**.0218**	**.6039**	**12.40**	**.00080**
Stddev	.003	.0138	.02	.006	.0055	.0006	.06	.00002
%RSD	.2410	162.2	.1434	.2536	25.08	.1050	.4756	2.9669
#1	1.249	.0183	12.25	2.459	.0257	.6043	12.36	.00078
#2	1.254	-.0013	12.28	2.468	.0179	.6034	12.44	.00082
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.466**	**.0051**	**2.044**	**1.293**	**1.271**	**1.233**	**.0121**	**.0084**
Stddev	.001	.0053	.000	.008	.002	.002	.0079	.0212
%RSD	.0399	102.8	.0131	.6472	.1171	.1599	65.32	252.5
#1	2.465	.0088	2.043	1.287	1.270	1.234	.0178	.0233
#2	2.467	.0014	2.044	1.299	1.273	1.232	.0065	-.0066
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	905.16	13244.	1927.4
Stddev	.98	42.	4.3
%RSD	.10849	.31627	.22132
#1	905.86	13273.	1924.4
#2	904.47	13214.	1930.4

Sample Name: ICB Acquired: 9/26/2013 11:38:31 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**-.0025**	**-.0004**	**-.0054**	**.0006**	**.00017**	**.0026**	**.0002**
Stddev	.0047	.0021	.0002	.0008	.0009	.00009	.0025	.0000
%RSD	238.5	84.96	58.25	14.41	151.5	49.361	94.88	6.392
#1	.0053	-.0040	-.0006	-.0048	.0000	.00023	.0044	.0002
#2	-.0014	-.0010	-.0003	-.0059	.0012	.00011	.0009	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0067**	**.0007**	**-.0009**	**-.0006**	**.0002**	**.0036**	**-.0113**
Stddev	.0001	.0036	.0000	.0007	.0000	.0003	.0021	.0020
%RSD	130.4	54.64	2.824	76.58	.9241	123.5	59.84	17.49
#1	.0000	.0092	.0007	-.0014	-.0006	.0004	.0051	-.0099
#2	-.0002	.0041	.0007	-.0004	-.0006	.0000	.0021	-.0126
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.0023**	**-.0230**	**.0004**	**-.0007**	**.0000**	**.0004**	**.0007**
Stddev	.0005	.0015	.0627	.0001	.0016	.0000	.0001	.0001
%RSD	68.03	66.65	272.0	30.72	247.5	141.2	30.39	17.40
#1	-.0004	.0034	-.0674	.0005	-.0018	.0000	.0003	.0008
#2	-.0012	.0012	.0213	.0003	.0005	.0000	.0005	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: ICB Acquired: 9/26/2013 11:38:31 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0042**	**.0178**	**-.0057**	**.0138**	**-.0005**	**-.0100**	**-.00007**
Stddev	.0004	.0041	.0080	.0010	.0083	.0015	.0067	.00001
%RSD	214.6	97.34	44.85	17.52	60.28	331.2	67.39	8.5779
#1	.0001	-.0013	.0234	-.0050	.0079	.0006	-.0052	-.00006
#2	-.0005	-.0071	.0121	-.0064	.0197	-.0016	-.0148	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0012**	**.0002**	**.0003**	**-.0001**	**.0001**	**.0025**	**-.0049**
Stddev	.0008	.0006	.0000	.0005	.0000	.0001	.0004	.0097
%RSD	3964.	49.78	27.41	169.1	4.680	119.6	15.54	199.8
#1	-.0005	.0017	.0002	.0006	-.0001	.0001	.0028	-.0117
#2	.0006	.0008	.0001	-.0001	-.0001	.0000	.0023	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	922.40	13237.	1911.8
Stddev	2.50	43.	7.0
%RSD	.27134	.32173	.36802
#1	924.17	13267.	1916.8
#2	920.63	13207.	1906.8

Sample Name: LLICV Acquired: 9/26/2013 11:40:59 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-Sle-E 0.5/50

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0135**	**.0091**	**.0173**	**.0120**	**.0049**	**.00078**	**.0198**	**.0010**
Stddev	.0041	.0003	.0030	.0060	.0008	.00029	.0020	.0002
%RSD	30.57	3.179	17.37	50.29	15.72	36.712	10.12	23.95
#1	.0164	.0089	.0194	.0162	.0043	.00058	.0183	.0008
#2	.0106	.0093	.0152	.0077	.0054	.00099	.0212	.0012
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0100							
Range	30.00%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	F **.0263**	**.0200**	F **.0027**	F **.0014**	**.0049**	F **.0060**	**.0155**
Stddev	.0000	.0140	.0008	.0013	.0003	.0006	.0013	.0008
%RSD	2.440	53.04	3.854	47.44	23.24	13.08	21.36	5.157
#1	.0010	.0165	.0194	.0018	.0016	.0045	.0069	.0149
#2	.0010	.0362	.0205	.0036	.0012	.0054	.0051	.0161
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Pass
Value		.0200		.0040	.0020		.0040	
Range		30.00%		-30.00%	-30.00%		30.00%	

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087**	**.0199**	**.0025**	**.0054**	**.0040**	**.0011**	**.0014**	**.0040**
Stddev	.0001	.0014	.0880	.0008	.0001	.0002	.0005	.0004
%RSD	.5937	7.207	3457.	14.25	1.666	18.18	35.55	10.73
#1	.0087	.0210	-.0597	.0048	.0040	.0009	.0011	.0037
#2	.0087	.0189	.0648	.0059	.0039	.0012	.0018	.0043
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

① Rerun
② 2x
9/26/13

Sample Name: LLICV Acquired: 9/26/2013 11:40:59 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Zeroed www 9/26/13

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0437**	**.1928**	F **.0110**	**.1926**	**.0038**	**.1701**	**.00104**
Stddev	.0001	.0128	.0132	.0049	.0011	.0005	.0077	.00003
%RSD	3.528	29.16	6.835	45.17	.5779	13.56	4.514	2.6874
#1	.0039	.0347	.2021	.0145	.1918	.0034	.1755	.00106
#2	.0041	.0528	.1834	.0075	.1934	.0041	.1646	.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0200				
Range				-30.00%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0112**	**.0205**	**.0021**	**.0036**	**.0041**	**.0044**	**.0202**	**.0365**
Stddev	.0035	.0001	.0003	.0006	.0001	.0003	.0038	.0014
%RSD	30.97	.5919	14.38	16.74	3.272	7.745	18.75	3.742
#1	.0136	.0206	.0018	.0032	.0040	.0047	.0228	.0374
#2	.0087	.0204	.0023	.0041	.0042	.0042	.0175	.0355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**935.56**	**13508.**	**1862.5**
Stddev	2.43	283.	6.9
%RSD	.25929	2.0943	.36954
#1	937.27	13308.	1857.6
#2	933.84	13708.	1867.3

Sample Name: LLICV Acquired: 9/26/2013 11:43:26 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: Rerun

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0113**	F **.0067**	**.0208**	F **.0056**	F **.0055**	**.00099**	**.0201**
Stddev	.0017	.0020	.0021	.0029	.0024	.00022	.0039
%RSD	15.04	30.30	10.30	50.92	44.22	21.897	19.54
#1	.0125	.0082	.0223	.0077	.0038	.00114	.0229
#2	.0101	.0053	.0193	.0036	.0072	.00084	.0173
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass
Value		.0100		.0100	.0040		
Range		-30.00%		-30.00%	30.00%		

Elem	Cd2144	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0009**	F **.0454**	**.0221**	F **.0023**	**.0024**	**.0037**
Stddev	.0001	.0002	.0141	.0036	.0004	.0000	.0009
%RSD	14.51	20.58	31.07	16.12	19.50	1.875	24.20
#1	.0011	.0010	.0354	.0196	.0026	.0024	.0043
#2	.0009	.0008	.0554	.0246	.0019	.0023	.0030
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value			.0200		.0040		
Range			30.00%		-30.00%		

Elem	Cu3273	Fe2599	Pb2203	Li6707	Mg2790	Mg2795	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0062**	**.0177**	**.0118**	**.0224**	**-.0219**	F **.0075**	F **.0091**
Stddev	.0021	.0051	.0028	.0001	.0345	.0036	.0005
%RSD	34.13	28.93	23.68	.2728	157.7	47.94	5.822
#1	.0047	.0141	.0099	.0225	.0025	.0050	.0095
#2	.0077	.0214	.0138	.0224	-.0463	.0101	.0088
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Fail	Chk Fail
Value	.0040					.0050	.0050
Range	30.00%					30.00%	30.00%

Sample Name: LLICV Acquired: 9/26/2013 11:43:26 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Mn2576	Mn2605	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0026**	**.0039**	**.0047**	**.0442**	**.1960**	**.0181**
Stddev	.0000	.0001	.0004	.0001	.0102	.0271	.0146
%RSD	4.819	3.048	9.287	1.385	23.20	13.82	80.80
#1	.0010	.0025	.0042	.0047	.0369	.1768	.0285
#2	.0010	.0026	.0037	.0046	.0514	.2152	.0078
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							
Range							

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1967**	**.0040**	**.1915**	F **.00133**	**.0111**	**.0194**	**.0021**
Stddev	.0067	.0022	.0029	.00042	.0005	.0021	.0003
%RSD	3.382	54.64	1.497	31.729	4.245	11.00	15.48
#1	.1920	.0025	.1935	.00103	.0108	.0209	.0023
#2	.2014	.0055	.1894	.00163	.0114	.0179	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value				.00100			
Range				30.000%			

Elem	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm
Avg	**.0041**	**.0043**	**.0042**	F **.0265**	**.0348**
Stddev	.0016	.0003	.0001	.0084	.0044
%RSD	39.31	7.188	1.988	31.81	12.73
#1	.0052	.0046	.0041	.0325	.0379
#2	.0029	.0041	.0042	.0206	.0317
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value				.0200	
Range				30.00%	

Sample Name: LLICV Acquired: 9/26/2013 11:43:26 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	930.78	13482.	1925.9
Stddev	4.75	9.	7.2
%RSD	.51011	.06670	.37404
#1	927.43	13476.	1931.0
#2	934.14	13489.	1920.8

Sample Name: LLICV,0.5 Acquired: 9/26/2013 11:45:53 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-Sle-E 1/50

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0248**	**.0187**	**.0456**	F **.0132**	**.0089**	**.00176**	**.0379**	**.0020**
Stddev	.0051	.0035	.0038	.0069	.0000	.00013	.0016	.0001
%RSD	20.80	18.72	8.443	52.74	.0733	7.3933	4.343	5.828
#1	.0211	.0212	.0429	.0083	.0089	.00185	.0367	.0019
#2	.0284	.0162	.0483	.0181	.0089	.00167	.0390	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0200				
Range				-30.00%				

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0494**	**.0394**	**.0082**	**.0036**	**.0089**	**.0088**	**.0331**
Stddev	.0001	.0093	.0001	.0017	.0003	.0002	.0010	.0044
%RSD	3.144	18.78	.1671	20.62	8.485	1.852	11.26	13.28
#1	.0019	.0429	.0393	.0094	.0034	.0090	.0095	.0299
#2	.0018	.0560	.0394	.0070	.0038	.0088	.0081	.0362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0213**	**.0415**	**.0337**	**.0102**	F **.0069**	**.0019**	**.0023**	**.0075**
Stddev	.0007	.0014	.0147	.0002	.0023	.0001	.0003	.0002
%RSD	3.486	3.257	43.67	1.509	33.54	6.701	14.19	2.114
#1	.0207	.0406	.0233	.0101	.0053	.0020	.0021	.0074
#2	.0218	.0425	.0441	.0103	.0086	.0018	.0026	.0077
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value					.0100			
Range					-30.00%			

Sample Name: LLICV,0.5 Acquired: 9/26/2013 11:45:53 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081**	**.0852**	**.4212**	**.0357**	**.4062**	**.0082**	**.3790**	**.00197**
Stddev	.0002	.0034	.0057	.0054	.0021	.0010	.0023	.00004
%RSD	1.931	3.987	1.353	15.07	.5110	11.89	.6093	2.2557
#1	.0079	.0828	.4172	.0319	.4047	.0089	.3806	.00200
#2	.0082	.0876	.4252	.0395	.4077	.0075	.3774	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0225**	**.0397**	**.0046**	**.0084**	**.0082**	**.0078**	**.0437**	**.0783**
Stddev	.0005	.0000	.0001	.0010	.0001	.0002	.0027	.0170
%RSD	2.070	.0846	2.072	11.53	1.489	2.551	6.118	21.67
#1	.0228	.0396	.0047	.0077	.0082	.0079	.0418	.0663
#2	.0222	.0397	.0046	.0090	.0081	.0077	.0456	.0902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**939.98**	**13666.**	**1939.8**
Stddev	24.63	33.	11.2
%RSD	2.6202	.24412	.57594
#1	957.40	13643.	1931.9
#2	922.57	13690.	1947.7

Sample Name: CCVB1 Acquired: 9/26/2013 11:48:32 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.696**	**9.964**	**.0014**	**1.005**	**10.07**	**.00004**	**.0006**	**.0000**
Stddev	.065	.087	.0047	.004	.20	.00014	.0022	.0002
%RSD	.8485	.8743	334.0	.3593	1.950	347.26	353.6	3895.
#1	7.761	9.914	.0009	1.007	10.08	-.00013	.0006	.0001
#2	7.724	9.989	.0030	1.000	10.04	-.00001	.0003	-.0002
#3	7.691	9.878	-.0047	1.004	9.849	.00019	.0034	.0001
#4	7.608	10.07	.0064	1.008	10.33	.00010	-.0019	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**10.01**	**9.686**	**-.0008**	**-.0007**	**.0006**	**.0013**	**10.04**
Stddev	.0003	.04	.102	.0008	.0005	.0009	.0009	.06
%RSD	118.7	.3929	1.049	94.50	73.47	171.0	70.42	.5911
#1	-.0003	9.996	9.767	.0000	-.0007	.0019	.0024	10.11
#2	-.0002	10.07	9.667	-.0016	-.0001	.0001	.0017	10.08
#3	.0001	10.01	9.550	-.0003	-.0014	-.0003	.0004	10.01
#4	-.0005	9.978	9.759	-.0014	-.0006	.0005	.0007	9.979
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Sample Name: CCVB1 Acquired: 9/26/2013 11:48:32 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**.9975**	F **10.58**	**9.680**	**10.02**	**.9794**	**.9939**	**-.0007**
Stddev	.0025	.0077	.11	.043	.06	.0006	.0139	.0004
%RSD	337.9	.7747	1.029	.4439	.5845	.0598	1.398	59.39
#1	.0030	.9981	10.62	9.718	10.02	.9796	1.004	-.0010
#2	-.0022	.9967	10.72	9.715	10.03	.9800	.9898	-.0002
#3	-.0024	1.007	10.47	9.654	10.08	.9793	1.005	-.0005
#4	-.0014	.9882	10.52	9.634	9.939	.9786	.9760	-.0012
Check ?	None	Chk Pass	Chk Fail*	None	Chk Pass	None	Chk Pass	None
Value			10.00					
Range			5.490%					

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**9.870**	**9.924**	**-.0036**	**9.908**	**.0001**	**9.910**	**.99383**
Stddev	.0006	.031	.063	.0048	.067	.0004	.062	.00500
%RSD	107.0	.3143	.6391	132.2	.6708	364.5	.6258	.50355
#1	.0001	9.897	9.941	-.0061	9.842	.0004	9.929	.99763
#2	-.0003	9.877	9.878	-.0071	9.921	.0000	9.879	.99794
#3	-.0007	9.880	10.01	.0034	9.995	-.0004	9.987	.99235
#4	-.0012	9.825	9.870	-.0047	9.873	.0005	9.845	.98738
Check ?	None	None	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

* NR by 200.7
OK - 6010
MMK
9/26/13

Sample Name: CCVB1 Acquired: 9/26/2013 11:48:32 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0003**	**.0004**	**-.0001**	**.0004**	**.0002**	**1.005**	**.9883**
Stddev	.0020	.0018	.0002	.0012	.0004	.0001	.004	.0109
%RSD	59.55	688.5	51.58	1251.	100.9	67.83	.4442	1.101
#1	.0008	.0016	.0005	-.0003	.0001	.0000	1.009	.9782
#2	.0049	.0006	.0005	-.0014	.0007	.0003	1.008	.9823
#3	.0047	-.0024	.0001	.0015	.0000	.0002	1.004	.9898
#4	.0026	.0013	.0006	-.0002	.0008	.0002	.9989	1.003
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	931.70	13319.	1944.0
Stddev	4.36	81.	11.4
%RSD	.46771	.61108	.58387
#1	928.73	13271.	1939.2
#2	930.88	13308.	1936.3
#3	929.10	13260.	1960.9
#4	938.08	13437.	1939.6

Sample Name: CCVA1 Acquired: 9/26/2013 11:59:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2542**	**.2556**	**.2466**	**.2365**	**.2588**	**.24699**	**.2476**	**.2514**
Stddev	.0066	.0018	.0031	.0074	.0053	.00070	.0056	.0012
%RSD	2.585	.7134	1.265	3.132	2.032	.28380	2.256	.4578
#1	.2495	.2578	.2506	.2322	.2549	.24728	.2432	.2526
#2	.2566	.2539	.2433	.2436	.2581	.24785	.2478	.2522
#3	.2484	.2563	.2452	.2283	.2664	.24643	.2439	.2508
#4	.2624	.2544	.2472	.2419	.2557	.24641	.2554	.2501
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2516**	**.2740**	**.2536**	**.2520**	**.2510**	**.2514**	**.2469**	**.2541**
Stddev	.0006	.0082	.0045	.0008	.0012	.0013	.0016	.0060
%RSD	.2520	3.005	1.762	.3317	.4915	.4974	.6612	2.343
#1	.2524	.2709	.2512	.2518	.2526	.2530	.2455	.2586
#2	.2515	.2752	.2531	.2523	.2505	.2516	.2456	.2540
#3	.2508	.2848	.2601	.2510	.2497	.2508	.2478	.2582
#4	.2517	.2653	.2501	.2530	.2513	.2500	.2488	.2457
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/26/2013 11:59:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2487**	**.0006**	**.2993**	**.2535**	**.2496**	**.2535**	**.2448**	**.2492**
Stddev	.0042	.0012	.0397	.0039	.0062	.0006	.0029	.0008
%RSD	1.680	207.5	13.27	1.543	2.465	.2242	1.198	.3409
#1	.2533	.0016	.2616	.2518	.2509	.2542	.2428	.2503
#2	.2463	-.0003	.3003	.2532	.2418	.2531	.2428	.2494
#3	.2443	.0016	.3539	.2591	.2567	.2529	.2490	.2484
#4	.2511	-.0006	.2813	.2501	.2490	.2537	.2446	.2487
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

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Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2508**	**.0036**	**2.472**	**.2460**	**.1407**	**.2476**	**.2476**	**.00029**
Stddev	.0006	.0104	.029	.0110	.0179	.0017	.0129	.00041
%RSD	.2347	288.4	1.177	4.472	12.71	.6786	5.229	143.47
#1	.2515	.0018	2.460	.2444	.1479	.2451	.2383	.00010
#2	.2501	.0076	2.506	.2494	.1234	.2481	.2363	.00014
#3	.2506	-.0098	2.483	.2320	.1625	.2483	.2640	.00089
#4	.2510	.0148	2.439	.2583	.1291	.2488	.2520	.00001
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/26/2013 11:59:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2481**	**.2510**	**.2517**	**.2509**	**.2524**	**.2467**	**.0006**	**.0060**
Stddev	.0068	.0032	.0011	.0017	.0016	.0011	.0021	.0069
%RSD	2.755	1.259	.4298	.6614	.6469	.4625	350.1	114.4
#1	.2472	.2531	.2514	.2518	.2548	.2474	-.0016	.0130
#2	.2578	.2543	.2530	.2523	.2520	.2464	.0012	.0090
#3	.2418	.2480	.2521	.2509	.2513	.2453	-.0005	.0050
#4	.2458	.2486	.2505	.2485	.2513	.2479	.0033	-.0031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**921.66**	**13537.**	**1910.3**
Stddev	3.22	42.	22.1
%RSD	.34950	.30888	1.1594
#1	919.94	13476.	1925.9
#2	922.32	13555.	1879.0
#3	918.49	13547.	1910.2
#4	925.87	13571.	1926.0

Sample Name: CCVA1 Acquired: 9/26/2013 12:03:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2537**	**.2666**	**.2534**	**.2410**	**.2578**	**.24765**	**.2500**	**.2499**
Stddev	.0017	.0019	.0020	.0068	.0017	.00102	.0021	.0014
%RSD	.6594	.7148	.7825	2.815	.6639	.41137	.8405	.5683
#1	.2560	.2693	.2531	.2477	.2561	.24763	.2507	.2514
#2	.2535	.2654	.2512	.2459	.2601	.24729	.2505	.2492
#3	.2520	.2664	.2560	.2343	.2571	.24904	.2469	.2483
#4	.2532	.2652	.2532	.2361	.2581	.24662	.2518	.2506
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2487**	**.2628**	**.2511**	**.2515**	**.2497**	**.2506**	**.2506**	**.2487**
Stddev	.0017	.0111	.0013	.0017	.0021	.0018	.0017	.0059
%RSD	.6824	4.215	.5163	.6956	.8213	.6986	.6857	2.373
#1	.2503	.2499	.2496	.2490	.2512	.2519	.2488	.2466
#2	.2476	.2670	.2528	.2528	.2472	.2481	.2504	.2490
#3	.2469	.2757	.2508	.2526	.2489	.2518	.2529	.2427
#4	.2500	.2585	.2514	.2515	.2515	.2506	.2500	.2567
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/26/2013 12:03:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2467**	**.0011**	**.2757**	**.2515**	**.2529**	**.2529**	**.2451**	**.2487**
Stddev	.0023	.0008	.0491	.0016	.0045	.0010	.0018	.0018
%RSD	.9460	78.18	17.82	.6511	1.762	.4047	.7308	.7302
#1	.2440	.0008	.2687	.2510	.2483	.2523	.2431	.2512
#2	.2489	.0023	.2497	.2533	.2587	.2522	.2474	.2474
#3	.2455	.0004	.2375	.2496	.2538	.2544	.2451	.2474
#4	.2483	.0007	.3468	.2522	.2509	.2527	.2447	.2488
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2495**	**.0023**	**2.457**	**.2437**	**.1292**	**.2489**	**.2471**	**.00016**
Stddev	.0012	.0043	.029	.0065	.0110	.0017	.0052	.00020
%RSD	.4722	185.8	1.189	2.685	8.493	.6823	2.089	122.32
#1	.2507	.0000	2.415	.2497	.1158	.2498	.2533	.00007
#2	.2494	.0086	2.483	.2458	.1382	.2501	.2495	.00037
#3	.2479	-.0006	2.462	.2447	.1247	.2493	.2435	.00026
#4	.2500	.0012	2.466	.2344	.1381	.2464	.2423	-.00007
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Sample Name: CCVA1 Acquired: 9/26/2013 12:03:11 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2549**	**.2476**	**.2511**	**.2502**	**.2478**	**.2469**	**-.0012**	**-.0054**
Stddev	.0057	.0024	.0016	.0001	.0017	.0011	.0061	.0063
%RSD	2.241	.9814	.6198	.0562	.6996	.4485	505.0	117.0
#1	.2516	.2476	.2489	.2503	.2493	.2481	-.0058	-.0029
#2	.2635	.2502	.2517	.2501	.2464	.2457	-.0055	-.0012
#3	.2518	.2443	.2524	.2502	.2462	.2476	-.0008	-.0148
#4	.2529	.2483	.2514	.2504	.2494	.2463	.0073	-.0027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**932.98**	**13593.**	**1919.6**
Stddev	3.61	35.	11.8
%RSD	.38650	.25789	.61466
#1	930.64	13616.	1916.0
#2	936.37	13563.	1936.0
#3	935.74	13631.	1918.7
#4	929.18	13564.	1908.0

Sample Name: CCB Acquired: 9/26/2013 12:07:21 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**-.0044**	**-.0026**	**-.0046**	**.0004**	**-.00014**	**-.0005**	**.0001**
Stddev	.0038	.0004	.0114	.0034	.0001	.00024	.0008	.0002
%RSD	258.8	8.473	442.6	74.91	17.22	173.03	146.9	122.6
#1	-.0012	-.0042	-.0106	-.0070	.0005	.00003	.0000	.0000
#2	.0042	-.0047	.0055	-.0022	.0004	-.00031	-.0010	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0172**	**.0000**	**-.0004**	**.0000**	**.0010**	**.0017**	**.0003**
Stddev	.000	.0017	.000	.0005	.0001	.0008	.0001	.0013
%RSD	10640.	10.06	434.7	114.6	731.8	81.79	7.521	484.6
#1	-.0002	.0184	.0000	-.0007	.0001	.0015	.0016	-.0007
#2	.0002	.0160	.0000	-.0001	-.0001	.0004	.0018	.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0014**	**.0008**	**.0530**	**-.0002**	**-.0004**	**-.0001**	**-.0005**	**-.0004**
Stddev	.0017	.0001	.0760	.0002	.0031	.0000	.0014	.0008
%RSD	120.4	13.62	143.3	152.7	886.0	11.68	282.7	188.4
#1	-.0002	.0007	-.0007	.0000	.0019	-.0001	.0005	-.0009
#2	-.0026	.0008	.1068	-.0003	-.0026	-.0001	-.0015	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 12:07:21 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0047**	**-.0047**	**-.0016**	**-.0094**	**.0012**	**-.0141**	**-.00009**
Stddev	.0010	.0049	.0267	.0035	.0026	.0003	.0152	.00006
%RSD	169.1	104.3	570.8	216.6	28.18	22.70	107.8	73.335
#1	.0013	-.0082	-.0235	-.0041	-.0075	.0010	-.0034	-.00013
#2	-.0001	-.0012	.0142	.0009	-.0113	.0014	-.0249	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**.0006**	**.0003**	**-.0003**	**-.0001**	**.0004**	**-.0026**	**-.0023**
Stddev	.0042	.0010	.0004	.0011	.0001	.0002	.0043	.0068
%RSD	114.8	162.1	143.2	437.3	132.0	47.67	167.8	303.8
#1	.0067	.0013	.0005	.0005	.0000	.0005	.0005	.0026
#2	.0007	-.0001	.0000	-.0011	-.0001	.0002	-.0056	-.0071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	910.04	13621.	1931.2
Stddev	4.73	45.	.9
%RSD	.52018	.32930	.04485
#1	913.39	13653.	1930.6
#2	906.69	13589.	1931.8

Sample Name: ICSA Acquired: 9/26/2013 12:09:48 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-81-E

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.07**	**469.6**	**.0014**	**.0096**	**.0008**	**-.00044**	**.0098**	**-.0002**
Stddev	.04	2.8	.0057	.0023	.0005	.00008	.0044	.0002
%RSD	.1498	.6002	407.7	23.87	59.72	17.792	44.44	76.17
#1	25.10	471.6	-.0026	.0080	.0005	-.00038	.0129	-.0004
#2	25.04	467.6	.0054	.0112	.0012	-.00049	.0067	-.0001
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**495.1**	*****	**.0025**	**-.0037**	**-.0097**	**.0057**	**193.2**
Stddev	.0003	.8	-----	.0008	.0017	.0003	.0017	.3
%RSD	14.59	.1525	-----	32.21	46.30	3.408	30.20	.1683
#1	-.0026	494.6	-----	.0019	-.0025	-.0095	.0069	193.0
#2	-.0021	495.6	-----	.0031	-.0050	-.0099	.0045	193.4
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0089**	**.0083**	**554.7**	**200.3**	**426.9**	**.0024**	**.0083**	**.0009**
Stddev	.0041	.0002	1.2	.2	1.3	.0000	.0015	.0004
%RSD	46.16	2.371	.2201	.0771	.2991	.0022	17.52	51.41
#1	-.0060	.0084	553.8	200.4	427.8	.0024	.0093	.0006
#2	-.0119	.0081	555.6	200.2	426.0	.0024	.0073	.0012
Check ?	None	None	Chk Pass	None	None	None	None	None
Value								
Range								

Sample Name: ICSA Acquired: 9/26/2013 12:09:48 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0038**	**-.0076**	**.0017**	**-.0015**	**-.0003**	**.0185**	**.00229**
Stddev	.0000	.0008	.0028	.0029	.0123	.0003	.0010	.00001
%RSD	2.690	21.92	36.86	166.6	841.5	99.73	5.284	.35320
#1	.0005	.0032	-.0096	.0037	.0072	-.0001	.0192	.00229
#2	.0006	.0044	-.0057	-.0003	-.0101	-.0004	.0178	.00230
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0025**	**.0031**	**.0066**	**.0007**	**.0108**	**.0041**	**.0169**	**.0121**
Stddev	.0050	.0050	.0003	.0007	.0005	.0001	.0058	.0023
%RSD	199.2	159.4	4.783	97.95	4.890	3.020	34.30	19.14
#1	-.0060	.0066	.0064	.0002	.0104	.0042	.0209	.0138
#2	.0010	-.0004	.0069	.0011	.0112	.0040	.0128	.0105
Check ?	None	None	None	None	None	None	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	817.76	11725.	1852.2
Stddev	.25	4.	6.8
%RSD	.03112	.03016	.36582
#1	817.58	11727.	1847.4
#2	817.94	11722.	1857.0

Sample Name: ICSAB Acquired: 9/26/2013 12:12:30 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: ICP12-82-G

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.10**	**476.6**	**.8918**	**.0091**	**.5256**	**.48441**	**.0094**	**.9411**
Stddev	.34	1.2	.0218	.0015	.0023	.00209	.0027	.0014
%RSD	1.369	.2455	2.447	16.20	.4328	.43147	28.95	.1449
#1	24.86	477.4	.9073	.0081	.5239	.48589	.0114	.9420
#2	25.34	475.7	.8764	.0102	.5272	.48293	.0075	.9401
Check ?	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9394**	**489.7**	*****	**.5025**	**.4654**	**.4643**	**.4809**	**191.3**
Stddev	.0005	.1	-----	.0001	.0014	.0013	.0013	.4
%RSD	.0502	.0109	-----	.0164	.2915	.2891	.2779	.2327
#1	.9398	489.7	-----	.5025	.4663	.4652	.4800	191.0
#2	.9391	489.6	-----	.5024	.4644	.4633	.4819	191.6
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9100**	**.0065**	**548.6**	**197.4**	**429.2**	**.4991**	**.5271**	**.0013**
Stddev	.0088	.0005	.5	.7	6.4	.0010	.0096	.0012
%RSD	.9638	7.335	.0953	.3353	1.485	.2033	1.828	92.24
#1	.9162	.0068	548.9	196.9	433.8	.4998	.5203	.0004
#2	.9038	.0061	548.2	197.9	424.7	.4984	.5339	.0021
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value								
Range								

Sample Name: ICSAB Acquired: 9/26/2013 12:12:30 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9190**	**.0107**	**-.0044**	**.0083**	**.0009**	**.9655**	**.0134**	**.00227**
Stddev	.0010	.0121	.0121	.0001	.0166	.0079	.0005	.00016
%RSD	.1128	113.0	275.1	.7113	1856.	.8226	3.501	7.0131
#1	.9197	.0193	-.0129	.0084	-.0108	.9711	.0131	.00215
#2	.9183	.0022	.0042	.0083	.0126	.9598	.0137	.00238
Check ?	Chk Pass	None	None	None	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.0046**	**.0066**	**.5278**	**.9299**	**.8843**	**.0193**	**-.0015**
Stddev	.0048	.0032	.0000	.0034	.0012	.0063	.0047	.0131
%RSD	169.3	68.99	.1439	.6382	.1248	.7155	24.54	905.5
#1	.0062	.0024	.0066	.5302	.9291	.8887	.0159	-.0107
#2	-.0006	.0069	.0066	.5254	.9307	.8798	.0226	.0078
Check ?	None	None	None	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**817.63**	**11942.**	**1891.4**
Stddev	4.17	37.	4.3
%RSD	.50968	.30940	.22553
#1	820.58	11968.	1888.4
#2	814.68	11916.	1894.4

Sample Name: KQ1310900-01 Acquired: 9/26/2013 12:41:31 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0019**	**-.0015**	**.0002**	**.00034**	**-.0015**	**.0001**	**-.0001**
#1	.0035	-.0004	-.0037	.0003	.00030	.0003	.0000	-.0001
#2	.0000	.0043	.0008	.0002	.00038	-.0034	.0001	-.0001

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0008**	**.0001**	**.0008**	**.0002**	**-.0090**	**.0022**	**.0018**
#1	.0007	-.0005	.0002	.0016	.0008	-.0159	.0024	.0010
#2	.0005	-.0011	.0000	.0001	-.0004	-.0022	.0021	.0026

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**-.0002**	**-.0002**	**-.0001**	**.0058**	**.0030**	**-.0078**	**.0378**
#1	.0000	-.0001	-.0006	.0000	.0097	.0107	-.0023	.0434
#2	-.0001	-.0003	.0001	-.0001	.0020	-.0047	-.0132	.0322

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0012**	**.0019**	**.00003**	**.0024**	**.0003**	**.0003**	**-.0002**	**.0004**
#1	-.0007	.0063	-.00007	.0057	-.0014	.0004	.0000	.0007
#2	-.0017	-.0025	.00013	-.0010	.0020	.0001	-.0003	.0002

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0004**	**.0064**	**-.0129**
#1	.0005	.0047	-.0134
#2	.0003	.0080	-.0124

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**928.50**	**13552.**	**1887.4**
#1	927.09	13531.	1897.7
#2	929.91	13574.	1877.0

Sample Name: KQ1310900-02 Acquired: 9/26/2013 12:43:59 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.030**	**2.420**	**2.419**	**5.070**	**.12112**	**.9772**	**1.221**	**1.223**
#1	5.024	2.410	2.405	5.068	.12077	.9742	1.225	1.227
#2	5.036	2.431	2.433	5.073	.12146	.9801	1.217	1.219

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.32**	**.4917**	**1.239**	**.6244**	**.6072**	**2.481**	**2.382**	**.0013**
#1	12.27	.4894	1.244	.6266	.6066	2.472	2.384	.0029
#2	12.38	.4940	1.234	.6222	.6078	2.491	2.380	-.0004

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.35**	**1.222**	**1.013**	**1.221**	**.0005**	**12.17**	**2.368**	**.0459**
#1	12.41	1.220	1.015	1.225	-.0044	12.22	2.359	.0421
#2	12.30	1.224	1.010	1.217	.0054	12.13	2.378	.0498

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5940**	**12.22**	**9.7555**	**2.415**	**.0010**	**9.988**	**1.267**	**1.234**
#1	.5940	12.25	9.7051	2.424	.0030	9.963	1.262	1.240
#2	.5941	12.20	9.8059	2.406	-.0010	10.01	1.273	1.228

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**1.217**	**.0013**	**.0086**
#1	1.212	.0038	.0073
#2	1.223	-.0012	.0099

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	919.33	13338.	1941.4
#1	914.27	13328.	1948.4
#2	924.39	13347.	1934.4

Sample Name: K1309638-001 Acquired: 9/26/2013 12:46:18 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0929**	**.0003**	**.0038**	**.0963**	**.00017**	**.0087**	**.0001**	**-.0001**
#1	.0938	.0020	.0095	.0971	-.00011	.0093	.0002	-.0001
#2	.0919	-.0014	-.0020	.0955	.00046	.0081	.0000	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.42**	**.0012**	**.0002**	**.0019**	**.0029**	**.1407**	**.0010**	**.0005**
#1	76.50	.0021	-.0004	.0024	.0027	.1387	.0010	-.0002
#2	76.35	.0003	.0007	.0014	.0031	.1427	.0010	.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.137**	**.0068**	**.0011**	**.0011**	**.0120**	**.6467**	**.0007**	**13.40**
#1	1.143	.0068	.0010	.0019	.0047	.6521	-.0062	13.41
#2	1.131	.0069	.0012	.0004	.0194	.6413	.0076	13.39

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**3.057**	**.06342**	**.0019**	**.0002**	**.0052**	**.0004**	**.0028**
#1	-.0002	3.073	.06436	.0013	.0002	.0055	.0004	.0031
#2	-.0004	3.041	.06248	.0025	.0003	.0050	.0005	.0024

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0025**	**.0061**	**1.184**
#1	.0026	.0081	1.183
#2	.0024	.0042	1.185

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	929.12	13423.	1936.1
#1	932.35	13480.	1923.8
#2	925.89	13366.	1948.4

Sample Name: K1309638-001L Acquired: 9/26/2013 12:48:45 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 5 Test Type: Sample Type:
Comment: MMR 092613A 1/5

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0261**	**.0059**	**-.0047**	**.0194**	**.00005**	**.0022**	**.0002**	**-.0002**
#1	.0261	.0088	-.0109	.0191	.00034	.0024	.0003	-.0001
#2	.0261	.0030	.0014	.0197	-.00023	.0019	.0001	-.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.35**	**-.0001**	**-.0005**	**.0002**	**.0020**	**.0277**	**-.0015**	**.0015**
#1	15.34	-.0011	-.0006	.0006	.0033	.0249	.0004	.0024
#2	15.35	.0009	-.0003	-.0003	.0006	.0305	-.0033	.0006

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2290**	**.0013**	**.0006**	**-.0001**	**.0120**	**.1311**	**-.0085**	**2.723**
#1	.2287	.0014	.0005	.0002	.0157	.1022	-.0126	2.725
#2	.2293	.0013	.0007	-.0004	.0083	.1600	-.0043	2.721

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.6276**	**.01237**	**.0036**	**-.0006**	**.0009**	**-.0002**	**.0004**
#1	-.0007	.6246	.01216	.0023	-.0024	.0008	-.0002	.0003
#2	-.0016	.6306	.01259	.0049	.0013	.0010	-.0001	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0005**	**.0018**	**.2376**
#1	.0005	-.0002	.2414
#2	.0006	.0037	.2339

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	941.21	13720.	1965.3
#1	943.15	13729.	1965.0
#2	939.28	13711.	1965.6

Sample Name: K1309638-001D Acquired: 9/26/2013 12:51:16 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0960**	**.0035**	**-.0069**	**.0944**	**-.00007**	**.0072**	**.0001**	**.0001**
#1	.0989	.0037	-.0020	.0947	-.00010	.0087	.0001	.0002
#2	.0932	.0032	-.0118	.0941	-.00004	.0057	.0001	.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**75.86**	**.0023**	**.0000**	**.0012**	**.0036**	**.1345**	**-.0002**	**.0013**
#1	75.75	.0025	.0002	.0012	.0033	.1343	-.0002	.0002
#2	75.98	.0021	-.0002	.0013	.0039	.1347	-.0002	.0024

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.123**	**.0068**	**.0000**	**.0009**	**.0265**	**.6420**	**-.0015**	**13.09**
#1	1.121	.0069	-.0008	.0007	.0317	.6355	.0007	13.13
#2	1.125	.0068	.0008	.0012	.0213	.6486	-.0038	13.05

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**2.967**	**.06104**	**.0017**	**.0008**	**.0043**	**.0009**	**.0024**
#1	-.0003	2.963	.06079	.0004	-.0006	.0040	.0001	.0027
#2	.0007	2.971	.06129	.0030	.0022	.0045	.0017	.0021

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0020**	**.0023**	**1.170**
#1	.0021	.0060	1.169
#2	.0019	-.0013	1.171

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	911.08	13065.	1893.0
#1	917.32	13062.	1895.2
#2	904.84	13068.	1890.9

Sample Name: K1309638-001S Acquired: 9/26/2013 12:53:43 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.071**	**2.222**	**.4654**	**.9744**	**2.152**	**.04917**	**.9906**	**.0491**
#1	2.069	2.233	.4635	.9682	2.153	.04909	.9909	.0488
#2	2.074	2.212	.4673	.9806	2.150	.04924	.9904	.0494

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0488**	**85.29**	**.2026**	**.4898**	**.2449**	**.2380**	**1.179**	**.4795**
#1	.0485	85.46	.2025	.4899	.2438	.2389	1.179	.4807
#2	.0491	85.12	.2027	.4897	.2459	.2371	1.179	.4783

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**11.04**	**.5045**	**1.013**	**.4832**	**.0254**	**10.58**	**.9572**
#1	-.0003	11.02	.5051	1.013	.4830	.0283	10.57	.9562
#2	.0013	11.05	.5039	1.013	.4833	.0225	10.59	.9582

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.44**	**.0452**	**12.87**	**10.024**	**.9820**	**.0002**	**10.16**	**.5142**
#1	13.39	.0442	12.86	10.011	.9777	-.0010	10.16	.5119
#2	13.50	.0463	12.89	10.036	.9864	.0015	10.15	.5164

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	**.4860**	**.4724**	**.0064**	**1.121**
#1	.4853	.4718	.0132	1.119
#2	.4866	.4730	-.0003	1.122

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**895.47**	**13077.**	**1891.4**
#1	895.57	13065.	1887.6
#2	895.37	13090.	1895.2

Sample Name: K1309638-002 Acquired: 9/26/2013 12:56:06 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.482**	**.0019**	**.0003**	**.1845**	**.00478**	**.0124**	**.0017**	**.0012**
#1	7.459	.0059	.0017	.1845	.00492	.0119	.0017	.0012
#2	7.504	-.0020	-.0011	.1845	.00463	.0129	.0018	.0013

Elem	Ca3158 *	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**>450.0**	**.2512**	**.0457**	**.0221**	**.0352**	**12.87**	**.0184**	**.0095**
#1	807.3	.2509	.0461	.0209	.0359	12.84	.0213	.0101
#2	809.7	.2514	.0453	.0233	.0345	12.91	.0154	.0088

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.295**	**1.191**	**.0228**	**.1613**	**.7076**	**1.105**	**-.0076**	**25.33**
#1	3.293	1.191	.0229	.1613	.7015	1.097	-.0057	25.32
#2	3.297	1.192	.0227	.1612	.7137	1.112	-.0095	25.35

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**3.790**	**.35512**	**-.0010**	**-.0003**	**.1090**	**.0366**	**.0335**
#1	.0028	3.812	.35488	.0031	-.0019	.1202	.0366	.0335
#2	.0009	3.768	.35535	-.0051	.0012	.0977	.0367	.0336

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0319**	**-.0007**	**1.145**
#1	.0318	-.0042	1.135
#2	.0320	.0028	1.155

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**866.07**	**12532.**	**1830.3**
#1	864.58	12497.	1831.2
#2	867.55	12568.	1829.3

* dilute MMR 9/26/13

Sample Name: K1309638-004 Acquired: 9/26/2013 12:58:31 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0351**	**.0033**	**-.0027**	**.1072**	**.00005**	**.0082**	**.0000**	**.0000**
#1	.0332	.0096	-.0053	.1074	.00003	.0081	.0001	.0001
#2	.0370	-.0030	-.0002	.1070	.00007	.0083	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.69**	**-.0006**	**-.0002**	**.0018**	**.0023**	**.0167**	**-.0016**	**.0029**
#1	54.80	-.0018	.0001	.0018	.0022	.0233	.0007	.0017
#2	54.58	.0006	-.0005	.0017	.0025	.0100	-.0040	.0041

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7165**	**.0022**	**-.0002**	**.0002**	**.0131**	**.2646**	**-.0013**	**11.44**
#1	.7153	.0023	-.0005	.0004	.0087	.2115	-.0007	11.44
#2	.7176	.0021	.0002	.0000	.0176	.3177	-.0019	11.43

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**2.444**	**.05161**	**.0026**	**.0003**	**.0022**	**.0005**	**.0013**
#1	-.0003	2.444	.05154	.0032	.0010	.0026	.0001	.0014
#2	-.0020	2.444	.05167	.0019	-.0005	.0018	.0008	.0012

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0010**	**.0012**	**.6069**
#1	.0011	.0042	.6131
#2	.0010	-.0018	.6006

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	911.73	13232.	1868.0
#1	912.10	13221.	1865.6
#2	911.36	13243.	1870.4

Sample Name: K1309638-005 Acquired: 9/26/2013 13:01:02 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1517**	**.0020**	**-.0006**	**.0904**	**-.00006**	**.0089**	**.0000**	**-.0002**
#1	.1500	.0079	-.0014	.0902	-.00030	.0124	-.0001	-.0001
#2	.1533	-.0039	.0003	.0905	.00018	.0054	.0001	-.0004

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**60.82**	**.0008**	**-.0003**	**.0004**	**.0028**	**.9827**	**-.0032**	**.0027**
#1	60.99	.0009	-.0002	.0009	.0024	.9860	-.0033	.0038
#2	60.64	.0007	-.0003	-.0002	.0032	.9794	-.0032	.0015

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.208**	**.0162**	**-.0002**	**.0009**	**.0226**	**.4545**	**-.0007**	**10.81**
#1	1.209	.0163	-.0001	.0008	.0263	.4594	.0002	10.74
#2	1.208	.0160	-.0003	.0011	.0189	.4495	-.0016	10.89

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**1.934**	**.09831**	**-.0058**	**.0003**	**.0066**	**.0029**	**.0146**
#1	.0005	1.922	.09828	-.0057	-.0007	.0074	.0019	.0147
#2	-.0018	1.946	.09835	-.0060	.0013	.0058	.0039	.0145

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0133**	**-.0006**	**.3767**
#1	.0134	.0016	.3767
#2	.0133	-.0028	.3767

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**884.76**	**12948.**	**1868.8**
#1	883.29	12992.	1862.7
#2	886.22	12904.	1874.9

Sample Name: K1309638-008 Acquired: 9/26/2013 13:03:32 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0880**	**-.0008**	**-.0146**	**.0782**	**-.00001**	**.0064**	**.0002**	**.0000**
#1	.0892	-.0026	-.0169	.0785	-.00010	.0059	.0001	.0001
#2	.0868	.0010	-.0123	.0780	.00008	.0068	.0002	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.97**	**.0045**	**-.0006**	**.0009**	**.0028**	**.0746**	**-.0008**	**.0013**
#1	92.49	.0048	-.0001	.0012	.0024	.0794	.0019	.0022
#2	91.45	.0042	-.0010	.0007	.0033	.0698	-.0034	.0004

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7133**	**.0423**	**-.0002**	**.0013**	**.0359**	**.2445**	**-.0053**	**9.313**
#1	.7162	.0425	.0002	.0010	.0349	.2395	-.0102	9.320
#2	.7103	.0421	-.0006	.0017	.0370	.2495	-.0004	9.305

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**1.806**	**.05953**	**.0070**	**.0000**	**.0043**	**.0012**	**.0021**
#1	-.0018	1.806	.05979	.0116	.0007	.0045	.0014	.0017
#2	.0002	1.807	.05928	.0024	-.0008	.0041	.0010	.0024

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0019**	**-.0014**	**.1732**
#1	.0021	-.0036	.1752
#2	.0017	.0007	.1713

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	911.62	13175.	1870.4
#1	912.75	13154.	1863.1
#2	910.49	13195.	1877.7

Sample Name: CCVB Acquired: 9/26/2013 13:06:01 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.793**	**9.813**	**.0020**	**.9820**	**10.16**	**.00015**	**.0006**	**.0001**
Stddev	.002	.144	.0030	.0065	.01	.00011	.0036	.0001
%RSD	.0307	1.467	149.0	.6579	.1309	72.394	575.3	193.8
#1	7.794	9.711	.0041	.9774	10.17	.00007	-.0019	.0002
#2	7.791	9.915	-.0001	.9866	10.15	.00022	.0031	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**10.00**	**9.588**	**-.0002**	**-.0002**	**-.0007**	**.0007**	**10.01**
Stddev	.0000	.00	.053	.0013	.0000	.0000	.0016	.03
%RSD	18.23	.0458	.5572	852.7	3.828	2.589	225.4	.3441
#1	-.0003	10.01	9.626	.0008	-.0002	-.0007	-.0004	10.03
#2	-.0002	10.000	9.551	-.0011	-.0002	-.0007	.0018	9.982
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**.9559**	**10.74**	**9.669**	**9.753**	**.9893**	**.9713**	**-.0004**
Stddev	.0021	.0071	.12	.037	.101	.0039	.0033	.0003
%RSD	92.22	.7384	1.144	.3857	1.036	.3964	.3409	73.06
#1	-.0008	.9509	10.65	9.695	9.682	.9921	.9736	-.0005
#2	-.0037	.9609	10.82	9.642	9.825	.9866	.9689	-.0002
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/26/2013 13:06:01 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**9.785**	**9.468**	**-.0064**	**9.586**	**.0004**	**9.364**	**.98788**
Stddev	.0004	.018	.043	.0012	.064	.0003	.058	.00574
%RSD	237.3	.1839	.4529	19.04	.6715	63.13	.6227	.58135
#1	-.0005	9.798	9.437	-.0072	9.541	.0002	9.323	.99194
#2	.0001	9.772	9.498	-.0055	9.632	.0006	9.406	.98382
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0082**	**.0009**	**.0006**	**.0000**	**.0007**	**.0002**	**1.003**	**.9470**
Stddev	.0044	.0008	.0003	.0004	.0000	.0000	.004	.0036
%RSD	54.24	90.75	59.45	1685.	4.570	9.102	.3727	.3760
#1	.0050	.0003	.0008	-.0002	.0007	.0002	1.005	.9445
#2	.0113	.0015	.0003	.0003	.0007	.0002	1.0000	.9495
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	920.16	13283.	1859.0
Stddev	.79	157.	18.4
%RSD	.08606	1.1786	.99211
#1	920.72	13172.	1846.0
#2	919.60	13394.	1872.1

Sample Name: CCVA Acquired: 9/26/2013 13:08:33 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2501**	**.2638**	**.2504**	**.2453**	**.2573**	**.24555**	**.2473**	**.2499**
Stddev	.0011	.0005	.0041	.0025	.0010	.00157	.0008	.0012
%RSD	.4597	.2024	1.641	1.030	.3706	.63907	.3258	.4649
#1	.2509	.2642	.2533	.2471	.2579	.24444	.2479	.2507
#2	.2493	.2634	.2475	.2435	.2566	.24666	.2467	.2491
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2486**	**.2749**	**.2625**	**.2485**	**.2491**	**.2497**	**.2462**	**.2488**
Stddev	.0014	.0267	.0176	.0002	.0004	.0006	.0007	.0081
%RSD	.5655	9.729	6.689	.0620	.1655	.2478	.2660	3.255
#1	.2476	.2938	.2750	.2486	.2488	.2493	.2458	.2430
#2	.2496	.2560	.2501	.2484	.2493	.2501	.2467	.2545
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2447**	**.0004**	**.3069**	**.2520**	**.2504**	**.2534**	**.2445**	**.2489**
Stddev	.0004	.0012	.0407	.0020	.0050	.0001	.0014	.0006
%RSD	.1507	304.5	13.26	.7845	1.981	.0265	.5922	.2408
#1	.2445	-.0004	.3356	.2534	.2539	.2535	.2435	.2493
#2	.2450	.0012	.2781	.2506	.2469	.2534	.2455	.2484
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/26/2013 13:08:33 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2487**	**.0076**	**2.467**	**.2375**	**.1550**	**.2474**	**.2463**	**.00026**
Stddev	.0006	.0028	.009	.0034	.0058	.0006	.0029	.00059
%RSD	.2239	36.73	.3847	1.420	3.766	.2525	1.189	226.88
#1	.2491	.0056	2.474	.2351	.1592	.2469	.2443	.00067
#2	.2483	.0095	2.461	.2399	.1509	.2478	.2484	-.00016
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2452**	**.2491**	**.2498**	**.2504**	**.2500**	**.2480**	**.0002**	**-.0003**
Stddev	.0038	.0026	.0015	.0022	.0000	.0001	.0034	.0100
%RSD	1.567	1.058	.5992	.8960	.0056	.0519	1745.	3635.
#1	.2480	.2509	.2488	.2488	.2500	.2479	.0026	-.0073
#2	.2425	.2472	.2509	.2520	.2500	.2481	-.0022	.0068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	937.21	13611.	1906.6
Stddev	.99	3.	9.6
%RSD	.10561	.02084	.50246
#1	937.91	13613.	1913.4
#2	936.51	13609.	1899.9

Sample Name: CCB Acquired: 9/26/2013 13:10:55 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	**-.0038**	**-.0038**	**-.0043**	**.0009**	**-.00014**	**.0015**	**.0001**
Stddev	.0018	.0040	.0036	.0072	.0000	.00005	.0021	.0000
%RSD	54.22	105.3	93.61	167.5	5.806	38.294	147.3	7.282
#1	.0047	-.0010	-.0064	-.0094	.0008	-.00018	-.0001	.0001
#2	.0021	-.0066	-.0013	.0008	.0009	-.00010	.0030	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0114**	**.0003**	**-.0004**	**-.0004**	**.0005**	**.0005**	**-.0068**
Stddev	.0000	.0014	.0003	.0003	.0003	.0008	.0011	.0111
%RSD	47.51	11.92	81.37	76.78	74.00	159.3	234.3	163.3
#1	.0000	.0124	.0001	-.0002	-.0005	.0011	.0012	-.0147
#2	.0001	.0105	.0005	-.0007	-.0002	-.0001	-.0003	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0012**	**-.0005**	**-.0001**	**-.0023**	**-.0001**	**-.0005**	**.0000**
Stddev	.0023	.0026	.0176	.0003	.0038	.0001	.0021	.000
%RSD	593.4	217.0	3845.	277.4	162.8	76.86	438.7	1914.
#1	-.0013	.0031	.0120	-.0003	-.0050	-.0001	-.0019	.0000
#2	.0021	-.0006	-.0129	.0001	.0004	.0000	.0010	.0000
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 13:10:55 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0018**	**-.0124**	**-.0108**	**.0087**	**-.0003**	**.0046**	**.00022**
Stddev	.000	.0025	.0114	.0048	.0071	.0007	.0033	.00001
%RSD	990.4	141.4	92.45	44.67	81.44	226.1	71.64	5.2971
#1	.0002	.0035	-.0205	-.0074	.0137	.0002	.0069	.00023
#2	-.0003	.0000	-.0043	-.0141	.0037	-.0008	.0023	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0024**	**-.0010**	**.0003**	**-.0006**	**.0000**	**-.0001**	**.0003**	**-.0009**
Stddev	.0079	.0003	.0002	.0000	.0000	.0000	.0002	.0013
%RSD	323.7	30.96	54.48	3.124	86.60	14.77	54.69	135.5
#1	.0032	-.0008	.0002	-.0006	.0000	-.0001	.0002	.0000
#2	-.0080	-.0012	.0005	-.0006	.0000	-.0001	.0004	-.0018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**928.29**	**13466.**	**1894.4**
Stddev	7.94	87.	10.3
%RSD	.85488	.64245	.54310
#1	922.68	13527.	1901.7
#2	933.90	13404.	1887.1

Sample Name: K1309638-010 Acquired: 9/26/2013 13:13:25 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0795**	**.0056**	**-.0069**	**.0790**	**.00010**	**.0065**	**.0001**	**-.0001**
#1	.0784	.0071	-.0064	.0798	.00018	.0053	.0000	.0000
#2	.0806	.0041	-.0074	.0783	.00001	.0077	.0001	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**78.83**	**.0032**	**-.0002**	**.0018**	**.0026**	**.0580**	**.0005**	**.0023**
#1	79.20	.0038	.0003	.0016	.0026	.0574	-.0009	.0008
#2	78.47	.0026	-.0007	.0021	.0025	.0586	.0019	.0038

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7006**	**.0289**	**-.0011**	**.0010**	**.0163**	**.2829**	**-.0098**	**9.726**
#1	.7048	.0288	-.0005	.0005	.0194	.2696	-.0078	9.749
#2	.6963	.0290	-.0017	.0014	.0132	.2962	-.0118	9.702

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**1.840**	**.05561**	**.0067**	**.0012**	**.0041**	**.0007**	**.0020**
#1	-.0006	1.851	.05588	.0094	.0013	.0041	.0004	.0020
#2	.0006	1.828	.05534	.0040	.0011	.0042	.0010	.0021

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0017**	**.0000**	**.1909**
#1	.0020	-.0027	.1884
#2	.0014	.0026	.1934

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	918.84	13352.	1924.9
#1	916.25	13438.	1922.6
#2	921.43	13267.	1927.2

Sample Name: K1309638-011 Acquired: 9/26/2013 13:15:52 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059**	**.0024**	**-.0014**	**.0003**	**.00030**	**.0016**	**.0000**	**.0001**
#1	.0061	.0046	.0083	.0006	.00042	.0002	.0001	-.0002
#2	.0057	.0002	-.0111	.0000	.00019	.0030	-.0001	.0003

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0166**	**.0000**	**-.0007**	**.0001**	**.0018**	**-.0048**	**-.0004**	**.0009**
#1	.0026	.0007	-.0013	-.0010	.0022	-.0031	-.0016	.0008
#2	.0306	-.0007	-.0002	.0013	.0014	-.0064	.0007	.0011

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0001**	**-.0001**	**-.0003**	**.0037**	**.0222**	**-.0104**	**.0340**
#1	.0001	-.0001	-.0001	-.0004	-.0019	.0309	-.0052	.0376
#2	.0003	-.0001	.0000	-.0002	.0092	.0135	-.0156	.0305

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0067**	**.00016**	**.0047**	**-.0005**	**.0004**	**-.0003**	**.0008**
#1	-.0003	-.0087	.00029	.0011	-.0009	.0005	-.0001	.0009
#2	-.0003	-.0047	.00003	.0083	-.0001	.0003	-.0005	.0006

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0004**	**.0016**	**-.0033**
#1	.0006	-.0005	.0045
#2	.0003	.0038	-.0111

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	933.83	13498.	1877.9
#1	921.07	13428.	1879.7
#2	946.59	13567.	1876.1

Sample Name: K1309706-001 Acquired: 9/26/2013 13:18:19 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**.0007**	**-.0056**	**.0115**	**.00022**	**.0052**	**-.0001**	**-.0001**
#1	.0032	-.0051	-.0027	.0116	-.00003	.0051	-.0002	-.0003
#2	.0038	.0064	-.0085	.0113	.00047	.0053	.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.20**	**-.0012**	**-.0004**	**.0008**	**.0023**	**.2340**	**-.0018**	**.0110**
#1	22.20	-.0016	-.0005	.0005	.0022	.2369	-.0015	.0103
#2	22.19	-.0009	-.0004	.0010	.0023	.2311	-.0021	.0117

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.50**	**.0219**	**-.0012**	**-.0004**	**.0628**	**2.933**	**-.0025**	**23.27**
#1	12.54	.0221	-.0011	-.0005	.0639	2.976	.0003	23.34
#2	12.45	.0218	-.0013	-.0002	.0616	2.891	-.0054	23.20

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**14.65**	**.11948**	**.0058**	**-.0014**	**.0005**	**-.0003**	**.0027**
#1	-.0012	14.70	.11947	.0080	-.0016	.0005	.0004	.0027
#2	.0013	14.60	.11949	.0036	-.0013	.0005	-.0010	.0028

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0028**	**.0030**	**3.218**
#1	.0031	.0019	3.221
#2	.0025	.0041	3.215

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**933.67**	**13476.**	**1951.7**
#1	930.81	13503.	1956.8
#2	936.52	13449.	1946.7

Sample Name: K1309757-001 Acquired: 9/26/2013 13:20:49 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: MMR 092613A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0054**	**-.0049**	**-.0102**	**.0027**	**.00013**	**.0025**	**.0001**	**-.0002**
#1	.0036	-.0014	-.0033	.0023	-.00014	.0045	.0002	-.0001
#2	.0072	-.0085	-.0171	.0031	.00041	.0005	.0000	-.0002

Elem	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.955**	**7.678**	**-.0017**	**-.0006**	**.0002**	**.0027**	**-.0069**	**.0013**
#1	7.932	7.626	-.0030	-.0009	.0012	.0035	-.0016	-.0003
#2	7.979	7.730	-.0004	-.0003	-.0009	.0018	-.0122	.0029

Elem	Li6707	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**3.326**	**.0001**	**-.0004**	**-.0004**	**.0447**	**.5364**	**-.0094**
#1	.0023	3.325	.0002	-.0012	-.0009	.0418	.5314	-.0120
#2	.0000	3.326	.0001	.0004	.0000	.0476	.5414	-.0067

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.08**	**.0010**	**5.696**	**.05917**	**.0068**	**.0005**	**.0002**	**.0000**
#1	17.09	.0025	5.709	.05898	.0161	-.0018	-.0001	-.0005
#2	17.07	-.0005	5.682	.05936	-.0025	.0029	.0005	.0005

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0011**	**.0041**	**.1372**
#1	.0012	.0010	.0075	.1313
#2	.0008	.0012	.0007	.1430

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**935.05**	**13522.**	**1939.8**
#1	933.86	13550.	1946.4
#2	936.24	13495.	1933.3

Sample Name: K1309757-002 Acquired: 9/26/2013 13:23:19 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: MMR 092613A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060**	**.0048**	**-.0019**	**.0047**	**.00001**	**.0172**	**.0000**	**.0001**
#1	.0066	.0082	-.0019	.0050	-.00007	.0194	.0000	-.0001
#2	.0055	.0013	-.0020	.0044	.00008	.0150	-.0001	.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.80**	**-.0004**	**-.0002**	**.0009**	**.0027**	**-.0040**	**-.0018**	**.0017**
#1	14.80	.0005	.0002	.0006	.0024	-.0053	-.0011	.0020
#2	14.79	-.0014	-.0006	.0013	.0030	-.0027	-.0025	.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.027**	**.0017**	**-.0003**	**-.0007**	**.0970**	**.9201**	**-.0097**	**15.90**
#1	7.038	.0016	-.0004	-.0009	.0978	.9237	-.0088	15.88
#2	7.017	.0019	-.0003	-.0005	.0961	.9164	-.0106	15.92

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**9.086**	**.10316**	**.0028**	**-.0008**	**.0001**	**.0010**	**.0006**
#1	-.0002	9.078	.10306	-.0004	.0003	.0002	.0010	.0005
#2	.0013	9.094	.10327	.0060	-.0018	.0001	.0011	.0008

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0006**	**.0019**	**.1996**
#1	.0009	.0023	.2001
#2	.0003	.0015	.1992

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**925.54**	**13395.**	**1897.4**
#1	924.77	13399.	1897.6
#2	926.31	13390.	1897.1

Sample Name: K1309757-003 Acquired: 9/26/2013 13:25:49 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: MMR 092613A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060**	**.0002**	**-.0064**	**.0091**	**.00019**	**.0029**	**-.0001**	**.0001**
#1	.0105	.0056	-.0091	.0091	.00026	.0004	.0000	.0000
#2	.0015	-.0051	-.0036	.0090	.00012	.0055	-.0002	.0002

Elem	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.143**	**.0004**	**-.0011**	**.0007**	**.0005**	**-.0073**	**.0004**	**.0012**
#1	3.144	.0006	-.0009	-.0004	.0009	-.0058	-.0018	.0012
#2	3.141	.0002	-.0014	.0018	.0002	-.0089	.0025	.0012

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.222**	**.0054**	**.0002**	**.0003**	**.0155**	**.4727**	**-.0041**	**10.31**
#1	1.222	.0054	.0002	.0005	.0169	.4721	-.0122	10.29
#2	1.222	.0054	.0002	.0000	.0140	.4732	.0040	10.33

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**7.400**	**.03776**	**.0028**	**.0003**	**-.0001**	**-.0001**	**.0021**
#1	-.0002	7.391	.03782	.0059	.0005	-.0001	-.0003	.0021
#2	-.0006	7.408	.03770	-.0003	.0000	.0000	.0000	.0020

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0020**	**-.0004**	**.3531**
#1	.0020	-.0036	.3542
#2	.0020	.0029	.3520

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	911.94	13386.	1901.0
#1	914.63	13344.	1901.0
#2	909.25	13428.	1901.0

Sample Name: K1309757-004 Acquired: 9/26/2013 13:28:15 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: MMR 092613A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027**	**-.0002**	**-.0017**	**.0019**	**.00000**	**.0039**	**.0000**	**.0000**
#1	.0045	.0010	-.0040	.0014	.00014	.0053	.0000	-.0002
#2	.0010	-.0015	.0006	.0023	-.00014	.0024	.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.25**	**-.0010**	**-.0005**	**.0014**	**.0008**	**-.0069**	**-.0010**	**.0004**
#1	12.20	-.0002	-.0006	.0008	.0019	-.0135	-.0018	.0005
#2	12.29	-.0018	-.0003	.0021	-.0002	-.0003	-.0003	.0002

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.777**	**.0001**	**-.0005**	**-.0018**	**.2239**	**.6941**	**.0025**	**28.15**
#1	1.777	.0000	-.0008	-.0020	.2347	.6751	.0005	28.10
#2	1.777	.0001	-.0002	-.0016	.2132	.7131	.0046	28.20

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**8.010**	**.09554**	**-.0017**	**.0023**	**.0005**	**.0022**	**.0003**
#1	-.0005	7.995	.09524	-.0003	.0034	.0005	.0017	.0002
#2	.0004	8.025	.09584	-.0031	.0011	.0005	.0026	.0003

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0008**	**-.0009**	**.3653**
#1	.0007	-.0005	.3619
#2	.0008	-.0012	.3687

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**938.10**	**13679.**	**1954.2**
#1	936.38	13637.	1956.5
#2	939.82	13720.	1951.9

Sample Name: K1309757-005 Acquired: 9/26/2013 13:30:44 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: D Sample Type:
Comment: MMR 092613A DISS

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**.0009**	**-.0013**	**.0013**	**-.00017**	**.0045**	**.0000**	**.0001**
#1	.0036	.0031	-.0044	.0014	-.00027	.0044	.0001	.0000
#2	.0053	-.0013	.0018	.0013	-.00007	.0046	-.0001	.0002

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.04**	**-.0010**	**-.0006**	**-.0001**	**.0019**	**-.0054**	**-.0008**	**.0018**
#1	12.02	-.0014	-.0006	.0012	.0012	-.0079	-.0005	.0024
#2	12.07	-.0006	-.0006	-.0014	.0026	-.0029	-.0011	.0013

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.748**	**.0001**	**.0002**	**-.0013**	**.2174**	**.7076**	**-.0042**	**27.91**
#1	1.749	.0000	-.0003	-.0008	.2144	.7311	-.0097	27.95
#2	1.747	.0003	.0008	-.0017	.2204	.6841	.0013	27.86

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**7.997**	**.09382**	**-.0018**	**.0001**	**.0004**	**.0016**	**.0006**
#1	-.0015	8.034	.09357	-.0023	.0003	.0001	.0009	.0006
#2	.0005	7.960	.09408	-.0013	-.0002	.0007	.0022	.0005

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0006**	**.0014**	**.3518**
#1	.0007	.0006	.3496
#2	.0005	.0022	.3540

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**928.63**	**13657.**	**1968.3**
#1	928.46	13653.	1979.2
#2	928.79	13661.	1957.4

Sample Name: K1309784-010 Acquired: 9/26/2013 13:33:15 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1169**	**.0040**	**.0239**	**1.561**	**.00027**	**.8154**	**.0000**	**.0000**
#1	.1175	.0059	.0302	1.563	.00050	.8149	.0000	.0001
#2	.1163	.0022	.0175	1.560	.00005	.8159	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.94**	**-.0002**	**.0009**	**.1484**	**.1540**	**.7217**	**-.0002**	**.0052**
#1	26.94	-.0007	.0017	.1488	.1559	.7219	.0009	.0046
#2	26.95	.0003	.0000	.1481	.1522	.7214	-.0012	.0059

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.757**	**.9818**	**.0082**	**.0100**	**6.919**	**2.158**	**-.0037**	**13.85**
#1	9.819	.9827	.0082	.0096	6.927	2.153	-.0106	13.99
#2	9.696	.9809	.0082	.0104	6.911	2.163	.0032	13.71

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	**34.33**	**2.0144**	**-.0067**	**.0043**	**.0031**	**.0039**	**.2038**
#1	-.0018	34.57	2.0148	-.0003	.0051	.0030	.0037	.2035
#2	-.0018	34.09	2.0140	-.0131	.0035	.0032	.0041	.2042

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.1976**	**.0024**	**3.251**
#1	.1971	-.0004	3.238
#2	.1981	.0053	3.264

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**918.54**	**13805.**	**2014.4**
#1	918.31	13829.	2029.2
#2	918.77	13781.	1999.7

Sample Name: K1309784-010D Acquired: 9/26/2013 13:35:42 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1158**	**.0034**	**.0221**	**1.566**	**-.00030**	**.8133**	**-.0001**	**.0000**
#1	.1216	.0080	.0174	1.556	-.00061	.8108	-.0001	.0001
#2	.1099	-.0013	.0269	1.576	.00000	.8159	.0000	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.05**	**-.0007**	**.0008**	**.1462**	**.1484**	**.7152**	**.0007**	**.0070**
#1	26.93	-.0006	.0009	.1458	.1485	.7096	.0031	.0050
#2	27.16	-.0009	.0007	.1466	.1483	.7208	-.0018	.0089

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.633**	**.9871**	**.0088**	**.0102**	**6.900**	**2.153**	**-.0047**	**13.73**
#1	9.635	.9899	.0084	.0098	6.902	2.164	-.0064	13.68
#2	9.631	.9844	.0092	.0105	6.898	2.141	-.0030	13.79

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**34.44**	**2.0186**	**-.0028**	**.0070**	**.0028**	**.0035**	**.2069**
#1	.0007	34.30	2.0081	-.0026	.0065	.0031	.0038	.2066
#2	.0015	34.57	2.0290	-.0030	.0075	.0026	.0032	.2072

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.1984**	**.0006**	**3.257**
#1	.1982	.0003	3.239
#2	.1985	.0009	3.275

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**914.90**	**13721.**	**1998.2**
#1	915.45	13708.	2003.0
#2	914.34	13734.	1993.5

Sample Name: CCVB Acquired: 9/26/2013 13:38:12 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.892**	**10.16**	**.0001**	**1.003**	**10.17**	**-.00007**	**.0054**	**.0000**
Stddev	.045	.01	.0016	.016	.07	.00018	.0012	.0002
%RSD	.5733	.1165	1531.	1.561	.7215	280.02	23.30	488.8
#1	7.860	10.16	.0012	1.014	10.12	.00006	.0062	.0001
#2	7.924	10.15	-.0010	.9915	10.22	-.00019	.0045	-.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**10.07**	**9.793**	**-.0006**	**.0000**	**.0005**	**.0023**	**10.14**
Stddev	.000	.06	.063	.0014	.000	.0000	.0004	.04
%RSD	541.1	.6332	.6429	233.6	1589.	10.62	17.36	.3862
#1	.0001	10.02	9.838	-.0016	-.0003	.0004	.0026	10.16
#2	-.0001	10.11	9.749	.0004	.0002	.0005	.0020	10.11
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**.9847**	**10.74**	**9.798**	**9.931**	**.9932**	**.9824**	**-.0007**
Stddev	.0029	.0015	.03	.044	.012	.0011	.0055	.0006
%RSD	122.9	.1506	.2865	.4497	.1161	.1114	.5589	81.37
#1	-.0003	.9857	10.76	9.829	9.939	.9924	.9863	-.0012
#2	-.0044	.9836	10.71	9.767	9.922	.9940	.9785	-.0003
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/26/2013 13:38:12 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0008**	**9.950**	**9.854**	**-.0022**	**9.780**	**-.0004**	**9.836**	**.99981**
Stddev	.0006	.039	.002	.0003	.059	.0000	.034	.00362
%RSD	71.82	.3885	.0162	13.17	.6073	.8558	.3434	.36201
#1	-.0012	9.977	9.855	-.0020	9.822	-.0004	9.812	1.0024
#2	-.0004	9.922	9.853	-.0024	9.738	-.0004	9.860	.99725
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044**	**.0011**	**.0001**	**-.0003**	**.0006**	**-.0001**	**1.005**	**.9893**
Stddev	.0053	.0023	.0001	.0000	.0001	.0004	.009	.0285
%RSD	121.0	203.5	74.45	15.60	11.40	314.2	.8904	2.876
#1	.0081	-.0005	.0002	-.0002	.0006	.0002	1.011	1.009
#2	.0006	.0027	.0001	-.0003	.0005	-.0004	.9986	.9692
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**909.57**	**13390.**	**1907.5**
Stddev	12.20	19.	7.1
%RSD	1.3415	.14400	.37079
#1	918.20	13403.	1902.5
#2	900.94	13376.	1912.5

Sample Name: CCVA Acquired: 9/26/2013 13:40:44 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2496**	**.2560**	**.2421**	**.2404**	**.2548**	**.24096**	**.2388**	**.2503**
Stddev	.0003	.0193	.0059	.0068	.0031	.00025	.0017	.0002
%RSD	.1341	7.524	2.417	2.849	1.210	.10383	.6933	.0628
#1	.2494	.2697	.2380	.2453	.2570	.24114	.2399	.2504
#2	.2499	.2424	.2463	.2356	.2527	.24078	.2376	.2502
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2516**	**.2600**	**.2513**	**.2525**	**.2490**	**.2486**	**.2383**	**.2447**
Stddev	.0004	.0046	.0026	.0003	.0003	.0007	.0002	.0073
%RSD	.1451	1.787	1.037	.1182	.1033	.2684	.0959	2.985
#1	.2514	.2633	.2531	.2527	.2492	.2491	.2384	.2396
#2	.2519	.2567	.2495	.2523	.2488	.2481	.2381	.2499
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2470**	**.0000**	**.2820**	**.2540**	**.2408**	**.2550**	**.2406**	**.2481**
Stddev	.0039	.001	.0355	.0024	.0037	.0013	.0076	.0001
%RSD	1.598	37850.	12.59	.9474	1.557	.5154	3.153	.0297
#1	.2442	-.0007	.2569	.2557	.2382	.2559	.2353	.2481
#2	.2497	.0007	.3071	.2523	.2435	.2540	.2460	.2480
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/26/2013 13:40:44 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2493**	**.0001**	**2.364**	**.2405**	**.1323**	**.2410**	**.2361**	**.00009**
Stddev	.0006	.0031	.023	.0077	.0003	.0004	.0105	.00005
%RSD	.2315	2103.	.9839	3.190	.2343	.1759	4.442	53.848
#1	.2489	-.0020	2.347	.2460	.1326	.2413	.2287	.00012
#2	.2497	.0023	2.380	.2351	.1321	.2407	.2435	.00006
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2530**	**.2464**	**.2497**	**.2513**	**.2539**	**.2459**	**-.0007**	**.0074**
Stddev	.0016	.0019	.0003	.0003	.0004	.0000	.0040	.0051
%RSD	.6329	.7837	.1122	.1218	.1655	.0009	569.2	69.14
#1	.2519	.2478	.2495	.2511	.2542	.2459	.0021	.0110
#2	.2541	.2450	.2499	.2515	.2536	.2459	-.0035	.0038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	922.82	13345.	1857.7
Stddev	2.60	68.	26.5
%RSD	.28160	.50596	1.4243
#1	924.66	13393.	1839.0
#2	920.98	13297.	1876.4

Sample Name: CCB Acquired: 9/26/2013 13:43:07 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**-.0028**	**.0051**	**-.0053**	**.0000**	**.00022**	**.0010**	**.0001**
Stddev	.0023	.0016	.0040	.0042	.000	.00003	.0035	.0000
%RSD	114.0	57.00	77.35	79.50	97.14	14.634	341.4	7.544
#1	-.0036	-.0039	.0023	-.0023	.0000	.00020	.0035	.0001
#2	-.0004	-.0017	.0079	-.0082	.0000	.00024	-.0015	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0077**	**.0001**	**-.0010**	**.0000**	**.0004**	**.0008**	**-.0073**
Stddev	.0001	.0039	.0000	.0010	.000	.0002	.0003	.0015
%RSD	75.35	51.02	35.89	97.89	1196.	42.77	33.42	21.13
#1	-.0001	.0105	.0001	-.0017	-.0004	.0003	.0006	-.0084
#2	-.0002	.0049	.0001	-.0003	.0003	.0005	.0009	-.0062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0022**	**.0001**	**-.0191**	**-.0002**	**-.0026**	**-.0001**	**-.0012**	**-.0001**
Stddev	.0028	.0019	.0166	.0000	.0016	.0001	.0003	.0003
%RSD	125.1	1501.	87.33	7.800	60.42	35.31	22.37	414.2
#1	-.0003	-.0012	-.0308	-.0003	-.0015	-.0002	-.0014	.0001
#2	-.0042	.0015	-.0073	-.0002	-.0037	-.0001	-.0010	-.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 13:43:07 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0018**	**.0043**	**-.0092**	**.0070**	**.0002**	**.0011**	**.00006**
Stddev	.0011	.0016	.0130	.0017	.0102	.0011	.0068	.00009
%RSD	749.4	93.89	300.4	18.75	145.0	672.8	631.4	137.38
#1	.0009	-.0006	.0135	-.0080	.0142	-.0006	.0059	.00012
#2	-.0006	-.0029	-.0049	-.0104	-.0002	.0009	-.0037	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**-.0003**	**.0001**	**-.0011**	**.0004**	**.0001**	**.0027**	**-.0026**
Stddev	.0054	.0010	.0000	.0002	.0001	.0001	.0041	.0077
%RSD	114.7	325.2	27.85	15.39	15.73	80.67	153.9	302.6
#1	.0009	.0004	.0001	-.0010	.0004	.0001	-.0002	-.0080
#2	.0085	-.0010	.0001	-.0012	.0003	.0002	.0056	.0029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	940.82	13607.	1928.6
Stddev	3.12	45.	.5
%RSD	.33132	.33028	.02337
#1	938.62	13639.	1928.3
#2	943.03	13576.	1928.9

Sample Name: K1309784-010S Acquired: 9/26/2013 13:45:36 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.973**	**2.212**	**.4634**	**1.081**	**3.703**	**.04780**	**1.809**	**.0487**
#1	1.974	2.217	.4608	1.080	3.701	.04735	1.811	.0486
#2	1.973	2.207	.4659	1.082	3.705	.04825	1.807	.0488

Elem	Cd2265	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0493**	**37.91**	**.1994**	**.4992**	**.3890**	**.4006**	**1.758**	**.4657**
#1	.0493	37.83	.1992	.4990	.3906	.3978	1.755	.4630
#2	.0492	38.00	.1997	.4994	.3875	.4033	1.762	.4683

Elem	Li6707	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**20.13**	**1.477**	**1.036**	**.4943**	**7.021**	**12.69**	**1.113**
#1	.0052	20.09	1.479	1.039	.4948	7.038	12.62	1.119
#2	.0042	20.16	1.474	1.034	.4938	7.005	12.75	1.107

Elem	Si2516	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.38**	**.0463**	**46.12**	**12.003**	**.9527**	**.0053**	**10.19**	**.5206**
#1	14.34	.0459	46.00	11.974	.9580	.0048	10.21	.5217
#2	14.42	.0467	46.24	12.033	.9475	.0058	10.16	.5195

Elem	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm
Avg	**.6981**	**.6720**	**.0119**	**3.363**
#1	.6959	.6765	.0137	3.369
#2	.7003	.6676	.0102	3.357

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	914.99	13643.	2002.0
#1	917.11	13620.	1997.3
#2	912.86	13665.	2006.8

Sample Name: K1309830-001 Acquired: 9/26/2013 13:48:00 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0031**	**-.0002**	**-.0023**	**.0509**	**-.00020**	**.0119**	**-.0001**	**-.0003**
#1	.0068	.0042	-.0017	.0511	-.00030	.0119	.0001	-.0003
#2	-.0006	-.0047	-.0030	.0507	-.00010	.0119	-.0003	-.0003

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.33**	**-.0008**	**.0060**	**.0011**	**.0023**	**12.58**	**-.0007**	**.0018**
#1	10.35	.0002	.0066	.0033	.0038	12.57	-.0011	.0023
#2	10.30	-.0018	.0053	-.0011	.0009	12.58	-.0003	.0014

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.428**	**.3581**	**.0017**	**.0001**	**.3623**	**.7601**	**-.0107**	**13.14**
#1	5.433	.3583	.0023	.0004	.3694	.7318	-.0165	13.17
#2	5.423	.3580	.0010	-.0002	.3552	.7884	-.0048	13.11

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**7.625**	**.10716**	**.0057**	**-.0006**	**.0011**	**.0008**	**.0021**
#1	.0000	7.602	.10667	.0037	-.0010	.0010	.0012	.0023
#2	-.0001	7.648	.10765	.0077	-.0001	.0011	.0003	.0019

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0014**	**-.0007**	**.0767**
#1	.0017	-.0004	.0779
#2	.0010	-.0009	.0756

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	925.62	13420.	1912.7
#1	926.27	13395.	1912.0
#2	924.97	13445.	1913.4

Sample Name: K1309833-002 Acquired: 9/26/2013 13:50:30 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: MMR 092613A

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.04**	**-.0032**	**.0024**	**.1352**	**.00028**	**.0287**	**.0023**	**.0018**
#1	16.09	-.0065	.0048	.1353	.00045	.0297	.0023	.0019
#2	15.99	.0002	.0000	.1351	.00012	.0277	.0023	.0017

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.70**	**.0312**	**.0075**	**.1316**	**.1366**	**18.43**	**.0753**	**.0081**
#1	27.68	.0315	.0078	.1321	.1359	18.46	.0705	.0087
#2	27.72	.0310	.0073	.1310	.1373	18.39	.0801	.0075

Elem	Mg2852	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.12**	**.2067**	**.0013**	**.0318**	**1.518**	**2.789**	**-.0130**	**34.34**
#1	10.09	.2066	.0015	.0320	1.518	2.784	-.0135	34.20
#2	10.15	.2068	.0011	.0316	1.517	2.795	-.0125	34.48

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**9.123**	**.16907**	**.0036**	**.0122**	**.8783**	**.0643**	**.6892**
#1	.0036	9.089	.16911	.0068	.0111	.8809	.0634	.6901
#2	.0012	9.158	.16903	.0005	.0133	.8757	.0652	.6882

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.6883**	**.0044**	**2.481**
#1	.6878	.0073	2.481
#2	.6887	.0015	2.482

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**934.27**	**13464.**	**1927.2**
#1	935.56	13452.	1919.9
#2	932.98	13475.	1934.5

Sample Name: CCVB Acquired: 9/26/2013 13:52:57 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.891**	**9.940**	**.0050**	**.9731**	**9.970**	**.00013**	**.0038**	**.0001**
Stddev	.009	.064	.0055	.0023	.044	.00007	.0019	.0002
%RSD	.1078	.6401	111.3	.2393	.4452	53.824	48.54	216.8
#1	7.885	9.985	.0088	.9747	9.938	.00008	.0052	.0002
#2	7.897	9.895	.0011	.9714	10.00	.00019	.0025	.0000
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**9.981**	**9.572**	**-.0006**	**-.0009**	**.0008**	**.0012**	**10.06**
Stddev	.0000	.040	.120	.0001	.0003	.0013	.0019	.05
%RSD	.1677	.3979	1.249	17.52	38.53	161.4	151.9	.4863
#1	-.0003	10.01	9.656	-.0005	-.0011	-.0001	.0026	10.03
#2	-.0003	9.953	9.487	-.0006	-.0007	.0017	-.0001	10.10
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.9651**	**10.61**	**9.634**	**9.840**	**1.0000**	**.9886**	**-.0004**
Stddev	.0017	.0063	.18	.002	.065	.0009	.0170	.0005
%RSD	264.2	.6514	1.669	.0152	.6614	.0940	1.720	134.3
#1	.0019	.9606	10.73	9.635	9.794	1.001	.9766	-.0007
#2	-.0006	.9695	10.48	9.633	9.886	.9993	1.001	.0000
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/26/2013 13:52:57 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**9.932**	**9.598**	**-.0032**	**9.777**	**.0006**	**9.486**	**.97905**
Stddev	.0004	.005	.063	.0103	.024	.0007	.012	.00124
%RSD	186.9	.0473	.6571	325.8	.2430	113.0	.1283	.12709
#1	.0001	9.929	9.553	-.0105	9.760	.0011	9.477	.97993
#2	-.0005	9.936	9.643	.0041	9.793	.0001	9.494	.97817
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**-.0008**	**.0001**	**-.0006**	**.0005**	**-.0001**	**1.010**	**.9564**
Stddev	.0038	.0040	.0001	.0013	.0002	.0000	.002	.0021
%RSD	853.5	482.2	66.80	205.0	44.38	16.29	.1721	.2216
#1	.0023	.0020	.0001	-.0016	.0003	-.0002	1.009	.9549
#2	-.0032	-.0037	.0002	.0003	.0006	-.0001	1.012	.9579
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**909.80**	**13224.**	**1885.4**
Stddev	3.58	66.	10.7
%RSD	.39373	.50034	.56914
#1	912.34	13271.	1877.9
#2	907.27	13177.	1893.0

Sample Name: CCVA Acquired: 9/26/2013 13:55:29 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2627**	**.2554**	**.2421**	**.2416**	**.2576**	**.24492**	**.2439**	**.2520**
Stddev	.0036	.0014	.0008	.0119	.0008	.00057	.0045	.0001
%RSD	1.359	.5369	.3190	4.907	.3104	.23406	1.864	.0316
#1	.2602	.2544	.2415	.2332	.2570	.24452	.2471	.2520
#2	.2652	.2563	.2426	.2500	.2582	.24533	.2407	.2519
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2481**	**.2667**	**.2524**	**.2492**	**.2506**	**.2515**	**.2459**	**.2452**
Stddev	.0000	.0092	.0003	.0017	.0002	.0009	.0015	.0016
%RSD	.0100	3.432	.1188	.6941	.0818	.3450	.6262	.6400
#1	.2481	.2602	.2526	.2480	.2505	.2509	.2470	.2441
#2	.2480	.2732	.2522	.2504	.2507	.2521	.2448	.2463
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2458**	**.0014**	**.3140**	**.2523**	**.2506**	**.2537**	**.2455**	**.2468**
Stddev	.0002	.0015	.0327	.0004	.0042	.0002	.0012	.0009
%RSD	.0719	111.3	10.43	.1673	1.676	.0946	.4875	.3797
#1	.2460	.0003	.2908	.2526	.2536	.2535	.2447	.2461
#2	.2457	.0025	.3371	.2520	.2476	.2539	.2464	.2474
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/26/2013 13:55:29 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2479**	**.0125**	**2.423**	**.2376**	**.1616**	**.2451**	**.2375**	**.00078**
Stddev	.0002	.0089	.019	.0009	.0079	.0007	.0187	.00004
%RSD	.0843	71.06	.7735	.3923	4.870	.2716	7.895	5.5057
#1	.2478	.0062	2.409	.2369	.1560	.2456	.2507	.00075
#2	.2481	.0188	2.436	.2382	.1672	.2447	.2242	.00081
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2589**	**.2468**	**.2497**	**.2496**	**.2476**	**.2414**	**-.0035**	**-.0017**
Stddev	.0003	.0007	.0006	.0002	.0002	.0001	.0100	.0052
%RSD	.1108	.3008	.2261	.0898	.0609	.0280	285.6	302.0
#1	.2587	.2463	.2493	.2494	.2475	.2413	.0036	-.0054
#2	.2591	.2473	.2501	.2497	.2477	.2414	-.0105	.0020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	921.91	13502.	1892.2
Stddev	1.91	17.	5.2
%RSD	.20706	.12854	.27411
#1	920.56	13514.	1895.9
#2	923.26	13489.	1888.6

Sample Name: CCB Acquired: 9/26/2013 13:57:50 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**.0000**	**.0005**	**-.0011**	**.0011**	**.00015**	**-.0003**	**.0000**
Stddev	.0002	.0106	.0020	.0002	.0007	.00021	.0003	.0001
%RSD	6.938	30200.	424.2	21.93	63.85	143.95	115.4	252.6
#1	.0033	-.0075	.0019	-.0009	.0017	.00030	-.0001	.0001
#2	.0037	.0075	-.0009	-.0013	.0006	.00000	-.0005	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Reran with 9/26/13

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	F **.0209**	**.0007**	**.0001**	**-.0011**	**.0008**	**.0015**	**-.0084**
Stddev	.0002	.0121	.0002	.0009	.0007	.0009	.0009	.0026
%RSD	93.78	57.83	30.43	1593.	65.21	114.4	58.40	31.02
#1	-.0004	.0294	.0009	.0007	-.0006	.0014	.0021	-.0066
#2	-.0001	.0123	.0006	-.0006	-.0016	.0002	.0009	-.0102
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0200						
Low Limit		-.0200						

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0004**	**.0301**	**.0006**	**.0033**	**.0003**	**-.0017**	**.0004**
Stddev	.0005	.0022	.0159	.0005	.0006	.0004	.0011	.0007
%RSD	20.57	521.6	52.84	77.09	16.93	139.9	64.60	170.7
#1	.0021	.0020	.0188	.0010	.0037	.0000	-.0009	.0009
#2	.0029	-.0011	.0413	.0003	.0029	.0006	-.0025	-.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 13:57:50 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0004**	**.0029**	**.0071**	**-.0105**	**.0134**	**-.0003**	**.0148**	**.00022**
Stddev	.0014	.0010	.0089	.0022	.0071	.0005	.0064	.00002
%RSD	343.7	36.27	124.7	21.07	52.84	164.8	42.82	8.8154
#1	.0006	.0036	.0008	-.0121	.0184	-.0006	.0193	.00024
#2	-.0014	.0021	.0134	-.0090	.0084	.0000	.0103	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047**	**.0012**	**.0001**	**-.0010**	**-.0001**	**.0001**	**-.0015**	**.0044**
Stddev	.0040	.0012	.0003	.0001	.0006	.0004	.0043	.0135
%RSD	84.99	104.1	313.0	12.00	692.0	503.6	293.3	304.4
#1	.0075	.0003	-.0001	-.0011	-.0005	.0004	-.0046	-.0051
#2	.0019	.0020	.0003	-.0009	.0003	-.0002	.0016	.0140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	920.55	13414.	1887.3
Stddev	.69	69.	8.9
%RSD	.07544	.51356	.47144
#1	920.06	13365.	1881.1
#2	921.04	13462.	1893.6

Sample Name: CCB Acquired: 9/26/2013 14:00:18 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028**	**.0008**	**.0001**	**-.0081**	**.0005**	**-.00038**	**.0003**	**.0000**
Stddev	.0001	.0033	.0055	.0078	.0000	.00010	.0019	.000
%RSD	4.598	394.0	8061.	96.27	1.956	26.792	558.3	454.0
#1	.0027	.0031	-.0038	-.0136	.0005	-.00031	-.0010	.0001
#2	.0029	-.0015	.0039	-.0026	.0005	-.00045	.0017	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0079**	**.0000**	**.0004**	**-.0009**	**.0001**	**.0007**	**-.0066**
Stddev	.0000	.0045	.000	.0013	.0007	.0000	.0009	.0016
%RSD	23.97	57.29	76.16	357.0	77.66	36.82	126.6	24.86
#1	.0000	.0112	.0000	-.0006	-.0014	.0001	.0014	-.0078
#2	-.0001	.0047	.0000	.0013	-.0004	.0002	.0001	-.0055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0008**	**.0031**	**-.0001**	**-.0012**	**-.0002**	**.0001**	**.0001**
Stddev	.0010	.0002	.0153	.0001	.0019	.0001	.0004	.0002
%RSD	66.09	18.67	498.6	150.7	154.7	46.44	657.0	230.2
#1	.0008	.0009	-.0078	.0000	-.0026	-.0002	-.0002	-.0001
#2	.0023	.0007	.0139	-.0001	.0001	-.0001	.0003	.0002
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 14:00:18 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0007**	**-.0357**	**-.0068**	**.0053**	**.0006**	**-.0065**	**.00009**
Stddev	.000	.0020	.0161	.0003	.0027	.0013	.0145	.00004
%RSD	660.5	278.6	45.03	4.192	51.81	211.2	222.0	44.251
#1	-.0002	.0021	-.0243	-.0071	.0034	.0015	-.0168	.00006
#2	.0001	-.0007	-.0470	-.0066	.0072	-.0003	.0037	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**.0002**	**-.0001**	**-.0005**	**.0000**	**.0002**	**-.0034**	**-.0069**
Stddev	.0001	.0011	.0001	.0009	.0000	.0002	.0063	.0073
%RSD	1.476	445.4	156.8	180.6	1.086	72.79	187.3	105.1
#1	.0061	-.0005	.0000	.0001	.0000	.0001	.0011	-.0018
#2	.0062	.0010	-.0001	-.0011	.0000	.0003	-.0078	-.0121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**922.25**	**13458.**	**1902.3**
Stddev	.79	36.	16.8
%RSD	.08586	.26756	.88082
#1	921.69	13483.	1890.4
#2	922.81	13432.	1914.1

Sample Name: LLCCV Acquired: 9/26/2013 14:02:46 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0146**	**.0098**	**.0200**	**.0076**	**.0046**	**.00093**	**.0225**	**.0011**
Stddev	.0017	.0047	.0027	.0031	.0004	.00021	.0002	.0001
%RSD	11.70	48.17	13.37	41.00	7.796	22.566	.8747	9.275
#1	.0159	.0065	.0219	.0054	.0048	.00078	.0223	.0010
#2	.0134	.0132	.0181	.0098	.0043	.00108	.0226	.0012
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0100							
Range	30.00%							

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0226**	**.0195**	**.0039**	**.0017**	F **.0057**	**.0043**	F **.0098**
Stddev	.0000	.0222	.0002	.0005	.0007	.0006	.0000	.0054
%RSD	3.970	98.44	.8761	12.53	41.50	9.793	.5897	55.48
#1	.0011	.0069	.0194	.0042	.0022	.0053	.0043	.0136
#2	.0012	.0383	.0197	.0036	.0012	.0061	.0043	.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value						.0040		.0200
Range						30.00%		-30.00%

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096**	**.0201**	**.0615**	**.0049**	**.0041**	**.0007**	**.0016**	**.0031**
Stddev	.0001	.0016	.0440	.0003	.0025	.0001	.0009	.0005
%RSD	.6862	7.826	71.61	6.172	60.48	12.64	57.76	15.94
#1	.0095	.0212	.0926	.0051	.0023	.0007	.0023	.0034
#2	.0096	.0190	.0304	.0047	.0058	.0008	.0010	.0027
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

① Rerun
② 2x
9/26/13

Sample Name: LLCCV Acquired: 9/26/2013 14:02:46 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0042**	**.0340**	**.2113**	**.0159**	**.2011**	**.0037**	**.1971**	**.00098**
Stddev	.0001	.0086	.0501	.0024	.0221	.0007	.0125	.00003
%RSD	3.041	25.35	23.70	15.36	11.00	19.09	6.326	2.8242
#1	.0043	.0279	.2467	.0141	.2167	.0042	.2059	.00100
#2	.0041	.0401	.1758	.0176	.1854	.0032	.1883	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Ke-run with 9/26/13

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0139**	**.0213**	**.0022**	**.0032**	**.0039**	**.0040**	**.0227**	**.0372**
Stddev	.0028	.0008	.0004	.0013	.0002	.0001	.0002	.0076
%RSD	20.24	3.603	18.25	40.59	5.062	2.467	1.042	20.45
#1	.0159	.0208	.0019	.0023	.0038	.0041	.0225	.0426
#2	.0119	.0218	.0025	.0042	.0041	.0039	.0229	.0318
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0100							
Range	30.00%							

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	931.30	13529.	1885.6
Stddev	.90	31.	12.3
%RSD	.09667	.23118	.65016
#1	931.93	13507.	1876.9
#2	930.66	13551.	1894.3

Sample Name: LLCCV Acquired: 9/26/2013 14:05:13 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: Rerun

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0121**	**.0081**	**.0177**	**.0103**	**.0044**	**.00091**	**.0209**	**.0010**
Stddev	.0010	.0001	.0022	.0089	.0002	.00010	.0013	.0000
%RSD	7.975	1.147	12.66	87.12	5.122	11.119	5.994	5.024
#1	.0128	.0082	.0161	.0166	.0043	.00098	.0218	.0010
#2	.0114	.0080	.0193	.0039	.0046	.00084	.0200	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	F **.0343**	**.0200**	**.0036**	**.0015**	F **.0056**	**.0049**	**.0181**
Stddev	.0002	.0047	.0000	.0002	.0006	.0007	.0007	.0078
%RSD	21.14	13.71	.0076	5.222	40.46	11.83	14.87	43.25
#1	.0008	.0310	.0200	.0035	.0011	.0060	.0044	.0236
#2	.0010	.0376	.0200	.0037	.0020	.0051	.0054	.0125
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value		.0200				.0040		
Range		30.00%				30.00%		

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0069**	**.0199**	**-.0172**	**.0051**	**.0039**	**.0008**	**-.0009**	**.0041**
Stddev	.0041	.0023	.0576	.0002	.0009	.0002	.0008	.0006
%RSD	60.10	11.49	334.8	4.348	22.27	25.50	89.04	15.73
#1	.0040	.0183	-.0580	.0053	.0045	.0009	-.0014	.0036
#2	.0098	.0215	.0235	.0050	.0033	.0006	-.0003	.0046
Check ?	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	.0100							
Range	-30.00%							

Sample Name: LLCCV Acquired: 9/26/2013 14:05:13 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035**	**.0418**	**.1918**	**.0177**	**.2070**	**.0041**	**.2016**	**.00097**
Stddev	.0009	.0107	.0234	.0022	.0213	.0003	.0040	.00016
%RSD	24.60	25.51	12.22	12.17	10.29	6.744	1.983	16.470
#1	.0041	.0343	.1753	.0192	.2220	.0043	.1988	.00108
#2	.0029	.0494	.2084	.0162	.1919	.0039	.2044	.00086
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105**	**.0221**	**.0023**	**.0037**	**.0042**	**.0044**	**.0194**	**.0433**
Stddev	.0091	.0001	.0000	.0001	.0002	.0001	.0015	.0012
%RSD	86.02	.4442	1.982	2.494	5.582	1.867	7.885	2.841
#1	.0041	.0221	.0023	.0036	.0044	.0044	.0205	.0424
#2	.0170	.0222	.0024	.0038	.0041	.0043	.0183	.0442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**936.76**	**13573.**	**1909.9**
Stddev	1.99	8.	5.3
%RSD	.21267	.06239	.27752
#1	935.35	13567.	1906.1
#2	938.16	13579.	1913.6

Sample Name: LLCCV,0.5 Acquired: 9/26/2013 14:07:40 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0213**	**.0206**	**.0371**	**.0181**	**.0086**	**.00199**	**.0420**	**.0020**
Stddev	.0004	.0052	.0062	.0115	.0006	.00021	.0008	.0000
%RSD	1.807	25.40	16.74	63.53	6.787	10.553	1.871	2.434
#1	.0210	.0169	.0327	.0100	.0082	.00184	.0415	.0020
#2	.0215	.0242	.0415	.0263	.0090	.00214	.0426	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0488**	**.0396**	**.0079**	**.0035**	**.0086**	**.0087**	**.0436**
Stddev	.0001	.0125	.0003	.0002	.0000	.0011	.0014	.0013
%RSD	7.081	25.58	.7250	2.241	1.119	13.26	15.92	3.049
#1	.0019	.0399	.0394	.0080	.0034	.0094	.0097	.0445
#2	.0017	.0576	.0398	.0078	.0035	.0078	.0078	.0426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0196**	**.0428**	**.0255**	**.0104**	**.0074**	**.0021**	**.0022**	**.0076**
Stddev	.0014	.0019	.0501	.0001	.0012	.0001	.0009	.0001
%RSD	6.983	4.371	196.7	1.313	15.76	3.262	42.48	.8500
#1	.0187	.0415	.0609	.0105	.0066	.0020	.0029	.0076
#2	.0206	.0441	-.0100	.0103	.0082	.0021	.0015	.0077
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/26/2013 14:07:40 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0078**	**.0796**	**.3836**	F **.0271**	**.3996**	**.0071**	**.3984**	**.00194**
Stddev	.0007	.0040	.0387	.0042	.0119	.0017	.0024	.00007
%RSD	8.414	5.085	10.08	15.62	2.976	23.83	.6119	3.4383
#1	.0074	.0825	.4110	.0241	.3912	.0083	.3967	.00190
#2	.0083	.0768	.3563	.0301	.4081	.0059	.4001	.00199
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0400				
Range				-30.00%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0223**	**.0410**	**.0045**	**.0085**	**.0081**	**.0081**	**.0422**	**.0888**
Stddev	.0065	.0010	.0001	.0006	.0004	.0003	.0036	.0011
%RSD	29.04	2.436	2.515	7.151	5.272	4.049	8.548	1.257
#1	.0268	.0403	.0044	.0081	.0078	.0079	.0448	.0896
#2	.0177	.0417	.0046	.0090	.0084	.0084	.0397	.0881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	936.24	13558.	1929.4
Stddev	3.13	5.	2.5
%RSD	.33479	.03489	.12766
#1	934.02	13555.	1931.1
#2	938.45	13561.	1927.6

Sample Name: K1309638-002 Acquired: 9/26/2013 14:38:00 Type: Unk
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 10 Test Type: Sample Type:
Comment: MMR 092613A 1/10

Elem	Al1670	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8526**	**.0028**	**-.0061**	**.0202**	**.00053**	**-.0016**	**.0002**	**.0001**
#1	.8564	-.0006	-.0077	.0205	.00059	-.0034	.0002	.0001
#2	.8487	.0062	-.0046	.0200	.00047	.0003	.0002	.0000

Elem	Ca3158	Cr2677	Co2307	Cu2247	Cu3273	Fe2599	Pb2203	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**87.44**	**.0270**	**.0049**	**.0028**	**.0065**	**1.411**	**.0017**	**.0020**
#1	87.88	.0265	.0055	.0030	.0077	1.416	.0004	.0011
#2	86.99	.0275	.0043	.0026	.0053	1.405	.0029	.0029

Elem	Mg2795	Mn2576	Mo2020	Ni2216	P_1782	K_7664	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3646**	**.1327**	**.0020**	**.0180**	**.0764**	**.1270**	**.0009**	**2.690**
#1	.3667	.1324	.0018	.0178	.0755	.1285	.0004	2.676
#2	.3625	.1331	.0023	.0183	.0774	.1255	.0013	2.704

Elem	Ag3280	Na5895	Sr4077	Tl1908	Sn1899	Ti3361	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0007**	**.4034**	**.03718**	**.0012**	**.0017**	**.0099**	**.0028**	**.0038**
#1	-.0016	.4027	.03723	-.0019	.0020	.0099	.0019	.0035
#2	.0003	.4041	.03712	.0042	.0015	.0100	.0037	.0041

Elem	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm
Avg	**.0041**	**.0019**	**.1255**
#1	.0038	.0028	.1245
#2	.0044	.0010	.1264

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	911.94	13079.	1872.4
#1	913.23	13109.	1860.3
#2	910.65	13049.	1884.6

Sample Name: CCVB Acquired: 9/26/2013 14:40:28 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.975**	**9.752**	**.0010**	**.9761**	**10.13**	**-.00014**	**.0004**	**.0001**
Stddev	.043	.053	.0015	.0041	.06	.00015	.0024	.0001
%RSD	.5437	.5426	152.2	.4179	.5503	108.66	617.4	119.6
#1	8.005	9.714	-.0001	.9732	10.17	-.00025	.0021	.0000
#2	7.944	9.789	.0021	.9790	10.09	-.00003	-.0013	.0001
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**10.33**	**9.630**	**-.0012**	**.0000**	**.0004**	**.0024**	**10.15**
Stddev	.000	.27	.020	.0010	.001	.0008	.0008	.03
%RSD	1161.	2.647	.2079	80.84	2308.	199.8	34.36	.3012
#1	.0001	10.13	9.616	-.0019	.0003	-.0002	.0030	10.18
#2	-.0001	10.52	9.644	-.0005	-.0004	.0009	.0018	10.13
Check ?	None	Chk Pass	None	None	None	None	None	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0013**	**.9488**	**10.64**	**9.657**	**9.628**	**1.008**	**.9838**	**-.0006**
Stddev	.0027	.0027	.00	.040	.026	.004	.0020	.0002
%RSD	207.6	.2892	.0275	.4152	.2743	.3876	.2052	23.83
#1	-.0032	.9468	10.64	9.685	9.609	1.011	.9852	-.0007
#2	.0006	.9507	10.64	9.628	9.647	1.006	.9824	-.0005
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None
Value								
Range								

Sample Name: CCVB Acquired: 9/26/2013 14:40:28 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**9.971**	**9.535**	**-.0071**	**9.630**	**.0005**	**9.391**	**.97486**
Stddev	.0006	.046	.050	.0057	.028	.0009	.008	.00302
%RSD	375.6	.4621	.5225	80.22	.2922	174.4	.0858	.31028
#1	.0006	10.00	9.499	-.0111	9.650	.0012	9.385	.97700
#2	-.0003	9.938	9.570	-.0031	9.610	-.0001	9.396	.97273
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0003**	**.0006**	**-.0007**	**.0005**	**.0003**	**1.012**	**.9618**
Stddev	.0044	.0008	.0003	.0002	.0004	.0002	.004	.0077
%RSD	1089.	285.9	53.30	25.51	84.63	59.83	.3773	.8010
#1	.0035	.0009	.0004	-.0008	.0002	.0005	1.010	.9672
#2	-.0027	-.0003	.0008	-.0006	.0007	.0002	1.015	.9563
Check ?	None	None	None	None	None	None	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	909.99	13070.	1853.1
Stddev	.28	6.	9.4
%RSD	.03056	.04907	.50799
#1	910.19	13065.	1846.5
#2	909.79	13074.	1859.8

Sample Name: CCVA Acquired: 9/26/2013 14:43:00 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2549**	**.2502**	**.2374**	**.2320**	**.2587**	**.24150**	**.2370**	**.2525**
Stddev	.0012	.0007	.0020	.0074	.0005	.00097	.0040	.0002
%RSD	.4515	.2943	.8522	3.184	.2089	.40093	1.689	.0609
#1	.2541	.2507	.2388	.2267	.2591	.24082	.2342	.2526
#2	.2557	.2497	.2360	.2372	.2583	.24219	.2399	.2524
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2489**	**.2745**	**.2493**	**.2526**	**.2507**	**.2536**	**.2404**	**.2514**
Stddev	.0002	.0049	.0000	.0029	.0015	.0014	.0016	.0107
%RSD	.0746	1.796	.0103	1.167	.5844	.5557	.6622	4.238
#1	.2490	.2780	.2493	.2505	.2517	.2526	.2415	.2589
#2	.2487	.2710	.2493	.2547	.2497	.2546	.2392	.2439
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2472**	**.0020**	**.2867**	**.2509**	**.2474**	**.2552**	**.2464**	**.2467**
Stddev	.0054	.0009	.0055	.0006	.0032	.0014	.0017	.0010
%RSD	2.200	44.38	1.932	.2532	1.297	.5510	.6862	.3924
#1	.2434	.0014	.2906	.2504	.2451	.2562	.2475	.2474
#2	.2511	.0027	.2828	.2513	.2496	.2542	.2452	.2460
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: CCVA Acquired: 9/26/2013 14:43:00 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2503**	**.0009**	**2.391**	**.2438**	**.1441**	**.2411**	**.2396**	**.00012**
Stddev	.0002	.0055	.019	.0060	.0097	.0001	.0202	.00013
%RSD	.0834	589.3	.8050	2.471	6.705	.0269	8.439	116.34
#1	.2501	.0049	2.377	.2481	.1373	.2410	.2253	.00002
#2	.2504	-.0030	2.405	.2396	.1510	.2411	.2539	.00021
Check ?	Chk Pass	None	None	Chk Pass	None	Chk Pass	None	None
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2521**	**.2498**	**.2513**	**.2497**	**.2503**	**.2418**	**.0035**	**-.0078**
Stddev	.0021	.0019	.0003	.0023	.0018	.0008	.0020	.0038
%RSD	.8203	.7536	.1078	.9021	.7109	.3445	55.97	49.33
#1	.2506	.2485	.2515	.2513	.2516	.2412	.0021	-.0105
#2	.2536	.2512	.2511	.2481	.2491	.2424	.0049	-.0051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	None
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	921.90	13307.	1854.8
Stddev	5.13	34.	12.9
%RSD	.55695	.25441	.69790
#1	918.27	13283.	1845.7
#2	925.53	13331.	1864.0

Sample Name: CCB Acquired: 9/26/2013 14:45:22 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0002**	**.0048**	**.0014**	**.0007**	**-.00031**	**-.0008**	**.0001**
Stddev	.0004	.0004	.0003	.0055	.0007	.00003	.0027	.0002
%RSD	21.58	211.5	5.412	380.6	102.0	9.1112	347.5	137.6
#1	.0017	.0005	.0046	.0053	.0011	-.00033	-.0027	.0000
#2	.0023	-.0001	.0050	-.0024	.0002	-.00029	.0011	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	F **.0238**	**.0001**	**-.0002**	**-.0003**	**.0004**	**.0016**	**-.0042**
Stddev	.000	.0051	.0000	.0002	.0001	.0003	.0000	.0016
%RSD	390.9	21.45	10.91	90.85	38.61	86.81	1.932	38.66
#1	.0000	.0275	.0001	-.0001	-.0002	.0002	.0015	-.0030
#2	-.0001	.0202	.0001	-.0003	-.0004	.0006	.0016	-.0053
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.0200						
Low Limit		-.0200						

Rerun ICV 9/26/13

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0016**	**.0213**	**-.0002**	**-.0002**	**.0000**	**-.0003**	**.0004**
Stddev	.0018	.0021	.0452	.0002	.0007	.000	.0008	.0005
%RSD	124.2	137.1	212.6	100.5	444.3	197.8	308.2	111.4
#1	.0002	.0031	.0532	.0000	.0004	.0000	.0003	.0008
#2	.0027	.0000	-.0107	-.0003	-.0007	.0000	-.0008	.0001
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 14:45:22 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**.0031**	**-.0498**	**-.0112**	**.0087**	**-.0015**	**-.0005**	**-.00001**
Stddev	.0002	.0001	.0305	.0020	.0055	.0018	.0076	.00007
%RSD	23.37	4.673	61.18	17.92	63.25	124.8	1620.	1381.3
#1	-.0005	.0032	-.0282	-.0126	.0048	-.0002	.0049	-.00006
#2	-.0008	.0030	-.0713	-.0098	.0126	-.0027	-.0058	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016**	**.0004**	**-.0006**	**-.0004**	**.0000**	**.0002**	**.0017**	**-.0036**
Stddev	.0002	.0023	.0002	.0000	.000	.0001	.0019	.0082
%RSD	14.66	542.9	36.64	1.755	740.0	31.49	113.3	226.1
#1	.0015	.0020	-.0007	-.0004	.0001	.0001	.0030	.0022
#2	.0018	-.0012	-.0004	-.0004	-.0001	.0002	.0003	-.0094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**917.35**	**13251.**	**1857.6**
Stddev	2.17	14.	.9
%RSD	.23686	.10454	.04631
#1	915.82	13261.	1857.0
#2	918.89	13241.	1858.2

Sample Name: CCB Acquired: 9/26/2013 14:47:50 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**.0079**	**-.0002**	**-.0023**	**.0003**	**.00020**	**-.0006**	**.0001**
Stddev	.0043	.0111	.0028	.0014	.0005	.00005	.0015	.0000
%RSD	185.3	140.2	1172.	59.01	157.9	26.582	234.5	7.006
#1	-.0007	.0157	-.0022	-.0033	.0006	.00023	-.0017	.0001
#2	.0054	.0001	.0017	-.0013	.0000	.00016	.0004	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0117**	**.0004**	**.0002**	**-.0002**	**.0005**	**.0019**	**-.0059**
Stddev	.0001	.0084	.0003	.0001	.0004	.0003	.0003	.0035
%RSD	61.83	71.65	77.52	32.84	184.1	70.17	15.93	59.68
#1	-.0002	.0177	.0005	.0003	-.0005	.0002	.0021	-.0085
#2	-.0001	.0058	.0002	.0002	.0001	.0007	.0017	-.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0025**	**.0002**	**.0715**	**.0002**	**.0022**	**.0004**	**-.0010**	**-.0003**
Stddev	.0004	.0027	.0638	.0000	.0001	.0007	.0010	.0012
%RSD	16.69	1096.	89.24	17.86	6.087	176.8	102.4	458.9
#1	-.0022	-.0017	.1165	.0002	.0021	.0009	-.0003	-.0011
#2	-.0028	.0022	.0264	.0002	.0023	-.0001	-.0017	.0006
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
High Limit								
Low Limit								

Sample Name: CCB Acquired: 9/26/2013 14:47:50 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0010**	**-.0009**	**-.0050**	**.0136**	**.0004**	**.0005**	**.00017**
Stddev	.0005	.0026	.0197	.0019	.0022	.0006	.0114	.00001
%RSD	126.3	269.4	2167.	37.15	16.06	162.8	2351.	6.5429
#1	.0000	-.0028	-.0149	-.0063	.0121	.0008	-.0076	.00017
#2	.0008	.0009	.0131	-.0037	.0152	-.0001	.0085	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0009**	**.0001**	**-.0007**	**.0004**	**.0001**	**.0037**	**-.0109**
Stddev	.0061	.0016	.0004	.0002	.0003	.0000	.0058	.0002
%RSD	253.2	181.3	264.0	29.62	67.84	15.69	155.8	1.385
#1	.0067	-.0002	.0004	-.0005	.0007	.0001	.0078	-.0111
#2	-.0019	.0020	-.0001	-.0008	.0002	.0001	-.0004	-.0108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**922.10**	**13459.**	**1893.5**
Stddev	.86	12.	2.1
%RSD	.09303	.08883	.11125
#1	922.71	13468.	1892.1
#2	921.50	13451.	1895.0

Sample Name: LLCCV Acquired: 9/26/2013 14:50:17 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0098**	**.0091**	**.0207**	**.0075**	**.0046**	**.00078**	**.0174**	**.0011**
Stddev	.0001	.0053	.0112	.0013	.0000	.00015	.0005	.0002
%RSD	1.042	57.74	54.00	16.84	.1888	19.364	3.154	20.50
#1	.0097	.0054	.0128	.0066	.0046	.00088	.0170	.0012
#2	.0099	.0128	.0286	.0084	.0046	.00067	.0177	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0236**	**.0207**	**.0039**	**.0025**	**.0044**	**.0038**	F **.0120**
Stddev	.0002	.0046	.0001	.0016	.0000	.0001	.0013	.0040
%RSD	17.29	19.40	.6846	41.83	1.675	2.925	33.96	33.73
#1	.0012	.0204	.0206	.0051	.0025	.0045	.0029	.0091
#2	.0010	.0268	.0208	.0028	.0025	.0043	.0047	.0149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value								.0200
Range								-30.00%

2x mwk 9/26/13

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0102**	**.0206**	**-.0008**	**.0049**	**.0051**	**.0010**	**.0012**	**.0041**
Stddev	.0006	.0003	.0173	.0002	.0043	.0000	.0003	.0004
%RSD	5.837	1.302	2272.	3.091	84.69	2.873	20.68	9.228
#1	.0098	.0208	.0114	.0050	.0082	.0010	.0011	.0044
#2	.0106	.0205	-.0130	.0048	.0020	.0009	.0014	.0038
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/26/2013 14:50:17 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036**	**.0396**	**.1618**	F **.0083**	**.2047**	**.0046**	**.1910**	**.00106**
Stddev	.0001	.0024	.0106	.0025	.0181	.0001	.0140	.00011
%RSD	3.469	6.105	6.543	30.17	8.827	1.751	7.332	10.117
#1	.0037	.0379	.1693	.0101	.1919	.0046	.1811	.00098
#2	.0035	.0413	.1543	.0065	.2175	.0047	.2009	.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0200				
Range				-30.00%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0135**	**.0219**	**.0020**	**.0045**	**.0041**	**.0042**	**.0215**	**.0330**
Stddev	.0007	.0022	.0002	.0004	.0000	.0001	.0053	.0093
%RSD	4.868	10.20	9.572	8.152	.2670	1.376	24.65	28.37
#1	.0131	.0203	.0019	.0048	.0041	.0042	.0252	.0263
#2	.0140	.0235	.0022	.0042	.0041	.0041	.0178	.0396
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.0100							
Range	30.00%							

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	917.35	13462.	1886.5
Stddev	2.88	27.	22.4
%RSD	.31342	.19958	1.1897
#1	919.38	13481.	1870.7
#2	915.32	13443.	1902.4

① Rerun
② 2x
9/26/13

Sample Name: LLCCV Acquired: 9/26/2013 14:52:45 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0113**	**.0105**	**.0231**	F **.0045**	**.0048**	**.00074**	**.0206**	**.0011**
Stddev	.0038	.0044	.0010	.0023	.0000	.00023	.0030	.0000
%RSD	33.99	41.51	4.227	50.46	.4870	31.530	14.48	3.566
#1	.0086	.0074	.0238	.0061	.0049	.00057	.0227	.0011
#2	.0140	.0136	.0224	.0029	.0048	.00090	.0185	.0011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value				.0100				
Range				-30.00%				

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	F **.0369**	**.0210**	**.0031**	**.0017**	F **.0055**	**.0046**	F **.0138**
Stddev	.0002	.0012	.0002	.0019	.0004	.0013	.0018	.0015
%RSD	20.69	3.300	.7431	63.59	25.80	22.93	40.00	11.16
#1	.0010	.0378	.0209	.0044	.0020	.0064	.0033	.0127
#2	.0008	.0360	.0211	.0017	.0014	.0046	.0058	.0149
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail
Value		.0200				.0040		.0200
Range		30.00%				30.00%		-30.00%

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0103**	**.0226**	**.0347**	**.0051**	**.0039**	**.0009**	**.0019**	**.0035**
Stddev	.0000	.0007	.0035	.0002	.0010	.0001	.0015	.0017
%RSD	.3595	2.918	10.23	3.076	26.71	11.05	80.62	48.90
#1	.0103	.0231	.0322	.0052	.0046	.0009	.0008	.0023
#2	.0103	.0222	.0372	.0050	.0031	.0008	.0029	.0047
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value								
Range								

Sample Name: LLCCV Acquired: 9/26/2013 14:52:45 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment: RERUN

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034**	F **.0521**	**.2049**	F **.0105**	**.1942**	**.0034**	**.1983**	**.00110**
Stddev	.0004	.0027	.0045	.0074	.0248	.0010	.0010	.00002
%RSD	11.38	5.134	2.177	70.03	12.79	28.28	.5285	1.8752
#1	.0032	.0540	.2081	.0158	.2117	.0027	.1990	.00111
#2	.0037	.0502	.2018	.0053	.1766	.0041	.1975	.00108
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.0400		.0200				
Range		30.00%		-30.00%				

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0123**	**.0189**	**.0023**	**.0043**	**.0043**	**.0043**	**.0204**	**.0331**
Stddev	.0014	.0000	.0002	.0007	.0001	.0005	.0011	.0007
%RSD	11.14	.0776	7.268	16.91	3.020	11.73	5.420	2.037
#1	.0133	.0189	.0022	.0038	.0042	.0040	.0211	.0336
#2	.0113	.0189	.0025	.0048	.0044	.0047	.0196	.0327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**930.96**	**13438.**	**1907.2**
Stddev	2.42	106.	47.9
%RSD	.25973	.78849	2.5116
#1	932.67	13363.	1941.0
#2	929.25	13513.	1873.3

Sample Name: LLCCV,0.5 Acquired: 9/26/2013 14:55:12 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2144
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0216**	**.0188**	**.0372**	**.0193**	**.0088**	**.00182**	**.0368**	**.0021**
Stddev	.0036	.0008	.0038	.0012	.0005	.00033	.0015	.0000
%RSD	16.76	4.417	10.36	6.018	5.212	18.015	3.945	1.324
#1	.0190	.0182	.0344	.0185	.0091	.00159	.0379	.0021
#2	.0241	.0194	.0399	.0202	.0084	.00205	.0358	.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Cd2265	Ca3158	Ca3933	Cr2677	Co2307	Cu2247	Cu3273	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0464**	**.0392**	**.0077**	**.0040**	**.0080**	**.0102**	**.0347**
Stddev	.0004	.0067	.0001	.0004	.0004	.0005	.0022	.0019
%RSD	18.86	14.42	.3007	5.699	10.63	6.789	21.35	5.494
#1	.0021	.0416	.0391	.0074	.0037	.0083	.0087	.0361
#2	.0016	.0511	.0393	.0080	.0043	.0076	.0118	.0334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Pb2203	Li6707	Mg2790	Mg2795	Mg2852	Mn2576	Mn2605	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0183**	**.0415**	**.0217**	**.0102**	**.0094**	**.0018**	**.0023**	**.0071**
Stddev	.0013	.0010	.0003	.0001	.0006	.0001	.0030	.0012
%RSD	7.363	2.471	1.237	1.365	6.373	3.745	131.8	16.38
#1	.0174	.0423	.0219	.0101	.0098	.0018	.0044	.0063
#2	.0193	.0408	.0215	.0103	.0090	.0019	.0002	.0079
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: LLCCV,0.5 Acquired: 9/26/2013 14:55:12 Type: QC
Method: 2013C-ICP04(v15) Mode: CONC Corr. Factor: 1.000000
User: admin Dilution: 1 Test Type: Sample Type:
Comment:

Elem	Ni2216	P_1782	K_7664	Se1960	Si2516	Ag3280	Na5895	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0085**	**.0854**	**.4194**	**.0315**	**.4036**	**.0089**	**.3804**	**.00190**
Stddev	.0003	.0007	.0305	.0036	.0000	.0001	.0043	.00005
%RSD	3.268	.8039	7.275	11.38	.0094	1.106	1.130	2.5034
#1	.0083	.0859	.3978	.0340	.4036	.0090	.3835	.00193
#2	.0087	.0850	.4410	.0290	.4036	.0089	.3774	.00186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Tl1908	Sn1899	Ti3361	V_2924	Zn2062	Zn2138	Bi2230	S_1820
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0247**	**.0386**	**.0044**	**.0083**	**.0081**	**.0081**	**.0424**	**.0798**
Stddev	.0082	.0030	.0002	.0009	.0001	.0003	.0027	.0091
%RSD	33.31	7.819	4.406	10.32	1.501	3.470	6.263	11.46
#1	.0189	.0364	.0045	.0077	.0082	.0079	.0405	.0733
#2	.0305	.0407	.0043	.0089	.0080	.0083	.0443	.0862
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**931.25**	**13523.**	**1900.1**
Stddev	2.28	49.	2.5
%RSD	.24463	.36357	.13351
#1	932.86	13557.	1901.8
#2	929.64	13488.	1898.3

Service Request #	K1309638
Calibration	100413B -Sc
QC in calibration	100413B -Sc
QC Service Request #	K1309638
STARLIMS run #	361779

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL	X		
13. CRA run	X		
14. Cd Correction Applied		X	
15. ICSA and ICSAB in control			X
16. Serial dilution run			X
17. Post spike in control			X
18. Was run stop prematurely, If so why?		X	

Comments:

Primary Review by RBM Date 10/4/13

Secondary Review by JoB Date 10/4/13

R:\icp\misc\data review forms\icpms review form

Dataset Report

User Name: ALKLS.ALKLSXP373
Computer Name: ALKLSXP373
Dataset File Path: C:\NexION Data\DataSet\100413B1\
Report Date/Time: Friday, October 04, 2013 16:59:06

The Dataset

Sample ID	Date and Time	Read Type	Description	Samp. File Name
Rinse	10:25:21 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\Rinse.001
Blank	10:30:33 Fri 04-Oct-13	Blank		C:\NexION Data\DataSet\100413B1\Blank.002
Standard 1	10:35:45 Fri 04-Oct-13	Standard #1		C:\NexION Data\DataSet\100413B1\Standard 1
ICV	10:40:57 Fri 04-Oct-13	QC Std #1		C:\NexION Data\DataSet\100413B1\ICV.004
ICV	10:45:58 Fri 04-Oct-13	QC Std #1		C:\NexION Data\DataSet\100413B1\ICV.005
CCV	10:51:11 Fri 04-Oct-13	QC Std #2		C:\NexION Data\DataSet\100413B1\CCV.006
ICB	10:56:23 Fri 04-Oct-13	QC Std #3		C:\NexION Data\DataSet\100413B1\ICB.007
CCB	11:01:36 Fri 04-Oct-13	QC Std #4		C:\NexION Data\DataSet\100413B1\CCB.008
LLICV	11:06:49 Fri 04-Oct-13	QC Std #5		C:\NexION Data\DataSet\100413B1\LLICV.009
ICSA	11:12:00 Fri 04-Oct-13	QC Std #7		C:\NexION Data\DataSet\100413B1\ICSA.010
ICSAB	11:17:27 Fri 04-Oct-13	QC Std #8		C:\NexION Data\DataSet\100413B1\ICSAB.011
K1309615-001	11:22:39 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309615-
K1309615-001D	11:27:52 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309615-
K1309639-005	11:33:04 Fri 04-Oct-13	Sample	1/2 dilution	C:\NexION Data\DataSet\100413B1\K1309639-
K1309639-008	11:38:16 Fri 04-Oct-13	Sample	1/2 dilution	C:\NexION Data\DataSet\100413B1\K1309639-
K1309639-005	11:43:29 Fri 04-Oct-13	Sample	1/5 dilution	C:\NexION Data\DataSet\100413B1\K1309639-
K1309639-008	11:48:42 Fri 04-Oct-13	Sample	1/5 dilution	C:\NexION Data\DataSet\100413B1\K1309639-
CCV	11:53:55 Fri 04-Oct-13	QC Std #2		C:\NexION Data\DataSet\100413B1\CCV.018
CCB	11:59:07 Fri 04-Oct-13	QC Std #4		C:\NexION Data\DataSet\100413B1\CCB.019
LLCCV	12:04:20 Fri 04-Oct-13	QC Std #6		C:\NexION Data\DataSet\100413B1\LLCCV.02(
K1309708-MB	12:10:59 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-001	12:16:11 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-001D	12:21:23 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-001S	12:26:35 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
LCSW	12:31:47 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\LCSW.025
K1309708-002	12:36:59 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-003	12:42:12 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-004	12:47:24 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-005	12:52:36 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
K1309708-006	12:57:48 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309708-
CCV	13:03:01 Fri 04-Oct-13	QC Std #2		C:\NexION Data\DataSet\100413B1\CCV.031
CCB	13:08:14 Fri 04-Oct-13	QC Std #4		C:\NexION Data\DataSet\100413B1\CCB.032
K1309712-001	13:13:27 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309712-001D	13:18:39 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309712-001S	13:23:51 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309712-002	13:29:03 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309712-003	13:34:15 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309712-004	13:39:28 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309712-
K1309713-001	13:44:40 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309713-
K1309713-002	13:49:52 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309713-
K1309713-003	13:55:04 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309713-
CCV	14:00:17 Fri 04-Oct-13	QC Std #2		C:\NexION Data\DataSet\100413B1\CCV.042
CCB	14:05:30 Fri 04-Oct-13	QC Std #4		C:\NexION Data\DataSet\100413B1\CCB.043
LLCCV	14:10:42 Fri 04-Oct-13	QC Std #6		C:\NexION Data\DataSet\100413B1\LLCCV.044
LLCCV	14:15:43 Fri 04-Oct-13	QC Std #6		C:\NexION Data\DataSet\100413B1\LLCCV.045
K1309638-MB	14:25:03 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-001	14:30:15 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-001D	14:35:27 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-001S	14:40:39 Fri 04-Oct-13	Sample		C:\NexION Data\DataSet\100413B1\K1309638-
LCSW	14:45:51 Fri 04-Oct-13	Sample	K1309638 9905 9706 9757 9(	C:\NexION Data\DataSet\100413B1\LCSW.050

K1309638-002	14:51:03 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-004	14:56:15 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-005	15:01:28 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-008	15:06:40 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
K1309638-010	15:11:52 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
CCV	15:17:06 Fri 04-Oct-13	QC Std #2	C:\NexION Data\DataSet\100413B1\CCV.056
CCV	15:22:07 Fri 04-Oct-13	QC Std #2	C:\NexION Data\DataSet\100413B1\CCV.057
CCB	15:27:19 Fri 04-Oct-13	QC Std #4	C:\NexION Data\DataSet\100413B1\CCB.058
K1309638-011	15:32:33 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309638-
K1309905-001	15:37:45 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309905-001D	15:42:57 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309905-001S	15:48:09 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309905-002	15:53:21 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309905-001	15:58:33 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309905-002	16:03:45 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309905-
K1309706-001	16:08:57 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309706-
K1309757-001	16:14:09 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309757-
K1309757-002	16:19:22 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309757-
CCV	16:24:35 Fri 04-Oct-13	QC Std #2	C:\NexION Data\DataSet\100413B1\CCV.069
CCB	16:31:58 Fri 04-Oct-13	QC Std #4	C:\NexION Data\DataSet\100413B1\CCB.070
K1309757-003	16:37:12 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309757-
K1309757-004	16:42:24 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309757-
K1309757-005	16:47:36 Fri 04-Oct-13	Sample	C:\NexION Data\DataSet\100413B1\K1309757-

Instrument Mass Calibration Report

File Name: Default.tun
File Path: C:\NexION\Data\MassCal\Default.tun
Acq. Date/Time: 08:52:26 Fri 04-Oct-13

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Peak Width	Custom Res.
Li	7.016	6.975	1289	2015	0.710	
Be	9.012	9.025	1755	2010	0.700	
Mg	23.985	23.975	4720	2018	0.707	
Co	58.933	58.875	11708	2013	0.692	
In	114.904	114.875	22879	2014	0.707	
Ce	139.905	139.925	27871	2014	0.705	
Pb	207.977	207.975	41476	2018	0.698	
Bi	208.980	208.975	41674	2018	0.702	
U	238.050	238.075	47481	2016	0.713	

Daily Performance Report

Sample ID: Daily Performance Check

Sample Date/Time: Friday, October 04, 2013 08:57:02
Sample Description:
Method File: C:\NexION Data\Method\CAS Daily Performance.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.1224
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Li	7.0	44690.0	44689.956	1037.209	2.3	Standard
	Be	9.0	12291.6	12291.553	199.943	1.6	Standard
	Mg	24.0	58720.8	58720.847	603.862	1.0	Standard
	Co	58.9	98528.9	98528.898	872.505	0.9	Standard
	In	114.9	172335.5	172335.507	2112.885	1.2	Standard
	Pb	208.0	161148.6	161148.586	606.281	0.4	Standard
	Bi	209.0	134715.6	134715.593	1354.500	1.0	Standard
	U	238.1	174534.1	174534.112	2286.368	1.3	Standard
⌈	CeO	155.9	2552.6	0.022	0.002	8.8	Standard
| >	Ce	139.9	114873.1	114873.083	653.518	0.6	Standard
⌊	Ce++	70.0	6602.9	0.057	0.002	3.0	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
0.98	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
16.00	Plasma Gas Flow
-10.50	Deflector Voltage
1600.00	ICP RF Power
-1750.00	Analog Stage Voltage
1200.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
8.00	Discriminator Threshold
-2.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.98	DRC Mode NEB
-6.50	DRC Mode QRO
-1.50	DRC Mode CRO
-10.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
280.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-40.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
0.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Base Vacuum _____ **Running Vacuum** _____

LABWORKS - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, October 04, 2013 10:30:33
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\Blank.002
User Name: RRM

10/4/13

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. MeanConc. RSD	Sample Unit
>	Li-KED1	6		289339.162	3.6		ppb
	Be-KED1	9		4.667	24.7		ppb
	B-KED1	10		116.667	6.9		ppb
	B-KED1	11		739.353	6.2		ppb
	Al-KED1	27		861.359	4.5		ppb
>	Sc-KED1	45		791944.750	1.3		ppb
	V-KED3	51		2.667	114.6		ppb
	Cr-KED3	52		1.333	86.6		ppb
	Cr-KED3	53		2.000	100.0		ppb
	Co-KED3	59		4.667	24.7		ppb
	Ni-KED3	60		4.000	50.0		ppb
	Ni-KED3	62		0.667	173.2		ppb
	Cu-KED3	63		3.333	34.6		ppb
	Cu-KED3	65		3.333	124.9		ppb
	Zn-KED3	66		8.000	50.0		ppb
>	Ge-KED3	72		18721.596	1.9		ppb
>	Ge-KED2	72		61732.783	1.6		ppb
	As-KED2	75		7.889	25.8		ppb
	Se-KED2	77		1.000	66.7		ppb
	Se-KED2	78		23.999	8.0		ppb
	Se-KED2	82		0.416	246.0		ppb
	Mo-KED2	95		14.667	20.8		ppb
	Mo-KED2	97		8.000	75.0		ppb
	Mo-KED2	98		27.114	17.8		ppb
	Cd-KED2	111		2.000	50.0		ppb
	Cd-KED2	112		0.811	67.3		ppb
	Cd-KED2	114		4.298	67.7		ppb
>	Rh-KED3	103		171361.077	1.3		ppb
	Ag-KED3	107		6.000	66.7		ppb
	Ag-KED3	109		5.333	114.6		ppb
>	In-KED1	115		737081.597	0.3		ppb
	Sn-KED1	116		19482.429	1.0		ppb
	Sn-KED1	118		354.004	2.0		ppb
	Sn-KED1	120		490.616	11.0		ppb
	Sb-KED1	121		191.335	10.5		ppb
	Sb-KED1	123		174.747	11.5		ppb
	Ba-KED1	135		62.667	6.6		ppb
	Ba-KED1	137		47.333	21.3		ppb
>	Lu-KED1	175		794743.932	1.1		ppb
	Tl-KED1	203		72.667	12.7		ppb
	Tl-KED1	205		154.668	12.0		ppb
	Pb-KED1	208		165.334	7.9		ppb
	Bi-KED1	209		960.699	1.3		ppb
	U-KED1	238		113.334	2.7		ppb
>	Th-KED1	232		406165.238	0.8		ppb
	Mn-STD1	55		1102.709	5.7		ppb
>	Ge-STD1	72		1364336.500	0.2		ppb

LABWORKS - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, October 04, 2013 10:35:45
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\Standard 1.003
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	289820.702	3.0			ppb
	Be-KED1	9	4.667	66305.577	2.4	25.00000	2.4	ppb
	B-KED1	10	116.667	21318.563	1.2	25.00000	4.2	ppb
	B-KED1	11	739.353	115811.079	2.6	25.00000	5.0	ppb
	Al-KED1	27	861.359	670943.079	2.1	25.00000	0.7	ppb
>	Sc-KED1	45	791944.750	770057.069	1.4			ppb
	V-KED3	51	2.667	12521.485	0.6	25.00000	1.4	ppb
	Cr-KED3	52	1.333	17492.706	1.9	25.00000	1.0	ppb
	Cr-KED3	53	2.000	2195.502	1.0	25.00000	0.4	ppb
	Co-KED3	59	4.667	46539.054	2.7	25.00000	2.3	ppb
	Ni-KED3	60	4.000	14021.545	1.5	25.00000	0.5	ppb
	Ni-KED3	62	0.667	2393.534	0.6	25.00000	1.2	ppb
	Cu-KED3	63	3.333	44775.393	0.3	25.00000	1.3	ppb
	Cu-KED3	65	3.333	22855.604	1.4	25.00000	1.9	ppb
	Zn-KED3	66	8.000	4373.337	4.5	25.00000	3.6	ppb
>	Ge-KED3	72	18721.596	18867.118	1.0			ppb
>	Ge-KED2	72	61732.783	61779.999	2.0			ppb
	As-KED2	75	7.889	6503.035	1.1	25.00000	3.0	ppb
	Se-KED2	77	1.000	235.780	2.5	25.00000	4.5	ppb
	Se-KED2	78	23.999	811.332	1.9	25.00000	3.0	ppb
	Se-KED2	82	0.416	440.528	1.9	25.00000	1.6	ppb
	Mo-KED2	95	14.667	44878.410	2.5	25.00000	4.4	ppb
	Mo-KED2	97	8.000	29549.200	1.4	25.00000	3.2	ppb
	Mo-KED2	98	27.114	78284.489	2.0	25.00000	4.0	ppb
	Cd-KED2	111	2.000	25166.149	1.0	25.00000	1.8	ppb
	Cd-KED2	112	0.811	49145.160	0.4	25.00000	2.4	ppb
	Cd-KED2	114	4.298	62525.968	0.6	25.00000	1.7	ppb
>	Rh-KED3	103	171361.077	168822.837	2.7			ppb
	Ag-KED3	107	6.000	103043.002	1.4	25.00000	1.5	ppb
	Ag-KED3	109	5.333	101501.992	0.6	25.00000	2.2	ppb
>	In-KED1	115	737081.597	731314.130	2.4			ppb
	Sn-KED1	116	19482.429	288207.211	1.9	25.00000	2.3	ppb
	Sn-KED1	118	354.004	454957.317	1.9	25.00000	2.7	ppb
	Sn-KED1	120	490.616	627106.578	1.1	25.00000	2.0	ppb
	Sb-KED1	121	191.335	409636.623	1.2	25.00000	1.7	ppb
	Sb-KED1	123	174.747	310825.089	0.8	25.00000	1.7	ppb
	Ba-KED1	135	62.667	110697.976	1.6	25.00000	1.9	ppb
	Ba-KED1	137	47.333	179448.312	2.0	25.00000	3.7	ppb
>	Lu-KED1	175	794743.932	808906.232	1.9			ppb
	Tl-KED1	203	72.667	340494.806	1.8	25.00000	0.4	ppb
	Tl-KED1	205	154.668	809640.479	2.7	25.00000	1.6	ppb
	Pb-KED1	208	165.334	1065509.037	1.0	25.00000	1.0	ppb
	Bi-KED1	209	960.699	838186.458	1.1	25.00000	2.7	ppb
	U-KED1	238	113.334	1224480.506	1.7	25.00000	1.4	ppb
>	Th-KED1	232	406165.238	413355.851	0.8			ppb
	Mn-STD1	55	1102.709	1389262.400	1.3	25.00000	1.9	ppb
>	Ge-STD1	72	1364336.500	1362319.580	1.0			ppb

LABWORKS - Summary Report

Sample ID: ICV
Sample Date/Time: Friday, October 04, 2013 10:40:57
Sample Description:
Autosampler Position: 3
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\ICV.004
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	304128.099	2.1			ppb
	Be-KED1	9	4.667	6842.972	1.4	2.45665	0.8	ppb
	B-KED1	10	116.667	22188.554	1.4	24.77668	0.7	ppb
	B-KED1	11	739.353	121301.564	1.6	24.93791	2.5	ppb
	Al-KED1	27	861.359	2764839.366	0.3	99.06394	1.3	ppb
>	Sc-KED1	45	791944.750	801716.861	1.5			ppb
	V-KED3	51	2.667	12909.167	3.1	26.77889	13.3	ppb
	Cr-KED3	52	1.333	7355.895	3.7	10.92011	13.0	ppb
	Cr-KED3	53	2.000	876.027	2.8	10.34123	11.9	ppb
	Co-KED3	59	4.667	47744.986	0.2	26.59196	9.8	ppb
	Ni-KED3	60	4.000	14600.791	0.5	27.00107	10.4	ppb
	Ni-KED3	62	0.667	2469.547	5.2	26.82566	14.9	ppb
	Cu-KED3	63	3.333	23210.174	1.0	13.42796	9.1	ppb
	Cu-KED3	65	3.333	11621.392	0.8	13.17498	9.7	ppb
	Zn-KED3	66	8.000	4431.354	2.9	26.28821	11.2	ppb
>	Ge-KED3	72	18721.596	18311.799	9.5			ppb
>	Ge-KED2	72	61732.783	64091.450	0.4			ppb
	As-KED2	75	7.889	6568.399	0.9	24.33041	0.7	ppb
	Se-KED2	77	1.000	244.780	1.2	25.00449	1.5	ppb
	Se-KED2	78	23.999	859.264	1.4	25.53186	1.9	ppb
	Se-KED2	82	0.416	448.843	3.2	24.55213	3.4	ppb
	Mo-KED2	95	14.667	45570.615	3.1	24.45719	3.3	ppb
	Mo-KED2	97	8.000	29755.623	0.3	24.25691	0.4	ppb
	Mo-KED2	98	27.114	79716.328	0.9	24.52682	1.1	ppb
	Cd-KED2	111	2.000	12771.374	1.5	12.22588	1.4	ppb
	Cd-KED2	112	0.811	24299.159	0.7	11.91117	0.5	ppb
	Cd-KED2	114	4.298	30740.709	1.2	11.84430	0.8	ppb
>	Rh-KED3	103	171361.077	163059.145	11.8			ppb
	Ag-KED3	107	6.000	54627.592	1.3	13.87075	14.0	ppb
	Ag-KED3	109	5.333	53537.519	2.9	13.80586	14.8	ppb
>	In-KED1	115	737081.597	744770.773	1.0			ppb
	Sn-KED1	116	19482.429	281188.884	1.2	23.87024	1.2	ppb
	Sn-KED1	118	354.004	461617.083	0.6	24.90224	1.5	ppb
	Sn-KED1	120	490.616	640791.077	1.4	25.08028	2.2	ppb
	Sb-KED1	121	191.335	432604.088	0.9	25.92157	1.7	ppb
	Sb-KED1	123	174.747	325745.911	1.6	25.72238	2.0	ppb
	Ba-KED1	135	62.667	438472.834	1.9	97.26372	2.4	ppb
	Ba-KED1	137	47.333	714680.367	1.0	97.74725	1.9	ppb
>	Lu-KED1	175	794743.932	814854.575	2.3			ppb
	Tl-KED1	203	72.667	347369.210	1.5	25.32102	0.9	ppb
	Tl-KED1	205	154.668	821416.399	0.5	25.18833	2.4	ppb
	Pb-KED1	208	165.334	1070276.768	0.5	24.93232	1.8	ppb
	Bi-KED1	209	960.699	835401.235	0.7	24.73314	1.7	ppb
	U-KED1	238	113.334	1240052.583	1.0	25.45359	1.5	ppb
>	Th-KED1	232	406165.238	411188.006	0.9			ppb
	Mn-STD1	55	1102.709	1386756.634	2.9	24.24239	3.3	ppb
>	Ge-STD1	72	1364336.500	1402323.099	0.4			ppb

WS RSDs RRM 10/4/13

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		105.1		
	Be-KED1	9	98.3			
	B-KED1	10	99.1			
	B-KED1	11	99.8			
	Al-KED1	27	99.1			
>	Sc-KED1	45		101.2		
	V-KED3	51	107.1			
	Cr-KED3	52	109.2			
	Cr-KED3	53	103.4			
	Co-KED3	59	106.4			
	Ni-KED3	60	108.0			
	Ni-KED3	62	107.3			
	Cu-KED3	63	107.4			
	Cu-KED3	65	105.4			
	Zn-KED3	66	105.2			
>	Ge-KED3	72		97.8		
>	Ge-KED2	72		103.8		
	As-KED2	75	97.3			
	Se-KED2	77	100.0			
	Se-KED2	78	102.1			
	Se-KED2	82	98.2			
	Mo-KED2	95	97.8			
	Mo-KED2	97	97.0			
	Mo-KED2	98	98.1			
	Cd-KED2	111	97.8			
	Cd-KED2	112	95.3			
	Cd-KED2	114	94.8			
>	Rh-KED3	103		95.2		
	Ag-KED3	107	111.0			
	Ag-KED3	109	110.4			
>	In-KED1	115		101.0		
	Sn-KED1	116				
	Sn-KED1	118	99.6			
	Sn-KED1	120	100.3			
	Sb-KED1	121	103.7			
	Sb-KED1	123	102.9			
	Ba-KED1	135	97.3			
	Ba-KED1	137	97.7			
>	Lu-KED1	175		102.5		
	Tl-KED1	203	101.3			
	Tl-KED1	205	100.8			
	Pb-KED1	208	99.7			
	Bi-KED1	209	98.9			
	U-KED1	238	101.8			
>	Th-KED1	232		101.2		
	Mn-STD1	55	97.0			
>	Ge-STD1	72		102.8		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	V-KED3	51	Out of Control
QC Std 1	Cr-KED3	52	Out of Control
QC Std 1	Cr-KED3	53	Out of Control
QC Std 1	Ni-KED3	60	Out of Control
QC Std 1	Ni-KED3	62	Out of Control
QC Std 1	Zn-KED3	66	Out of Control
QC Std 1	Ag-KED3	107	Out of Control

RPM 10/4/13

QC Std 1	Ag-KED3	109	Out of Control

Rem 10/4/13

LABWORKS - Summary Report

Sample ID: ICV
Sample Date/Time: Friday, October 04, 2013 10:45:58
Sample Description:
Autosampler Position: 3
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\ICV.005
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	303961.892	2.0			ppb
	Be-KED1	9	4.667	6792.281	0.4	2.44032	2.4	ppb
	B-KED1	10	116.667	21931.491	1.6	24.50468	2.3	ppb
	B-KED1	11	739.353	117415.072	4.1	24.13558	2.5	ppb
	Al-KED1	27	861.359	2708364.232	0.7	98.90430	1.2	ppb
>	Sc-KED1	45	791944.750	786589.707	1.6			ppb
	V-KED3	51	2.667	12514.146	0.6	23.94573	1.4	ppb
	Cr-KED3	52	1.333	7167.799	2.9	9.81569	1.6	ppb
	Cr-KED3	53	2.000	872.027	3.8	9.50402	4.3	ppb
	Co-KED3	59	4.667	46617.286	1.8	24.00019	1.0	ppb
	Ni-KED3	60	4.000	14064.922	1.9	24.03392	1.3	ppb
	Ni-KED3	62	0.667	2385.533	5.8	23.87560	5.5	ppb
	Cu-KED3	63	3.333	22920.376	1.8	12.26248	0.8	ppb
	Cu-KED3	65	3.333	11830.230	1.4	12.39984	1.8	ppb
	Zn-KED3	66	8.000	4436.022	0.7	24.31004	1.8	ppb
>	Ge-KED3	72	18721.596	19686.891	1.5			ppb
>	Ge-KED2	72	61732.783	64426.627	1.0			ppb
	As-KED2	75	7.889	6545.722	1.3	24.11977	0.7	ppb
	Se-KED2	77	1.000	247.113	4.3	25.11403	4.6	ppb
	Se-KED2	78	23.999	856.759	1.0	25.32059	2.0	ppb
	Se-KED2	82	0.416	441.856	2.5	24.04096	1.9	ppb
	Mo-KED2	95	14.667	44797.468	1.2	23.91896	2.1	ppb
	Mo-KED2	97	8.000	29781.012	1.1	24.15407	2.0	ppb
	Mo-KED2	98	27.114	80156.871	1.4	24.53727	2.3	ppb
	Cd-KED2	111	2.000	12862.121	0.6	12.24948	1.1	ppb
	Cd-KED2	112	0.811	24062.496	1.7	11.73504	2.2	ppb
	Cd-KED2	114	4.298	30763.414	2.1	11.79092	1.3	ppb
>	Rh-KED3	103	171361.077	175316.575	0.8			ppb
	Ag-KED3	107	6.000	54893.282	1.7	12.82047	1.2	ppb
	Ag-KED3	109	5.333	53690.750	2.6	12.72849	2.4	ppb
>	In-KED1	115	737081.597	746898.757	1.5			ppb
	Sn-KED1	116	19482.429	284239.235	2.7	24.07165	1.7	ppb
	Sn-KED1	118	354.004	468575.149	2.5	25.20106	1.1	ppb
	Sn-KED1	120	490.616	637821.331	1.4	24.88968	0.1	ppb
	Sb-KED1	121	191.335	433152.801	0.5	25.88218	1.8	ppb
	Sb-KED1	123	174.747	326619.970	0.6	25.71819	0.9	ppb
	Ba-KED1	135	62.667	440728.221	0.9	97.48946	1.7	ppb
	Ba-KED1	137	47.333	707115.177	0.8	96.43210	0.7	ppb
>	Lu-KED1	175	794743.932	816948.654	1.2			ppb
	Tl-KED1	203	72.667	347599.465	0.5	25.27133	0.8	ppb
	Tl-KED1	205	154.668	817894.253	0.6	25.00868	0.8	ppb
	Pb-KED1	208	165.334	1069297.923	1.2	24.84329	2.3	ppb
	Bi-KED1	209	960.699	841342.438	1.2	24.84338	2.3	ppb
	U-KED1	238	113.334	1247827.282	0.8	25.28977	0.8	ppb
>	Th-KED1	232	406165.238	416422.971	0.7			ppb
	Mn-STD1	55	1102.709	1393240.047	1.5	24.14333	1.4	ppb
>	Ge-STD1	72	1364336.500	1414524.754	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % Re	Duplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		105.1 ✓			
	Be-KED1	9	97.6				
	B-KED1	10	98.0				
	B-KED1	11	96.5				
	Al-KED1	27	98.9				
>	Sc-KED1	45		99.3 ✓			
	V-KED3	51	95.8				
	Cr-KED3	52	98.2				
	Cr-KED3	53	95.0				
	Co-KED3	59	96.0				
	Ni-KED3	60	96.1				
	Ni-KED3	62	95.5				
	Cu-KED3	63	98.1				
	Cu-KED3	65	99.2				
	Zn-KED3	66	97.2				
>	Ge-KED3	72		105.2 ✓			
>	Ge-KED2	72		104.4 ✓			
	As-KED2	75	96.5				
	Se-KED2	77	100.5				
	Se-KED2	78	101.3				
	Se-KED2	82	96.2				
	Mo-KED2	95	95.7				
	Mo-KED2	97	96.6				
	Mo-KED2	98	98.1				
	Cd-KED2	111	98.0				
	Cd-KED2	112	93.9				
	Cd-KED2	114	94.3				
>	Rh-KED3	103		102.3 ✓			
	Ag-KED3	107	102.6				
	Ag-KED3	109	101.8				
>	In-KED1	115		101.3 ✓			
	Sn-KED1	116					
	Sn-KED1	118	100.8				
	Sn-KED1	120	99.6				
	Sb-KED1	121	103.5				
	Sb-KED1	123	102.9				
	Ba-KED1	135	97.5				
	Ba-KED1	137	96.4				
>	Lu-KED1	175		102.8 ✓			
	Tl-KED1	203	101.1				
	Tl-KED1	205	100.0				
	Pb-KED1	208	99.4				
	Bi-KED1	209	99.4				
	U-KED1	238	101.2				
>	Th-KED1	232		102.5 ✓			
	Mn-STD1	55	96.6				
>	Ge-STD1	72		103.7 ✓			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 10:51:11
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCV.006
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	294903.973	3.6			ppb
	Be-KED1	9	4.667	66149.542	2.8	24.50881	0.9	ppb
	B-KED1	10	116.667	20150.874	2.4	23.20088	1.3	ppb
	B-KED1	11	739.353	113511.390	2.6	24.07227	4.0	ppb
	Al-KED1	27	861.359	676309.966	2.8	25.06274	3.8	ppb
>	Sc-KED1	45	791944.750	774508.287	1.0			ppb
	V-KED3	51	2.667	12339.327	0.9	24.47989	2.1	ppb
	Cr-KED3	52	1.333	17749.020	1.2	25.20992	2.5	ppb
	Cr-KED3	53	2.000	2172.165	2.6	24.57384	2.0	ppb
	Co-KED3	59	4.667	45880.241	1.9	24.49622	3.4	ppb
	Ni-KED3	60	4.000	13883.411	1.8	24.60221	3.2	ppb
	Ni-KED3	62	0.667	2372.197	0.7	24.62109	2.3	ppb
	Cu-KED3	63	3.333	44591.488	0.8	24.73958	2.1	ppb
	Cu-KED3	65	3.333	23021.207	2.3	25.02603	3.8	ppb
	Zn-KED3	66	8.000	4398.011	2.6	24.98583	2.6	ppb
>	Ge-KED3	72	18721.596	18989.949	1.6			ppb
>	Ge-KED2	72	61732.783	61893.468	1.2			ppb
	As-KED2	75	7.889	6425.223	1.4	24.65070	2.5	ppb
	Se-KED2	77	1.000	243.002	3.6	25.70272	2.6	ppb
	Se-KED2	78	23.999	826.468	3.7	25.43354	4.9	ppb
	Se-KED2	82	0.416	440.867	0.7	24.97220	0.7	ppb
	Mo-KED2	95	14.667	45450.194	1.3	25.25744	0.2	ppb
	Mo-KED2	97	8.000	29732.913	1.3	25.09917	0.6	ppb
	Mo-KED2	98	27.114	77939.896	0.7	24.83304	1.0	ppb
	Cd-KED2	111	2.000	24787.153	1.0	24.57491	1.2	ppb
	Cd-KED2	112	0.811	47719.109	2.8	24.22996	4.0	ppb
	Cd-KED2	114	4.298	62403.775	2.1	24.90363	2.6	ppb
>	Rh-KED3	103	171361.077	174019.633	1.5			ppb
	Ag-KED3	107	6.000	105324.864	1.0	24.78591	1.0	ppb
	Ag-KED3	109	5.333	104923.917	0.6	25.06609	2.0	ppb
>	In-KED1	115	737081.597	740703.557	2.4			ppb
	Sn-KED1	116	19482.429	290909.257	2.7	24.91047	3.4	ppb
	Sn-KED1	118	354.004	454507.445	1.0	24.66014	2.5	ppb
	Sn-KED1	120	490.616	632184.385	0.9	24.88249	1.7	ppb
	Sb-KED1	121	191.335	413827.109	1.5	24.93513	1.7	ppb
	Sb-KED1	123	174.747	309790.111	1.1	24.59989	1.4	ppb
	Ba-KED1	135	62.667	110003.359	2.1	24.52387	0.6	ppb
	Ba-KED1	137	47.333	179792.455	1.4	24.72909	3.1	ppb
>	Lu-KED1	175	794743.932	795795.999	1.6			ppb
	Tl-KED1	203	72.667	342832.282	0.4	25.59059	1.8	ppb
	Tl-KED1	205	154.668	811481.906	1.0	25.47299	1.1	ppb
	Pb-KED1	208	165.334	1067359.722	0.2	25.45671	1.4	ppb
	Bi-KED1	209	960.699	846292.860	1.1	25.65152	0.5	ppb
	U-KED1	238	113.334	1225597.253	1.7	24.87670	1.1	ppb
>	Th-KED1	232	406165.238	415773.766	0.7			ppb
	Mn-STD1	55	1102.709	1410187.486	1.3	24.98387	1.6	ppb
>	Ge-STD1	72	1364336.500	1383654.909	0.6			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		101.9		
	Be-KED1	9	98.0			
	B-KED1	10	92.8			
	B-KED1	11	96.3			
	Al-KED1	27	100.3			
>	Sc-KED1	45		97.8		
	V-KED3	51	97.9			
	Cr-KED3	52	100.8			
	Cr-KED3	53	98.3			
	Co-KED3	59	98.0			
	Ni-KED3	60	98.4			
	Ni-KED3	62	98.5			
	Cu-KED3	63	99.0			
	Cu-KED3	65	100.1			
	Zn-KED3	66	99.9			
>	Ge-KED3	72		101.4		
>	Ge-KED2	72		100.3		
	As-KED2	75	98.6			
	Se-KED2	77	102.8			
	Se-KED2	78	101.7			
	Se-KED2	82	99.9			
	Mo-KED2	95	101.0			
	Mo-KED2	97	100.4			
	Mo-KED2	98	99.3			
	Cd-KED2	111	98.3			
	Cd-KED2	112	96.9			
	Cd-KED2	114	99.6			
>	Rh-KED3	103		101.6		
	Ag-KED3	107	99.1			
	Ag-KED3	109	100.3			
>	In-KED1	115		100.5		
	Sn-KED1	116				
	Sn-KED1	118	98.6			
	Sn-KED1	120	99.5			
	Sb-KED1	121	99.7			
	Sb-KED1	123	98.4			
	Ba-KED1	135	98.1			
	Ba-KED1	137	98.9			
>	Lu-KED1	175		100.1		
	Tl-KED1	203	102.4			
	Tl-KED1	205	101.9			
	Pb-KED1	208	101.8			
	Bi-KED1	209	102.6			
	U-KED1	238	99.5			
>	Th-KED1	232		102.4		
	Mn-STD1	55	99.9			
>	Ge-STD1	72		101.4		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: ICB
Sample Date/Time: Friday, October 04, 2013 10:56:23
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\ICB.007
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	288046.615	1.2			ppb
	Be-KED1	9	4.667	10.667	28.6	0.00228	49.2	ppb
	B-KED1	10	116.667	180.001	17.1	0.07550	46.3	ppb
	B-KED1	11	739.353	1138.046	7.8	0.08794	24.5	ppb
	Al-KED1	27	861.359	926.030	6.2	0.00291	84.7	ppb
>	Sc-KED1	45	791944.750	779279.927	1.1			ppb
	V-KED3	51	2.667	4.000	100.0	0.00254	310.9	ppb
	Cr-KED3	52	1.333	2.667	114.6	0.00185	233.1	ppb
	Cr-KED3	53	2.000	0.667	173.2	-0.01543	84.7	ppb
	Co-KED3	59	4.667	9.333	44.6	0.00247	89.1	ppb
	Ni-KED3	60	4.000	3.333	34.6	-0.00125	166.7	ppb
	Ni-KED3	62	0.667	0.000		-0.00702	0.0	ppb
	Cu-KED3	63	3.333	8.000	43.3	0.00260	75.6	ppb
	Cu-KED3	65	3.333	4.000	50.0	0.00071	315.3	ppb
	Zn-KED3	66	8.000	12.667	45.6	0.02646	126.7	ppb
>	Ge-KED3	72	18721.596	18900.496	1.4			ppb
>	Ge-KED2	72	61732.783	61018.707	0.6			ppb
	As-KED2	75	7.889	4.556	29.6	-0.01261	42.5	ppb
	Se-KED2	77	1.000	1.333	66.1	0.03678	256.8	ppb
	Se-KED2	78	23.999	24.326	8.0	0.01960	335.4	ppb
	Se-KED2	82	0.416	0.858	265.7	0.02606	504.2	ppb
	Mo-KED2	95	14.667	40.000	40.0	0.01438	62.6	ppb
	Mo-KED2	97	8.000	28.000	14.3	0.01722	20.7	ppb
	Mo-KED2	98	27.114	69.854	14.7	0.01391	23.0	ppb
	Cd-KED2	111	2.000	2.000	86.6	0.00003	6366.6	ppb
	Cd-KED2	112	0.811	2.249	139.6	0.00074	218.2	ppb
	Cd-KED2	114	4.298	6.568	22.8	0.00094	66.1	ppb
>	Rh-KED3	103	171361.077	167438.230	0.7			ppb
	Ag-KED3	107	6.000	14.000	37.8	0.00199	64.6	ppb
	Ag-KED3	109	5.333	15.333	49.4	0.00251	74.5	ppb
>	In-KED1	115	737081.597	748639.173	1.8			ppb
	Sn-KED1	116	19482.429	19452.163	0.9	-0.03014	110.8	ppb
	Sn-KED1	118	354.004	897.362	14.7	0.02881	21.6	ppb
	Sn-KED1	120	490.616	1231.952	9.2	0.02855	13.0	ppb
	Sb-KED1	121	191.335	602.013	7.5	0.02429	8.5	ppb
	Sb-KED1	123	174.747	467.667	10.9	0.02279	16.5	ppb
	Ba-KED1	135	62.667	71.334	8.6	0.00168	64.0	ppb
	Ba-KED1	137	47.333	63.333	28.5	0.00205	112.3	ppb
>	Lu-KED1	175	794743.932	800968.906	0.4			ppb
	Tl-KED1	203	72.667	118.000	12.2	0.00332	31.2	ppb
	Tl-KED1	205	154.668	272.003	16.3	0.00362	37.0	ppb
	Pb-KED1	208	165.334	212.667	17.9	0.00109	82.1	ppb
	Bi-KED1	209	960.699	1200.717	6.7	0.00700	32.6	ppb
	U-KED1	238	113.334	217.335	7.9	0.00218	15.1	ppb
>	Th-KED1	232	406165.238	404505.281	2.2			ppb
	Mn-STD1	55	1102.709	1192.717	6.1	0.00182	64.6	ppb
>	Ge-STD1	72	1364336.500	1351218.615	0.6			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		99.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		98.4		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101.0		
>	Ge-KED2	72		98.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		97.7		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		99.6		
	Mn-STD1	55				
>	Ge-STD1	72		99.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 11:01:36
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCB.008
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	293672.944	1.5			ppb
	Be-KED1	9	4.667	4.667	65.5	-0.00004	3156.4	ppb
	B-KED1	10	116.667	120.001	13.0	0.00172	968.7	ppb
	B-KED1	11	739.353	725.352	11.8	-0.00550	296.8	ppb
	Al-KED1	27	861.359	807.356	12.5	-0.00142	230.0	ppb
>	Sc-KED1	45	791944.750	776903.805	1.7			ppb
	V-KED3	51	2.667	2.667	43.3	-0.00013	1873.9	ppb
	Cr-KED3	52	1.333	1.333	86.6	-0.00003	5047.9	ppb
	Cr-KED3	53	2.000	2.000	0.0	-0.00064	72.6	ppb
	Co-KED3	59	4.667	8.000	66.1	0.00167	164.6	ppb
	Ni-KED3	60	4.000	6.000	0.0	0.00329	6.6	ppb
	Ni-KED3	62	0.667	0.667	173.2	-0.00007	16808.6	ppb
	Cu-KED3	63	3.333	6.667	17.3	0.00178	39.2	ppb
	Cu-KED3	65	3.333	4.667	24.7	0.00134	99.2	ppb
	Zn-KED3	66	8.000	6.000	33.3	-0.01236	96.2	ppb
>	Ge-KED3	72	18721.596	19264.985	2.1			ppb
>	Ge-KED2	72	61732.783	61682.882	0.5			ppb
	As-KED2	75	7.889	7.556	17.8	-0.00127	404.5	ppb
	Se-KED2	77	1.000	1.111	45.8	0.01210	453.8	ppb
	Se-KED2	78	23.999	23.218	19.0	-0.02427	573.5	ppb
	Se-KED2	82	0.416	0.748	305.6	0.01929	677.0	ppb
	Mo-KED2	95	14.667	18.000	33.3	0.00186	178.7	ppb
	Mo-KED2	97	8.000	11.333	36.7	0.00284	126.0	ppb
	Mo-KED2	98	27.114	34.447	20.7	0.00235	95.9	ppb
	Cd-KED2	111	2.000	3.333	69.3	0.00133	173.7	ppb
	Cd-KED2	112	0.811	2.811	52.6	0.00102	74.6	ppb
	Cd-KED2	114	4.298	6.071	72.2	0.00072	247.0	ppb
>	Rh-KED3	103	171361.077	173273.534	2.3			ppb
	Ag-KED3	107	6.000	6.667	45.8	0.00013	511.8	ppb
	Ag-KED3	109	5.333	7.333	68.6	0.00046	257.8	ppb
>	In-KED1	115	737081.597	729811.894	0.7			ppb
	Sn-KED1	116	19482.429	19108.933	2.4	-0.01683	269.2	ppb
	Sn-KED1	118	354.004	418.673	8.6	0.00375	50.1	ppb
	Sn-KED1	120	490.616	547.259	2.3	0.00246	26.0	ppb
	Sb-KED1	121	191.335	212.002	7.4	0.00138	69.3	ppb
	Sb-KED1	123	174.747	171.828	10.2	-0.00010	1284.5	ppb
	Ba-KED1	135	62.667	44.000	18.2	-0.00408	45.3	ppb
	Ba-KED1	137	47.333	21.333	21.7	-0.00357	17.7	ppb
>	Lu-KED1	175	794743.932	795675.012	2.1			ppb
	Tl-KED1	203	72.667	62.667	46.1	-0.00074	299.5	ppb
	Tl-KED1	205	154.668	116.667	12.6	-0.00120	35.1	ppb
	Pb-KED1	208	165.334	118.667	11.0	-0.00112	22.7	ppb
	Bi-KED1	209	960.699	1004.702	6.7	0.00131	166.3	ppb
	U-KED1	238	113.334	67.334	29.8	-0.00096	43.9	ppb
>	Th-KED1	232	406165.238	407891.965	0.5			ppb
	Mn-STD1	55	1102.709	1035.371	8.0	-0.00104	141.5	ppb
>	Ge-STD1	72	1364336.500	1352182.921	0.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		101.5		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		98.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102.9		
>	Ge-KED2	72		99.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		101.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		99.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		100.4		
	Mn-STD1	55				
>	Ge-STD1	72		99.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLICV
Sample Date/Time: Friday, October 04, 2013 11:06:49
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\LLICV.009
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	294666.708	1.9			ppb
	Be-KED1	9	4.667	62.667	11.2	0.02151	14.2	ppb
	B-KED1	10	116.667	556.678	4.2	0.50763	6.4	ppb
	B-KED1	11	739.353	2970.976	2.6	0.47391	6.1	ppb
	Al-KED1	27	861.359	53044.992	2.0	1.92873	2.5	ppb
>	Sc-KED1	45	791944.750	777907.216	3.3			ppb
	V-KED3	51	2.667	106.667	4.7	0.21121	4.0	ppb
	Cr-KED3	52	1.333	155.334	7.9	0.22350	3.4	ppb
	Cr-KED3	53	2.000	22.000	41.7	0.23187	44.0	ppb
	Co-KED3	59	4.667	46.000	11.5	0.02259	11.4	ppb
	Ni-KED3	60	4.000	114.000	16.9	0.19844	12.0	ppb
	Ni-KED3	62	0.667	15.333	37.7	0.15466	35.4	ppb
	Cu-KED3	63	3.333	171.334	7.4	0.09584	14.1	ppb
	Cu-KED3	65	3.333	80.667	16.9	0.08572	13.3	ppb
	Zn-KED3	66	8.000	96.667	10.4	0.51553	6.4	ppb
>	Ge-KED3	72	18721.596	18574.096	6.0			ppb
>	Ge-KED2	72	61732.783	63319.717	1.9			ppb
	As-KED2	75	7.889	126.778	1.8	0.44575	3.7	ppb
	Se-KED2	77	1.000	8.444	20.3	0.76835	20.9	ppb
	Se-KED2	78	23.999	58.205	7.1	1.04045	12.2	ppb
	Se-KED2	82	0.416	15.522	12.6	0.83646	12.7	ppb
	Mo-KED2	95	14.667	96.000	24.0	0.04398	28.4	ppb
	Mo-KED2	97	8.000	74.667	8.2	0.05491	10.7	ppb
	Mo-KED2	98	27.114	182.376	27.0	0.04835	33.9	ppb
	Cd-KED2	111	2.000	23.333	31.0	0.02071	35.4	ppb
	Cd-KED2	112	0.811	47.992	10.7	0.02344	12.7	ppb
	Cd-KED2	114	4.298	47.019	6.9	0.01662	7.3	ppb
>	Rh-KED3	103	171361.077	166362.234	7.1			ppb
	Ag-KED3	107	6.000	100.000	6.0	0.02328	10.9	ppb
	Ag-KED3	109	5.333	86.000	9.3	0.02034	16.7	ppb
>	In-KED1	115	737081.597	727064.288	1.3			ppb
	Sn-KED1	116	19482.429	19344.907	1.7	0.01185	82.7	ppb
	Sn-KED1	118	354.004	1371.399	2.9	0.05653	3.6	ppb
	Sn-KED1	120	490.616	1920.078	1.3	0.05762	1.0	ppb
	Sb-KED1	121	191.335	1168.714	1.8	0.06017	2.0	ppb
	Sb-KED1	123	174.747	828.187	3.5	0.05309	5.4	ppb
	Ba-KED1	135	62.667	271.336	1.1	0.04762	1.7	ppb
	Ba-KED1	137	47.333	364.671	12.3	0.04457	14.6	ppb
>	Lu-KED1	175	794743.932	803091.684	2.3			ppb
	Tl-KED1	203	72.667	292.003	9.4	0.01618	13.8	ppb
	Tl-KED1	205	154.668	755.353	2.8	0.01864	3.4	ppb
	Pb-KED1	208	165.334	946.012	7.1	0.01839	5.8	ppb
	Bi-KED1	209	960.699	2365.529	4.6	0.04191	3.8	ppb
	U-KED1	238	113.334	1082.708	1.4	0.02000	3.8	ppb
>	Th-KED1	232	406165.238	409011.327	2.0			ppb
	Mn-STD1	55	1102.709	3669.805	1.5	0.04668	4.9	ppb
>	Ge-STD1	72	1364336.500	1354314.358	2.3			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		101.8		
	Be-KED1	9	107.6			
	B-KED1	10	101.5			
	B-KED1	11	94.8			
	Al-KED1	27	96.4			
>	Sc-KED1	45		98.2		
	V-KED3	51	105.6			
	Cr-KED3	52	111.7			
	Cr-KED3	53	115.9			
	Co-KED3	59	113.0			
	Ni-KED3	60	99.2			
	Ni-KED3	62	77.3			
	Cu-KED3	63	95.8			
	Cu-KED3	65	85.7			
	Zn-KED3	66	103.1			
>	Ge-KED3	72		99.2		
>	Ge-KED2	72		102.6		
	As-KED2	75	89.1			
	Se-KED2	77	76.8			
	Se-KED2	78	104.0			
	Se-KED2	82	83.6			
	Mo-KED2	95	88.0			
	Mo-KED2	97	109.8			
	Mo-KED2	98	96.7			
	Cd-KED2	111	103.6			
	Cd-KED2	112	117.2			
	Cd-KED2	114	83.1			
>	Rh-KED3	103		97.1		
	Ag-KED3	107	116.4			
	Ag-KED3	109	101.7			
>	In-KED1	115		98.6		
	Sn-KED1	116				
	Sn-KED1	118	113.1			
	Sn-KED1	120	115.2			
	Sb-KED1	121	120.3			
	Sb-KED1	123	106.2			
	Ba-KED1	135	95.2			
	Ba-KED1	137	89.1			
>	Lu-KED1	175		101.1		
	Tl-KED1	203	80.9			
	Tl-KED1	205	93.2			
	Pb-KED1	208	92.0			
	Bi-KED1	209	83.8			
	U-KED1	238	100.0			
>	Th-KED1	232		100.7		
	Mn-STD1	55	93.4			
>	Ge-STD1	72		99.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: ICSA
Sample Date/Time: Friday, October 04, 2013 11:12:00
Sample Description:
Autosampler Position: 5
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\ICSA.010
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	301662.524	2.0			ppb
	Be-KED1	9	4.667	8.667	74.2	0.00135	166.5	ppb
	B-KED1	10	116.667	189.335	5.8	0.07664	15.7	ppb
	B-KED1	11	739.353	1575.420	1.1	0.16783	1.7	ppb
	Al-KED1	27	861.359	554460021.981	1.0	18699.53742	0.4	ppb
>	Sc-KED1	45	791944.750	851921.387	1.4			ppb
	V-KED3	51	2.667	18.667	48.3	0.03179	58.5	ppb
	Cr-KED3	52	1.333	303.337	9.0	0.42704	7.3	ppb
	Cr-KED3	53	2.000	610.013	5.2	6.86269	5.4	ppb
	Co-KED3	59	4.667	1726.104	1.5	0.91581	0.8	ppb
	Ni-KED3	60	4.000	491.342	8.4	0.86040	8.0	ppb
	Ni-KED3	62	0.667	83.334	13.9	0.85663	15.6	ppb
	Cu-KED3	63	3.333	306.670	9.5	0.16785	11.1	ppb
	Cu-KED3	65	3.333	156.001	3.4	0.16542	5.4	ppb
	Zn-KED3	66	8.000	140.667	11.4	0.75119	11.1	ppb
>	Ge-KED3	72	18721.596	19054.035	2.0			ppb
>	Ge-KED2	72	61732.783	60366.609	0.1			ppb
	As-KED2	75	7.889	28.111	13.7	0.08032	19.0	ppb
	Se-KED2	77	1.000	5.556	25.0	0.49866	30.4	ppb
	Se-KED2	78	23.999	25.268	19.7	0.05841	276.3	ppb
	Se-KED2	82	0.416	-1.490	149.7	-0.11026	117.6	ppb
	Mo-KED2	95	14.667	96359.241	1.0	54.91273	0.9	ppb
	Mo-KED2	97	8.000	62199.799	1.4	53.84165	1.3	ppb
	Mo-KED2	98	27.114	163357.502	1.0	53.37153	0.9	ppb
	Cd-KED2	111	2.000	147.001	9.6	0.14744	9.7	ppb
	Cd-KED2	112	0.811	251.750	6.4	0.13061	6.4	ppb
	Cd-KED2	114	4.298	364.800	8.8	0.14754	8.9	ppb
>	Rh-KED3	103	171361.077	156733.922	1.6			ppb
	Ag-KED3	107	6.000	42.667	19.5	0.00972	23.0	ppb
	Ag-KED3	109	5.333	30.667	16.4	0.00684	20.2	ppb
>	In-KED1	115	737081.597	658527.192	0.3			ppb
	Sn-KED1	116	19482.429	23094.059	0.5	0.58721	2.8	ppb
	Sn-KED1	118	354.004	11602.838	20.2	0.68930	21.0	ppb
	Sn-KED1	120	490.616	18205.516	14.8	0.78686	15.0	ppb
	Sb-KED1	121	191.335	3943.211	2.7	0.25573	3.0	ppb
	Sb-KED1	123	174.747	3041.224	3.9	0.25776	3.9	ppb
	Ba-KED1	135	62.667	13307.529	1.2	3.32458	0.9	ppb
	Ba-KED1	137	47.333	21811.310	2.2	3.36727	2.5	ppb
>	Lu-KED1	175	794743.932	777856.717	0.4			ppb
	Tl-KED1	203	72.667	217.335	10.1	0.01117	15.4	ppb
	Tl-KED1	205	154.668	512.676	5.3	0.01160	7.0	ppb
	Pb-KED1	208	165.334	2009.389	1.5	0.04508	1.4	ppb
	Bi-KED1	209	960.699	1310.060	3.7	0.01148	11.7	ppb
	U-KED1	238	113.334	103.334	10.7	-0.00026	81.6	ppb
>	Th-KED1	232	406165.238	416784.758	0.9			ppb
	Mn-STD1	55	1102.709	84932.468	2.1	1.38961	1.0	ppb
>	Ge-STD1	72	1364336.500	1478199.848	1.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27	93.5			
>	Sc-KED1	45		107.6		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101.8		
>	Ge-KED2	72		97.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		91.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		89.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		97.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		102.6		
	Mn-STD1	55				
>	Ge-STD1	72		108.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: ICSAB
Sample Date/Time: Friday, October 04, 2013 11:17:27
Sample Description:
Autosampler Position: 6
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\ICSAB.011
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	300399.283	1.4			ppb
	Be-KED1	9	4.667	10.000	52.9	0.00187	103.1	ppb
	B-KED1	10	116.667	198.668	4.8	0.08826	15.4	ppb
	B-KED1	11	739.353	1550.751	3.1	0.16397	4.1	ppb
	Al-KED1	27	861.359	576819916.781	0.7	18824.94840	0.8	ppb
>	Sc-KED1	45	791944.750	880405.372	1.4			ppb
	V-KED3	51	2.667	29192.474	2.4	56.68632	2.0	ppb
	Cr-KED3	52	1.333	39659.644	0.8	55.13145	0.4	ppb
	Cr-KED3	53	2.000	5424.364	3.3	60.09801	2.6	ppb
	Co-KED3	59	4.667	99976.029	1.9	52.23551	1.5	ppb
	Ni-KED3	60	4.000	28147.719	2.9	48.81368	2.3	ppb
	Ni-KED3	62	0.667	4802.140	0.7	48.78527	0.1	ppb
	Cu-KED3	63	3.333	82678.568	0.7	44.89507	0.5	ppb
	Cu-KED3	65	3.333	41444.702	1.0	44.08883	0.7	ppb
	Zn-KED3	66	8.000	3978.555	5.9	22.11348	5.2	ppb
>	Ge-KED3	72	18721.596	19399.163	0.7			ppb
>	Ge-KED2	72	61732.783	63064.572	1.1			ppb
	As-KED2	75	7.889	6513.596	0.9	24.52398	1.9	ppb
	Se-KED2	77	1.000	237.780	4.7	24.67668	3.6	ppb
	Se-KED2	78	23.999	781.078	1.0	23.52924	1.5	ppb
	Se-KED2	82	0.416	409.074	1.2	22.74187	2.3	ppb
	Mo-KED2	95	14.667	95771.995	1.3	52.24232	0.3	ppb
	Mo-KED2	97	8.000	63253.778	2.3	52.40768	1.4	ppb
	Mo-KED2	98	27.114	168022.107	2.8	52.54059	1.7	ppb
	Cd-KED2	111	2.000	22348.133	0.2	21.74524	1.0	ppb
	Cd-KED2	112	0.811	42683.596	1.7	21.26328	0.8	ppb
	Cd-KED2	114	4.298	54070.713	1.3	21.17455	0.9	ppb
>	Rh-KED3	103	171361.077	157711.137	0.8			ppb
	Ag-KED3	107	6.000	46104.280	0.9	11.97004	0.7	ppb
	Ag-KED3	109	5.333	44954.627	1.2	11.84691	0.4	ppb
>	In-KED1	115	737081.597	672201.416	1.0			ppb
	Sn-KED1	116	19482.429	26669.853	3.0	0.90064	10.1	ppb
	Sn-KED1	118	354.004	772.021	1.7	0.02686	1.8	ppb
	Sn-KED1	120	490.616	1010.499	0.8	0.02443	1.4	ppb
	Sb-KED1	121	191.335	4063.245	3.2	0.25822	2.3	ppb
	Sb-KED1	123	174.747	3167.004	0.5	0.26327	0.7	ppb
	Ba-KED1	135	62.667	13579.119	2.1	3.32387	2.7	ppb
	Ba-KED1	137	47.333	22647.941	1.6	3.42586	2.6	ppb
>	Lu-KED1	175	794743.932	788161.629	0.7			ppb
	Tl-KED1	203	72.667	188.668	1.6	0.00879	3.5	ppb
	Tl-KED1	205	154.668	466.008	2.8	0.00991	4.0	ppb
	Pb-KED1	208	165.334	1893.383	2.4	0.04165	2.3	ppb
	Bi-KED1	209	960.699	1186.716	6.2	0.00718	34.8	ppb
	U-KED1	238	113.334	109.334	1.1	-0.00017	7.9	ppb
>	Th-KED1	232	406165.238	421808.280	0.8			ppb
	Mn-STD1	55	1102.709	3135168.626	0.4	51.46792	1.2	ppb
>	Ge-STD1	72	1364336.500	1493907.207	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		103.8		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27	94.1			
>	Sc-KED1	45		111.2		
	V-KED3	51	113.4			
	Cr-KED3	52	110.3			
	Cr-KED3	53	120.2			
	Co-KED3	59	104.5			
	Ni-KED3	60	97.6			
	Ni-KED3	62	97.6			
	Cu-KED3	63	89.8			
	Cu-KED3	65	88.2			
	Zn-KED3	66	88.5			
>	Ge-KED3	72		103.6		
>	Ge-KED2	72		102.2		
	As-KED2	75	98.1			
	Se-KED2	77	98.7			
	Se-KED2	78	94.1			
	Se-KED2	82	91.0			
	Mo-KED2	95	104.5			
	Mo-KED2	97	104.8			
	Mo-KED2	98	105.1			
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		92.0		
	Ag-KED3	107	95.8			
	Ag-KED3	109	94.8			
>	In-KED1	115		91.2		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		99.2		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		103.9		
	Mn-STD1	55	102.9			
>	Ge-STD1	72		109.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Cr-KED3	53	Out of Control

LABWORKS - Summary Report

Sample ID: K1309615-001
Sample Date/Time: Friday, October 04, 2013 11:22:39
Sample Description:
Autosampler Position: 101
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309615-001.012
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	306578.479	3.4			ppb
	Be-KED1	9	4.667	17.333	24.0	0.00441	32.5	ppb
	B-KED1	10	116.667	18993.958	2.8	21.02036	1.0	ppb
	B-KED1	11	739.353	103091.325	1.0	21.01297	4.1	ppb
	Al-KED1	27	861.359	228401.355	2.3	6.40698	2.7	ppb
>	Sc-KED1	45	791944.750	1019314.083	0.4			ppb
	V-KED3	51	2.667	3311.717	0.3	6.44080	9.6	ppb
	Cr-KED3	52	1.333	686.683	6.0	0.95176	5.2	ppb
	Cr-KED3	53	2.000	81.334	14.0	0.87509	10.0	ppb
	Co-KED3	59	4.667	67.333	16.4	0.03242	10.3	ppb
	Ni-KED3	60	4.000	178.668	7.1	0.30411	14.7	ppb
	Ni-KED3	62	0.667	28.667	17.6	0.28782	27.5	ppb
	Cu-KED3	63	3.333	3068.330	2.0	1.66903	10.6	ppb
	Cu-KED3	65	3.333	1600.757	6.1	1.69860	6.5	ppb
	Zn-KED3	66	8.000	309.337	10.7	1.67951	13.3	ppb
>	Ge-KED3	72	18721.596	19464.654	8.8			ppb
>	Ge-KED2	72	61732.783	65804.552	0.9			ppb
	As-KED2	75	7.889	1011.369	1.3	3.62295	1.0	ppb
	Se-KED2	77	1.000	8.333	24.3	0.72490	27.0	ppb
	Se-KED2	78	23.999	46.949	12.2	0.63788	28.9	ppb
	Se-KED2	82	0.416	14.514	15.3	0.75010	15.4	ppb
	Mo-KED2	95	14.667	6446.121	0.3	3.36245	0.9	ppb
	Mo-KED2	97	8.000	4139.933	2.4	3.28167	3.1	ppb
	Mo-KED2	98	27.114	11177.559	1.0	3.34198	0.1	ppb
	Cd-KED2	111	2.000	5.667	10.2	0.00330	16.9	ppb
	Cd-KED2	112	0.811	5.551	41.0	0.00224	48.3	ppb
	Cd-KED2	114	4.298	14.265	24.9	0.00363	35.6	ppb
>	Rh-KED3	103	171361.077	163208.987	8.7			ppb
	Ag-KED3	107	6.000	10.667	96.2	0.00120	198.1	ppb
	Ag-KED3	109	5.333	20.667	34.0	0.00397	41.9	ppb
>	In-KED1	115	737081.597	738925.083	1.1			ppb
	Sn-KED1	116	19482.429	20025.019	1.4	0.04552	58.0	ppb
	Sn-KED1	118	354.004	1774.777	6.6	0.07722	7.0	ppb
	Sn-KED1	120	490.616	2352.793	0.9	0.07347	2.5	ppb
	Sb-KED1	121	191.335	1224.052	3.9	0.06238	5.4	ppb
	Sb-KED1	123	174.747	943.360	2.5	0.06118	4.1	ppb
	Ba-KED1	135	62.667	422049.773	1.4	94.36930	2.5	ppb
	Ba-KED1	137	47.333	702757.858	0.3	96.87570	1.4	ppb
>	Lu-KED1	175	794743.932	829253.701	1.1			ppb
	Tl-KED1	203	72.667	16.667	27.7	-0.00424	7.6	ppb
	Tl-KED1	205	154.668	44.667	18.1	-0.00352	6.6	ppb
	Pb-KED1	208	165.334	10038.037	0.8	0.22581	1.0	ppb
	Bi-KED1	209	960.699	850.692	7.5	-0.00442	40.6	ppb
	U-KED1	238	113.334	374356.323	0.6	7.22425	1.2	ppb
>	Th-KED1	232	406165.238	437270.713	1.3			ppb
	Mn-STD1	55	1102.709	97637.879	1.0	1.64447	1.5	ppb
>	Ge-STD1	72	1364336.500	1439308.526	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		106.0		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		128.7		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		104.0		
>	Ge-KED2	72		106.6		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		95.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.3		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.7		
	Mn-STD1	55				
>	Ge-STD1	72		105.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc-KED1 45 Int Std for sampl	Sc-KED1	45	IS out of control

LABWORKS - Summary Report

Sample ID: K1309615-001D
Sample Date/Time: Friday, October 04, 2013 11:27:52
Sample Description:
Autosampler Position: 102
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309615-001D.013
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	310224.750	2.4			ppb
	Be-KED1	9	4.667	13.333	75.5	0.00299	123.0	ppb
	B-KED1	10	116.667	18501.983	3.4	20.22408	1.4	ppb
	B-KED1	11	739.353	104378.791	2.7	21.00542	0.8	ppb
	Al-KED1	27	861.359	251245.634	2.5	7.19777	0.1	ppb
>	Sc-KED1	45	791944.750	998539.740	2.5			ppb
	V-KED3	51	2.667	3310.384	5.9	6.05273	5.5	ppb
	Cr-KED3	52	1.333	640.681	3.7	0.83753	4.0	ppb
	Cr-KED3	53	2.000	94.000	11.8	0.95897	12.1	ppb
	Co-KED3	59	4.667	66.667	19.3	0.03032	21.2	ppb
	Ni-KED3	60	4.000	187.335	11.4	0.29914	12.0	ppb
	Ni-KED3	62	0.667	22.000	32.8	0.20348	33.5	ppb
	Cu-KED3	63	3.333	3174.353	3.5	1.62255	3.2	ppb
	Cu-KED3	65	3.333	1641.428	3.1	1.64221	3.4	ppb
	Zn-KED3	66	8.000	278.669	7.7	1.41693	8.0	ppb
>	Ge-KED3	72	18721.596	20584.153	0.4			ppb
>	Ge-KED2	72	61732.783	65924.445	1.3			ppb
	As-KED2	75	7.889	959.366	0.7	3.42934	1.9	ppb
	Se-KED2	77	1.000	8.889	14.2	0.78103	17.5	ppb
	Se-KED2	78	23.999	46.760	2.2	0.62876	5.5	ppb
	Se-KED2	82	0.416	13.634	34.7	0.70038	35.2	ppb
	Mo-KED2	95	14.667	6205.347	0.6	3.23098	1.8	ppb
	Mo-KED2	97	8.000	4220.624	3.2	3.33863	2.0	ppb
	Mo-KED2	98	27.114	10861.839	3.5	3.24122	3.0	ppb
	Cd-KED2	111	2.000	7.667	15.1	0.00516	22.7	ppb
	Cd-KED2	112	0.811	4.871	63.8	0.00190	77.5	ppb
	Cd-KED2	114	4.298	11.149	16.1	0.00245	25.2	ppb
>	Rh-KED3	103	171361.077	166372.906	2.5			ppb
	Ag-KED3	107	6.000	12.667	45.6	0.00166	82.4	ppb
	Ag-KED3	109	5.333	17.333	35.3	0.00306	53.2	ppb
>	In-KED1	115	737081.597	723697.942	1.2			ppb
	Sn-KED1	116	19482.429	18941.053	1.0	-0.01743	170.6	ppb
	Sn-KED1	118	354.004	1677.432	1.7	0.07388	1.1	ppb
	Sn-KED1	120	490.616	2308.769	3.4	0.07367	5.9	ppb
	Sb-KED1	121	191.335	1148.046	4.3	0.05922	4.5	ppb
	Sb-KED1	123	174.747	891.189	5.5	0.05851	6.8	ppb
	Ba-KED1	135	62.667	413295.593	1.7	94.34669	2.0	ppb
	Ba-KED1	137	47.333	674548.817	1.4	94.94736	2.2	ppb
>	Lu-KED1	175	794743.932	799553.225	1.6			ppb
	Tl-KED1	203	72.667	27.333	15.2	-0.00340	9.6	ppb
	Tl-KED1	205	154.668	48.667	15.6	-0.00334	7.7	ppb
	Pb-KED1	208	165.334	9786.646	0.8	0.22840	1.6	ppb
	Bi-KED1	209	960.699	858.026	6.7	-0.00329	43.8	ppb
	U-KED1	238	113.334	362669.203	0.4	7.23938	0.9	ppb
>	Th-KED1	232	406165.238	422718.077	1.0			ppb
	Mn-STD1	55	1102.709	110719.406	0.4	1.84528	0.9	ppb
>	Ge-STD1	72	1364336.500	1456373.177	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		107.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		126.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		109.9		
>	Ge-KED2	72		106.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		97.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		98.2		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.1		
	Mn-STD1	55				
>	Ge-STD1	72		106.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc-KED1 45 Int Std for sampl	Sc-KED1	45	IS out of control

LABWORKS - Summary Report

Sample ID: K1309639-005
Sample Date/Time: Friday, October 04, 2013 11:33:04
Sample Description: 1/2 dilution
Autosampler Position: 103
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309639-005.014
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	413189.120	3.1			ppb
	Be-KED1	9	4.667	7.333	31.5	0.00017	329.3	ppb
	B-KED1	10	116.667	10137.596	1.8	8.24709	4.4	ppb
	B-KED1	11	739.353	56093.973	2.9	8.38489	4.1	ppb
	Al-KED1	27	861.359	630368.920	2.0	19.33482	0.9	ppb
>	Sc-KED1	45	791944.750	935162.637	1.5			ppb
	V-KED3	51	2.667	1684.766	3.5	3.06339	4.2	ppb
	Cr-KED3	52	1.333	64.667	10.9	0.08232	10.0	ppb
	Cr-KED3	53	2.000	12.667	18.2	0.10851	20.9	ppb
	Co-KED3	59	4.667	17.333	24.0	0.00597	34.3	ppb
	Ni-KED3	60	4.000	30.000	23.1	0.04172	28.5	ppb
	Ni-KED3	62	0.667	4.000	50.0	0.03117	62.4	ppb
	Cu-KED3	63	3.333	234.669	13.8	0.11754	13.2	ppb
	Cu-KED3	65	3.333	100.000	10.4	0.09612	11.2	ppb
	Zn-KED3	66	8.000	82.000	24.8	0.38244	28.3	ppb
>	Ge-KED3	72	18721.596	20688.973	1.6			ppb
>	Ge-KED2	72	61732.783	65293.929	2.3			ppb
	As-KED2	75	7.889	1061.484	2.3	3.83396	0.1	ppb
	Se-KED2	77	1.000	7.556	21.8	0.65215	23.2	ppb
	Se-KED2	78	23.999	40.309	7.1	0.44781	15.5	ppb
	Se-KED2	82	0.416	8.299	21.3	0.42167	21.0	ppb
	Mo-KED2	95	14.667	3127.676	0.8	1.64063	2.7	ppb
	Mo-KED2	97	8.000	2079.485	0.9	1.65825	2.4	ppb
	Mo-KED2	98	27.114	5320.772	2.8	1.59980	4.6	ppb
	Cd-KED2	111	2.000	5.333	60.3	0.00302	98.9	ppb
	Cd-KED2	112	0.811	8.092	21.5	0.00349	24.5	ppb
	Cd-KED2	114	4.298	13.382	23.1	0.00336	37.6	ppb
>	Rh-KED3	103	171361.077	167544.111	0.6			ppb
	Ag-KED3	107	6.000	9.333	68.9	0.00085	185.3	ppb
	Ag-KED3	109	5.333	8.000	50.0	0.00069	142.7	ppb
>	In-KED1	115	737081.597	729556.142	0.1			ppb
	Sn-KED1	116	19482.429	18260.903	0.8	-0.09530	13.3	ppb
	Sn-KED1	118	354.004	215.335	6.2	-0.00744	9.6	ppb
	Sn-KED1	120	490.616	292.619	3.2	-0.00772	5.1	ppb
	Sb-KED1	121	191.335	2078.151	4.8	0.11558	5.4	ppb
	Sb-KED1	123	174.747	1558.248	5.8	0.11173	6.6	ppb
	Ba-KED1	135	62.667	14952.488	0.5	3.37209	0.5	ppb
	Ba-KED1	137	47.333	24868.963	1.2	3.46556	1.1	ppb
>	Lu-KED1	175	794743.932	803314.120	1.3			ppb
	Tl-KED1	203	72.667	90.000	11.5	0.00122	63.2	ppb
	Tl-KED1	205	154.668	216.668	6.1	0.00188	24.0	ppb
	Pb-KED1	208	165.334	890.677	1.3	0.01710	3.2	ppb
	Bi-KED1	209	960.699	842.025	6.7	-0.00388	38.9	ppb
	U-KED1	238	113.334	282955.017	1.2	5.60270	1.3	ppb
>	Th-KED1	232	406165.238	426088.962	0.2			ppb
	Mn-STD1	55	1102.709	31987.105	0.3	0.51598	0.7	ppb
>	Ge-STD1	72	1364336.500	1464576.606	0.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		142.8		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		118.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		110.5		
>	Ge-KED2	72		105.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		97.8		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		99.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.9		
	Mn-STD1	55				
>	Ge-STD1	72		107.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li-KED1 6 Int Std for sample	Li-KED1	6	IS out of control

LABWORKS - Summary Report

Sample ID: K1309639-008
Sample Date/Time: Friday, October 04, 2013 11:38:16
Sample Description: 1/2 dilution
Autosampler Position: 104
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309639-008.015
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	417844.233	2.7			ppb
	Be-KED1	9	4.667	10.000	52.9	0.00088	164.0	ppb
	B-KED1	10	116.667	10140.265	1.2	8.15270	2.9	ppb
	B-KED1	11	739.353	54092.332	4.1	7.99349	7.0	ppb
	Al-KED1	27	861.359	237467.134	3.7	7.28011	3.7	ppb
>	Sc-KED1	45	791944.750	933143.999	0.1			ppb
	V-KED3	51	2.667	2260.179	6.6	4.02424	6.9	ppb
	Cr-KED3	52	1.333	64.000	3.1	0.07974	2.6	ppb
	Cr-KED3	53	2.000	8.667	53.3	0.06505	71.3	ppb
	Co-KED3	59	4.667	18.667	24.7	0.00643	34.6	ppb
	Ni-KED3	60	4.000	14.000	51.5	0.01513	76.3	ppb
	Ni-KED3	62	0.667	3.333	69.3	0.02400	88.8	ppb
	Cu-KED3	63	3.333	160.668	19.3	0.07827	20.3	ppb
	Cu-KED3	65	3.333	90.667	16.0	0.08483	16.2	ppb
	Zn-KED3	66	8.000	164.668	3.9	0.79603	4.7	ppb
>	Ge-KED3	72	18721.596	21133.621	0.6			ppb
>	Ge-KED2	72	61732.783	66599.565	1.3			ppb
	As-KED2	75	7.889	4266.304	1.5	15.20002	2.7	ppb
	Se-KED2	77	1.000	4.444	17.3	0.33261	23.8	ppb
	Se-KED2	78	23.999	40.184	8.3	0.42031	20.3	ppb
	Se-KED2	82	0.416	5.739	16.7	0.27859	17.6	ppb
	Mo-KED2	95	14.667	6232.026	2.6	3.21106	1.3	ppb
	Mo-KED2	97	8.000	4045.906	0.4	3.16848	1.4	ppb
	Mo-KED2	98	27.114	10962.799	1.8	3.23858	1.8	ppb
	Cd-KED2	111	2.000	3.667	56.8	0.00138	135.6	ppb
	Cd-KED2	112	0.811	3.812	63.2	0.00138	81.3	ppb
	Cd-KED2	114	4.298	10.192	20.4	0.00206	35.5	ppb
>	Rh-KED3	103	171361.077	176658.485	1.8			ppb
	Ag-KED3	107	6.000	5.333	57.3	-0.00021	335.5	ppb
	Ag-KED3	109	5.333	2.000	100.0	-0.00082	58.5	ppb
>	In-KED1	115	737081.597	744346.453	1.8			ppb
	Sn-KED1	116	19482.429	18945.784	2.8	-0.06670	38.3	ppb
	Sn-KED1	118	354.004	213.335	6.0	-0.00779	7.3	ppb
	Sn-KED1	120	490.616	321.953	4.9	-0.00680	8.3	ppb
	Sb-KED1	121	191.335	4012.564	1.5	0.22909	1.6	ppb
	Sb-KED1	123	174.747	3031.818	2.9	0.22568	1.4	ppb
	Ba-KED1	135	62.667	11485.951	2.3	2.53566	2.3	ppb
	Ba-KED1	137	47.333	18927.867	1.8	2.58403	2.3	ppb
>	Lu-KED1	175	794743.932	817448.436	1.6			ppb
	Tl-KED1	203	72.667	88.000	4.5	0.00096	22.9	ppb
	Tl-KED1	205	154.668	202.001	4.3	0.00131	20.2	ppb
	Pb-KED1	208	165.334	303.335	5.0	0.00309	11.3	ppb
	Bi-KED1	209	960.699	1262.722	2.2	0.00812	14.4	ppb
	U-KED1	238	113.334	116560.257	0.2	2.26916	1.1	ppb
>	Th-KED1	232	406165.238	433133.094	0.9			ppb
	Mn-STD1	55	1102.709	29525.147	0.9	0.47030	2.1	ppb
>	Ge-STD1	72	1364336.500	1478049.020	1.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		144.4		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		117.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		112.9		
>	Ge-KED2	72		107.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		106.6		
	Mn-STD1	55				
>	Ge-STD1	72		108.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Li-KED1 6 Int Std for sample	Li-KED1	6	IS out of control

LABWORKS - Summary Report

Sample ID: K1309639-005
Sample Date/Time: Friday, October 04, 2013 11:43:29
Sample Description: 1/5 dilution
Autosampler Position: 105
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309639-005.016
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	339365.249	5.4			ppb
	Be-KED1	9	4.667	10.000	52.9	0.00144	111.6	ppb
	B-KED1	10	116.667	4346.661	2.3	4.24446	6.1	ppb
	B-KED1	11	739.353	22903.016	2.0	4.09289	5.7	ppb
	Al-KED1	27	861.359	261858.434	1.4	8.86565	5.0	ppb
>	Sc-KED1	45	791944.750	847345.028	6.1			ppb
	V-KED3	51	2.667	662.682	3.3	1.15597	3.9	ppb
	Cr-KED3	52	1.333	28.667	4.0	0.03404	4.8	ppb
	Cr-KED3	53	2.000	4.667	65.5	0.02324	126.3	ppb
	Co-KED3	59	4.667	12.000	0.0	0.00313	4.3	ppb
	Ni-KED3	60	4.000	20.667	31.1	0.02529	42.8	ppb
	Ni-KED3	62	0.667	2.667	43.3	0.01758	63.9	ppb
	Cu-KED3	63	3.333	97.334	10.5	0.04580	10.6	ppb
	Cu-KED3	65	3.333	43.333	10.7	0.03787	9.6	ppb
	Zn-KED3	66	8.000	46.667	17.3	0.18823	20.6	ppb
>	Ge-KED3	72	18721.596	21504.847	2.4			ppb
>	Ge-KED2	72	61732.783	66520.856	0.8			ppb
	As-KED2	75	7.889	421.673	2.9	1.47662	3.5	ppb
	Se-KED2	77	1.000	4.444	28.4	0.33213	36.7	ppb
	Se-KED2	78	23.999	33.649	2.4	0.22962	10.1	ppb
	Se-KED2	82	0.416	4.411	19.1	0.20910	21.3	ppb
	Mo-KED2	95	14.667	1314.061	4.5	0.67149	4.4	ppb
	Mo-KED2	97	8.000	886.027	2.2	0.68944	3.0	ppb
	Mo-KED2	98	27.114	2200.544	3.9	0.64403	4.6	ppb
	Cd-KED2	111	2.000	4.333	26.6	0.00201	53.4	ppb
	Cd-KED2	112	0.811	3.959	28.9	0.00146	38.2	ppb
	Cd-KED2	114	4.298	6.185	52.1	0.00058	207.1	ppb
>	Rh-KED3	103	171361.077	177964.543	1.8			ppb
	Ag-KED3	107	6.000	6.667	62.4	0.00010	915.9	ppb
	Ag-KED3	109	5.333	4.667	107.9	-0.00021	544.1	ppb
>	In-KED1	115	737081.597	710966.796	5.0			ppb
	Sn-KED1	116	19482.429	18407.807	6.4	-0.03762	69.1	ppb
	Sn-KED1	118	354.004	136.667	9.7	-0.01155	9.0	ppb
	Sn-KED1	120	490.616	202.617	1.5	-0.01108	5.0	ppb
	Sb-KED1	121	191.335	868.693	3.1	0.04310	10.1	ppb
	Sb-KED1	123	174.747	658.845	5.8	0.04068	10.8	ppb
	Ba-KED1	135	62.667	6316.730	2.9	1.45533	3.7	ppb
	Ba-KED1	137	47.333	10328.400	1.6	1.47634	6.5	ppb
>	Lu-KED1	175	794743.932	795878.847	5.4			ppb
	Tl-KED1	203	72.667	38.667	25.5	-0.00251	36.4	ppb
	Tl-KED1	205	154.668	114.000	16.7	-0.00125	64.0	ppb
	Pb-KED1	208	165.334	455.336	9.2	0.00690	6.4	ppb
	Bi-KED1	209	960.699	860.693	4.2	-0.00305	31.8	ppb
	U-KED1	238	113.334	117126.889	0.9	2.37464	6.7	ppb
>	Th-KED1	232	406165.238	416950.065	5.6			ppb
	Mn-STD1	55	1102.709	13486.364	1.8	0.20190	3.0	ppb
>	Ge-STD1	72	1364336.500	1492432.636	1.0			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		117.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		107.0		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.9		
>	Ge-KED2	72		107.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		102.7		
	Mn-STD1	55				
>	Ge-STD1	72		109.4		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309639-008
Sample Date/Time: Friday, October 04, 2013 11:48:42
Sample Description: 1/5 dilution
Autosampler Position: 106
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309639-008.017
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	339173.116	1.6			ppb
	Be-KED1	9	4.667	8.000	43.3	0.00081	134.6	ppb
	B-KED1	10	116.667	4075.915	4.2	3.96824	6.1	ppb
	B-KED1	11	739.353	22256.670	3.3	3.96966	5.1	ppb
	Al-KED1	27	861.359	90207.917	0.4	2.91455	0.7	ppb
>	Sc-KED1	45	791944.750	879843.197	1.0			ppb
	V-KED3	51	2.667	896.028	6.2	1.56879	6.4	ppb
	Cr-KED3	52	1.333	20.667	24.4	0.02405	26.0	ppb
	Cr-KED3	53	2.000	2.667	114.6	0.00370	825.2	ppb
	Co-KED3	59	4.667	10.667	21.7	0.00252	43.8	ppb
	Ni-KED3	60	4.000	14.667	34.3	0.01581	49.5	ppb
	Ni-KED3	62	0.667	5.333	21.7	0.04201	25.5	ppb
	Cu-KED3	63	3.333	81.334	16.7	0.03808	17.7	ppb
	Cu-KED3	65	3.333	26.667	53.2	0.02198	61.9	ppb
	Zn-KED3	66	8.000	70.000	11.4	0.30666	13.6	ppb
>	Ge-KED3	72	18721.596	21446.753	0.4			ppb
>	Ge-KED2	72	61732.783	68256.020	1.1			ppb
	As-KED2	75	7.889	1729.883	0.7	5.99479	1.8	ppb
	Se-KED2	77	1.000	2.000	44.1	0.08596	98.6	ppb
	Se-KED2	78	23.999	30.417	9.0	0.11102	61.6	ppb
	Se-KED2	82	0.416	1.742	146.8	0.06689	197.0	ppb
	Mo-KED2	95	14.667	2452.211	2.1	1.22818	3.0	ppb
	Mo-KED2	97	8.000	1634.761	8.7	1.24528	9.2	ppb
	Mo-KED2	98	27.114	4252.487	2.0	1.22058	3.0	ppb
	Cd-KED2	111	2.000	2.333	49.5	0.00011	971.6	ppb
	Cd-KED2	112	0.811	4.559	66.1	0.00170	82.7	ppb
	Cd-KED2	114	4.298	6.807	8.7	0.00074	24.8	ppb
>	Rh-KED3	103	171361.077	181722.808	2.0			ppb
	Ag-KED3	107	6.000	8.667	74.2	0.00053	279.8	ppb
	Ag-KED3	109	5.333	5.333	57.3	-0.00008	899.9	ppb
>	In-KED1	115	737081.597	755766.700	2.2			ppb
	Sn-KED1	116	19482.429	19476.976	1.4	-0.04407	135.5	ppb
	Sn-KED1	118	354.004	150.667	9.0	-0.01129	7.5	ppb
	Sn-KED1	120	490.616	230.584	5.0	-0.01051	5.8	ppb
	Sb-KED1	121	191.335	1650.762	0.6	0.08594	1.9	ppb
	Sb-KED1	123	174.747	1300.553	4.1	0.08738	6.8	ppb
	Ba-KED1	135	62.667	4824.148	1.8	1.04110	3.8	ppb
	Ba-KED1	137	47.333	7940.874	2.7	1.06391	3.1	ppb
>	Lu-KED1	175	794743.932	827892.588	1.4			ppb
	Tl-KED1	203	72.667	53.333	21.3	-0.00160	52.7	ppb
	Tl-KED1	205	154.668	124.667	12.9	-0.00110	48.6	ppb
	Pb-KED1	208	165.334	165.334	6.2	-0.00016	184.2	ppb
	Bi-KED1	209	960.699	1109.377	6.5	0.00317	67.8	ppb
	U-KED1	238	113.334	46942.335	0.8	0.90972	0.4	ppb
>	Th-KED1	232	406165.238	434399.772	0.4			ppb
	Mn-STD1	55	1102.709	12485.455	2.2	0.18644	2.9	ppb
>	Ge-STD1	72	1364336.500	1485077.208	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		117.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		111.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.6		
>	Ge-KED2	72		110.6		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		106.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.2		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.0		
	Mn-STD1	55				
>	Ge-STD1	72		108.8		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 11:53:55
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\CCV.018
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	302630.698	0.8			ppb
	Be-KED1	9	4.667	67347.752	2.0	24.30976	1.4	ppb
	B-KED1	10	116.667	21059.529	4.1	23.62007	3.5	ppb
	B-KED1	11	739.353	116714.558	3.5	24.10105	3.3	ppb
	Al-KED1	27	861.359	712749.989	2.6	24.70931	2.6	ppb
>	Sc-KED1	45	791944.750	827701.336	0.4			ppb
	V-KED3	51	2.667	13805.336	2.1	25.17333	2.5	ppb
	Cr-KED3	52	1.333	19841.116	3.9	25.90276	4.3	ppb
	Cr-KED3	53	2.000	2429.540	1.5	25.26612	1.3	ppb
	Co-KED3	59	4.667	50563.335	1.3	24.80878	1.7	ppb
	Ni-KED3	60	4.000	14998.537	1.3	24.42522	1.8	ppb
	Ni-KED3	62	0.667	2536.892	3.3	24.19622	2.9	ppb
	Cu-KED3	63	3.333	48209.215	1.1	24.58250	1.6	ppb
	Cu-KED3	65	3.333	24541.732	1.6	24.51520	1.7	ppb
	Zn-KED3	66	8.000	4738.786	1.8	24.74598	2.1	ppb
>	Ge-KED3	72	18721.596	20658.259	0.5			ppb
>	Ge-KED2	72	61732.783	65955.924	1.3			ppb
	As-KED2	75	7.889	6937.573	1.9	24.97330	1.7	ppb
	Se-KED2	77	1.000	257.669	1.9	25.58546	3.1	ppb
	Se-KED2	78	23.999	905.301	1.9	26.15840	2.1	ppb
	Se-KED2	82	0.416	490.298	0.4	26.06355	1.0	ppb
	Mo-KED2	95	14.667	46985.825	1.8	24.50229	1.1	ppb
	Mo-KED2	97	8.000	31123.873	1.5	24.65587	1.2	ppb
	Mo-KED2	98	27.114	81959.617	2.1	24.50511	2.0	ppb
	Cd-KED2	111	2.000	26012.328	0.7	24.20130	1.0	ppb
	Cd-KED2	112	0.811	50683.333	2.1	24.14237	1.5	ppb
	Cd-KED2	114	4.298	65223.959	0.4	24.42624	1.7	ppb
>	Rh-KED3	103	171361.077	180181.499	2.1			ppb
	Ag-KED3	107	6.000	109702.339	1.6	24.93613	2.0	ppb
	Ag-KED3	109	5.333	108134.546	2.5	24.94605	1.8	ppb
>	In-KED1	115	737081.597	752033.621	2.8			ppb
	Sn-KED1	116	19482.429	292571.640	2.4	24.65751	2.5	ppb
	Sn-KED1	118	354.004	467199.365	1.2	24.97575	3.9	ppb
	Sn-KED1	120	490.616	646401.660	1.8	25.05741	1.3	ppb
	Sb-KED1	121	191.335	426726.941	0.3	25.33110	2.5	ppb
	Sb-KED1	123	174.747	321500.436	2.1	25.14621	2.2	ppb
	Ba-KED1	135	62.667	111434.266	0.4	24.48113	3.1	ppb
	Ba-KED1	137	47.333	184186.529	1.2	24.95805	3.9	ppb
>	Lu-KED1	175	794743.932	807927.930	1.4			ppb
	Tl-KED1	203	72.667	352804.899	0.9	25.93604	0.6	ppb
	Tl-KED1	205	154.668	829038.419	0.5	25.63468	1.6	ppb
	Pb-KED1	208	165.334	1097772.747	0.1	25.78816	1.3	ppb
	Bi-KED1	209	960.699	874491.965	0.8	26.11196	2.0	ppb
	U-KED1	238	113.334	1266727.491	0.2	24.90795	0.7	ppb
>	Th-KED1	232	406165.238	429215.980	0.6			ppb
	Mn-STD1	55	1102.709	1500957.646	0.7	25.38206	0.7	ppb
>	Ge-STD1	72	1364336.500	1449583.048	0.3			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.6		
	Be-KED1	9	97.2			
	B-KED1	10	94.5			
	B-KED1	11	96.4			
	Al-KED1	27	98.8			
>	Sc-KED1	45		104.5		
	V-KED3	51	100.7			
	Cr-KED3	52	103.6			
	Cr-KED3	53	101.1			
	Co-KED3	59	99.2			
	Ni-KED3	60	97.7			
	Ni-KED3	62	96.8			
	Cu-KED3	63	98.3			
	Cu-KED3	65	98.1			
	Zn-KED3	66	99.0			
>	Ge-KED3	72		110.3		
>	Ge-KED2	72		106.8		
	As-KED2	75	99.9			
	Se-KED2	77	102.3			
	Se-KED2	78	104.6			
	Se-KED2	82	104.3			
	Mo-KED2	95	98.0			
	Mo-KED2	97	98.6			
	Mo-KED2	98	98.0			
	Cd-KED2	111	96.8			
	Cd-KED2	112	96.6			
	Cd-KED2	114	97.7			
>	Rh-KED3	103		105.1		
	Ag-KED3	107	99.7			
	Ag-KED3	109	99.8			
>	In-KED1	115		102.0		
	Sn-KED1	116				
	Sn-KED1	118	99.9			
	Sn-KED1	120	100.2			
	Sb-KED1	121	101.3			
	Sb-KED1	123	100.6			
	Ba-KED1	135	97.9			
	Ba-KED1	137	99.8			
>	Lu-KED1	175		101.7		
	Tl-KED1	203	103.7			
	Tl-KED1	205	102.5			
	Pb-KED1	208	103.2			
	Bi-KED1	209	104.4			
	U-KED1	238	99.6			
>	Th-KED1	232		105.7		
	Mn-STD1	55	101.5			
>	Ge-STD1	72		106.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 11:59:07
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCB.019
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	289339.162	295972.625	3.2			ppb
|	Be-KED1	9	4.667	7.333	41.7	0.00094	116.7	ppb
|	B-KED1	10	116.667	166.668	6.6	0.05483	28.8	ppb
⌊	B-KED1	11	739.353	841.358	6.9	0.01797	42.3	ppb
⌈	Al-KED1	27	861.359	900.028	3.6	0.00052	187.6	ppb
⌊>	Sc-KED1	45	791944.750	814004.719	2.1			ppb
⌈	V-KED3	51	2.667	5.333	86.6	0.00456	188.7	ppb
|	Cr-KED3	52	1.333	0.667	173.2	-0.00104	147.0	ppb
|	Cr-KED3	53	2.000	3.333	69.3	0.01228	197.5	ppb
|	Co-KED3	59	4.667	10.000	34.6	0.00249	72.8	ppb
|	Ni-KED3	60	4.000	4.000	86.6	-0.00063	876.8	ppb
|	Ni-KED3	62	0.667	0.667	173.2	-0.00036	3210.5	ppb
|	Cu-KED3	63	3.333	12.000	60.1	0.00429	84.3	ppb
|	Cu-KED3	65	3.333	2.667	86.6	-0.00093	255.5	ppb
|	Zn-KED3	66	8.000	6.000	88.2	-0.01391	203.6	ppb
⌊>	Ge-KED3	72	18721.596	20298.417	2.6			ppb
⌈>	Ge-KED2	72	61732.783	66142.110	1.1			ppb
|	As-KED2	75	7.889	6.889	17.0	-0.00564	71.8	ppb
|	Se-KED2	77	1.000	1.111	62.4	0.00353	1938.4	ppb
|	Se-KED2	78	23.999	24.441	13.0	-0.03697	278.1	ppb
|	Se-KED2	82	0.416	0.526	459.5	0.00521	2482.8	ppb
|	Mo-KED2	95	14.667	20.667	29.6	0.00260	126.6	ppb
|	Mo-KED2	97	8.000	18.000	29.4	0.00747	57.1	ppb
|	Mo-KED2	98	27.114	43.187	9.1	0.00423	31.2	ppb
|	Cd-KED2	111	2.000	1.667	69.3	-0.00045	234.7	ppb
|	Cd-KED2	112	0.811	2.624	27.7	0.00083	40.3	ppb
⌊	Cd-KED2	114	4.298	4.610	64.2	0.00001	10694.1	ppb
⌈>	Rh-KED3	103	171361.077	177387.379	1.6			ppb
|	Ag-KED3	107	6.000	6.667	45.8	0.00011	658.3	ppb
⌊	Ag-KED3	109	5.333	6.667	45.8	0.00027	265.4	ppb
⌈>	In-KED1	115	737081.597	742342.044	1.6			ppb
|	Sn-KED1	116	19482.429	18849.866	1.1	-0.07055	23.3	ppb
|	Sn-KED1	118	354.004	544.677	12.6	0.01016	32.0	ppb
|	Sn-KED1	120	490.616	788.578	12.6	0.01154	29.5	ppb
|	Sb-KED1	121	191.335	441.340	9.3	0.01494	14.4	ppb
|	Sb-KED1	123	174.747	318.246	11.6	0.01128	26.2	ppb
|	Ba-KED1	135	62.667	40.000	13.2	-0.00515	20.0	ppb
⌊	Ba-KED1	137	47.333	19.333	26.0	-0.00388	18.7	ppb
⌈>	Lu-KED1	175	794743.932	801381.325	0.6			ppb
|	Tl-KED1	203	72.667	86.667	13.1	0.00099	82.3	ppb
|	Tl-KED1	205	154.668	203.335	7.6	0.00148	32.5	ppb
|	Pb-KED1	208	165.334	144.667	17.6	-0.00052	117.4	ppb
⌊	Bi-KED1	209	960.699	1057.372	3.7	0.00267	44.2	ppb
⌈	U-KED1	238	113.334	135.334	19.8	0.00039	139.5	ppb
⌊>	Th-KED1	232	406165.238	416153.166	0.5			ppb
⌈	Mn-STD1	55	1102.709	1330.062	5.0	0.00336	23.5	ppb
⌊>	Ge-STD1	72	1364336.500	1406971.208	2.0			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		102.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		102.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		108.4		
>	Ge-KED2	72		107.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100.7		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		100.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		102.5		
	Mn-STD1	55				
>	Ge-STD1	72		103.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCV
Sample Date/Time: Friday, October 04, 2013 12:04:20
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\LLCCV.020
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	296884.081	1.1			ppb
	Be-KED1	9	4.667	62.667	16.4	0.02131	18.2	ppb
	B-KED1	10	116.667	521.343	6.7	0.46172	7.5	ppb
	B-KED1	11	739.353	2955.639	2.6	0.46564	4.1	ppb
	Al-KED1	27	861.359	55528.432	2.8	1.94817	0.8	ppb
>	Sc-KED1	45	791944.750	805899.326	2.1			ppb
	V-KED3	51	2.667	113.334	12.4	0.20648	11.3	ppb
	Cr-KED3	52	1.333	146.001	13.2	0.19380	14.2	ppb
	Cr-KED3	53	2.000	18.000	29.4	0.16869	32.0	ppb
	Co-KED3	59	4.667	44.000	4.5	0.01962	3.5	ppb
	Ni-KED3	60	4.000	129.334	8.5	0.20898	8.8	ppb
	Ni-KED3	62	0.667	14.000	24.7	0.12992	25.4	ppb
	Cu-KED3	63	3.333	206.668	7.8	0.10621	7.0	ppb
	Cu-KED3	65	3.333	82.000	9.8	0.08038	10.0	ppb
	Zn-KED3	66	8.000	83.334	5.5	0.40129	7.0	ppb
>	Ge-KED3	72	18721.596	20134.848	1.6			ppb
>	Ge-KED2	72	61732.783	66590.507	0.3			ppb
	As-KED2	75	7.889	138.667	5.6	0.46468	6.3	ppb
	Se-KED2	77	1.000	10.444	10.3	0.92454	11.1	ppb
	Se-KED2	78	23.999	60.407	3.4	1.01668	6.2	ppb
	Se-KED2	82	0.416	16.517	15.3	0.84651	15.5	ppb
	Mo-KED2	95	14.667	96.000	10.4	0.04142	12.1	ppb
	Mo-KED2	97	8.000	61.333	22.2	0.04139	26.2	ppb
	Mo-KED2	98	27.114	167.261	1.4	0.04088	1.4	ppb
	Cd-KED2	111	2.000	25.333	8.2	0.02136	9.1	ppb
	Cd-KED2	112	0.811	43.446	25.4	0.02008	25.7	ppb
	Cd-KED2	114	4.298	53.661	7.6	0.01819	8.6	ppb
>	Rh-KED3	103	171361.077	177293.463	1.1			ppb
	Ag-KED3	107	6.000	106.000	6.8	0.02306	8.5	ppb
	Ag-KED3	109	5.333	91.334	5.5	0.02013	6.9	ppb
>	In-KED1	115	737081.597	755032.161	1.0			ppb
	Sn-KED1	116	19482.429	19528.370	1.6	-0.03851	72.4	ppb
	Sn-KED1	118	354.004	1253.388	5.6	0.04742	6.7	ppb
	Sn-KED1	120	490.616	1856.702	1.0	0.05232	1.3	ppb
	Sb-KED1	121	191.335	1225.386	3.8	0.06089	5.6	ppb
	Sb-KED1	123	174.747	883.188	3.0	0.05489	5.0	ppb
	Ba-KED1	135	62.667	272.003	12.9	0.04553	18.3	ppb
	Ba-KED1	137	47.333	375.338	5.3	0.04409	5.6	ppb
>	Lu-KED1	175	794743.932	809293.730	0.5			ppb
	Tl-KED1	203	72.667	312.670	6.3	0.01752	8.7	ppb
	Tl-KED1	205	154.668	782.688	7.2	0.01930	8.5	ppb
	Pb-KED1	208	165.334	967.346	3.0	0.01874	4.0	ppb
	Bi-KED1	209	960.699	2408.203	2.6	0.04267	5.2	ppb
	U-KED1	238	113.334	1037.371	4.1	0.01846	3.8	ppb
>	Th-KED1	232	406165.238	420500.634	0.9			ppb
	Mn-STD1	55	1102.709	3981.888	1.4	0.04986	1.5	ppb
>	Ge-STD1	72	1364336.500	1401811.710	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		102.6		
	Be-KED1	9	106.6			
	B-KED1	10	92.3			
	B-KED1	11	93.1			
	Al-KED1	27	97.4			
>	Sc-KED1	45		101.8		
	V-KED3	51	103.2			
	Cr-KED3	52	96.9			
	Cr-KED3	53	84.3			
	Co-KED3	59	98.1			
	Ni-KED3	60	104.5			
	Ni-KED3	62	65.0			
	Cu-KED3	63	106.2			
	Cu-KED3	65	80.4			
	Zn-KED3	66	80.3			
>	Ge-KED3	72		107.5		
>	Ge-KED2	72		107.9		
	As-KED2	75	92.9			
	Se-KED2	77	92.5			
	Se-KED2	78	101.7			
	Se-KED2	82	84.7			
	Mo-KED2	95	82.8			
	Mo-KED2	97	82.8			
	Mo-KED2	98	81.8			
	Cd-KED2	111	106.8			
	Cd-KED2	112	100.4			
	Cd-KED2	114	90.9			
>	Rh-KED3	103		103.5		
	Ag-KED3	107	115.3			
	Ag-KED3	109	100.6			
>	In-KED1	115		102.4		
	Sn-KED1	116				
	Sn-KED1	118	94.8			
	Sn-KED1	120	104.6			
	Sb-KED1	121	121.8			
	Sb-KED1	123	109.8			
	Ba-KED1	135	91.1			
	Ba-KED1	137	88.2			
>	Lu-KED1	175		101.8		
	Tl-KED1	203	87.6			
	Tl-KED1	205	96.5			
	Pb-KED1	208	93.7			
	Bi-KED1	209	85.3			
	U-KED1	238	92.3			
>	Th-KED1	232		103.5		
	Mn-STD1	55	99.7			
>	Ge-STD1	72		102.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Ni-KED3	62	Out of Control

LABWORKS - Summary Report

Sample ID: K1309708-MB
Sample Date/Time: Friday, October 04, 2013 12:10:59
Sample Description:
Autosampler Position: 107
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-MB.021
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	289384.486	1.0			ppb
	Be-KED1	9	4.667	6.000	33.3	0.00050	149.9	ppb
	B-KED1	10	116.667	692.683	5.2	0.67998	7.4	ppb
	B-KED1	11	739.353	4041.905	2.0	0.71810	3.7	ppb
	Al-KED1	27	861.359	5300.318	5.4	0.14853	6.1	ppb
>	Sc-KED1	45	791944.750	846947.912	0.6			ppb
	V-KED3	51	2.667	3.333	124.9	0.00081	955.2	ppb
	Cr-KED3	52	1.333	2.000	100.0	0.00074	362.5	ppb
	Cr-KED3	53	2.000	2.667	114.6	0.00508	631.6	ppb
	Co-KED3	59	4.667	2.000	100.0	-0.00153	65.6	ppb
	Ni-KED3	60	4.000	4.000	50.0	-0.00059	554.6	ppb
	Ni-KED3	62	0.667	0.667	173.2	-0.00052	2152.1	ppb
	Cu-KED3	63	3.333	8.000	50.0	0.00227	91.4	ppb
	Cu-KED3	65	3.333	1.333	173.2	-0.00232	100.6	ppb
	Zn-KED3	66	8.000	17.333	6.7	0.04585	13.6	ppb
>	Ge-KED3	72	18721.596	20355.826	0.6			ppb
>	Ge-KED2	72	61732.783	67099.902	1.4			ppb
	As-KED2	75	7.889	8.000	18.2	-0.00199	275.0	ppb
	Se-KED2	77	1.000	1.333	25.0	0.02397	132.6	ppb
	Se-KED2	78	23.999	26.100	15.0	0.00158	7945.5	ppb
	Se-KED2	82	0.416	-0.476	214.2	-0.04814	111.1	ppb
	Mo-KED2	95	14.667	7.333	83.3	-0.00444	69.3	ppb
	Mo-KED2	97	8.000	5.333	57.3	-0.00262	89.8	ppb
	Mo-KED2	98	27.114	8.594	75.4	-0.00612	31.9	ppb
	Cd-KED2	111	2.000	0.333	173.2	-0.00168	31.9	ppb
	Cd-KED2	112	0.811	1.012	245.7	0.00007	1641.6	ppb
	Cd-KED2	114	4.298	4.328	63.6	-0.00014	735.1	ppb
>	Rh-KED3	103	171361.077	178904.665	0.9			ppb
	Ag-KED3	107	6.000	4.667	65.5	-0.00037	187.3	ppb
	Ag-KED3	109	5.333	1.333	86.6	-0.00098	27.4	ppb
>	In-KED1	115	737081.597	748858.735	0.5			ppb
	Sn-KED1	116	19482.429	19026.542	0.9	-0.06964	18.8	ppb
	Sn-KED1	118	354.004	246.669	9.7	-0.00606	22.2	ppb
	Sn-KED1	120	490.616	311.927	9.3	-0.00726	16.0	ppb
	Sb-KED1	121	191.335	80.667	9.4	-0.00678	6.7	ppb
	Sb-KED1	123	174.747	50.578	30.9	-0.00997	12.5	ppb
	Ba-KED1	135	62.667	36.667	22.7	-0.00596	30.0	ppb
	Ba-KED1	137	47.333	18.000	29.4	-0.00409	17.5	ppb
>	Lu-KED1	175	794743.932	808592.986	0.8			ppb
	Tl-KED1	203	72.667	14.667	15.7	-0.00435	3.7	ppb
	Tl-KED1	205	154.668	42.000	23.8	-0.00356	9.0	ppb
	Pb-KED1	208	165.334	66.667	18.1	-0.00238	12.1	ppb
	Bi-KED1	209	960.699	860.026	2.8	-0.00350	26.3	ppb
	U-KED1	238	113.334	44.000	9.1	-0.00147	5.3	ppb
>	Th-KED1	232	406165.238	419298.858	1.1			ppb
	Mn-STD1	55	1102.709	964.033	8.0	-0.00339	41.4	ppb
>	Ge-STD1	72	1364336.500	1439098.930	0.7			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		100.0		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		106.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		108.7		
>	Ge-KED2	72		108.7		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		104.4		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101.7		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		103.2		
	Mn-STD1	55				
>	Ge-STD1	72		105.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-001
Sample Date/Time: Friday, October 04, 2013 12:16:11
Sample Description:
Autosampler Position: 108
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-001.022
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	302659.407	1.1			ppb
	Be-KED1	9	4.667	16.667	18.3	0.00425	24.7	ppb
	B-KED1	10	116.667	7622.035	3.9	8.46008	3.1	ppb
	B-KED1	11	739.353	42399.517	2.4	8.65160	1.3	ppb
	Al-KED1	27	861.359	3183102.730	1.9	104.21206	2.1	ppb
>	Sc-KED1	45	791944.750	877385.258	1.5			ppb
	V-KED3	51	2.667	2134.826	3.8	3.74952	5.5	ppb
	Cr-KED3	52	1.333	419.339	2.4	0.52570	1.6	ppb
	Cr-KED3	53	2.000	58.000	12.4	0.55990	14.7	ppb
	Co-KED3	59	4.667	199.335	6.1	0.09177	6.8	ppb
	Ni-KED3	60	4.000	294.670	1.4	0.45550	1.7	ppb
	Ni-KED3	62	0.667	53.333	5.7	0.48339	5.3	ppb
	Cu-KED3	63	3.333	2928.300	1.3	1.43786	3.0	ppb
	Cu-KED3	65	3.333	1558.085	1.6	1.49711	3.0	ppb
	Zn-KED3	66	8.000	556.678	3.3	2.76116	3.5	ppb
>	Ge-KED3	72	18721.596	21433.403	1.8			ppb
>	Ge-KED2	72	61732.783	67009.464	0.7			ppb
	As-KED2	75	7.889	104.334	6.2	0.33983	7.4	ppb
	Se-KED2	77	1.000	2.000	16.7	0.08988	37.9	ppb
	Se-KED2	78	23.999	28.615	7.2	0.07486	74.4	ppb
	Se-KED2	82	0.416	0.958	34.2	0.02662	65.9	ppb
	Mo-KED2	95	14.667	318.004	3.9	0.15508	3.4	ppb
	Mo-KED2	97	8.000	204.001	11.9	0.15239	12.9	ppb
	Mo-KED2	98	27.114	578.459	9.4	0.16157	9.4	ppb
	Cd-KED2	111	2.000	78.000	12.8	0.06944	13.2	ppb
	Cd-KED2	112	0.811	155.226	7.8	0.07234	7.2	ppb
	Cd-KED2	114	4.298	194.687	6.3	0.07002	5.9	ppb
>	Rh-KED3	103	171361.077	180522.774	0.3			ppb
	Ag-KED3	107	6.000	28.000	18.9	0.00492	24.7	ppb
	Ag-KED3	109	5.333	22.000	27.3	0.00377	36.7	ppb
>	In-KED1	115	737081.597	754658.804	1.9			ppb
	Sn-KED1	116	19482.429	19584.278	0.6	-0.03236	79.3	ppb
	Sn-KED1	118	354.004	363.338	5.0	0.00006	2071.0	ppb
	Sn-KED1	120	490.616	541.942	4.3	0.00153	33.8	ppb
	Sb-KED1	121	191.335	482.675	3.5	0.01698	9.1	ppb
	Sb-KED1	123	174.747	327.332	3.3	0.01157	3.2	ppb
	Ba-KED1	135	62.667	19622.137	2.1	4.28340	3.5	ppb
	Ba-KED1	137	47.333	31982.431	1.2	4.31057	0.7	ppb
>	Lu-KED1	175	794743.932	831490.965	0.8			ppb
	Tl-KED1	203	72.667	42.667	5.4	-0.00238	6.7	ppb
	Tl-KED1	205	154.668	79.334	10.2	-0.00248	10.6	ppb
	Pb-KED1	208	165.334	8191.570	0.7	0.18305	1.5	ppb
	Bi-KED1	209	960.699	985.367	5.0	-0.00058	213.4	ppb
	U-KED1	238	113.334	576.012	4.3	0.00882	5.3	ppb
>	Th-KED1	232	406165.238	435185.146	0.4			ppb
	Mn-STD1	55	1102.709	612267.843	1.2	10.35770	0.3	ppb
>	Ge-STD1	72	1364336.500	1447423.086	1.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		110.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.5		
>	Ge-KED2	72		108.5		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		105.3		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.1		
	Mn-STD1	55				
>	Ge-STD1	72		106.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-001D
Sample Date/Time: Friday, October 04, 2013 12:21:23
Sample Description:
Autosampler Position: 109
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309708-001D.023
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	314768.127	1.9			ppb
	Be-KED1	9	4.667	14.667	28.4	0.00332	41.8	ppb
	B-KED1	10	116.667	7960.885	1.7	8.50216	3.7	ppb
	B-KED1	11	739.353	43772.962	0.7	8.59045	2.4	ppb
	Al-KED1	27	861.359	3482557.782	1.2	111.61556	3.3	ppb
>	Sc-KED1	45	791944.750	896622.723	2.3			ppb
	V-KED3	51	2.667	2106.822	2.5	3.67814	4.9	ppb
	Cr-KED3	52	1.333	421.340	6.1	0.52470	3.9	ppb
	Cr-KED3	53	2.000	59.333	18.6	0.56826	18.4	ppb
	Co-KED3	59	4.667	216.668	5.6	0.09944	8.1	ppb
	Ni-KED3	60	4.000	358.004	4.2	0.55177	5.5	ppb
	Ni-KED3	62	0.667	66.000	18.2	0.59472	16.1	ppb
	Cu-KED3	63	3.333	3105.004	4.2	1.51615	6.0	ppb
	Cu-KED3	65	3.333	1543.417	3.8	1.47355	3.3	ppb
	Zn-KED3	66	8.000	560.011	5.2	2.76098	5.3	ppb
>	Ge-KED3	72	18721.596	21564.937	2.4			ppb
>	Ge-KED2	72	61732.783	68460.315	0.4			ppb
	As-KED2	75	7.889	109.556	2.8	0.35004	3.3	ppb
	Se-KED2	77	1.000	1.889	27.0	0.07504	66.0	ppb
	Se-KED2	78	23.999	26.023	12.5	-0.01724	522.0	ppb
	Se-KED2	82	0.416	-1.607	73.4	-0.10584	56.8	ppb
	Mo-KED2	95	14.667	297.336	2.2	0.14126	2.0	ppb
	Mo-KED2	97	8.000	246.669	7.3	0.18152	7.4	ppb
	Mo-KED2	98	27.114	625.941	1.8	0.17169	1.8	ppb
	Cd-KED2	111	2.000	84.000	7.8	0.07331	8.1	ppb
	Cd-KED2	112	0.811	139.065	15.1	0.06339	14.9	ppb
	Cd-KED2	114	4.298	197.578	9.9	0.06954	9.8	ppb
>	Rh-KED3	103	171361.077	186111.179	0.8			ppb
	Ag-KED3	107	6.000	28.000	21.4	0.00472	27.1	ppb
	Ag-KED3	109	5.333	30.000	52.1	0.00540	64.1	ppb
>	In-KED1	115	737081.597	749857.545	1.8			ppb
	Sn-KED1	116	19482.429	19362.284	3.1	-0.04088	179.7	ppb
	Sn-KED1	118	354.004	380.672	3.2	0.00110	32.5	ppb
	Sn-KED1	120	490.616	507.275	10.2	0.00031	603.1	ppb
	Sb-KED1	121	191.335	503.342	6.4	0.01836	7.7	ppb
	Sb-KED1	123	174.747	354.000	6.8	0.01382	11.1	ppb
	Ba-KED1	135	62.667	19508.648	1.8	4.28547	2.9	ppb
	Ba-KED1	137	47.333	31651.695	1.2	4.29371	2.0	ppb
>	Lu-KED1	175	794743.932	821665.061	1.5			ppb
	Tl-KED1	203	72.667	31.333	28.8	-0.00316	21.7	ppb
	Tl-KED1	205	154.668	85.334	11.6	-0.00227	11.9	ppb
	Pb-KED1	208	165.334	8263.592	2.1	0.18693	1.1	ppb
	Bi-KED1	209	960.699	950.698	5.8	-0.00125	119.6	ppb
	U-KED1	238	113.334	621.347	8.2	0.00985	9.0	ppb
>	Th-KED1	232	406165.238	429493.144	1.1			ppb
	Mn-STD1	55	1102.709	632817.659	2.1	10.58720	1.6	ppb
>	Ge-STD1	72	1364336.500	1463728.263	2.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.8		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		113.2		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		115.2		
>	Ge-KED2	72		110.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.6		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101.7		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		105.7		
	Mn-STD1	55				
>	Ge-STD1	72		107.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-001S
Sample Date/Time: Friday, October 04, 2013 12:26:35
Sample Description:
Autosampler Position: 110
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309708-001S.024
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	312174.965	2.1			ppb
	Be-KED1	9	4.667	7137.116	1.2	2.49689	2.9	ppb
	B-KED1	10	116.667	8028.256	2.1	8.64366	0.6	ppb
	B-KED1	11	739.353	44301.256	1.1	8.76961	2.4	ppb
	Al-KED1	27	861.359	6618332.982	1.7	206.92487	3.5	ppb
>	Sc-KED1	45	791944.750	919240.227	2.4			ppb
	V-KED3	51	2.667	16538.235	1.4	29.26263	0.7	ppb
	Cr-KED3	52	1.333	8733.337	2.6	11.06091	2.0	ppb
	Cr-KED3	53	2.000	1013.369	1.2	10.21323	0.2	ppb
	Co-KED3	59	4.667	52792.037	0.9	25.13528	0.2	ppb
	Ni-KED3	60	4.000	15835.441	2.1	25.02789	2.8	ppb
	Ni-KED3	62	0.667	2714.925	2.8	25.12769	1.9	ppb
	Cu-KED3	63	3.333	28205.151	0.8	13.95596	1.0	ppb
	Cu-KED3	65	3.333	14369.892	1.7	13.92836	1.7	ppb
	Zn-KED3	66	8.000	5594.429	0.4	28.35771	1.3	ppb
>	Ge-KED3	72	18721.596	21287.850	0.9			ppb
>	Ge-KED2	72	61732.783	68613.049	0.8			ppb
	As-KED2	75	7.889	14298.152	0.4	49.50560	0.7	ppb
	Se-KED2	77	1.000	525.010	1.6	50.20076	1.2	ppb
	Se-KED2	78	23.999	1796.506	1.3	50.59213	2.1	ppb
	Se-KED2	82	0.416	982.770	1.1	50.24172	1.8	ppb
	Mo-KED2	95	14.667	41032.858	1.8	20.56909	2.0	ppb
	Mo-KED2	97	8.000	27290.713	1.6	20.78260	2.3	ppb
	Mo-KED2	98	27.114	70809.071	1.2	20.35023	1.8	ppb
	Cd-KED2	111	2.000	27840.770	0.5	24.89868	1.1	ppb
	Cd-KED2	112	0.811	51806.011	1.4	23.72404	2.1	ppb
	Cd-KED2	114	4.298	65014.418	1.7	23.40030	1.0	ppb
>	Rh-KED3	103	171361.077	183308.681	1.2			ppb
	Ag-KED3	107	6.000	58460.048	1.2	13.05867	0.5	ppb
	Ag-KED3	109	5.333	57047.016	1.0	12.93679	2.1	ppb
>	In-KED1	115	737081.597	754884.574	0.6			ppb
	Sn-KED1	116	19482.429	29848.562	9.8	0.89203	30.9	ppb
	Sn-KED1	118	354.004	547.344	7.6	0.00984	21.0	ppb
	Sn-KED1	120	490.616	988.531	5.5	0.01879	12.5	ppb
	Sb-KED1	121	191.335	908289.859	0.3	53.70385	0.8	ppb
	Sb-KED1	123	174.747	691039.819	1.0	53.84983	1.3	ppb
	Ba-KED1	135	62.667	484365.981	0.6	105.99782	0.8	ppb
	Ba-KED1	137	47.333	795819.820	1.6	107.37562	1.5	ppb
>	Lu-KED1	175	794743.932	822109.130	1.0			ppb
	Tl-KED1	203	72.667	726294.324	1.1	52.48008	1.8	ppb
	Tl-KED1	205	154.668	1709696.469	1.3	51.95754	2.0	ppb
	Pb-KED1	208	165.334	2228448.477	0.5	51.44931	1.5	ppb
	Bi-KED1	209	960.699	1030.704	4.9	0.00108	115.6	ppb
	U-KED1	238	113.334	1063307.415	0.6	21.06534	0.3	ppb
>	Th-KED1	232	406165.238	425993.665	0.6			ppb
	Mn-STD1	55	1102.709	2256773.316	1.8	38.01188	1.7	ppb
>	Ge-STD1	72	1364336.500	1455757.718	1.0			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		107.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		116.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		113.7		
>	Ge-KED2	72		111.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		107.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		102.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.9		
	Mn-STD1	55				
>	Ge-STD1	72		106.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LCSW
Sample Date/Time: Friday, October 04, 2013 12:31:47
Sample Description:
Autosampler Position: 111
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\LCSW.025
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	307406.693	2.3			ppb
	Be-KED1	9	4.667	7326.547	3.8	2.60145	1.6	ppb
	B-KED1	10	116.667	856.026	6.6	0.81407	9.5	ppb
	B-KED1	11	739.353	4634.085	1.6	0.78816	4.6	ppb
	Al-KED1	27	861.359	2943465.002	2.0	98.68662	1.1	ppb
>	Sc-KED1	45	791944.750	856622.472	1.2			ppb
	V-KED3	51	2.667	13969.496	2.2	24.60401	3.0	ppb
	Cr-KED3	52	1.333	8225.035	2.3	10.36994	3.1	ppb
	Cr-KED3	53	2.000	958.699	6.7	9.61506	6.6	ppb
	Co-KED3	59	4.667	52718.461	2.3	24.98452	3.0	ppb
	Ni-KED3	60	4.000	15881.495	3.1	24.98338	3.9	ppb
	Ni-KED3	62	0.667	2651.580	5.3	24.42561	5.0	ppb
	Cu-KED3	63	3.333	25466.018	2.1	12.53930	1.2	ppb
	Cu-KED3	65	3.333	12849.112	2.5	12.39467	2.5	ppb
	Zn-KED3	66	8.000	5244.296	1.1	26.45442	1.9	ppb
>	Ge-KED3	72	18721.596	21389.335	0.8			ppb
>	Ge-KED2	72	61732.783	68541.702	0.2			ppb
	As-KED2	75	7.889	14618.365	0.7	50.66574	0.6	ppb
	Se-KED2	77	1.000	544.677	3.6	52.13949	3.5	ppb
	Se-KED2	78	23.999	1860.023	1.9	52.45845	2.0	ppb
	Se-KED2	82	0.416	985.787	1.6	50.44471	1.7	ppb
	Mo-KED2	95	14.667	40572.877	1.6	20.35904	1.8	ppb
	Mo-KED2	97	8.000	25946.894	3.4	19.77803	3.6	ppb
	Mo-KED2	98	27.114	69103.433	1.8	19.87920	1.8	ppb
	Cd-KED2	111	2.000	27455.026	1.2	24.57792	1.1	ppb
	Cd-KED2	112	0.811	53508.712	1.3	24.52651	1.2	ppb
	Cd-KED2	114	4.298	68953.299	0.4	24.84501	0.5	ppb
>	Rh-KED3	103	171361.077	185356.100	0.6			ppb
	Ag-KED3	107	6.000	57244.463	0.2	12.64605	0.7	ppb
	Ag-KED3	109	5.333	56858.931	0.7	12.74964	0.4	ppb
>	In-KED1	115	737081.597	761560.838	2.4			ppb
	Sn-KED1	116	19482.429	31948.703	3.4	1.05578	10.0	ppb
	Sn-KED1	118	354.004	986.034	1.8	0.03276	3.2	ppb
	Sn-KED1	120	490.616	1441.988	4.5	0.03580	3.8	ppb
	Sb-KED1	121	191.335	936909.306	2.5	54.90954	0.9	ppb
	Sb-KED1	123	174.747	722034.738	1.3	55.78238	1.6	ppb
	Ba-KED1	135	62.667	460913.101	0.9	100.02968	3.2	ppb
	Ba-KED1	137	47.333	754631.995	2.2	100.99634	4.5	ppb
>	Lu-KED1	175	794743.932	813107.963	0.4			ppb
	Tl-KED1	203	72.667	730274.375	1.3	53.34633	1.3	ppb
	Tl-KED1	205	154.668	1733494.170	0.7	53.25901	1.1	ppb
	Pb-KED1	208	165.334	2253823.772	0.5	52.60594	0.3	ppb
	Bi-KED1	209	960.699	949.365	3.6	-0.00099	107.7	ppb
	U-KED1	238	113.334	1062530.555	0.1	21.10571	0.8	ppb
>	Th-KED1	232	406165.238	424884.086	0.8			ppb
	Mn-STD1	55	1102.709	1517963.226	1.5	25.34246	1.1	ppb
>	Ge-STD1	72	1364336.500	1468316.076	1.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		106.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		108.2		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.2		
>	Ge-KED2	72		111.0		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102.3		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.6		
	Mn-STD1	55				
>	Ge-STD1	72		107.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-002
Sample Date/Time: Friday, October 04, 2013 12:36:59
Sample Description:
Autosampler Position: 112
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309708-002.026
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	313940.616	2.3			ppb
	Be-KED1	9	4.667	20.667	27.9	0.00542	35.9	ppb
	B-KED1	10	116.667	7403.918	0.9	7.91858	2.9	ppb
	B-KED1	11	739.353	40298.799	3.2	7.91395	1.4	ppb
	Al-KED1	27	861.359	5149379.500	4.6	165.54131	1.4	ppb
>	Sc-KED1	45	791944.750	893287.211	3.2			ppb
	V-KED3	51	2.667	2453.544	5.3	4.30821	6.4	ppb
	Cr-KED3	52	1.333	384.672	1.2	0.48208	2.7	ppb
	Cr-KED3	53	2.000	56.667	19.4	0.54606	21.1	ppb
	Co-KED3	59	4.667	367.338	3.0	0.17115	2.7	ppb
	Ni-KED3	60	4.000	188.001	12.9	0.28812	14.0	ppb
	Ni-KED3	62	0.667	36.667	24.6	0.32941	23.9	ppb
	Cu-KED3	63	3.333	1313.394	4.3	0.64333	3.2	ppb
	Cu-KED3	65	3.333	674.683	3.4	0.64604	4.6	ppb
	Zn-KED3	66	8.000	268.669	12.3	1.30687	11.4	ppb
>	Ge-KED3	72	18721.596	21439.411	1.5			ppb
>	Ge-KED2	72	61732.783	67917.659	4.9			ppb
	As-KED2	75	7.889	114.223	9.3	0.36883	5.2	ppb
	Se-KED2	77	1.000	3.444	27.9	0.22942	45.0	ppb
	Se-KED2	78	23.999	28.995	10.4	0.07328	64.7	ppb
	Se-KED2	82	0.416	-0.614	414.2	-0.05111	261.9	ppb
	Mo-KED2	95	14.667	290.670	7.7	0.13894	3.2	ppb
	Mo-KED2	97	8.000	220.668	4.1	0.16314	3.4	ppb
	Mo-KED2	98	27.114	571.573	4.6	0.15750	5.0	ppb
	Cd-KED2	111	2.000	7.333	31.5	0.00461	40.4	ppb
	Cd-KED2	112	0.811	15.372	19.0	0.00666	15.4	ppb
	Cd-KED2	114	4.298	18.346	15.8	0.00493	15.5	ppb
>	Rh-KED3	103	171361.077	185619.568	1.2			ppb
	Ag-KED3	107	6.000	25.333	44.9	0.00416	60.8	ppb
	Ag-KED3	109	5.333	22.000	31.5	0.00362	41.9	ppb
>	In-KED1	115	737081.597	768706.132	1.7			ppb
	Sn-KED1	116	19482.429	19357.282	1.0	-0.08461	44.7	ppb
	Sn-KED1	118	354.004	198.668	10.5	-0.00891	14.0	ppb
	Sn-KED1	120	490.616	308.602	18.4	-0.00773	25.2	ppb
	Sb-KED1	121	191.335	576.012	6.9	0.02187	11.3	ppb
	Sb-KED1	123	174.747	426.002	5.4	0.01868	12.0	ppb
	Ba-KED1	135	62.667	20173.576	3.0	4.32346	4.3	ppb
	Ba-KED1	137	47.333	32502.270	1.4	4.30033	0.6	ppb
>	Lu-KED1	175	794743.932	835051.469	1.1			ppb
	Tl-KED1	203	72.667	101.334	11.2	0.00177	42.4	ppb
	Tl-KED1	205	154.668	230.002	24.9	0.00202	84.0	ppb
	Pb-KED1	208	165.334	6193.853	2.5	0.13684	2.6	ppb
	Bi-KED1	209	960.699	1007.369	4.5	-0.00005	3573.5	ppb
	U-KED1	238	113.334	780.688	4.1	0.01276	4.4	ppb
>	Th-KED1	232	406165.238	436000.089	0.4			ppb
	Mn-STD1	55	1102.709	1387806.209	1.0	22.91221	1.4	ppb
>	Ge-STD1	72	1364336.500	1484712.708	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.5		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		112.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.5		
>	Ge-KED2	72		110.0		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.3		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.3		
	Mn-STD1	55				
>	Ge-STD1	72		108.8		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-003
Sample Date/Time: Friday, October 04, 2013 12:42:12
Sample Description:
Autosampler Position: 113
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-003.027
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	324710.237	0.6			ppb
	Be-KED1	9	4.667	24.667	18.7	0.00654	24.6	ppb
	B-KED1	10	116.667	7852.160	4.5	8.11832	4.0	ppb
	B-KED1	11	739.353	43479.401	0.7	8.26342	1.1	ppb
	Al-KED1	27	861.359	8970345.965	2.6	280.97861	2.4	ppb
>	Sc-KED1	45	791944.750	917136.473	0.9			ppb
	V-KED3	51	2.667	2394.201	1.3	4.12250	2.8	ppb
	Cr-KED3	52	1.333	396.672	5.1	0.48735	3.8	ppb
	Cr-KED3	53	2.000	42.667	31.9	0.39660	33.6	ppb
	Co-KED3	59	4.667	479.341	5.0	0.21979	5.0	ppb
	Ni-KED3	60	4.000	421.340	7.0	0.64113	5.6	ppb
	Ni-KED3	62	0.667	70.667	9.1	0.63044	9.6	ppb
	Cu-KED3	63	3.333	6398.099	2.0	3.08165	1.2	ppb
	Cu-KED3	65	3.333	3241.701	1.4	3.05774	2.1	ppb
	Zn-KED3	66	8.000	638.681	7.3	3.11211	7.4	ppb
>	Ge-KED3	72	18721.596	21857.377	1.5			ppb
>	Ge-KED2	72	61732.783	70444.266	0.9			ppb
	As-KED2	75	7.889	111.778	6.3	0.34693	7.6	ppb
	Se-KED2	77	1.000	3.333	26.5	0.20491	41.0	ppb
	Se-KED2	78	23.999	28.056	9.8	0.01847	393.0	ppb
	Se-KED2	82	0.416	1.513	129.8	0.05113	190.9	ppb
	Mo-KED2	95	14.667	312.670	13.1	0.14447	13.3	ppb
	Mo-KED2	97	8.000	204.668	12.8	0.14519	14.3	ppb
	Mo-KED2	98	27.114	523.270	6.9	0.13781	6.4	ppb
	Cd-KED2	111	2.000	11.667	9.9	0.00818	13.5	ppb
	Cd-KED2	112	0.811	20.731	36.3	0.00881	37.3	ppb
	Cd-KED2	114	4.298	20.243	7.7	0.00538	9.2	ppb
>	Rh-KED3	103	171361.077	185441.924	1.0			ppb
	Ag-KED3	107	6.000	20.000	40.0	0.00298	59.2	ppb
	Ag-KED3	109	5.333	18.000	11.1	0.00274	16.1	ppb
>	In-KED1	115	737081.597	768436.872	0.6			ppb
	Sn-KED1	116	19482.429	19344.920	1.0	-0.08550	12.7	ppb
	Sn-KED1	118	354.004	372.005	5.5	0.00016	741.7	ppb
	Sn-KED1	120	490.616	452.631	6.4	-0.00223	51.2	ppb
	Sb-KED1	121	191.335	438.673	2.1	0.01390	3.8	ppb
	Sb-KED1	123	174.747	347.585	10.1	0.01267	21.8	ppb
	Ba-KED1	135	62.667	22229.284	1.6	4.76543	1.7	ppb
	Ba-KED1	137	47.333	35474.664	1.4	4.69574	1.4	ppb
>	Lu-KED1	175	794743.932	832247.849	0.5			ppb
	Tl-KED1	203	72.667	62.000	8.5	-0.00101	35.1	ppb
	Tl-KED1	205	154.668	150.667	8.5	-0.00034	110.1	ppb
	Pb-KED1	208	165.334	7877.516	1.5	0.17570	1.0	ppb
	Bi-KED1	209	960.699	1009.369	1.0	0.00010	257.5	ppb
	U-KED1	238	113.334	611.346	4.3	0.00950	5.9	ppb
>	Th-KED1	232	406165.238	435485.810	1.0			ppb
	Mn-STD1	55	1102.709	890997.771	1.9	14.86408	1.2	ppb
>	Ge-STD1	72	1364336.500	1468505.007	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		112.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		115.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		116.7		
>	Ge-KED2	72		114.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.7		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.2		
	Mn-STD1	55				
>	Ge-STD1	72		107.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-004
Sample Date/Time: Friday, October 04, 2013 12:47:24
Sample Description:
Autosampler Position: 114
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-004.028
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	316224.614	2.7			ppb
	Be-KED1	9	4.667	8.000	43.3	0.00099	117.9	ppb
	B-KED1	10	116.667	5687.132	0.6	6.00571	2.3	ppb
	B-KED1	11	739.353	31120.535	1.9	6.03448	4.1	ppb
	Al-KED1	27	861.359	798973.519	3.3	24.45936	2.3	ppb
>	Sc-KED1	45	791944.750	937163.797	1.0			ppb
	V-KED3	51	2.667	3867.857	4.1	6.76074	1.7	ppb
	Cr-KED3	52	1.333	246.669	10.2	0.30701	9.8	ppb
	Cr-KED3	53	2.000	30.000	24.0	0.27784	28.3	ppb
	Co-KED3	59	4.667	62.667	24.2	0.02709	29.0	ppb
	Ni-KED3	60	4.000	72.667	5.7	0.10652	8.5	ppb
	Ni-KED3	62	0.667	17.333	65.6	0.15069	66.6	ppb
	Cu-KED3	63	3.333	540.677	8.1	0.26297	9.7	ppb
	Cu-KED3	65	3.333	300.003	10.1	0.28443	12.4	ppb
	Zn-KED3	66	8.000	88.667	7.3	0.39859	5.8	ppb
>	Ge-KED3	72	18721.596	21530.886	2.4			ppb
>	Ge-KED2	72	61732.783	70496.212	1.7			ppb
	As-KED2	75	7.889	101.111	2.4	0.31068	4.0	ppb
	Se-KED2	77	1.000	1.667	40.0	0.04960	130.8	ppb
	Se-KED2	78	23.999	29.494	8.6	0.05749	100.5	ppb
	Se-KED2	82	0.416	-0.822	83.9	-0.06482	53.7	ppb
	Mo-KED2	95	14.667	408.006	4.7	0.19107	6.3	ppb
	Mo-KED2	97	8.000	280.003	9.3	0.20097	10.7	ppb
	Mo-KED2	98	27.114	743.946	4.1	0.19953	4.3	ppb
	Cd-KED2	111	2.000	4.333	35.3	0.00177	72.5	ppb
	Cd-KED2	112	0.811	4.799	23.9	0.00172	27.8	ppb
	Cd-KED2	114	4.298	7.970	47.1	0.00108	122.9	ppb
>	Rh-KED3	103	171361.077	184304.871	1.9			ppb
	Ag-KED3	107	6.000	6.000	66.7	-0.00011	803.1	ppb
	Ag-KED3	109	5.333	10.000	91.7	0.00098	213.8	ppb
>	In-KED1	115	737081.597	773163.906	0.2			ppb
	Sn-KED1	116	19482.429	19318.032	0.6	-0.09832	8.6	ppb
	Sn-KED1	118	354.004	146.667	18.5	-0.01168	12.2	ppb
	Sn-KED1	120	490.616	232.652	6.9	-0.01064	5.6	ppb
	Sb-KED1	121	191.335	242.669	3.7	0.00242	22.0	ppb
	Sb-KED1	123	174.747	190.500	19.5	0.00055	516.9	ppb
	Ba-KED1	135	62.667	8012.248	3.5	1.69816	3.7	ppb
	Ba-KED1	137	47.333	13132.036	2.9	1.72357	3.1	ppb
>	Lu-KED1	175	794743.932	825343.961	0.4			ppb
	Tl-KED1	203	72.667	30.667	52.3	-0.00322	36.1	ppb
	Tl-KED1	205	154.668	61.333	10.5	-0.00300	6.7	ppb
	Pb-KED1	208	165.334	1448.695	4.8	0.02937	5.6	ppb
	Bi-KED1	209	960.699	938.698	1.8	-0.00173	22.5	ppb
	U-KED1	238	113.334	672.016	5.2	0.01072	5.9	ppb
>	Th-KED1	232	406165.238	433593.841	0.4			ppb
	Mn-STD1	55	1102.709	248330.339	2.0	4.12616	1.2	ppb
>	Ge-STD1	72	1364336.500	1469375.203	1.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		118.3		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		115.0		
>	Ge-KED2	72		114.2		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		107.6		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.9		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		106.8		
	Mn-STD1	55				
>	Ge-STD1	72		107.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-005
Sample Date/Time: Friday, October 04, 2013 12:52:36
Sample Description:
Autosampler Position: 115
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-005.029
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	316459.749	1.2			ppb
	Be-KED1	9	4.667	6.667	17.3	0.00054	77.6	ppb
	B-KED1	10	116.667	8621.934	0.3	9.16618	1.2	ppb
	B-KED1	11	739.353	46452.768	2.5	9.07667	3.8	ppb
	Al-KED1	27	861.359	1264533.268	2.9	39.01445	2.1	ppb
>	Sc-KED1	45	791944.750	930376.039	0.9			ppb
	V-KED3	51	2.667	3649.133	1.8	6.24755	1.4	ppb
	Cr-KED3	52	1.333	368.672	16.2	0.45009	15.9	ppb
	Cr-KED3	53	2.000	42.667	31.2	0.39435	33.0	ppb
	Co-KED3	59	4.667	97.334	6.6	0.04234	6.6	ppb
	Ni-KED3	60	4.000	132.001	4.5	0.19488	5.2	ppb
	Ni-KED3	62	0.667	20.667	34.0	0.17840	35.7	ppb
	Cu-KED3	63	3.333	935.364	3.3	0.44635	3.7	ppb
	Cu-KED3	65	3.333	439.340	6.8	0.40881	7.2	ppb
	Zn-KED3	66	8.000	268.669	1.5	1.27452	1.6	ppb
>	Ge-KED3	72	18721.596	21985.572	0.5			ppb
>	Ge-KED2	72	61732.783	69684.214	0.7			ppb
	As-KED2	75	7.889	103.556	2.5	0.32286	2.4	ppb
	Se-KED2	77	1.000	1.000	57.7	-0.01196	458.1	ppb
	Se-KED2	78	23.999	25.999	7.1	-0.03049	184.8	ppb
	Se-KED2	82	0.416	2.305	65.9	0.09225	82.6	ppb
	Mo-KED2	95	14.667	414.006	6.5	0.19621	6.4	ppb
	Mo-KED2	97	8.000	292.003	11.4	0.21216	11.3	ppb
	Mo-KED2	98	27.114	728.685	4.4	0.19758	4.1	ppb
	Cd-KED2	111	2.000	10.333	22.3	0.00712	29.5	ppb
	Cd-KED2	112	0.811	17.799	24.5	0.00761	26.0	ppb
	Cd-KED2	114	4.298	19.076	16.8	0.00504	21.7	ppb
>	Rh-KED3	103	171361.077	184188.512	0.9			ppb
	Ag-KED3	107	6.000	10.000	69.3	0.00080	196.3	ppb
	Ag-KED3	109	5.333	10.000	34.6	0.00097	83.2	ppb
>	In-KED1	115	737081.597	766571.487	0.4			ppb
	Sn-KED1	116	19482.429	18922.918	1.5	-0.11865	27.8	ppb
	Sn-KED1	118	354.004	236.002	1.5	-0.00693	2.9	ppb
	Sn-KED1	120	490.616	315.953	9.4	-0.00739	16.0	ppb
	Sb-KED1	121	191.335	320.670	9.1	0.00708	23.0	ppb
	Sb-KED1	123	174.747	267.499	7.5	0.00658	22.2	ppb
	Ba-KED1	135	62.667	12438.082	3.0	2.66668	3.0	ppb
	Ba-KED1	137	47.333	20556.782	1.6	2.72483	1.2	ppb
>	Lu-KED1	175	794743.932	821995.594	1.0			ppb
	Tl-KED1	203	72.667	32.000	28.6	-0.00312	20.9	ppb
	Tl-KED1	205	154.668	65.333	15.4	-0.00288	10.2	ppb
	Pb-KED1	208	165.334	4040.887	1.4	0.08936	1.2	ppb
	Bi-KED1	209	960.699	923.363	6.2	-0.00206	90.2	ppb
	U-KED1	238	113.334	716.018	9.2	0.01173	11.5	ppb
>	Th-KED1	232	406165.238	429102.409	1.2			ppb
	Mn-STD1	55	1102.709	422917.133	2.4	6.95639	1.9	ppb
>	Ge-STD1	72	1364336.500	1487111.932	0.6			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.4		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		117.5		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		117.4		
>	Ge-KED2	72		112.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		107.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		105.6		
	Mn-STD1	55				
>	Ge-STD1	72		109.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309708-006
Sample Date/Time: Friday, October 04, 2013 12:57:48
Sample Description:
Autosampler Position: 116
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309708-006.030
User Name: RRM

Concentration Results

Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	289339.162	316056.290	1.2			ppb
Be-KED1	9	4.667	23.333	62.0	0.00626	77.7	ppb
B-KED1	10	116.667	5637.779	2.6	5.95488	3.7	ppb
B-KED1	11	739.353	30698.282	0.4	5.95054	1.7	ppb
Al-KED1	27	861.359	8697886.343	0.9	264.13672	1.2	ppb
Sc-KED1	45	791944.750	946015.476	0.9			ppb
V-KED3	51	2.667	1086.708	3.1	1.83802	4.7	ppb
Cr-KED3	52	1.333	325.337	7.2	0.39266	5.3	ppb
Cr-KED3	53	2.000	39.333	35.7	0.35886	38.7	ppb
Co-KED3	59	4.667	503.342	11.9	0.22671	9.8	ppb
Ni-KED3	60	4.000	296.003	8.2	0.44120	8.7	ppb
Ni-KED3	62	0.667	48.000	4.2	0.41908	6.1	ppb
Cu-KED3	63	3.333	2709.590	1.8	1.28348	4.4	ppb
Cu-KED3	65	3.333	1415.403	1.8	1.31100	1.1	ppb
Zn-KED3	66	8.000	293.336	7.0	1.37977	5.6	ppb
Ge-KED3	72	18721.596	22224.617	2.9			ppb
Ge-KED2	72	61732.783	71688.768	0.9			ppb
As-KED2	75	7.889	160.779	4.3	0.50275	4.6	ppb
Se-KED2	77	1.000	2.889	43.7	0.15775	71.5	ppb
Se-KED2	78	23.999	27.689	14.1	-0.00556	1778.3	ppb
Se-KED2	82	0.416	-0.496	77.0	-0.04785	39.0	ppb
Mo-KED2	95	14.667	79.334	11.6	0.02988	13.6	ppb
Mo-KED2	97	8.000	64.000	22.5	0.03995	27.3	ppb
Mo-KED2	98	27.114	116.375	22.1	0.02332	28.9	ppb
Cd-KED2	111	2.000	5.333	28.6	0.00257	49.1	ppb
Cd-KED2	112	0.811	13.172	7.9	0.00536	8.7	ppb
Cd-KED2	114	4.298	14.437	18.6	0.00326	29.6	ppb
Rh-KED3	103	171361.077	185863.104	2.5			ppb
Ag-KED3	107	6.000	13.333	22.9	0.00151	47.6	ppb
Ag-KED3	109	5.333	12.000	44.1	0.00137	80.6	ppb
In-KED1	115	737081.597	782695.307	0.8			ppb
Sn-KED1	116	19482.429	19495.706	1.8	-0.10337	40.3	ppb
Sn-KED1	118	354.004	194.668	16.6	-0.00932	17.0	ppb
Sn-KED1	120	490.616	304.577	3.3	-0.00806	5.3	ppb
Sb-KED1	121	191.335	394.005	9.6	0.01089	20.6	ppb
Sb-KED1	123	174.747	317.080	4.3	0.00989	10.0	ppb
Ba-KED1	135	62.667	30370.248	0.4	6.39709	1.2	ppb
Ba-KED1	137	47.333	50269.625	0.3	6.53559	0.6	ppb
Lu-KED1	175	794743.932	833586.129	1.5			ppb
Tl-KED1	203	72.667	50.667	14.9	-0.00182	32.1	ppb
Tl-KED1	205	154.668	117.334	4.9	-0.00135	9.2	ppb
Pb-KED1	208	165.334	8795.045	0.3	0.19634	1.8	ppb
Bi-KED1	209	960.699	1008.702	5.5	0.00002	6077.5	ppb
U-KED1	238	113.334	294.003	10.1	0.00334	19.2	ppb
Th-KED1	232	406165.238	435943.616	1.2			ppb
Mn-STD1	55	1102.709	1448253.264	1.4	23.81808	0.5	ppb
Ge-STD1	72	1364336.500	1490526.563	1.9			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
⌈>	Li-KED1	6		109.2		
|	Be-KED1	9				
|	B-KED1	10				
⌊	B-KED1	11				
⌈	Al-KED1	27				
⌊>	Sc-KED1	45		119.5		
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		118.7		
⌈>	Ge-KED2	72		116.1		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
|	Se-KED2	82				
|	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
⌊	Cd-KED2	114				
⌈>	Rh-KED3	103		108.5		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		106.2		
|	Sn-KED1	116				
|	Sn-KED1	118				
|	Sn-KED1	120				
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		104.9		
|	Tl-KED1	203				
|	Tl-KED1	205				
|	Pb-KED1	208				
⌊	Bi-KED1	209				
⌈	U-KED1	238				
⌊>	Th-KED1	232		107.3		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		109.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 13:03:01
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCV.031
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	316800.498	1.2			ppb
	Be-KED1	9	4.667	70426.596	2.8	24.28392	2.3	ppb
	B-KED1	10	116.667	22838.244	1.6	24.47843	1.3	ppb
	B-KED1	11	739.353	122853.402	1.5	24.24094	2.7	ppb
	Al-KED1	27	861.359	741090.797	0.9	24.43044	1.1	ppb
>	Sc-KED1	45	791944.750	870449.058	0.7			ppb
	V-KED3	51	2.667	14117.639	0.6	24.53553	2.7	ppb
	Cr-KED3	52	1.333	19728.950	1.9	24.54443	2.7	ppb
	Cr-KED3	53	2.000	2372.864	1.5	23.51420	1.2	ppb
	Co-KED3	59	4.667	51399.637	0.6	24.03964	3.2	ppb
	Ni-KED3	60	4.000	15549.793	1.4	24.14200	4.0	ppb
	Ni-KED3	62	0.667	2615.573	3.4	23.78790	5.3	ppb
	Cu-KED3	63	3.333	50642.944	0.9	24.61638	3.4	ppb
	Cu-KED3	65	3.333	25737.163	0.2	24.50488	2.5	ppb
	Zn-KED3	66	8.000	4946.190	1.3	24.61865	3.0	ppb
>	Ge-KED3	72	18721.596	21683.118	2.7			ppb
>	Ge-KED2	72	61732.783	69141.304	2.3			ppb
	As-KED2	75	7.889	7192.922	2.1	24.70595	2.9	ppb
	Se-KED2	77	1.000	261.669	5.6	24.79865	7.4	ppb
	Se-KED2	78	23.999	952.890	1.9	26.27878	3.7	ppb
	Se-KED2	82	0.416	483.416	2.8	24.50872	0.7	ppb
	Mo-KED2	95	14.667	48589.193	2.5	24.18268	3.9	ppb
	Mo-KED2	97	8.000	31594.916	2.6	23.88848	4.4	ppb
	Mo-KED2	98	27.114	83432.884	1.4	23.80771	3.6	ppb
	Cd-KED2	111	2.000	27019.875	2.8	23.97726	0.9	ppb
	Cd-KED2	112	0.811	52743.096	1.3	23.96978	1.0	ppb
	Cd-KED2	114	4.298	66685.513	0.6	23.82555	1.7	ppb
>	Rh-KED3	103	171361.077	187373.030	1.7			ppb
	Ag-KED3	107	6.000	114456.070	1.4	25.01458	0.7	ppb
	Ag-KED3	109	5.333	111294.636	2.1	24.69228	2.5	ppb
>	In-KED1	115	737081.597	768053.267	0.9			ppb
	Sn-KED1	116	19482.429	305182.378	2.2	25.21325	1.4	ppb
	Sn-KED1	118	354.004	483768.058	1.6	25.30326	0.8	ppb
	Sn-KED1	120	490.616	659581.220	1.6	25.02907	0.9	ppb
	Sb-KED1	121	191.335	431173.491	1.3	25.04917	0.4	ppb
	Sb-KED1	123	174.747	332161.169	1.7	25.43064	0.9	ppb
	Ba-KED1	135	62.667	113371.417	0.4	24.37404	0.6	ppb
	Ba-KED1	137	47.333	186035.275	2.4	24.66596	2.5	ppb
>	Lu-KED1	175	794743.932	819114.235	0.4			ppb
	Tl-KED1	203	72.667	355877.018	0.8	25.80333	0.8	ppb
	Tl-KED1	205	154.668	844093.969	0.8	25.74001	0.6	ppb
	Pb-KED1	208	165.334	1108753.182	0.6	25.68724	0.4	ppb
	Bi-KED1	209	960.699	873221.127	0.9	25.71329	1.0	ppb
	U-KED1	238	113.334	1278559.394	0.4	25.08203	0.2	ppb
>	Th-KED1	232	406165.238	430206.323	0.3			ppb
	Mn-STD1	55	1102.709	1541928.415	1.1	25.57929	0.9	ppb
>	Ge-STD1	72	1364336.500	1477652.858	0.3			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.5		
	Be-KED1	9	97.1			
	B-KED1	10	97.9			
	B-KED1	11	97.0			
	Al-KED1	27	97.7			
>	Sc-KED1	45		109.9		
	V-KED3	51	98.1			
	Cr-KED3	52	98.2			
	Cr-KED3	53	94.1			
	Co-KED3	59	96.2			
	Ni-KED3	60	96.6			
	Ni-KED3	62	95.2			
	Cu-KED3	63	98.5			
	Cu-KED3	65	98.0			
	Zn-KED3	66	98.5			
>	Ge-KED3	72		115.8		
>	Ge-KED2	72		112.0		
	As-KED2	75	98.8			
	Se-KED2	77	99.2			
	Se-KED2	78	105.1			
	Se-KED2	82	98.0			
	Mo-KED2	95	96.7			
	Mo-KED2	97	95.6			
	Mo-KED2	98	95.2			
	Cd-KED2	111	95.9			
	Cd-KED2	112	95.9			
	Cd-KED2	114	95.3			
>	Rh-KED3	103		109.3		
	Ag-KED3	107	100.1			
	Ag-KED3	109	98.8			
>	In-KED1	115		104.2		
	Sn-KED1	116				
	Sn-KED1	118	101.2			
	Sn-KED1	120	100.1			
	Sb-KED1	121	100.2			
	Sb-KED1	123	101.7			
	Ba-KED1	135	97.5			
	Ba-KED1	137	98.7			
>	Lu-KED1	175		103.1		
	Tl-KED1	203	103.2			
	Tl-KED1	205	103.0			
	Pb-KED1	208	102.7			
	Bi-KED1	209	102.9			
	U-KED1	238	100.3			
>	Th-KED1	232		105.9		
	Mn-STD1	55	102.3			
>	Ge-STD1	72		108.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 13:08:14
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCB.032
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	312469.146	3.1			ppb
	Be-KED1	9	4.667	10.000	34.6	0.00175	73.1	ppb
	B-KED1	10	116.667	143.334	9.9	0.01900	83.0	ppb
	B-KED1	11	739.353	900.695	7.6	0.02097	90.4	ppb
	Al-KED1	27	861.359	1022.703	2.8	0.00317	30.0	ppb
>	Sc-KED1	45	791944.750	853636.952	0.6			ppb
	V-KED3	51	2.667	1.333	86.6	-0.00306	65.3	ppb
	Cr-KED3	52	1.333	2.667	86.6	0.00139	205.9	ppb
	Cr-KED3	53	2.000	0.667	173.2	-0.01636	70.1	ppb
	Co-KED3	59	4.667	12.667	36.5	0.00338	63.9	ppb
	Ni-KED3	60	4.000	2.667	86.6	-0.00307	116.5	ppb
	Ni-KED3	62	0.667	1.333	86.6	0.00506	206.7	ppb
	Cu-KED3	63	3.333	10.667	28.6	0.00329	45.0	ppb
	Cu-KED3	65	3.333	2.000	0.0	-0.00178	0.4	ppb
	Zn-KED3	66	8.000	4.667	65.5	-0.02302	65.5	ppb
>	Ge-KED3	72	18721.596	21745.204	0.4			ppb
>	Ge-KED2	72	61732.783	69797.113	1.4			ppb
	As-KED2	75	7.889	7.000	20.8	-0.00658	70.2	ppb
	Se-KED2	77	1.000	1.000	33.3	-0.01244	245.4	ppb
	Se-KED2	78	23.999	24.726	7.3	-0.06738	83.3	ppb
	Se-KED2	82	0.416	-1.375	42.5	-0.09300	32.7	ppb
	Mo-KED2	95	14.667	24.667	24.8	0.00401	77.5	ppb
	Mo-KED2	97	8.000	19.333	26.0	0.00769	48.0	ppb
	Mo-KED2	98	27.114	38.448	49.4	0.00225	245.2	ppb
	Cd-KED2	111	2.000	1.000	100.0	-0.00111	79.1	ppb
	Cd-KED2	112	0.811	1.731	109.4	0.00036	232.3	ppb
	Cd-KED2	114	4.298	3.910	38.3	-0.00033	164.2	ppb
>	Rh-KED3	103	171361.077	185941.628	0.5			ppb
	Ag-KED3	107	6.000	10.667	43.3	0.00091	110.8	ppb
	Ag-KED3	109	5.333	6.000	33.3	0.00005	952.2	ppb
>	In-KED1	115	737081.597	761342.307	1.6			ppb
	Sn-KED1	116	19482.429	19226.254	0.4	-0.07986	34.3	ppb
	Sn-KED1	118	354.004	580.012	11.1	0.01134	32.0	ppb
	Sn-KED1	120	490.616	773.885	7.4	0.01025	24.4	ppb
	Sb-KED1	121	191.335	439.340	3.3	0.01419	8.9	ppb
	Sb-KED1	123	174.747	315.327	4.7	0.01041	7.7	ppb
	Ba-KED1	135	62.667	54.000	9.8	-0.00234	41.5	ppb
	Ba-KED1	137	47.333	18.000	40.1	-0.00414	22.7	ppb
>	Lu-KED1	175	794743.932	806799.626	0.4			ppb
	Tl-KED1	203	72.667	95.334	14.7	0.00159	66.8	ppb
	Tl-KED1	205	154.668	238.002	8.1	0.00251	24.7	ppb
	Pb-KED1	208	165.334	176.667	13.6	0.00021	277.9	ppb
	Bi-KED1	209	960.699	1076.707	2.2	0.00304	25.4	ppb
	U-KED1	238	113.334	119.334	4.2	0.00001	678.3	ppb
>	Th-KED1	232	406165.238	425221.216	0.8			ppb
	Mn-STD1	55	1102.709	1582.088	2.7	0.00686	12.7	ppb
>	Ge-STD1	72	1364336.500	1454267.523	0.7			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.0		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		107.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		116.2		
>	Ge-KED2	72		113.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101.5		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.7		
	Mn-STD1	55				
>	Ge-STD1	72		106.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-001
Sample Date/Time: Friday, October 04, 2013 13:13:27
Sample Description:
Autosampler Position: 117
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309712-001.033
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	314108.404	2.5			ppb
	Be-KED1	9	4.667	146.001	8.2	0.04898	6.6	ppb
	B-KED1	10	116.667	14854.387	1.9	16.01246	1.5	ppb
	B-KED1	11	739.353	83623.471	2.5	16.59212	2.9	ppb
	Al-KED1	27	861.359	2828683.109	0.6	91.84129	0.8	ppb
>	Sc-KED1	45	791944.750	884641.650	1.2			ppb
	V-KED3	51	2.667	523.343	6.0	0.90237	6.1	ppb
	Cr-KED3	52	1.333	460.007	9.0	0.56952	9.9	ppb
	Cr-KED3	53	2.000	60.000	5.8	0.57124	6.9	ppb
	Co-KED3	59	4.667	1263.389	0.8	0.58704	0.4	ppb
	Ni-KED3	60	4.000	592.012	3.5	0.90983	2.9	ppb
	Ni-KED3	62	0.667	89.334	9.0	0.80409	10.0	ppb
	Cu-KED3	63	3.333	1828.117	4.7	0.88485	5.1	ppb
	Cu-KED3	65	3.333	935.364	7.6	0.88525	8.1	ppb
	Zn-KED3	66	8.000	851.359	1.6	4.18985	1.8	ppb
>	Ge-KED3	72	18721.596	21721.836	0.9			ppb
>	Ge-KED2	72	61732.783	70888.808	1.5			ppb
	As-KED2	75	7.889	336.226	2.9	1.09699	2.2	ppb
	Se-KED2	77	1.000	13.667	17.1	1.16340	20.1	ppb
	Se-KED2	78	23.999	52.342	9.7	0.68485	18.3	ppb
	Se-KED2	82	0.416	12.612	37.6	0.59843	37.4	ppb
	Mo-KED2	95	14.667	341.337	4.2	0.15747	3.3	ppb
	Mo-KED2	97	8.000	225.335	4.0	0.15937	4.4	ppb
	Mo-KED2	98	27.114	605.054	4.7	0.15967	3.9	ppb
	Cd-KED2	111	2.000	111.334	6.3	0.09435	5.2	ppb
	Cd-KED2	112	0.811	223.613	4.9	0.09868	4.2	ppb
	Cd-KED2	114	4.298	268.164	9.3	0.09166	8.3	ppb
>	Rh-KED3	103	171361.077	185283.279	1.3			ppb
	Ag-KED3	107	6.000	44.000	13.6	0.00830	17.2	ppb
	Ag-KED3	109	5.333	43.333	9.6	0.00842	9.6	ppb
>	In-KED1	115	737081.597	762001.468	1.9			ppb
	Sn-KED1	116	19482.429	19459.921	1.9	-0.06011	98.9	ppb
	Sn-KED1	118	354.004	372.005	8.9	0.00031	505.5	ppb
	Sn-KED1	120	490.616	511.831	3.7	0.00017	241.2	ppb
	Sb-KED1	121	191.335	1001.369	6.1	0.04713	9.9	ppb
	Sb-KED1	123	174.747	744.924	8.5	0.04357	11.2	ppb
	Ba-KED1	135	62.667	165461.480	1.4	35.86966	2.4	ppb
	Ba-KED1	137	47.333	271243.394	1.8	36.26717	3.6	ppb
>	Lu-KED1	175	794743.932	829539.779	1.8			ppb
	Tl-KED1	203	72.667	215.335	13.0	0.00998	19.0	ppb
	Tl-KED1	205	154.668	488.675	10.1	0.00987	17.4	ppb
	Pb-KED1	208	165.334	140741.594	0.7	3.21699	2.1	ppb
	Bi-KED1	209	960.699	1139.379	4.4	0.00397	26.0	ppb
	U-KED1	238	113.334	2542.226	1.6	0.04707	2.4	ppb
>	Th-KED1	232	406165.238	434180.988	1.0			ppb
	Mn-STD1	55	1102.709	6771562.390	1.9	111.50324	2.2	ppb
>	Ge-STD1	72	1364336.500	1489653.807	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		111.7		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		116.0		
>	Ge-KED2	72		114.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		106.9		
	Mn-STD1	55				
>	Ge-STD1	72		109.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-001D
Sample Date/Time: Friday, October 04, 2013 13:18:39
Sample Description:
Autosampler Position: 118
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309712-001D.034
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	317054.917	2.3			ppb
	Be-KED1	9	4.667	120.001	3.3	0.03962	5.3	ppb
	B-KED1	10	116.667	14957.835	4.0	15.96727	1.7	ppb
	B-KED1	11	739.353	85147.243	3.8	16.73069	1.7	ppb
	Al-KED1	27	861.359	3037283.199	1.3	96.58387	2.5	ppb
>	Sc-KED1	45	791944.750	903490.087	2.3			ppb
	V-KED3	51	2.667	548.011	4.1	0.94273	2.9	ppb
	Cr-KED3	52	1.333	464.008	7.1	0.57281	6.8	ppb
	Cr-KED3	53	2.000	69.334	20.3	0.66368	22.9	ppb
	Co-KED3	59	4.667	1304.726	2.0	0.60508	3.1	ppb
	Ni-KED3	60	4.000	590.012	2.1	0.90476	1.7	ppb
	Ni-KED3	62	0.667	109.334	7.6	0.98348	8.7	ppb
	Cu-KED3	63	3.333	1728.771	3.5	0.83458	3.0	ppb
	Cu-KED3	65	3.333	973.366	1.8	0.91923	2.7	ppb
	Zn-KED3	66	8.000	810.023	1.9	3.97588	3.2	ppb
>	Ge-KED3	72	18721.596	21772.583	1.9			ppb
>	Ge-KED2	72	61732.783	70405.409	0.9			ppb
	As-KED2	75	7.889	345.893	5.4	1.13743	5.5	ppb
	Se-KED2	77	1.000	14.111	19.8	1.20970	20.5	ppb
	Se-KED2	78	23.999	54.544	7.8	0.75627	13.7	ppb
	Se-KED2	82	0.416	14.384	22.9	0.69271	23.1	ppb
	Mo-KED2	95	14.667	335.337	2.1	0.15573	3.1	ppb
	Mo-KED2	97	8.000	244.669	13.1	0.17476	13.1	ppb
	Mo-KED2	98	27.114	621.867	2.5	0.16557	2.3	ppb
	Cd-KED2	111	2.000	109.334	8.2	0.09329	7.9	ppb
	Cd-KED2	112	0.811	227.760	7.4	0.10118	6.5	ppb
	Cd-KED2	114	4.298	259.158	4.7	0.08918	4.0	ppb
>	Rh-KED3	103	171361.077	186575.134	0.4			ppb
	Ag-KED3	107	6.000	50.667	11.4	0.00969	13.1	ppb
	Ag-KED3	109	5.333	42.667	44.3	0.00820	50.9	ppb
>	In-KED1	115	737081.597	769863.584	2.5			ppb
	Sn-KED1	116	19482.429	19479.818	1.2	-0.07636	30.1	ppb
	Sn-KED1	118	354.004	281.336	5.1	-0.00461	19.2	ppb
	Sn-KED1	120	490.616	407.896	8.6	-0.00394	39.7	ppb
	Sb-KED1	121	191.335	973.367	4.7	0.04490	8.1	ppb
	Sb-KED1	123	174.747	667.591	2.0	0.03710	5.0	ppb
	Ba-KED1	135	62.667	170774.961	2.1	36.66043	4.3	ppb
	Ba-KED1	137	47.333	275100.374	1.0	36.41066	3.3	ppb
>	Lu-KED1	175	794743.932	833132.726	1.1			ppb
	Tl-KED1	203	72.667	195.335	6.7	0.00850	12.6	ppb
	Tl-KED1	205	154.668	437.340	6.0	0.00826	10.8	ppb
	Pb-KED1	208	165.334	144692.620	0.7	3.29249	0.6	ppb
	Bi-KED1	209	960.699	1142.712	1.4	0.00393	10.7	ppb
	U-KED1	238	113.334	2617.573	1.1	0.04775	1.1	ppb
>	Th-KED1	232	406165.238	440910.011	0.2			ppb
	Mn-STD1	55	1102.709	6755836.612	1.4	111.45215	2.0	ppb
>	Ge-STD1	72	1364336.500	1486995.893	1.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		114.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		116.3		
>	Ge-KED2	72		114.0		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.6		
	Mn-STD1	55				
>	Ge-STD1	72		109.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-001S
Sample Date/Time: Friday, October 04, 2013 13:23:51
Sample Description:
Autosampler Position: 119
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309712-001S.035
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	314174.935	3.3			ppb
	Be-KED1	9	4.667	7355.893	0.4	2.55820	3.6	ppb
	B-KED1	10	116.667	15316.208	1.7	16.52510	4.7	ppb
	B-KED1	11	739.353	82669.868	1.2	16.40436	3.3	ppb
	Al-KED1	27	861.359	5866540.007	0.8	187.03980	0.5	ppb
>	Sc-KED1	45	791944.750	901017.808	1.2			ppb
	V-KED3	51	2.667	15303.528	2.1	26.20238	2.7	ppb
	Cr-KED3	52	1.333	8767.358	2.8	10.74305	1.8	ppb
	Cr-KED3	53	2.000	1068.707	0.8	10.42262	1.2	ppb
	Co-KED3	59	4.667	54562.668	0.6	25.13730	1.3	ppb
	Ni-KED3	60	4.000	16348.017	1.8	24.99448	0.6	ppb
	Ni-KED3	62	0.667	2763.601	3.6	24.74919	3.2	ppb
	Cu-KED3	63	3.333	27056.269	1.8	12.95221	1.4	ppb
	Cu-KED3	65	3.333	13818.681	1.4	12.95854	0.5	ppb
	Zn-KED3	66	8.000	6119.978	3.3	30.01084	2.3	ppb
>	Ge-KED3	72	18721.596	22003.603	1.9			ppb
>	Ge-KED2	72	61732.783	71689.101	0.8			ppb
	As-KED2	75	7.889	15015.221	1.5	49.76253	2.3	ppb
	Se-KED2	77	1.000	542.455	2.7	49.65251	3.5	ppb
	Se-KED2	78	23.999	1915.784	0.7	51.64709	0.2	ppb
	Se-KED2	82	0.416	984.308	2.9	48.15046	2.1	ppb
	Mo-KED2	95	14.667	40050.082	2.3	19.21397	2.3	ppb
	Mo-KED2	97	8.000	26294.177	0.9	19.16266	1.2	ppb
	Mo-KED2	98	27.114	69618.403	2.4	19.14638	1.8	ppb
	Cd-KED2	111	2.000	28177.431	1.3	24.11668	0.6	ppb
	Cd-KED2	112	0.811	53533.869	0.1	23.46204	0.8	ppb
	Cd-KED2	114	4.298	67229.759	1.1	23.16034	0.8	ppb
>	Rh-KED3	103	171361.077	185593.897	1.1			ppb
	Ag-KED3	107	6.000	57477.419	1.8	12.68036	0.7	ppb
	Ag-KED3	109	5.333	56829.483	0.9	12.72706	0.6	ppb
>	In-KED1	115	737081.597	766735.676	1.1			ppb
	Sn-KED1	116	19482.429	31263.734	5.2	0.97558	15.7	ppb
	Sn-KED1	118	354.004	352.004	7.7	-0.00084	192.8	ppb
	Sn-KED1	120	490.616	759.209	1.4	0.00947	4.3	ppb
	Sb-KED1	121	191.335	907857.933	1.2	52.84969	1.3	ppb
	Sb-KED1	123	174.747	694459.051	1.1	53.27740	0.3	ppb
	Ba-KED1	135	62.667	631784.671	1.2	136.14457	2.3	ppb
	Ba-KED1	137	47.333	1044921.896	1.6	138.82696	2.4	ppb
>	Lu-KED1	175	794743.932	838706.967	1.3			ppb
	Tl-KED1	203	72.667	736586.805	1.2	52.16525	0.3	ppb
	Tl-KED1	205	154.668	1743145.089	1.8	51.91797	1.0	ppb
	Pb-KED1	208	165.334	2397102.532	1.1	54.24523	1.0	ppb
	Bi-KED1	209	960.699	1178.715	3.1	0.00475	19.7	ppb
	U-KED1	238	113.334	1087473.644	1.0	20.88969	1.7	ppb
>	Th-KED1	232	406165.238	439395.293	1.5			ppb
	Mn-STD1	55	1102.709	8115128.328	1.9	135.28174	1.4	ppb
>	Ge-STD1	72	1364336.500	1471341.699	0.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		113.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		117.5		
>	Ge-KED2	72		116.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.3		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.5		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.2		
	Mn-STD1	55				
>	Ge-STD1	72		107.8		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-002
Sample Date/Time: Friday, October 04, 2013 13:29:03
Sample Description:
Autosampler Position: 120
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309712-002.036
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	289339.162	313176.746	1.5			ppb
|	Be-KED1	9	4.667	140.001	16.5	0.04710	17.5	ppb
|	B-KED1	10	116.667	16111.747	0.7	17.43110	1.4	ppb
⌊	B-KED1	11	739.353	89718.889	1.5	17.86303	1.3	ppb
⌈	Al-KED1	27	861.359	8031616.615	1.2	252.24646	1.4	ppb
⌊>	Sc-KED1	45	791944.750	914865.773	2.4			ppb
⌈	V-KED3	51	2.667	5891.215	0.7	10.16349	0.9	ppb
|	Cr-KED3	52	1.333	456.007	6.3	0.56186	7.6	ppb
|	Cr-KED3	53	2.000	62.000	28.1	0.58629	27.6	ppb
|	Co-KED3	59	4.667	1161.381	4.6	0.53680	4.4	ppb
|	Ni-KED3	60	4.000	1392.068	3.5	2.13971	4.7	ppb
|	Ni-KED3	62	0.667	221.335	7.9	1.99329	9.2	ppb
|	Cu-KED3	63	3.333	2678.918	2.7	1.29127	3.5	ppb
|	Cu-KED3	65	3.333	1366.732	5.7	1.28851	5.4	ppb
|	Zn-KED3	66	8.000	1428.072	5.7	7.02170	4.3	ppb
⌊>	Ge-KED3	72	18721.596	21827.999	1.4			ppb
⌈>	Ge-KED2	72	61732.783	68739.016	1.8			ppb
|	As-KED2	75	7.889	352.004	0.8	1.18704	1.3	ppb
|	Se-KED2	77	1.000	12.000	18.2	1.04406	22.1	ppb
|	Se-KED2	78	23.999	54.002	6.6	0.77848	13.1	ppb
|	Se-KED2	82	0.416	15.388	7.0	0.76165	6.1	ppb
|	Mo-KED2	95	14.667	1877.457	3.4	0.93210	5.0	ppb
|	Mo-KED2	97	8.000	1187.383	0.8	0.89620	2.2	ppb
|	Mo-KED2	98	27.114	3232.000	1.2	0.91889	0.7	ppb
|	Cd-KED2	111	2.000	205.335	7.1	0.18150	8.8	ppb
|	Cd-KED2	112	0.811	405.922	7.3	0.18517	7.6	ppb
⌊	Cd-KED2	114	4.298	543.473	3.1	0.19354	1.9	ppb
⌈>	Rh-KED3	103	171361.077	181582.932	1.6			ppb
|	Ag-KED3	107	6.000	107.334	25.7	0.02284	28.7	ppb
⌊	Ag-KED3	109	5.333	88.000	15.9	0.01887	17.6	ppb
⌈>	In-KED1	115	737081.597	746532.640	1.9			ppb
|	Sn-KED1	116	19482.429	19293.294	1.6	-0.03973	74.8	ppb
|	Sn-KED1	118	354.004	632.014	4.1	0.01473	9.1	ppb
|	Sn-KED1	120	490.616	862.608	1.0	0.01430	5.7	ppb
|	Sb-KED1	121	191.335	1444.740	3.1	0.07486	5.7	ppb
|	Sb-KED1	123	174.747	1108.537	4.9	0.07344	6.4	ppb
|	Ba-KED1	135	62.667	179544.867	2.0	39.72210	1.1	ppb
⌊	Ba-KED1	137	47.333	291425.950	2.0	39.75698	1.1	ppb
⌈>	Lu-KED1	175	794743.932	854663.219	0.7			ppb
|	Tl-KED1	203	72.667	254.002	6.8	0.01222	10.0	ppb
|	Tl-KED1	205	154.668	652.015	9.1	0.01421	13.1	ppb
|	Pb-KED1	208	165.334	206701.454	0.9	4.58637	0.4	ppb
⌊	Bi-KED1	209	960.699	1048.705	4.6	0.00044	282.9	ppb
⌈	U-KED1	238	113.334	4784.135	3.3	0.08921	3.0	ppb
⌊>	Th-KED1	232	406165.238	440954.142	0.6			ppb
⌈	Mn-STD1	55	1102.709	9490938.618	2.6	247.53461	60.3	ppb
⌊>	Ge-STD1	72	1364336.500	1139247.821	43.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		115.5		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		116.6		
>	Ge-KED2	72		111.3		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		106.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		101.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		107.5		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.6		
	Mn-STD1	55				
>	Ge-STD1	72		83.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-003
Sample Date/Time: Friday, October 04, 2013 13:34:15
Sample Description:
Autosampler Position: 121
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309712-003.037
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	315826.439	1.9			ppb
	Be-KED1	9	4.667	144.667	11.9	0.04822	10.7	ppb
	B-KED1	10	116.667	26981.464	2.2	29.03315	1.1	ppb
	B-KED1	11	739.353	147569.002	1.2	29.24460	2.9	ppb
	Al-KED1	27	861.359	1844177.719	1.8	58.69366	0.4	ppb
>	Sc-KED1	45	791944.750	902232.862	1.7			ppb
	V-KED3	51	2.667	538.677	2.5	0.90098	2.4	ppb
	Cr-KED3	52	1.333	326.670	11.0	0.39144	10.7	ppb
	Cr-KED3	53	2.000	54.667	5.6	0.50189	5.0	ppb
	Co-KED3	59	4.667	1115.377	3.3	0.50246	3.7	ppb
	Ni-KED3	60	4.000	568.011	6.1	0.84648	6.3	ppb
	Ni-KED3	62	0.667	98.000	14.1	0.85516	13.6	ppb
	Cu-KED3	63	3.333	1617.425	6.4	0.75891	5.8	ppb
	Cu-KED3	65	3.333	835.358	6.2	0.76622	6.0	ppb
	Zn-KED3	66	8.000	400.006	8.8	1.88404	8.6	ppb
>	Ge-KED3	72	18721.596	22391.535	0.8			ppb
>	Ge-KED2	72	61732.783	71617.076	0.9			ppb
	As-KED2	75	7.889	355.671	3.4	1.15042	4.4	ppb
	Se-KED2	77	1.000	8.889	22.6	0.70854	25.1	ppb
	Se-KED2	78	23.999	31.780	11.6	0.10843	100.0	ppb
	Se-KED2	82	0.416	6.721	34.0	0.30537	36.2	ppb
	Mo-KED2	95	14.667	382.672	7.9	0.17574	8.8	ppb
	Mo-KED2	97	8.000	216.002	2.8	0.15089	3.8	ppb
	Mo-KED2	98	27.114	613.054	8.4	0.16027	9.6	ppb
	Cd-KED2	111	2.000	27.333	11.2	0.02144	12.8	ppb
	Cd-KED2	112	0.811	35.092	31.6	0.01496	31.8	ppb
	Cd-KED2	114	4.298	49.382	6.1	0.01531	7.1	ppb
>	Rh-KED3	103	171361.077	188921.768	1.1			ppb
	Ag-KED3	107	6.000	16.000	12.5	0.00204	22.8	ppb
	Ag-KED3	109	5.333	15.333	27.2	0.00209	45.8	ppb
>	In-KED1	115	737081.597	779272.584	1.5			ppb
	Sn-KED1	116	19482.429	19715.197	1.3	-0.07693	8.5	ppb
	Sn-KED1	118	354.004	190.001	7.3	-0.00951	6.0	ppb
	Sn-KED1	120	490.616	300.576	5.4	-0.00817	6.2	ppb
	Sb-KED1	121	191.335	1016.036	2.7	0.04663	3.8	ppb
	Sb-KED1	123	174.747	813.767	2.7	0.04750	3.3	ppb
	Ba-KED1	135	62.667	180349.103	2.6	38.22003	1.7	ppb
	Ba-KED1	137	47.333	290376.387	1.2	37.95065	1.0	ppb
>	Lu-KED1	175	794743.932	863928.018	0.5			ppb
	Tl-KED1	203	72.667	212.002	10.5	0.00914	16.6	ppb
	Tl-KED1	205	154.668	519.343	12.5	0.01015	17.8	ppb
	Pb-KED1	208	165.334	38005.737	1.1	0.83101	0.8	ppb
	Bi-KED1	209	960.699	1092.042	2.7	0.00134	66.1	ppb
	U-KED1	238	113.334	2580.900	1.1	0.04695	1.9	ppb
>	Th-KED1	232	406165.238	441861.684	0.8			ppb
	Mn-STD1	55	1102.709	5711332.600	0.6	91.20537	2.0	ppb
>	Ge-STD1	72	1364336.500	1536174.882	1.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		113.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		119.6		
>	Ge-KED2	72		116.0		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		110.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		105.7		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		108.7		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.8		
	Mn-STD1	55				
>	Ge-STD1	72		112.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309712-004
Sample Date/Time: Friday, October 04, 2013 13:39:28
Sample Description:
Autosampler Position: 122
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309712-004.038
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	321872.025	1.2			ppb
	Be-KED1	9	4.667	150.667	6.7	0.04939	7.4	ppb
	B-KED1	10	116.667	12233.903	0.7	12.84240	1.8	ppb
	B-KED1	11	739.353	68978.882	2.8	13.32044	2.0	ppb
	Al-KED1	27	861.359	1486981.028	1.5	46.86088	0.8	ppb
>	Sc-KED1	45	791944.750	911099.005	1.6			ppb
	V-KED3	51	2.667	352.671	8.1	0.58172	5.1	ppb
	Cr-KED3	52	1.333	360.671	2.8	0.42865	4.9	ppb
	Cr-KED3	53	2.000	57.333	8.1	0.52348	11.2	ppb
	Co-KED3	59	4.667	1062.706	7.6	0.47491	10.4	ppb
	Ni-KED3	60	4.000	504.676	7.8	0.74337	5.2	ppb
	Ni-KED3	62	0.667	91.334	6.7	0.78899	5.0	ppb
	Cu-KED3	63	3.333	1380.067	8.4	0.64046	5.3	ppb
	Cu-KED3	65	3.333	708.684	5.7	0.64293	2.8	ppb
	Zn-KED3	66	8.000	973.367	4.7	4.60771	4.5	ppb
>	Ge-KED3	72	18721.596	22608.554	3.1			ppb
>	Ge-KED2	72	61732.783	73315.671	1.3			ppb
	As-KED2	75	7.889	268.669	1.2	0.84072	0.8	ppb
	Se-KED2	77	1.000	4.667	32.7	0.31285	44.9	ppb
	Se-KED2	78	23.999	34.605	18.3	0.16194	96.4	ppb
	Se-KED2	82	0.416	3.845	65.4	0.15996	74.8	ppb
	Mo-KED2	95	14.667	199.335	14.1	0.08528	14.1	ppb
	Mo-KED2	97	8.000	132.001	4.5	0.08734	5.2	ppb
	Mo-KED2	98	27.114	357.265	5.2	0.08751	7.0	ppb
	Cd-KED2	111	2.000	137.001	10.3	0.11262	9.6	ppb
	Cd-KED2	112	0.811	251.121	4.5	0.10719	4.0	ppb
	Cd-KED2	114	4.298	325.738	3.0	0.10800	1.9	ppb
>	Rh-KED3	103	171361.077	188544.558	2.5			ppb
	Ag-KED3	107	6.000	87.334	13.4	0.01750	12.0	ppb
	Ag-KED3	109	5.333	75.334	22.1	0.01532	23.6	ppb
>	In-KED1	115	737081.597	792071.379	2.9			ppb
	Sn-KED1	116	19482.429	20123.126	2.3	-0.06953	18.4	ppb
	Sn-KED1	118	354.004	216.002	11.2	-0.00832	18.0	ppb
	Sn-KED1	120	490.616	289.243	6.9	-0.00875	10.9	ppb
	Sb-KED1	121	191.335	696.017	3.3	0.02767	7.3	ppb
	Sb-KED1	123	174.747	573.755	5.3	0.02871	10.1	ppb
	Ba-KED1	135	62.667	216697.396	1.5	45.19871	1.4	ppb
	Ba-KED1	137	47.333	354103.819	0.9	45.56125	3.6	ppb
>	Lu-KED1	175	794743.932	857228.845	1.6			ppb
	Tl-KED1	203	72.667	172.001	4.7	0.00650	11.4	ppb
	Tl-KED1	205	154.668	436.007	11.7	0.00784	17.8	ppb
	Pb-KED1	208	165.334	143013.782	0.3	3.16313	1.8	ppb
	Bi-KED1	209	960.699	1040.038	3.4	0.00011	972.4	ppb
	U-KED1	238	113.334	1862.121	2.9	0.03302	3.0	ppb
>	Th-KED1	232	406165.238	444339.851	0.2			ppb
	Mn-STD1	55	1102.709	8310588.264	2.1	133.30028	1.7	ppb
>	Ge-STD1	72	1364336.500	1529249.343	1.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		111.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		115.0		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		120.8		
>	Ge-KED2	72		118.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		110.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		107.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		107.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		109.4		
	Mn-STD1	55				
>	Ge-STD1	72		112.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309713-001
Sample Date/Time: Friday, October 04, 2013 13:44:40
Sample Description:
Autosampler Position: 123
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309713-001.039
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	315050.129	0.4			ppb
	Be-KED1	9	4.667	42.000	4.8	0.01280	5.8	ppb
	B-KED1	10	116.667	57344.936	3.0	62.01302	3.0	ppb
	B-KED1	11	739.353	308820.330	1.9	61.50433	1.6	ppb
	Al-KED1	27	861.359	2421388.448	0.9	80.73206	1.7	ppb
>	Sc-KED1	45	791944.750	861468.108	0.9			ppb
	V-KED3	51	2.667	424.006	6.0	0.81271	5.8	ppb
	Cr-KED3	52	1.333	255.336	8.2	0.35099	9.3	ppb
	Cr-KED3	53	2.000	40.667	17.3	0.42450	17.2	ppb
	Co-KED3	59	4.667	1763.442	0.8	0.91299	0.7	ppb
	Ni-KED3	60	4.000	1440.739	2.3	2.47664	3.8	ppb
	Ni-KED3	62	0.667	215.335	11.2	2.16931	12.6	ppb
	Cu-KED3	63	3.333	4753.458	2.6	2.56235	1.2	ppb
	Cu-KED3	65	3.333	2404.202	1.3	2.53757	0.3	ppb
	Zn-KED3	66	8.000	3537.772	2.5	19.53769	2.9	ppb
>	Ge-KED3	72	18721.596	19526.004	1.5			ppb
>	Ge-KED2	72	61732.783	63135.554	1.3			ppb
	As-KED2	75	7.889	221.780	8.8	0.80415	8.1	ppb
	Se-KED2	77	1.000	7.111	22.2	0.63276	24.7	ppb
	Se-KED2	78	23.999	37.511	3.1	0.40259	5.5	ppb
	Se-KED2	82	0.416	4.849	48.5	0.24590	52.8	ppb
	Mo-KED2	95	14.667	5721.813	2.5	3.10973	1.3	ppb
	Mo-KED2	97	8.000	3808.508	1.8	3.14631	2.5	ppb
	Mo-KED2	98	27.114	9923.967	1.7	3.09217	1.8	ppb
	Cd-KED2	111	2.000	45.667	8.8	0.04242	10.1	ppb
	Cd-KED2	112	0.811	52.711	14.5	0.02580	14.0	ppb
	Cd-KED2	114	4.298	85.374	6.4	0.03168	7.0	ppb
>	Rh-KED3	103	171361.077	160170.940	0.7			ppb
	Ag-KED3	107	6.000	15.333	27.2	0.00248	41.8	ppb
	Ag-KED3	109	5.333	9.333	61.9	0.00113	133.0	ppb
>	In-KED1	115	737081.597	668239.502	1.6			ppb
	Sn-KED1	116	19482.429	17455.795	0.3	-0.02075	143.8	ppb
	Sn-KED1	118	354.004	1646.095	6.7	0.07968	6.5	ppb
	Sn-KED1	120	490.616	2273.455	3.2	0.07982	3.5	ppb
	Sb-KED1	121	191.335	2740.930	4.0	0.17148	2.8	ppb
	Sb-KED1	123	174.747	2189.580	0.6	0.17888	2.3	ppb
	Ba-KED1	135	62.667	229601.155	1.0	56.75947	1.5	ppb
	Ba-KED1	137	47.333	372729.290	0.6	56.81581	1.6	ppb
>	Lu-KED1	175	794743.932	811537.993	0.6			ppb
	Tl-KED1	203	72.667	72.667	11.5	-0.00011	543.1	ppb
	Tl-KED1	205	154.668	193.335	9.8	0.00109	50.6	ppb
	Pb-KED1	208	165.334	20399.668	0.8	0.47318	1.3	ppb
	Bi-KED1	209	960.699	1125.378	5.2	0.00430	44.6	ppb
	U-KED1	238	113.334	21573.612	0.9	0.42418	0.5	ppb
>	Th-KED1	232	406165.238	426898.078	0.7			ppb
	Mn-STD1	55	1102.709	1951315.282	0.5	35.93591	0.2	ppb
>	Ge-STD1	72	1364336.500	1331368.142	0.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		108.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		104.3		
>	Ge-KED2	72		102.3		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		93.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		90.7		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		105.1		
	Mn-STD1	55				
>	Ge-STD1	72		97.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309713-002
Sample Date/Time: Friday, October 04, 2013 13:49:52
Sample Description:
Autosampler Position: 124
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309713-002.040
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	328908.156	1.0			ppb
	Be-KED1	9	4.667	26.000	7.7	0.00687	8.9	ppb
	B-KED1	10	116.667	16170.492	4.3	16.65083	4.5	ppb
	B-KED1	11	739.353	88920.026	2.8	16.84958	3.4	ppb
	Al-KED1	27	861.359	1878328.730	2.2	64.17211	2.1	ppb
>	Sc-KED1	45	791944.750	840704.247	2.6			ppb
	V-KED3	51	2.667	206.002	15.3	0.38541	14.0	ppb
	Cr-KED3	52	1.333	236.002	13.6	0.31755	8.4	ppb
	Cr-KED3	53	2.000	29.333	37.6	0.29447	38.8	ppb
	Co-KED3	59	4.667	706.017	5.0	0.35866	7.9	ppb
	Ni-KED3	60	4.000	431.340	8.3	0.72279	0.9	ppb
	Ni-KED3	62	0.667	70.000	0.0	0.68985	7.8	ppb
	Cu-KED3	63	3.333	3890.530	0.8	2.06849	8.1	ppb
	Cu-KED3	65	3.333	1842.119	2.5	1.91880	10.1	ppb
	Zn-KED3	66	8.000	773.354	2.7	4.17804	9.5	ppb
>	Ge-KED3	72	18721.596	19875.201	7.5			ppb
>	Ge-KED2	72	61732.783	68595.636	0.9			ppb
	As-KED2	75	7.889	162.779	1.0	0.53373	1.5	ppb
	Se-KED2	77	1.000	4.111	18.7	0.28737	25.1	ppb
	Se-KED2	78	23.999	33.171	11.1	0.18593	56.2	ppb
	Se-KED2	82	0.416	1.069	157.4	0.03147	275.4	ppb
	Mo-KED2	95	14.667	958.032	6.4	0.47220	5.6	ppb
	Mo-KED2	97	8.000	573.345	3.8	0.43006	3.9	ppb
	Mo-KED2	98	27.114	1569.420	4.6	0.44281	5.6	ppb
	Cd-KED2	111	2.000	28.333	8.9	0.02337	10.6	ppb
	Cd-KED2	112	0.811	53.157	19.0	0.02396	20.3	ppb
	Cd-KED2	114	4.298	52.186	12.8	0.01708	14.5	ppb
>	Rh-KED3	103	171361.077	168288.261	8.0			ppb
	Ag-KED3	107	6.000	28.667	26.4	0.00548	25.7	ppb
	Ag-KED3	109	5.333	22.667	10.2	0.00430	4.3	ppb
>	In-KED1	115	737081.597	740674.709	1.6			ppb
	Sn-KED1	116	19482.429	19198.563	1.4	-0.03426	145.7	ppb
	Sn-KED1	118	354.004	417.340	17.6	0.00330	110.3	ppb
	Sn-KED1	120	490.616	632.579	7.7	0.00548	28.6	ppb
	Sb-KED1	121	191.335	1359.398	3.6	0.07039	6.0	ppb
	Sb-KED1	123	174.747	990.361	4.9	0.06475	6.7	ppb
	Ba-KED1	135	62.667	125642.788	0.9	28.01675	1.8	ppb
	Ba-KED1	137	47.333	205061.304	0.6	28.19753	1.4	ppb
>	Lu-KED1	175	794743.932	837239.641	0.7			ppb
	Tl-KED1	203	72.667	56.000	23.4	-0.00146	65.4	ppb
	Tl-KED1	205	154.668	132.667	20.9	-0.00091	88.8	ppb
	Pb-KED1	208	165.334	13016.968	0.8	0.29116	1.6	ppb
	Bi-KED1	209	960.699	1052.039	1.7	0.00116	56.6	ppb
	U-KED1	238	113.334	6690.234	2.9	0.12617	3.1	ppb
>	Th-KED1	232	406165.238	439400.445	1.2			ppb
	Mn-STD1	55	1102.709	8285414.004	2.3	143.18726	2.1	ppb
>	Ge-STD1	72	1364336.500	1419356.765	1.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		113.7		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		106.2		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		106.2		
>	Ge-KED2	72		111.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		98.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		100.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.3		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.2		
	Mn-STD1	55				
>	Ge-STD1	72		104.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309713-003
Sample Date/Time: Friday, October 04, 2013 13:55:04
Sample Description:
Autosampler Position: 125
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309713-003.041
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	311953.105	2.3			ppb
	Be-KED1	9	4.667	24.667	24.8	0.00688	30.7	ppb
	B-KED1	10	116.667	27352.837	2.2	29.80526	1.6	ppb
	B-KED1	11	739.353	146027.533	2.6	29.30327	4.1	ppb
	Al-KED1	27	861.359	4202792.053	2.4	148.14302	1.5	ppb
>	Sc-KED1	45	791944.750	814899.927	1.7			ppb
	V-KED3	51	2.667	1358.065	1.2	2.52974	2.0	ppb
	Cr-KED3	52	1.333	451.340	5.5	0.60089	4.3	ppb
	Cr-KED3	53	2.000	65.333	4.7	0.67344	6.4	ppb
	Co-KED3	59	4.667	1045.372	3.7	0.52231	2.2	ppb
	Ni-KED3	60	4.000	1114.044	5.8	1.84959	5.0	ppb
	Ni-KED3	62	0.667	197.335	15.0	1.91741	13.6	ppb
	Cu-KED3	63	3.333	3525.102	3.8	1.83877	5.3	ppb
	Cu-KED3	65	3.333	1796.780	1.1	1.83391	2.6	ppb
	Zn-KED3	66	8.000	1135.379	4.6	6.03078	3.1	ppb
>	Ge-KED3	72	18721.596	20185.587	1.5			ppb
>	Ge-KED2	72	61732.783	62552.991	0.8			ppb
	As-KED2	75	7.889	167.668	1.4	0.60684	2.3	ppb
	Se-KED2	77	1.000	4.333	20.4	0.34935	27.5	ppb
	Se-KED2	78	23.999	33.952	9.8	0.30177	33.3	ppb
	Se-KED2	82	0.416	7.626	24.2	0.40363	24.8	ppb
	Mo-KED2	95	14.667	1758.775	3.9	0.95925	4.0	ppb
	Mo-KED2	97	8.000	1144.046	8.0	0.94946	8.8	ppb
	Mo-KED2	98	27.114	2878.738	3.2	0.89927	3.7	ppb
	Cd-KED2	111	2.000	221.335	11.9	0.21528	12.8	ppb
	Cd-KED2	112	0.811	419.789	2.6	0.21047	3.4	ppb
	Cd-KED2	114	4.298	549.822	3.3	0.21537	3.2	ppb
>	Rh-KED3	103	171361.077	163627.578	2.8			ppb
	Ag-KED3	107	6.000	15.333	66.9	0.00245	108.6	ppb
	Ag-KED3	109	5.333	14.000	37.8	0.00225	56.2	ppb
>	In-KED1	115	737081.597	674845.107	1.4			ppb
	Sn-KED1	116	19482.429	17243.810	2.1	-0.05979	45.6	ppb
	Sn-KED1	118	354.004	738.686	3.8	0.02470	6.4	ppb
	Sn-KED1	120	490.616	999.942	3.4	0.02382	8.0	ppb
	Sb-KED1	121	191.335	3582.449	2.4	0.22537	1.1	ppb
	Sb-KED1	123	174.747	2663.992	1.5	0.21832	0.8	ppb
	Ba-KED1	135	62.667	290312.768	1.8	71.05797	0.5	ppb
	Ba-KED1	137	47.333	482744.616	1.4	72.86125	1.4	ppb
>	Lu-KED1	175	794743.932	807544.756	0.5			ppb
	Tl-KED1	203	72.667	122.667	10.0	0.00359	24.7	ppb
	Tl-KED1	205	154.668	244.002	18.3	0.00269	50.8	ppb
	Pb-KED1	208	165.334	13046.311	1.4	0.30267	0.9	ppb
	Bi-KED1	209	960.699	918.696	2.2	-0.00172	27.9	ppb
	U-KED1	238	113.334	4727.449	3.7	0.09153	4.2	ppb
>	Th-KED1	232	406165.238	425026.785	0.6			ppb
	Mn-STD1	55	1102.709	3771015.412	0.2	67.13926	1.1	ppb
>	Ge-STD1	72	1364336.500	1377606.102	1.0			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		107.8		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		102.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		107.8		
>	Ge-KED2	72		101.3		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		95.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		91.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		104.6		
	Mn-STD1	55				
>	Ge-STD1	72		101.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 14:00:17
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\CCV.042
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	326995.272	1.5			ppb
	Be-KED1	9	4.667	73788.747	0.5	24.65370	1.0	ppb
	B-KED1	10	116.667	23979.450	2.4	24.90383	2.4	ppb
	B-KED1	11	739.353	132150.353	3.9	25.26382	3.6	ppb
	Al-KED1	27	861.359	742549.575	0.8	24.50127	0.3	ppb
>	Sc-KED1	45	791944.750	869616.612	0.8			ppb
	V-KED3	51	2.667	14346.535	1.9	24.54314	1.2	ppb
	Cr-KED3	52	1.333	20170.230	0.8	24.71041	2.6	ppb
	Cr-KED3	53	2.000	2420.872	3.2	23.61722	1.9	ppb
	Co-KED3	59	4.667	51645.202	1.7	23.77604	1.8	ppb
	Ni-KED3	60	4.000	15649.238	2.8	23.90776	1.7	ppb
	Ni-KED3	62	0.667	2629.575	0.6	23.54483	3.5	ppb
	Cu-KED3	63	3.333	49085.518	0.4	23.48959	2.5	ppb
	Cu-KED3	65	3.333	25447.981	1.1	23.85425	1.9	ppb
	Zn-KED3	66	8.000	4852.157	0.9	23.77576	2.2	ppb
>	Ge-KED3	72	18721.596	22022.304	3.0			ppb
>	Ge-KED2	72	61732.783	72061.306	1.1			ppb
	As-KED2	75	7.889	7340.441	1.2	24.18385	1.2	ppb
	Se-KED2	77	1.000	267.891	2.7	24.33815	3.1	ppb
	Se-KED2	78	23.999	990.566	2.7	26.19508	2.4	ppb
	Se-KED2	82	0.416	512.863	4.6	24.94811	4.2	ppb
	Mo-KED2	95	14.667	48759.788	3.0	23.27213	2.6	ppb
	Mo-KED2	97	8.000	32079.327	2.6	23.25647	1.7	ppb
	Mo-KED2	98	27.114	85013.921	0.5	23.26412	0.7	ppb
	Cd-KED2	111	2.000	28681.097	0.9	24.42198	0.4	ppb
	Cd-KED2	112	0.811	54387.885	4.0	23.70796	3.0	ppb
	Cd-KED2	114	4.298	68143.661	2.4	23.35181	1.4	ppb
>	Rh-KED3	103	171361.077	190889.344	2.3			ppb
	Ag-KED3	107	6.000	116409.720	0.8	24.97780	1.6	ppb
	Ag-KED3	109	5.333	113873.412	1.0	24.80285	2.2	ppb
>	In-KED1	115	737081.597	786051.834	0.8			ppb
	Sn-KED1	116	19482.429	311363.755	2.3	25.12934	1.7	ppb
	Sn-KED1	118	354.004	498426.786	1.7	25.47330	1.1	ppb
	Sn-KED1	120	490.616	685232.952	2.3	25.40655	1.7	ppb
	Sb-KED1	121	191.335	447199.068	0.4	25.38699	0.9	ppb
	Sb-KED1	123	174.747	340884.097	0.6	25.50372	1.3	ppb
	Ba-KED1	135	62.667	118292.423	0.7	24.84991	1.0	ppb
	Ba-KED1	137	47.333	191904.054	2.1	24.86422	2.8	ppb
>	Lu-KED1	175	794743.932	845312.369	0.5			ppb
	Tl-KED1	203	72.667	369868.680	1.2	25.98717	1.3	ppb
	Tl-KED1	205	154.668	873451.961	1.3	25.80995	1.2	ppb
	Pb-KED1	208	165.334	1153585.466	0.1	25.89819	0.6	ppb
	Bi-KED1	209	960.699	902682.792	0.7	25.75766	1.2	ppb
	U-KED1	238	113.334	1310893.305	0.5	25.50867	0.5	ppb
>	Th-KED1	232	406165.238	433709.194	0.1			ppb
	Mn-STD1	55	1102.709	1499148.133	1.3	25.34596	1.2	ppb
>	Ge-STD1	72	1364336.500	1449915.448	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		113.0		
	Be-KED1	9	98.6			
	B-KED1	10	99.6			
	B-KED1	11	101.1			
	Al-KED1	27	98.0			
>	Sc-KED1	45		109.8		
	V-KED3	51	98.2			
	Cr-KED3	52	98.8			
	Cr-KED3	53	94.5			
	Co-KED3	59	95.1			
	Ni-KED3	60	95.6			
	Ni-KED3	62	94.2			
	Cu-KED3	63	94.0			
	Cu-KED3	65	95.4			
	Zn-KED3	66	95.1			
>	Ge-KED3	72		117.6		
>	Ge-KED2	72		116.7		
	As-KED2	75	96.7			
	Se-KED2	77	97.4			
	Se-KED2	78	104.8			
	Se-KED2	82	99.8			
	Mo-KED2	95	93.1			
	Mo-KED2	97	93.0			
	Mo-KED2	98	93.1			
	Cd-KED2	111	97.7			
	Cd-KED2	112	94.8			
	Cd-KED2	114	93.4			
>	Rh-KED3	103		111.4		
	Ag-KED3	107	99.9			
	Ag-KED3	109	99.2			
>	In-KED1	115		106.6		
	Sn-KED1	116				
	Sn-KED1	118	101.9			
	Sn-KED1	120	101.6			
	Sb-KED1	121	101.5			
	Sb-KED1	123	102.0			
	Ba-KED1	135	99.4			
	Ba-KED1	137	99.5			
>	Lu-KED1	175		106.4		
	Tl-KED1	203	103.9			
	Tl-KED1	205	103.2			
	Pb-KED1	208	103.6			
	Bi-KED1	209	103.0			
	U-KED1	238	102.0			
>	Th-KED1	232		106.8		
	Mn-STD1	55	101.4			
>	Ge-STD1	72		106.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 14:05:30
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCB.043
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	323092.464	1.3			ppb
	Be-KED1	9	4.667	5.333	108.3	0.00006	3428.9	ppb
	B-KED1	10	116.667	200.668	15.5	0.07418	41.5	ppb
	B-KED1	11	739.353	1181.383	12.3	0.06912	37.9	ppb
	Al-KED1	27	861.359	1043.371	4.2	0.00436	23.9	ppb
>	Sc-KED1	45	791944.750	841628.134	1.9			ppb
	V-KED3	51	2.667	4.000	86.6	0.00175	352.0	ppb
	Cr-KED3	52	1.333	4.000	50.0	0.00314	82.3	ppb
	Cr-KED3	53	2.000	1.333	173.2	-0.00952	244.7	ppb
	Co-KED3	59	4.667	10.000	80.0	0.00219	169.6	ppb
	Ni-KED3	60	4.000	2.667	43.3	-0.00297	63.6	ppb
	Ni-KED3	62	0.667	2.667	114.6	0.01727	160.1	ppb
	Cu-KED3	63	3.333	7.333	56.8	0.00172	115.3	ppb
	Cu-KED3	65	3.333	4.667	49.5	0.00086	266.2	ppb
	Zn-KED3	66	8.000	5.333	43.3	-0.01909	63.6	ppb
>	Ge-KED3	72	18721.596	21365.969	1.7			ppb
>	Ge-KED2	72	61732.783	67345.812	3.3			ppb
	As-KED2	75	7.889	7.889	4.9	-0.00248	91.3	ppb
	Se-KED2	77	1.000	0.889	57.3	-0.02052	236.0	ppb
	Se-KED2	78	23.999	29.770	13.0	0.10277	83.6	ppb
	Se-KED2	82	0.416	0.858	118.9	0.02004	257.8	ppb
	Mo-KED2	95	14.667	21.333	30.1	0.00276	124.8	ppb
	Mo-KED2	97	8.000	14.000	0.0	0.00410	8.7	ppb
	Mo-KED2	98	27.114	36.521	40.0	0.00204	208.6	ppb
	Cd-KED2	111	2.000	1.000	100.0	-0.00107	84.7	ppb
	Cd-KED2	112	0.811	3.478	46.9	0.00121	63.9	ppb
	Cd-KED2	114	4.298	2.631	61.8	-0.00075	80.5	ppb
>	Rh-KED3	103	171361.077	186634.040	1.4			ppb
	Ag-KED3	107	6.000	11.333	53.9	0.00104	124.8	ppb
	Ag-KED3	109	5.333	6.667	62.4	0.00019	493.2	ppb
>	In-KED1	115	737081.597	767940.257	1.8			ppb
	Sn-KED1	116	19482.429	19655.395	1.9	-0.05628	102.4	ppb
	Sn-KED1	118	354.004	464.008	13.8	0.00503	75.3	ppb
	Sn-KED1	120	490.616	581.902	11.3	0.00269	92.6	ppb
	Sb-KED1	121	191.335	383.338	4.5	0.01070	8.7	ppb
	Sb-KED1	123	174.747	330.913	5.5	0.01141	12.3	ppb
	Ba-KED1	135	62.667	38.000	27.3	-0.00585	40.8	ppb
	Ba-KED1	137	47.333	24.000	25.0	-0.00336	22.7	ppb
>	Lu-KED1	175	794743.932	824551.874	1.0			ppb
	Tl-KED1	203	72.667	100.000	19.1	0.00176	74.4	ppb
	Tl-KED1	205	154.668	240.669	7.7	0.00243	21.7	ppb
	Pb-KED1	208	165.334	162.000	10.8	-0.00022	193.8	ppb
	Bi-KED1	209	960.699	1119.377	6.5	0.00359	56.7	ppb
	U-KED1	238	113.334	98.667	30.8	-0.00040	152.4	ppb
>	Th-KED1	232	406165.238	427505.055	1.3			ppb
	Mn-STD1	55	1102.709	1530.082	0.9	0.00628	1.5	ppb
>	Ge-STD1	72	1364336.500	1437904.863	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		111.7		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		106.3		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		114.1		
>	Ge-KED2	72		109.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		108.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		104.2		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		105.3		
	Mn-STD1	55				
>	Ge-STD1	72		105.4		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LLCCV
Sample Date/Time: Friday, October 04, 2013 14:10:42
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\LLCCV.044
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	317110.821	2.3			ppb
	Be-KED1	9	4.667	56.000	21.7	0.01748	21.4	ppb
	B-KED1	10	116.667	546.677	8.6	0.45180	13.6	ppb
	B-KED1	11	739.353	3104.337	3.2	0.45540	5.9	ppb
	Al-KED1	27	861.359	57201.006	2.6	1.96283	4.1	ppb
>	Sc-KED1	45	791944.750	824496.747	1.6			ppb
	V-KED3	51	2.667	116.667	13.8	0.20078	14.1	ppb
	Cr-KED3	52	1.333	150.001	24.1	0.18771	23.9	ppb
	Cr-KED3	53	2.000	19.333	39.2	0.17176	43.7	ppb
	Co-KED3	59	4.667	38.000	45.0	0.01546	51.0	ppb
	Ni-KED3	60	4.000	122.667	12.5	0.18617	11.5	ppb
	Ni-KED3	62	0.667	22.667	22.2	0.20300	24.6	ppb
	Cu-KED3	63	3.333	164.001	3.2	0.07914	2.7	ppb
	Cu-KED3	65	3.333	109.334	9.2	0.10225	11.1	ppb
	Zn-KED3	66	8.000	103.334	30.4	0.47589	31.9	ppb
>	Ge-KED3	72	18721.596	21325.241	1.6			ppb
>	Ge-KED2	72	61732.783	67263.319	0.7			ppb
	As-KED2	75	7.889	149.890	1.1	0.49931	0.5	ppb
	Se-KED2	77	1.000	11.111	17.3	0.97897	18.6	ppb
	Se-KED2	78	23.999	64.057	5.7	1.10539	9.9	ppb
	Se-KED2	82	0.416	15.957	15.1	0.80920	16.0	ppb
	Mo-KED2	95	14.667	123.334	9.9	0.05491	11.3	ppb
	Mo-KED2	97	8.000	66.000	26.4	0.04457	31.3	ppb
	Mo-KED2	98	27.114	204.449	1.2	0.05129	0.6	ppb
	~~Cd-KED2~~	~~111~~	~~2.000~~	~~16.667~~	~~3.5~~	~~0.01322~~	~~4.3~~	~~ppb~~
	Cd-KED2	112	0.811	50.219	7.1	0.02304	6.7	ppb
	Cd-KED2	114	4.298	57.507	7.3	0.01939	7.3	ppb
>	Rh-KED3	103	171361.077	185667.950	2.6			ppb
	Ag-KED3	107	6.000	104.667	12.4	0.02162	11.0	ppb
	Ag-KED3	109	5.333	102.000	12.9	0.02155	14.2	ppb
>	In-KED1	115	737081.597	787391.992	1.7			ppb
	Sn-KED1	116	19482.429	20480.988	1.1	-0.02813	157.7	ppb
	Sn-KED1	118	354.004	1306.060	6.2	0.04743	10.9	ppb
	Sn-KED1	120	490.616	1794.661	2.3	0.04709	5.1	ppb
	Sb-KED1	121	191.335	1264.723	3.2	0.06016	5.8	ppb
	Sb-KED1	123	174.747	936.189	9.0	0.05600	10.7	ppb
	Ba-KED1	135	62.667	280.669	4.1	0.04487	6.6	ppb
	Ba-KED1	137	47.333	395.339	5.6	0.04462	7.0	ppb
>	Lu-KED1	175	794743.932	829584.104	0.5			ppb
	Tl-KED1	203	72.667	389.339	9.3	0.02246	12.1	ppb
	Tl-KED1	205	154.668	831.358	3.2	0.02018	4.2	ppb
	Pb-KED1	208	165.334	980.013	8.0	0.01847	9.3	ppb
	Bi-KED1	209	960.699	2450.210	2.7	0.04212	3.6	ppb
	U-KED1	238	113.334	1060.706	4.1	0.01856	3.8	ppb
>	Th-KED1	232	406165.238	428051.951	0.8			ppb
	Mn-STD1	55	1102.709	4315.319	2.7	0.05469	4.3	ppb
>	Ge-STD1	72	1364336.500	1420810.549	0.5			ppb

RRM 10/4/13

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.6		
	Be-KED1	9	87.4			
	B-KED1	10	90.4			
	B-KED1	11	91.1			
	Al-KED1	27	98.1			
>	Sc-KED1	45		104.1		
	V-KED3	51	100.4			
	Cr-KED3	52	93.9			
	Cr-KED3	53	85.9			
	Co-KED3	59	77.3			
	Ni-KED3	60	93.1			
	Ni-KED3	62	101.5			
	Cu-KED3	63	79.1			
	Cu-KED3	65	102.2			
	Zn-KED3	66	95.2			
>	Ge-KED3	72		113.9		
>	Ge-KED2	72		109.0		
	As-KED2	75	99.9			
	Se-KED2	77	97.9			
	Se-KED2	78	110.5			
	Se-KED2	82	80.9			
	Mo-KED2	95	109.8			
	Mo-KED2	97	89.1			
	Mo-KED2	98	102.6			
	Cd-KED2	111	66.1			
	Cd-KED2	112	115.2			
	Cd-KED2	114	97.0			
>	Rh-KED3	103		108.3		
	Ag-KED3	107	108.1			
	Ag-KED3	109	107.8			
>	In-KED1	115		106.8		
	Sn-KED1	116				
	Sn-KED1	118	94.9			
	Sn-KED1	120	94.2			
	Sb-KED1	121	120.3			
	Sb-KED1	123	112.0			
	Ba-KED1	135	89.7			
	Ba-KED1	137	89.2			
>	Lu-KED1	175		104.4		
	Tl-KED1	203	112.3			
	Tl-KED1	205	100.9			
	Pb-KED1	208	92.3			
	Bi-KED1	209	84.2			
	U-KED1	238	92.8			
>	Th-KED1	232		105.4		
	Mn-STD1	55	109.4			
>	Ge-STD1	72		104.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Cd-KED2	111	Out of Control

LABWORKS - Summary Report

Sample ID: LLCCV
Sample Date/Time: Friday, October 04, 2013 14:15:43
Sample Description:
Autosampler Position: 4
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\LLCCV.045
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	315328.278	0.8			ppb
	Be-KED1	9	4.667	59.333	16.6	0.01879	17.8	ppb
	B-KED1	10	116.667	578.012	1.5	0.48828	2.6	ppb
	B-KED1	11	739.353	3098.336	3.0	0.45752	5.1	ppb
	Al-KED1	27	861.359	57524.286	2.2	1.97397	2.2	ppb
>	Sc-KED1	45	791944.750	824203.272	0.1			ppb
	V-KED3	51	2.667	116.000	13.7	0.19909	15.2	ppb
	Cr-KED3	52	1.333	156.001	13.5	0.19447	12.4	ppb
	Cr-KED3	53	2.000	23.333	34.6	0.21207	39.2	ppb
	Co-KED3	59	4.667	42.667	15.1	0.01767	16.1	ppb
	Ni-KED3	60	4.000	119.334	7.9	0.18037	7.0	ppb
	Ni-KED3	62	0.667	16.667	25.0	0.14662	26.7	ppb
	Cu-KED3	63	3.333	230.669	4.4	0.11171	5.2	ppb
	Cu-KED3	65	3.333	100.667	8.0	0.09346	9.0	ppb
	Zn-KED3	66	8.000	114.667	14.8	0.53228	14.8	ppb
>	Ge-KED3	72	18721.596	21399.351	1.2			ppb
>	Ge-KED2	72	61732.783	68630.202	2.7			ppb
	As-KED2	75	7.889	152.556	2.2	0.49825	3.7	ppb
	Se-KED2	77	1.000	13.333	13.2	1.17243	15.5	ppb
	Se-KED2	78	23.999	64.760	5.6	1.08779	7.3	ppb
	Se-KED2	82	0.416	20.411	18.9	1.02371	21.5	ppb
	Mo-KED2	95	14.667	115.334	15.7	0.04952	15.5	ppb
	Mo-KED2	97	8.000	59.333	32.4	0.03838	38.0	ppb
	Mo-KED2	98	27.114	153.782	2.1	0.03554	2.2	ppb
	Cd-KED2	111	2.000	25.333	22.8	0.02074	27.5	ppb
	Cd-KED2	112	0.811	43.673	24.0	0.01950	21.8	ppb
	Cd-KED2	114	4.298	60.149	12.0	0.01996	14.5	ppb
>	Rh-KED3	103	171361.077	185440.086	1.8			ppb
	Ag-KED3	107	6.000	100.667	16.5	0.02085	19.4	ppb
	Ag-KED3	109	5.333	92.000	31.6	0.01927	31.9	ppb
>	In-KED1	115	737081.597	759739.863	1.7			ppb
	Sn-KED1	116	19482.429	20168.775	0.9	0.00803	267.6	ppb
	Sn-KED1	118	354.004	1251.388	5.1	0.04693	8.1	ppb
	Sn-KED1	120	490.616	1750.048	6.3	0.04782	10.8	ppb
	Sb-KED1	121	191.335	1197.384	3.2	0.05876	1.8	ppb
	Sb-KED1	123	174.747	898.108	7.1	0.05559	8.3	ppb
	Ba-KED1	135	62.667	262.669	12.8	0.04317	19.0	ppb
	Ba-KED1	137	47.333	412.673	14.5	0.04871	14.7	ppb
>	Lu-KED1	175	794743.932	824086.021	0.9			ppb
	Tl-KED1	203	72.667	341.337	7.5	0.01916	8.5	ppb
	Tl-KED1	205	154.668	798.689	7.6	0.01935	9.3	ppb
	Pb-KED1	208	165.334	1008.680	8.0	0.01928	9.7	ppb
	Bi-KED1	209	960.699	2494.218	1.5	0.04390	3.5	ppb
	U-KED1	238	113.334	1064.040	7.5	0.01878	8.8	ppb
>	Th-KED1	232	406165.238	424971.794	0.4			ppb
	Mn-STD1	55	1102.709	4278.641	3.2	0.05371	4.1	ppb
>	Ge-STD1	72	1364336.500	1427269.506	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.0		
	Be-KED1	9	93.9			
	B-KED1	10	97.7			
	B-KED1	11	91.5			
	Al-KED1	27	98.7			
>	Sc-KED1	45		104.1		
	V-KED3	51	99.5			
	Cr-KED3	52	97.2			
	Cr-KED3	53	106.0			
	Co-KED3	59	88.3			
	Ni-KED3	60	90.2			
	Ni-KED3	62	73.3			
	Cu-KED3	63	111.7			
	Cu-KED3	65	93.5			
	Zn-KED3	66	106.5			
>	Ge-KED3	72		114.3		
>	Ge-KED2	72		111.2		
	As-KED2	75	99.7			
	Se-KED2	77	117.2			
	Se-KED2	78	108.8			
	Se-KED2	82	102.4			
	Mo-KED2	95	99.0			
	Mo-KED2	97	76.8			
	Mo-KED2	98	71.1			
	Cd-KED2	111	103.7			
	Cd-KED2	112	97.5			
	Cd-KED2	114	99.8			
>	Rh-KED3	103		108.2		
	Ag-KED3	107	104.2			
	Ag-KED3	109	96.3			
>	In-KED1	115		103.1		
	Sn-KED1	116				
	Sn-KED1	118	93.9			
	Sn-KED1	120	95.6			
	Sb-KED1	121	117.5			
	Sb-KED1	123	111.2			
	Ba-KED1	135	86.3			
	Ba-KED1	137	97.4			
>	Lu-KED1	175		103.7		
	Tl-KED1	203	95.8			
	Tl-KED1	205	96.8			
	Pb-KED1	208	96.4			
	Bi-KED1	209	87.8			
	U-KED1	238	93.9			
>	Th-KED1	232		104.6		
	Mn-STD1	55	107.4			
>	Ge-STD1	72		104.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-MB
Sample Date/Time: Friday, October 04, 2013 14:25:03
Sample Description:
Autosampler Position: 126
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-MB.046
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li-KED1	6	289339.162	313986.658	2.0			ppb
|	Be-KED1	9	4.667	9.333	32.7	0.00148	71.2	ppb
|	B-KED1	10	116.667	94.667	9.5	-0.03468	30.5	ppb
⌊	B-KED1	11	739.353	627.347	3.1	-0.03507	5.9	ppb
⌈	Al-KED1	27	861.359	9182.951	1.4	0.28461	0.8	ppb
⌊>	Sc-KED1	45	791944.750	835286.571	1.1			ppb
⌈	V-KED3	51	2.667	5.333	57.3	0.00404	130.6	ppb
|	Cr-KED3	52	1.333	2.667	114.6	0.00152	261.2	ppb
|	Cr-KED3	53	2.000	4.667	107.9	0.02396	208.5	ppb
|	Co-KED3	59	4.667	2.667	43.3	-0.00126	41.8	ppb
|	Ni-KED3	60	4.000	3.333	69.3	-0.00186	203.5	ppb
|	Ni-KED3	62	0.667	0.667	173.2	-0.00094	1119.4	ppb
|	Cu-KED3	63	3.333	8.667	35.3	0.00242	61.9	ppb
|	Cu-KED3	65	3.333	4.667	65.5	0.00090	340.3	ppb
|	Zn-KED3	66	8.000	34.000	35.8	0.12639	46.5	ppb
⌊>	Ge-KED3	72	18721.596	21220.420	1.9			ppb
⌈>	Ge-KED2	72	61732.783	70297.616	2.6			ppb
|	As-KED2	75	7.889	6.667	26.5	-0.00790	70.9	ppb
|	Se-KED2	77	1.000	0.778	65.5	-0.03307	148.4	ppb
|	Se-KED2	78	23.999	28.791	8.9	0.04238	216.1	ppb
|	Se-KED2	82	0.416	1.419	211.4	0.04983	299.9	ppb
|	Mo-KED2	95	14.667	8.000	90.1	-0.00431	78.6	ppb
|	Mo-KED2	97	8.000	4.000	132.3	-0.00386	98.5	ppb
|	Mo-KED2	98	27.114	12.968	31.4	-0.00504	20.6	ppb
|	Cd-KED2	111	2.000	2.000	50.0	-0.00024	370.1	ppb
|	Cd-KED2	112	0.811	3.013	59.3	0.00092	83.7	ppb
⌊	Cd-KED2	114	4.298	6.222	22.6	0.00047	105.5	ppb
⌈>	Rh-KED3	103	171361.077	189871.093	1.9			ppb
|	Ag-KED3	107	6.000	7.333	83.3	0.00014	947.4	ppb
⌊	Ag-KED3	109	5.333	8.667	35.3	0.00060	105.6	ppb
⌈>	In-KED1	115	737081.597	788887.546	0.2			ppb
|	Sn-KED1	116	19482.429	19848.100	0.8	-0.08650	11.7	ppb
|	Sn-KED1	118	354.004	97.334	17.5	-0.01435	6.1	ppb
|	Sn-KED1	120	490.616	169.275	19.1	-0.01316	9.0	ppb
|	Sb-KED1	121	191.335	96.000	14.4	-0.00615	12.9	ppb
|	Sb-KED1	123	174.747	76.746	19.9	-0.00823	13.7	ppb
|	Ba-KED1	135	62.667	51.333	17.6	-0.00330	56.5	ppb
⌊	Ba-KED1	137	47.333	66.000	22.9	0.00198	97.5	ppb
⌈>	Lu-KED1	175	794743.932	845215.459	0.4			ppb
|	Tl-KED1	203	72.667	42.000	9.5	-0.00248	11.4	ppb
|	Tl-KED1	205	154.668	82.667	17.2	-0.00242	17.4	ppb
|	Pb-KED1	208	165.334	134.000	3.9	-0.00094	13.9	ppb
⌊	Bi-KED1	209	960.699	980.034	6.2	-0.00119	155.0	ppb
⌈	U-KED1	238	113.334	92.667	21.0	-0.00054	68.4	ppb
⌊>	Th-KED1	232	406165.238	431375.103	0.9			ppb
⌈	Mn-STD1	55	1102.709	1479.410	4.4	0.00927	56.7	ppb
⌊>	Ge-STD1	72	1364336.500	1278388.674	20.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		108.5		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		105.5		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		113.3		
>	Ge-KED2	72		113.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		110.8		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		107.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		106.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		106.2		
	Mn-STD1	55				
>	Ge-STD1	72		93.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-001
Sample Date/Time: Friday, October 04, 2013 14:30:15
Sample Description:
Autosampler Position: 127
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-001.047
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	319017.908	2.3			ppb
	Be-KED1	9	4.667	83.334	12.3	0.02681	14.4	ppb
	B-KED1	10	116.667	6544.833	3.2	6.86818	2.9	ppb
	B-KED1	11	739.353	36598.837	2.2	7.05749	1.9	ppb
	Al-KED1	27	861.359	987959.848	0.6	30.63934	1.6	ppb
>	Sc-KED1	45	791944.750	925570.514	1.1			ppb
	V-KED3	51	2.667	407.339	5.1	0.74941	4.5	ppb
	Cr-KED3	52	1.333	1716.103	2.3	2.27441	1.1	ppb
	Cr-KED3	53	2.000	227.335	8.5	2.38280	9.3	ppb
	Co-KED3	59	4.667	131.334	5.3	0.06293	4.1	ppb
	Ni-KED3	60	4.000	424.673	8.6	0.69520	7.0	ppb
	Ni-KED3	62	0.667	80.667	8.0	0.77534	8.5	ppb
	Cu-KED3	63	3.333	1517.414	3.3	0.78468	4.4	ppb
	Cu-KED3	65	3.333	795.355	0.6	0.80389	1.6	ppb
	Zn-KED3	66	8.000	376.005	5.9	1.95207	4.8	ppb
>	Ge-KED3	72	18721.596	20329.791	1.6			ppb
>	Ge-KED2	72	61732.783	64865.263	0.2			ppb
	As-KED2	75	7.889	33.778	8.2	0.09341	11.1	ppb
	Se-KED2	77	1.000	4.778	14.5	0.37770	18.4	ppb
	Se-KED2	78	23.999	32.598	2.5	0.22319	11.9	ppb
	Se-KED2	82	0.416	4.509	29.9	0.22029	33.0	ppb
	Mo-KED2	95	14.667	338.004	7.3	0.17111	7.5	ppb
	Mo-KED2	97	8.000	226.002	10.6	0.17530	10.9	ppb
	Mo-KED2	98	27.114	593.866	3.8	0.17193	3.9	ppb
	Cd-KED2	111	2.000	15.667	9.8	0.01283	11.4	ppb
	Cd-KED2	112	0.811	29.425	10.9	0.01384	11.3	ppb
	Cd-KED2	114	4.298	42.489	3.5	0.01446	4.1	ppb
>	Rh-KED3	103	171361.077	173326.772	2.1			ppb
	Ag-KED3	107	6.000	18.000	40.1	0.00280	58.2	ppb
	Ag-KED3	109	5.333	21.333	23.6	0.00384	34.1	ppb
>	In-KED1	115	737081.597	734399.730	1.4			ppb
	Sn-KED1	116	19482.429	18891.491	0.6	-0.04801	33.6	ppb
	Sn-KED1	118	354.004	276.003	6.2	-0.00419	26.8	ppb
	Sn-KED1	120	490.616	357.945	3.4	-0.00519	12.1	ppb
	Sb-KED1	121	191.335	180.001	1.1	-0.00065	27.6	ppb
	Sb-KED1	123	174.747	128.746	6.4	-0.00364	14.5	ppb
	Ba-KED1	135	62.667	411645.095	1.2	92.59411	0.4	ppb
	Ba-KED1	137	47.333	689144.554	1.3	95.57538	0.5	ppb
>	Lu-KED1	175	794743.932	837563.931	0.4			ppb
	Tl-KED1	203	72.667	110.000	11.1	0.00237	35.8	ppb
	Tl-KED1	205	154.668	226.668	9.0	0.00190	33.5	ppb
	Pb-KED1	208	165.334	5618.430	0.5	0.12337	0.8	ppb
	Bi-KED1	209	960.699	972.700	2.6	-0.00115	59.6	ppb
	U-KED1	238	113.334	16069.034	1.7	0.30985	1.3	ppb
>	Th-KED1	232	406165.238	434401.118	0.3			ppb
	Mn-STD1	55	1102.709	373850.625	0.4	6.69814	1.0	ppb
>	Ge-STD1	72	1364336.500	1365320.914	1.3			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		110.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		116.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		108.6		
>	Ge-KED2	72		105.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		101.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		99.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		107.0		
	Mn-STD1	55				
>	Ge-STD1	72		100.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-001D
Sample Date/Time: Friday, October 04, 2013 14:35:27
Sample Description:
Autosampler Position: 128
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-001D.048
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	317120.707	1.0			ppb
	Be-KED1	9	4.667	84.000	18.9	0.02721	21.0	ppb
	B-KED1	10	116.667	6794.282	0.4	7.17826	0.6	ppb
	B-KED1	11	739.353	38870.833	2.5	7.54992	1.7	ppb
	Al-KED1	27	861.359	1011745.827	1.4	31.57276	1.7	ppb
>	Sc-KED1	45	791944.750	919835.884	1.2			ppb
	V-KED3	51	2.667	380.672	3.4	0.71107	3.8	ppb
	Cr-KED3	52	1.333	1699.435	4.9	2.28666	3.9	ppb
	Cr-KED3	53	2.000	200.668	14.8	2.12929	13.5	ppb
	Co-KED3	59	4.667	125.334	6.4	0.06096	7.7	ppb
	Ni-KED3	60	4.000	425.340	6.3	0.70754	5.5	ppb
	Ni-KED3	62	0.667	74.000	22.1	0.72123	21.8	ppb
	Cu-KED3	63	3.333	1426.071	4.9	0.74629	3.8	ppb
	Cu-KED3	65	3.333	726.019	6.7	0.74530	8.1	ppb
	Zn-KED3	66	8.000	407.339	5.3	2.15220	4.5	ppb
>	Ge-KED3	72	18721.596	20021.356	1.7			ppb
>	Ge-KED2	72	61732.783	64858.572	0.8			ppb
	As-KED2	75	7.889	36.222	17.8	0.10248	23.7	ppb
	Se-KED2	77	1.000	5.778	31.8	0.47833	38.2	ppb
	Se-KED2	78	23.999	33.875	12.5	0.26124	45.8	ppb
	Se-KED2	82	0.416	4.634	33.1	0.22723	36.9	ppb
	Mo-KED2	95	14.667	312.670	14.6	0.15783	16.2	ppb
	Mo-KED2	97	8.000	254.669	10.4	0.19853	11.3	ppb
	Mo-KED2	98	27.114	583.939	3.6	0.16896	4.3	ppb
	Cd-KED2	111	2.000	15.333	10.0	0.01252	11.9	ppb
	Cd-KED2	112	0.811	30.132	2.5	0.01419	3.4	ppb
	Cd-KED2	114	4.298	43.183	7.3	0.01473	9.1	ppb
>	Rh-KED3	103	171361.077	173051.049	2.9			ppb
	Ag-KED3	107	6.000	13.333	17.3	0.00172	30.5	ppb
	Ag-KED3	109	5.333	26.667	30.3	0.00510	37.0	ppb
>	In-KED1	115	737081.597	731034.150	1.9			ppb
	Sn-KED1	116	19482.429	18819.632	2.0	-0.04677	25.4	ppb
	Sn-KED1	118	354.004	279.336	4.8	-0.00395	12.7	ppb
	Sn-KED1	120	490.616	393.161	5.9	-0.00374	17.1	ppb
	Sb-KED1	121	191.335	165.334	11.0	-0.00150	61.3	ppb
	Sb-KED1	123	174.747	109.571	5.5	-0.00513	6.4	ppb
	Ba-KED1	135	62.667	411099.901	1.4	92.92985	3.1	ppb
	Ba-KED1	137	47.333	684318.758	1.8	95.38620	3.7	ppb
>	Lu-KED1	175	794743.932	839465.399	0.3			ppb
	Tl-KED1	203	72.667	100.000	10.4	0.00164	43.8	ppb
	Tl-KED1	205	154.668	250.669	5.8	0.00260	15.9	ppb
	Pb-KED1	208	165.334	5781.782	1.0	0.12677	0.8	ppb
	Bi-KED1	209	960.699	943.365	3.7	-0.00206	44.4	ppb
	U-KED1	238	113.334	16195.176	1.2	0.30929	0.7	ppb
>	Th-KED1	232	406165.238	438616.891	1.1			ppb
	Mn-STD1	55	1102.709	368245.845	0.5	6.71602	0.7	ppb
>	Ge-STD1	72	1364336.500	1341222.470	0.9			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		109.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		116.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		106.9		
>	Ge-KED2	72		105.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		101.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		99.2		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.0		
	Mn-STD1	55				
>	Ge-STD1	72		98.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-001S
Sample Date/Time: Friday, October 04, 2013 14:40:39
Sample Description:
Autosampler Position: 129
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-001S.049
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	322196.948	0.6			ppb
	Be-KED1	9	4.667	7086.424	1.4	2.40120	1.7	ppb
	B-KED1	10	116.667	24644.600	4.4	25.97806	4.2	ppb
	B-KED1	11	739.353	137841.791	3.8	26.75098	3.4	ppb
	Al-KED1	27	861.359	4001992.163	2.1	125.34867	2.3	ppb
>	Sc-KED1	45	791944.750	917446.316	3.4			ppb
	V-KED3	51	2.667	14334.527	3.4	26.83662	3.0	ppb
	Cr-KED3	52	1.333	9583.214	1.9	12.84549	2.4	ppb
	Cr-KED3	53	2.000	1214.718	6.6	12.95907	6.3	ppb
	Co-KED3	59	4.667	49804.003	1.0	25.09277	1.5	ppb
	Ni-KED3	60	4.000	15083.292	0.7	25.22336	1.4	ppb
	Ni-KED3	62	0.667	2500.219	2.6	24.48907	2.6	ppb
	Cu-KED3	63	3.333	23614.171	1.6	12.36269	1.1	ppb
	Cu-KED3	65	3.333	12182.526	1.3	12.49381	0.7	ppb
	Zn-KED3	66	8.000	4996.207	2.1	26.79139	1.2	ppb
>	Ge-KED3	72	18721.596	20118.157	0.8			ppb
>	Ge-KED2	72	61732.783	65013.939	0.5			ppb
	As-KED2	75	7.889	13907.657	1.7	50.81936	1.8	ppb
	Se-KED2	77	1.000	525.565	3.8	53.03801	3.4	ppb
	Se-KED2	78	23.999	1744.048	1.9	51.85068	2.4	ppb
	Se-KED2	82	0.416	930.320	1.4	50.18731	0.9	ppb
	Mo-KED2	95	14.667	38393.538	2.1	20.31100	2.2	ppb
	Mo-KED2	97	8.000	25653.013	0.9	20.61436	0.5	ppb
	Mo-KED2	98	27.114	69690.170	0.6	21.13615	0.2	ppb
	Cd-KED2	111	2.000	25760.205	0.7	24.31314	1.2	ppb
	Cd-KED2	112	0.811	49417.796	0.5	23.88082	0.2	ppb
	Cd-KED2	114	4.298	61170.049	2.0	23.23835	2.5	ppb
>	Rh-KED3	103	171361.077	172666.902	2.3			ppb
	Ag-KED3	107	6.000	53454.516	2.0	12.67684	0.5	ppb
	Ag-KED3	109	5.333	52539.106	0.8	12.65032	2.0	ppb
>	In-KED1	115	737081.597	721782.228	1.2			ppb
	Sn-KED1	116	19482.429	217103.279	1.6	18.65125	1.3	ppb
	Sn-KED1	118	354.004	332875.218	2.6	18.52068	1.5	ppb
	Sn-KED1	120	490.616	470542.546	1.2	18.99631	0.3	ppb
	Sb-KED1	121	191.335	869857.292	0.4	53.79350	1.2	ppb
	Sb-KED1	123	174.747	663487.919	0.4	54.07516	0.8	ppb
	Ba-KED1	135	62.667	875634.601	0.3	200.43220	0.9	ppb
	Ba-KED1	137	47.333	1431487.250	1.4	202.00201	0.4	ppb
>	Lu-KED1	175	794743.932	831465.705	0.6			ppb
	Tl-KED1	203	72.667	735200.237	0.7	52.52140	0.9	ppb
	Tl-KED1	205	154.668	1741415.444	0.6	52.32138	1.0	ppb
	Pb-KED1	208	165.334	2184604.745	0.2	49.86535	0.6	ppb
	Bi-KED1	209	960.699	683781.539	0.9	19.82875	0.4	ppb
	U-KED1	238	113.334	1104315.303	0.1	21.21872	1.3	ppb
>	Th-KED1	232	406165.238	439271.396	1.3			ppb
	Mn-STD1	55	1102.709	1737508.487	2.5	32.24212	1.2	ppb
>	Ge-STD1	72	1364336.500	1321106.507	1.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		111.4		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		115.8		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		107.5		
>	Ge-KED2	72		105.3		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		100.8		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		97.9		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		108.2		
	Mn-STD1	55				
>	Ge-STD1	72		96.8		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: LCSW
Sample Date/Time: Friday, October 04, 2013 14:45:51
Sample Description: K1309638 9905 9706 9757 9830 9946 9928
Autosampler Position: 130
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\LCSW.050
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	312265.317	0.4			ppb
	Be-KED1	9	4.667	7201.815	1.5	2.51798	1.8	ppb
	B-KED1	10	116.667	18722.269	3.2	20.33564	3.4	ppb
	B-KED1	11	739.353	100738.658	1.5	20.13517	1.7	ppb
	Al-KED1	27	861.359	2867915.695	0.7	100.90195	1.6	ppb
>	Sc-KED1	45	791944.750	816457.482	1.3			ppb
	V-KED3	51	2.667	13269.494	1.1	23.54428	1.1	ppb
	Cr-KED3	52	1.333	7853.492	2.7	9.98013	4.8	ppb
	Cr-KED3	53	2.000	912.696	4.8	9.22636	6.1	ppb
	Co-KED3	59	4.667	51377.564	1.2	24.53092	1.6	ppb
	Ni-KED3	60	4.000	15507.079	0.7	24.57543	1.5	ppb
	Ni-KED3	62	0.667	2522.889	2.1	23.41970	2.5	ppb
	Cu-KED3	63	3.333	24461.596	1.9	12.13607	1.3	ppb
	Cu-KED3	65	3.333	12643.594	2.2	12.28674	0.3	ppb
	Zn-KED3	66	8.000	5230.292	4.2	26.58074	4.1	ppb
>	Ge-KED3	72	18721.596	21231.771	2.2			ppb
>	Ge-KED2	72	61732.783	67615.324	1.4			ppb
	As-KED2	75	7.889	14281.024	1.2	50.18418	2.3	ppb
	Se-KED2	77	1.000	529.788	4.5	51.43666	5.9	ppb
	Se-KED2	78	23.999	1889.919	0.8	54.06516	2.2	ppb
	Se-KED2	82	0.416	973.231	3.0	50.50451	4.4	ppb
	Mo-KED2	95	14.667	39310.682	0.9	19.99665	0.8	ppb
	Mo-KED2	97	8.000	25882.765	1.9	19.99845	1.1	ppb
	Mo-KED2	98	27.114	68289.309	1.7	19.91413	1.0	ppb
	Cd-KED2	111	2.000	28346.096	0.7	25.72776	1.9	ppb
	Cd-KED2	112	0.811	54833.140	1.9	25.48066	2.1	ppb
	Cd-KED2	114	4.298	68663.442	2.6	25.08385	3.2	ppb
>	Rh-KED3	103	171361.077	189675.967	2.2			ppb
	Ag-KED3	107	6.000	59316.313	3.3	12.80295	1.1	ppb
	Ag-KED3	109	5.333	58284.054	2.9	12.77053	1.1	ppb
>	In-KED1	115	737081.597	763668.765	2.2			ppb
	Sn-KED1	116	19482.429	259628.463	1.0	21.32136	2.3	ppb
	Sn-KED1	118	354.004	401394.450	0.6	21.11795	1.7	ppb
	Sn-KED1	120	490.616	549086.191	0.4	20.95858	1.8	ppb
	Sb-KED1	121	191.335	921223.275	2.0	53.85202	2.4	ppb
	Sb-KED1	123	174.747	716017.474	2.1	55.15491	1.0	ppb
	Ba-KED1	135	62.667	478039.693	1.8	103.42601	2.0	ppb
	Ba-KED1	137	47.333	778127.641	1.9	103.78921	1.4	ppb
>	Lu-KED1	175	794743.932	857106.338	1.4			ppb
	Tl-KED1	203	72.667	769563.797	1.1	53.33248	0.5	ppb
	Tl-KED1	205	154.668	1823925.520	0.9	53.16159	0.5	ppb
	Pb-KED1	208	165.334	2365375.765	0.3	52.38358	1.7	ppb
	Bi-KED1	209	960.699	772757.391	0.8	21.74576	2.1	ppb
	U-KED1	238	113.334	1109766.010	0.8	20.87902	0.2	ppb
>	Th-KED1	232	406165.238	448575.580	1.0			ppb
	Mn-STD1	55	1102.709	1428286.527	3.0	25.12931	3.1	ppb
>	Ge-STD1	72	1364336.500	1393279.162	0.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		107.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		103.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		113.4		
>	Ge-KED2	72		109.5		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		110.7		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		103.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		107.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		110.4		
	Mn-STD1	55				
>	Ge-STD1	72		102.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-002
Sample Date/Time: Friday, October 04, 2013 14:51:03
Sample Description:
Autosampler Position: 131
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-002.051
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	273470.376	1.4			ppb
	Be-KED1	9	4.667	4970.865	1.2	1.98411	0.3	ppb
	B-KED1	10	116.667	2292.184	1.5	2.72495	2.7	ppb
	B-KED1	11	739.353	13093.998	0.8	2.85208	2.3	ppb
	Al-KED1	27	861.359	72193341.929	1.7	2381.61486	0.9	ppb
>	Sc-KED1	45	791944.750	870886.229	1.4			ppb
	V-KED3	51	2.667	5254.967	2.1	12.69550	3.1	ppb
	Cr-KED3	52	1.333	41714.150	0.8	72.15608	1.0	ppb
	Cr-KED3	53	2.000	5228.957	2.0	72.09714	1.7	ppb
	Co-KED3	59	4.667	37749.147	1.2	24.54217	1.6	ppb
	Ni-KED3	60	4.000	21857.377	1.3	47.17207	1.7	ppb
	Ni-KED3	62	0.667	3655.801	1.5	46.21276	1.4	ppb
	Cu-KED3	63	3.333	10282.366	0.8	6.94725	2.6	ppb
	Cu-KED3	65	3.333	5332.329	2.9	7.05471	2.4	ppb
	Zn-KED3	66	8.000	1662.764	3.7	11.47655	2.0	ppb
>	Ge-KED3	72	18721.596	15591.839	1.8			ppb
>	Ge-KED2	72	61732.783	48962.096	0.5			ppb
	As-KED2	75	7.889	626.792	2.0	3.01244	1.5	ppb
	Se-KED2	77	1.000	232.557	5.2	31.12569	5.6	ppb
	Se-KED2	78	23.999	149.998	2.8	5.24538	2.8	ppb
	Se-KED2	82	0.416	74.594	7.2	5.32220	7.1	ppb
	Mo-KED2	95	14.667	2316.188	1.2	1.61952	1.5	ppb
	Mo-KED2	97	8.000	1506.079	3.7	1.60065	3.3	ppb
	Mo-KED2	98	27.114	3978.335	2.1	1.59426	2.6	ppb
	Cd-KED2	111	2.000	687.017	3.4	0.85896	2.9	ppb
	Cd-KED2	112	0.811	1294.775	3.0	0.83052	3.5	ppb
	Cd-KED2	114	4.298	1710.868	0.3	0.86132	0.6	ppb
>	Rh-KED3	103	171361.077	126920.486	3.7			ppb
	Ag-KED3	107	6.000	6263.373	1.2	2.02069	2.5	ppb
	Ag-KED3	109	5.333	6276.045	2.3	2.05494	1.8	ppb
>	In-KED1	115	737081.597	508815.783	1.2			ppb
	Sn-KED1	116	19482.429	18198.771	1.7	0.63482	7.6	ppb
	Sn-KED1	118	354.004	725.352	14.1	0.03795	19.4	ppb
	Sn-KED1	120	490.616	1082.513	5.3	0.04262	6.0	ppb
	Sb-KED1	121	191.335	286.670	3.5	0.01356	6.0	ppb
	Sb-KED1	123	174.747	215.405	8.5	0.01098	21.9	ppb
	Ba-KED1	135	62.667	341117.620	2.0	110.75963	2.3	ppb
	Ba-KED1	137	47.333	563743.647	1.5	112.86910	2.6	ppb
>	Lu-KED1	175	794743.932	702230.133	0.2			ppb
	Tl-KED1	203	72.667	1916.129	2.4	0.15666	2.6	ppb
	Tl-KED1	205	154.668	4532.052	2.7	0.15637	2.8	ppb
	Pb-KED1	208	165.334	287234.603	0.4	7.75944	0.2	ppb
	Bi-KED1	209	960.699	1726.104	2.5	0.03017	4.9	ppb
	~~U-KED1~~	~~238~~	~~113.334~~	~~51046.381~~	~~1.3~~	~~0.79909~~	~~0.8~~	~~ppb~~
>	Th-KED1	232	406165.238	537611.139	1.5			ppb
	Mn-STD1	55	1102.709	28288946.136	1.3	651.63577	0.8	ppb
>	Ge-STD1	72	1364336.500	1064942.674	0.6			ppb

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Rem
10/4/13

Sample ID: K1309638-002
Report Date/Time: Friday, October 04, 2013 15:34:43
Page 1

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		94.5		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		110.0		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		83.3		
>	Ge-KED2	72		79.3		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		74.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		69.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		88.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		132.4		
	Mn-STD1	55				
>	Ge-STD1	72		78.1		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Th-KED1 232 Int Std for sam	Th-KED1	232	IS out of control

LABWORKS - Summary Report

Sample ID: K1309638-004
Sample Date/Time: Friday, October 04, 2013 14:56:15
Sample Description:
Autosampler Position: 132
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-004.052
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	303535.545	0.7			ppb
	Be-KED1	9	4.667	90.667	22.6	0.03087	24.1	ppb
	B-KED1	10	116.667	5380.347	2.0	5.91554	2.7	ppb
	B-KED1	11	739.353	29952.721	3.1	6.04703	2.9	ppb
	Al-KED1	27	861.359	310384.589	5.9	11.73031	4.3	ppb
>	Sc-KED1	45	791944.750	757920.136	2.2			ppb
	V-KED3	51	2.667	381.338	7.7	0.74182	5.9	ppb
	Cr-KED3	52	1.333	1044.038	4.4	1.46294	2.1	ppb
	Cr-KED3	53	2.000	124.667	24.9	1.37828	28.0	ppb
	Co-KED3	59	4.667	40.667	27.1	0.01884	28.3	ppb
	Ni-KED3	60	4.000	215.335	8.9	0.36971	7.7	ppb
	Ni-KED3	62	0.667	40.667	24.8	0.41085	25.7	ppb
	Cu-KED3	63	3.333	976.033	7.1	0.53369	8.4	ppb
	Cu-KED3	65	3.333	584.679	8.8	0.62499	10.2	ppb
	Zn-KED3	66	8.000	194.001	6.4	1.04425	4.2	ppb
>	Ge-KED3	72	18721.596	19214.919	2.5			ppb
>	Ge-KED2	72	61732.783	61649.071	0.5			ppb
	As-KED2	75	7.889	30.222	12.9	0.08611	16.9	ppb
	Se-KED2	77	1.000	2.889	35.3	0.20126	53.3	ppb
	Se-KED2	78	23.999	31.413	11.3	0.23670	46.4	ppb
	Se-KED2	82	0.416	1.852	83.6	0.08169	107.5	ppb
	Mo-KED2	95	14.667	282.003	3.9	0.14923	4.6	ppb
	Mo-KED2	97	8.000	214.002	5.7	0.17464	5.8	ppb
	Mo-KED2	98	27.114	536.238	6.7	0.16296	7.6	ppb
	Cd-KED2	111	2.000	6.000	44.1	0.00398	65.5	ppb
	Cd-KED2	112	0.811	5.945	24.9	0.00261	28.4	ppb
	Cd-KED2	114	4.298	14.495	8.6	0.00409	12.0	ppb
>	Rh-KED3	103	171361.077	170607.375	0.5			ppb
	Ag-KED3	107	6.000	24.000	71.2	0.00434	95.2	ppb
	Ag-KED3	109	5.333	17.333	26.6	0.00293	38.7	ppb
>	In-KED1	115	737081.597	696267.233	2.0			ppb
	Sn-KED1	116	19482.429	19624.043	0.5	0.11969	34.9	ppb
	Sn-KED1	118	354.004	360.005	5.5	0.00147	61.8	ppb
	Sn-KED1	120	490.616	504.616	8.7	0.00172	102.5	ppb
	Sb-KED1	121	191.335	182.668	7.0	0.00013	742.9	ppb
	Sb-KED1	123	174.747	145.413	6.3	-0.00167	37.5	ppb
	Ba-KED1	135	62.667	484375.991	1.0	114.96488	2.9	ppb
	Ba-KED1	137	47.333	807266.257	0.8	118.11816	2.0	ppb
>	Lu-KED1	175	794743.932	839361.784	0.5			ppb
	Tl-KED1	203	72.667	120.001	18.9	0.00306	52.9	ppb
	Tl-KED1	205	154.668	277.336	5.2	0.00339	12.4	ppb
	Pb-KED1	208	165.334	2163.398	2.9	0.04497	3.5	ppb
	Bi-KED1	209	960.699	1023.370	2.2	0.00025	200.4	ppb
	U-KED1	238	113.334	18243.649	3.0	0.33645	2.1	ppb
>	Th-KED1	232	406165.238	454431.747	1.0			ppb
	Mn-STD1	55	1102.709	109196.480	1.6	2.21382	2.5	ppb
>	Ge-STD1	72	1364336.500	1199776.632	2.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
⌈>	Li-KED1	6		104.9		
|	Be-KED1	9				
|	B-KED1	10				
⌊	B-KED1	11				
⌈	Al-KED1	27				
⌊>	Sc-KED1	45		95.7		
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		102.6		
⌈>	Ge-KED2	72		99.9		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
|	Se-KED2	82				
|	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
⌊	Cd-KED2	114				
⌈>	Rh-KED3	103		99.6		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		94.5		
|	Sn-KED1	116				
|	Sn-KED1	118				
|	Sn-KED1	120				
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		105.6		
|	Tl-KED1	203				
|	Tl-KED1	205				
|	Pb-KED1	208				
⌊	Bi-KED1	209				
⌈	U-KED1	238				
⌊>	Th-KED1	232		111.9		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		87.9		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-005
Sample Date/Time: Friday, October 04, 2013 15:01:28
Sample Description:
Autosampler Position: 133
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-005.053
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	307705.605	1.3			ppb
	Be-KED1	9	4.667	236.002	5.3	0.08207	6.6	ppb
	B-KED1	10	116.667	5298.983	0.4	5.74325	1.5	ppb
	B-KED1	11	739.353	30740.378	1.6	6.12572	3.0	ppb
	Al-KED1	27	861.359	807769.798	1.6	30.83915	1.6	ppb
>	Sc-KED1	45	791944.750	751772.236	0.2			ppb
	V-KED3	51	2.667	915.363	2.3	1.77586	2.4	ppb
	Cr-KED3	52	1.333	1196.050	3.6	1.66402	3.6	ppb
	Cr-KED3	53	2.000	151.334	17.7	1.65794	18.1	ppb
	Co-KED3	59	4.667	392.005	4.7	0.20270	4.6	ppb
	Ni-KED3	60	4.000	384.005	2.3	0.66022	2.2	ppb
	Ni-KED3	62	0.667	56.667	15.9	0.56995	16.2	ppb
	Cu-KED3	63	3.333	1208.718	3.9	0.65578	3.9	ppb
	Cu-KED3	65	3.333	618.013	7.9	0.65514	8.0	ppb
	Zn-KED3	66	8.000	2332.857	3.5	12.97624	3.6	ppb
>	Ge-KED3	72	18721.596	19361.111	0.1			ppb
>	Ge-KED2	72	61732.783	60634.757	1.4			ppb
	As-KED2	75	7.889	106.223	4.2	0.38625	6.0	ppb
	Se-KED2	77	1.000	13.222	8.9	1.32799	10.3	ppb
	Se-KED2	78	23.999	55.174	0.0	1.02235	2.5	ppb
	Se-KED2	82	0.416	18.404	16.4	1.04193	17.2	ppb
	Mo-KED2	95	14.667	198.668	13.7	0.10462	15.2	ppb
	Mo-KED2	97	8.000	150.667	9.8	0.12301	9.3	ppb
	Mo-KED2	98	27.114	372.973	7.4	0.11264	7.1	ppb
	Cd-KED2	111	2.000	7.667	41.9	0.00574	55.2	ppb
	Cd-KED2	112	0.811	17.506	17.0	0.00866	17.9	ppb
	Cd-KED2	114	4.298	21.770	10.8	0.00716	15.0	ppb
>	Rh-KED3	103	171361.077	170121.202	2.0			ppb
	Ag-KED3	107	6.000	13.333	37.7	0.00178	67.7	ppb
	Ag-KED3	109	5.333	15.333	65.7	0.00243	99.4	ppb
>	In-KED1	115	737081.597	674631.828	0.7			ppb
	Sn-KED1	116	19482.429	19091.029	1.4	0.12707	30.9	ppb
	Sn-KED1	118	354.004	200.668	10.5	-0.00735	17.9	ppb
	Sn-KED1	120	490.616	285.243	6.4	-0.00708	10.2	ppb
	Sb-KED1	121	191.335	308.670	7.1	0.00884	17.3	ppb
	Sb-KED1	123	174.747	222.412	12.1	0.00545	43.4	ppb
	Ba-KED1	135	62.667	407218.473	0.5	99.71502	0.7	ppb
	Ba-KED1	137	47.333	668150.811	1.5	100.88300	2.2	ppb
>	Lu-KED1	175	794743.932	847437.346	1.5			ppb
	Tl-KED1	203	72.667	136.667	8.5	0.00430	22.1	ppb
	Tl-KED1	205	154.668	323.337	7.2	0.00467	12.0	ppb
	Pb-KED1	208	165.334	6413.227	1.7	0.13968	0.3	ppb
	Bi-KED1	209	960.699	957.366	6.6	-0.00192	74.4	ppb
	U-KED1	238	113.334	47021.262	0.9	0.87267	1.9	ppb
>	Th-KED1	232	406165.238	453667.619	2.1			ppb
	Mn-STD1	55	1102.709	778391.629	1.4	15.49884	1.2	ppb
>	Ge-STD1	72	1364336.500	1230486.806	0.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		106.3		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		94.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		103.4		
>	Ge-KED2	72		98.2		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		99.3		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		91.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		106.6		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		111.7		
	Mn-STD1	55				
>	Ge-STD1	72		90.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-008
Sample Date/Time: Friday, October 04, 2013 15:06:40
Sample Description:
Autosampler Position: 134
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-008.054
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	306040.978	1.1			ppb
	Be-KED1	9	4.667	76.667	19.8	0.02559	20.5	ppb
	B-KED1	10	116.667	4646.089	2.9	5.04690	3.6	ppb
	B-KED1	11	739.353	26952.079	2.7	5.38111	3.9	ppb
	Al-KED1	27	861.359	609942.512	1.7	23.88423	1.1	ppb
>	Sc-KED1	45	791944.750	732728.316	0.9			ppb
	V-KED3	51	2.667	549.344	10.6	1.10089	11.4	ppb
	Cr-KED3	52	1.333	2630.909	2.3	3.78879	2.9	ppb
	Cr-KED3	53	2.000	310.670	9.4	3.54798	10.4	ppb
	Co-KED3	59	4.667	1061.373	7.1	0.57269	8.7	ppb
	Ni-KED3	60	4.000	874.693	0.7	1.56524	0.9	ppb
	Ni-KED3	62	0.667	128.667	10.6	1.34657	9.2	ppb
	Cu-KED3	63	3.333	1032.704	3.1	0.57950	4.5	ppb
	Cu-KED3	65	3.333	520.009	2.8	0.56956	1.4	ppb
	Zn-KED3	66	8.000	327.337	9.2	1.84558	11.0	ppb
>	Ge-KED3	72	18721.596	18720.260	1.6			ppb
>	Ge-KED2	72	61732.783	59144.195	1.4			ppb
	As-KED2	75	7.889	38.333	3.8	0.12369	4.6	ppb
	Se-KED2	77	1.000	6.667	8.7	0.63530	11.9	ppb
	Se-KED2	78	23.999	33.120	8.1	0.33532	23.1	ppb
	Se-KED2	82	0.416	0.834	401.6	0.02742	731.3	ppb
	Mo-KED2	95	14.667	550.011	4.0	0.31185	4.5	ppb
	Mo-KED2	97	8.000	380.005	9.3	0.32892	8.8	ppb
	Mo-KED2	98	27.114	997.222	1.9	0.32396	2.1	ppb
	Cd-KED2	111	2.000	81.000	10.5	0.08200	9.8	ppb
	Cd-KED2	112	0.811	153.892	6.7	0.08133	6.5	ppb
	Cd-KED2	114	4.298	190.354	9.4	0.07780	10.1	ppb
>	Rh-KED3	103	171361.077	162015.546	0.4			ppb
	Ag-KED3	107	6.000	249.336	18.5	0.06162	19.4	ppb
	Ag-KED3	109	5.333	246.002	3.5	0.06182	3.8	ppb
>	In-KED1	115	737081.597	661285.168	1.8			ppb
	Sn-KED1	116	19482.429	18877.610	0.8	0.14403	14.6	ppb
	Sn-KED1	118	354.004	283.336	9.2	-0.00207	85.7	ppb
	Sn-KED1	120	490.616	414.613	10.6	-0.00114	151.3	ppb
	Sb-KED1	121	191.335	144.667	0.8	-0.00182	5.8	ppb
	Sb-KED1	123	174.747	130.746	10.6	-0.00230	62.5	ppb
	Ba-KED1	135	62.667	345993.328	0.9	86.44006	1.2	ppb
	Ba-KED1	137	47.333	570813.316	0.3	87.93217	1.6	ppb
>	Lu-KED1	175	794743.932	822755.434	1.2			ppb
	Tl-KED1	203	72.667	770.687	4.0	0.05023	5.1	ppb
	Tl-KED1	205	154.668	1774.777	4.2	0.04905	5.8	ppb
	Pb-KED1	208	165.334	6817.967	2.7	0.15337	3.6	ppb
	Bi-KED1	209	960.699	918.696	1.3	-0.00223	6.6	ppb
	U-KED1	238	113.334	17253.747	1.2	0.32138	2.0	ppb
>	Th-KED1	232	406165.238	449871.941	0.8			ppb
	Mn-STD1	55	1102.709	2101485.700	0.9	43.13253	1.8	ppb
>	Ge-STD1	72	1364336.500	1194826.197	0.9			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		105.8		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		92.5		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		100.0		
>	Ge-KED2	72		95.8		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		94.5		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		89.7		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.5		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		110.8		
	Mn-STD1	55				
>	Ge-STD1	72		87.6		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-010
Sample Date/Time: Friday, October 04, 2013 15:11:52
Sample Description:
Autosampler Position: 135
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-010.055
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	301431.839	6.6			ppb
	Be-KED1	9	4.667	56.667	12.4	0.01895	21.0	ppb
	B-KED1	10	116.667	4610.744	1.5	5.10457	8.6	ppb
	B-KED1	11	739.353	25347.137	1.5	5.14864	8.6	ppb
	Al-KED1	27	861.359	574447.262	5.5	23.17358	9.0	ppb
>	Sc-KED1	45	791944.750	712781.977	3.7			ppb
	V-KED3	51	2.667	510.009	7.9	1.03005	7.9	ppb
	Cr-KED3	52	1.333	2500.219	3.1	3.63262	4.0	ppb
	Cr-KED3	53	2.000	305.337	13.2	3.51898	14.3	ppb
	Co-KED3	59	4.667	906.695	3.9	0.49297	5.1	ppb
	Ni-KED3	60	4.000	852.025	2.3	1.53831	3.5	ppb
	Ni-KED3	62	0.667	156.668	9.2	1.65684	9.0	ppb
	Cu-KED3	63	3.333	975.367	9.0	0.55184	9.1	ppb
	Cu-KED3	65	3.333	537.344	11.1	0.59421	11.7	ppb
	Zn-KED3	66	8.000	260.002	7.4	1.46936	9.1	ppb
>	Ge-KED3	72	18721.596	18556.713	1.5			ppb
>	Ge-KED2	72	61732.783	59531.117	0.6			ppb
	As-KED2	75	7.889	32.444	8.6	0.09920	11.6	ppb
	Se-KED2	77	1.000	5.000	11.5	0.44580	14.5	ppb
	Se-KED2	78	23.999	30.629	7.3	0.24644	28.2	ppb
	Se-KED2	82	0.416	4.295	38.8	0.22984	43.4	ppb
	Mo-KED2	95	14.667	552.011	1.0	0.31086	0.6	ppb
	Mo-KED2	97	8.000	340.671	5.1	0.29237	5.9	ppb
	Mo-KED2	98	27.114	947.812	7.2	0.30532	6.8	ppb
	Cd-KED2	111	2.000	52.667	6.7	0.05231	7.1	ppb
	Cd-KED2	112	0.811	95.799	10.1	0.05017	10.8	ppb
	Cd-KED2	114	4.298	129.183	5.3	0.05189	6.1	ppb
>	Rh-KED3	103	171361.077	164827.596	1.6			ppb
	Ag-KED3	107	6.000	172.001	5.1	0.04130	5.3	ppb
	Ag-KED3	109	5.333	184.001	10.4	0.04508	9.4	ppb
>	In-KED1	115	737081.597	645623.462	4.2			ppb
	Sn-KED1	116	19482.429	18392.051	6.6	0.13937	63.7	ppb
	Sn-KED1	118	354.004	266.669	3.5	-0.00270	9.5	ppb
	Sn-KED1	120	490.616	372.527	5.8	-0.00256	54.9	ppb
	Sb-KED1	121	191.335	154.668	18.8	-0.00088	228.8	ppb
	Sb-KED1	123	174.747	87.240	19.8	-0.00594	32.6	ppb
	Ba-KED1	135	62.667	347707.950	1.5	89.06292	4.2	ppb
	Ba-KED1	137	47.333	573504.869	2.0	90.55022	3.4	ppb
>	Lu-KED1	175	794743.932	804899.432	5.5			ppb
	Tl-KED1	203	72.667	794.022	2.8	0.05324	3.9	ppb
	Tl-KED1	205	154.668	1837.452	2.9	0.05232	8.4	ppb
	Pb-KED1	208	165.334	4992.336	1.9	0.11410	7.8	ppb
	Bi-KED1	209	960.699	908.029	11.1	-0.00201	78.7	ppb
	U-KED1	238	113.334	14620.144	0.5	0.28361	6.1	ppb
>	Th-KED1	232	406165.238	432586.488	6.2			ppb
	Mn-STD1	55	1102.709	1346264.557	0.8	27.80127	0.6	ppb
>	Ge-STD1	72	1364336.500	1187152.229	1.0			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.2		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		90.0		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		99.1		
>	Ge-KED2	72		96.4		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		96.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		87.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		101.3		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		106.5		
	Mn-STD1	55				
>	Ge-STD1	72		87.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 15:17:06
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCV.056
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	301792.040	2.8			ppb
	Be-KED1	9	4.667	67847.533	3.5	24.55750	1.6	ppb
	B-KED1	10	116.667	21177.688	1.3	23.83635	3.2	ppb
	B-KED1	11	739.353	111906.096	2.4	23.17269	2.4	ppb
	Al-KED1	27	861.359	576376.089	2.9	24.69960	1.6	ppb
>	Sc-KED1	45	791944.750	669510.064	1.5			ppb
	V-KED3	51	2.667	12030.399	2.5	23.14108	2.7	ppb
	Cr-KED3	52	1.333	17136.272	1.0	23.59756	0.8	ppb
	Cr-KED3	53	2.000	2065.483	0.9	22.65889	1.1	ppb
	Co-KED3	59	4.667	45420.100	1.5	23.50925	1.6	ppb
	Ni-KED3	60	4.000	13779.310	1.4	23.67202	1.6	ppb
	Ni-KED3	62	0.667	2338.191	2.0	23.52912	2.3	ppb
	Cu-KED3	63	3.333	44623.589	0.8	24.00342	0.7	ppb
	Cu-KED3	65	3.333	22680.658	1.0	23.90070	1.0	ppb
	Zn-KED3	66	8.000	4277.307	2.1	23.56097	2.3	ppb
>	Ge-KED3	72	18721.596	19582.079	0.2			ppb
>	Ge-KED2	72	61732.783	61882.433	1.7			ppb
	As-KED2	75	7.889	6543.165	0.9	25.10603	1.2	ppb
	Se-KED2	77	1.000	242.669	5.1	25.69577	6.8	ppb
	Se-KED2	78	23.999	862.995	0.5	26.59278	1.9	ppb
	Se-KED2	82	0.416	464.860	2.1	26.34629	3.6	ppb
	Mo-KED2	95	14.667	45529.776	0.9	25.31335	2.5	ppb
	Mo-KED2	97	8.000	30201.896	1.4	25.50560	2.4	ppb
	Mo-KED2	98	27.114	78350.265	2.2	24.97558	3.5	ppb
	Cd-KED2	111	2.000	26437.112	1.9	26.21916	2.6	ppb
	Cd-KED2	112	0.811	50518.155	1.7	25.65609	3.1	ppb
	Cd-KED2	114	4.298	63336.370	1.2	25.28227	2.2	ppb
>	Rh-KED3	103	171361.077	181841.446	1.2			ppb
	Ag-KED3	107	6.000	110528.057	2.1	24.88799	1.0	ppb
	Ag-KED3	109	5.333	109792.977	0.8	25.09778	1.0	ppb
>	In-KED1	115	737081.597	703465.592	1.6			ppb
	Sn-KED1	116	19482.429	277959.913	0.6	25.06901	1.8	ppb
	Sn-KED1	118	354.004	446547.613	1.6	25.50584	2.2	ppb
	Sn-KED1	120	490.616	625719.507	2.5	25.93117	3.2	ppb
	Sb-KED1	121	191.335	406582.884	0.8	25.79323	1.3	ppb
	Sb-KED1	123	174.747	315099.263	0.7	26.34581	1.9	ppb
	Ba-KED1	135	62.667	113577.044	0.5	26.66617	2.0	ppb
	Ba-KED1	137	47.333	186719.817	1.4	27.03162	1.4	ppb
>	Lu-KED1	175	794743.932	838360.981	0.6			ppb
	Tl-KED1	203	72.667	385999.642	1.0	27.34568	1.1	ppb
	Tl-KED1	205	154.668	903875.749	0.9	26.93179	1.3	ppb
	Pb-KED1	208	165.334	1193751.961	0.5	27.02280	1.0	ppb
	Bi-KED1	209	960.699	936993.931	1.8	26.95782	1.3	ppb
	U-KED1	238	113.334	1340186.229	0.6	24.97217	0.4	ppb
>	Th-KED1	232	406165.238	452926.039	0.5			ppb
	Mn-STD1	55	1102.709	1174679.578	1.5	23.50773	1.0	ppb
>	Ge-STD1	72	1364336.500	1224805.319	0.6			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.3		
	Be-KED1	9	98.2			
	B-KED1	10	95.3			
	B-KED1	11	92.7			
	Al-KED1	27	98.8			
>	Sc-KED1	45		84.5		
	V-KED3	51	92.6			
	Cr-KED3	52	94.4			
	Cr-KED3	53	90.6			
	Co-KED3	59	94.0			
	Ni-KED3	60	94.7			
	Ni-KED3	62	94.1			
	Cu-KED3	63	96.0			
	Cu-KED3	65	95.6			
	Zn-KED3	66	94.2			
>	Ge-KED3	72		104.6		
>	Ge-KED2	72		100.2		
	As-KED2	75	100.4			
	Se-KED2	77	102.8			
	Se-KED2	78	106.4			
	Se-KED2	82	105.4			
	Mo-KED2	95	101.3			
	Mo-KED2	97	102.0			
	Mo-KED2	98	99.9			
	Cd-KED2	111	104.9			
	Cd-KED2	112	102.6			
	Cd-KED2	114	101.1			
>	Rh-KED3	103		106.1		
	Ag-KED3	107	99.6			
	Ag-KED3	109	100.4			
>	In-KED1	115		95.4		
	Sn-KED1	116				
	Sn-KED1	118	102.0			
	Sn-KED1	120	103.7			
	Sb-KED1	121	103.2			
	Sb-KED1	123	105.4			
	Ba-KED1	135	106.7			
	Ba-KED1	137	108.1			
>	Lu-KED1	175		105.5		
	Tl-KED1	203	109.4			
	Tl-KED1	205	107.7			
	Pb-KED1	208	108.1			
	Bi-KED1	209	107.8			
	U-KED1	238	99.9			
>	Th-KED1	232		111.5		
	Mn-STD1	55	94.0			
>	Ge-STD1	72		89.8		

QC Out of Limits

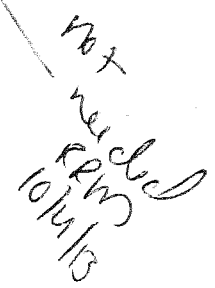
Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 15:22:07
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCV.057
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	300500.300	3.1			ppb
	Be-KED1	9	4.667	66627.068	2.4	24.22730	1.8	ppb
	B-KED1	10	116.667	20343.142	0.8	22.99667	3.9	ppb
	B-KED1	11	739.353	110651.687	2.2	23.01716	3.4	ppb
	Al-KED1	27	861.359	578974.044	1.0	25.19277	1.6	ppb
>	Sc-KED1	45	791944.750	659634.605	2.5			ppb
	V-KED3	51	2.667	12400.047	1.6	24.20837	1.9	ppb
	Cr-KED3	52	1.333	17450.652	0.9	24.39296	2.3	ppb
	Cr-KED3	53	2.000	2210.171	3.4	24.61705	4.6	ppb
	Co-KED3	59	4.667	45012.842	2.8	23.64414	2.4	ppb
	Ni-KED3	60	4.000	13729.930	1.9	23.93679	1.0	ppb
	Ni-KED3	62	0.667	2370.197	0.4	24.21271	2.8	ppb
	Cu-KED3	63	3.333	44139.462	3.1	24.09280	1.9	ppb
	Cu-KED3	65	3.333	22923.722	2.9	24.51281	1.7	ppb
	Zn-KED3	66	8.000	4238.629	2.6	23.69321	1.7	ppb
>	Ge-KED3	72	18721.596	19297.697	2.4			ppb
>	Ge-KED2	72	61732.783	62331.354	0.4			ppb
	As-KED2	75	7.889	6451.012	0.4	24.57076	0.2	ppb
	Se-KED2	77	1.000	233.780	3.3	24.55299	3.4	ppb
	Se-KED2	78	23.999	875.144	1.6	26.77361	1.9	ppb
	Se-KED2	82	0.416	446.980	1.4	25.14054	1.7	ppb
	Mo-KED2	95	14.667	44842.956	2.0	24.74609	2.3	ppb
	Mo-KED2	97	8.000	29557.881	0.6	24.77631	0.8	ppb
	Mo-KED2	98	27.114	78108.897	1.1	24.71136	1.5	ppb
	Cd-KED2	111	2.000	26598.739	0.2	26.18434	0.5	ppb
	Cd-KED2	112	0.811	50973.725	0.5	25.69311	0.7	ppb
	Cd-KED2	114	4.298	63023.196	0.6	24.97061	0.4	ppb
>	Rh-KED3	103	171361.077	178167.118	2.1			ppb
	Ag-KED3	107	6.000	112263.058	3.5	25.79792	1.8	ppb
	Ag-KED3	109	5.333	109299.383	2.6	25.49725	0.9	ppb
>	In-KED1	115	737081.597	722817.653	0.2			ppb
	Sn-KED1	116	19482.429	283627.863	2.2	24.87930	2.5	ppb
	Sn-KED1	118	354.004	435132.972	2.2	24.18445	2.4	ppb
	Sn-KED1	120	490.616	626460.614	2.0	25.26159	2.2	ppb
	Sb-KED1	121	191.335	413350.826	0.3	25.51750	0.5	ppb
	Sb-KED1	123	174.747	313484.104	1.3	25.50384	1.2	ppb
	Ba-KED1	135	62.667	113480.289	0.7	25.92436	0.8	ppb
	Ba-KED1	137	47.333	189028.428	0.7	26.63109	0.8	ppb
>	Lu-KED1	175	794743.932	833189.684	1.4			ppb
	Tl-KED1	203	72.667	385924.179	1.6	27.50925	0.5	ppb
	Tl-KED1	205	154.668	909394.669	1.0	27.26472	0.8	ppb
	Pb-KED1	208	165.334	1186892.894	0.8	27.03478	0.6	ppb
	Bi-KED1	209	960.699	948200.605	1.6	27.45106	0.6	ppb
	U-KED1	238	113.334	1334595.938	1.6	24.93089	1.3	ppb
>	Th-KED1	232	406165.238	451787.224	1.1			ppb
	Mn-STD1	55	1102.709	1188188.722	1.4	23.79190	1.1	ppb
>	Ge-STD1	72	1364336.500	1224152.966	0.9			ppb



QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		103.9		
	Be-KED1	9	96.9			
	B-KED1	10	92.0			
	B-KED1	11	92.1			
	Al-KED1	27	100.8			
>	Sc-KED1	45		83.3		
	V-KED3	51	96.8			
	Cr-KED3	52	97.6			
	Cr-KED3	53	98.5			
	Co-KED3	59	94.6			
	Ni-KED3	60	95.7			
	Ni-KED3	62	96.9			
	Cu-KED3	63	96.4			
	Cu-KED3	65	98.1			
	Zn-KED3	66	94.8			
>	Ge-KED3	72		103.1		
>	Ge-KED2	72		101.0		
	As-KED2	75	98.3			
	Se-KED2	77	98.2			
	Se-KED2	78	107.1			
	Se-KED2	82	100.6			
	Mo-KED2	95	99.0			
	Mo-KED2	97	99.1			
	Mo-KED2	98	98.8			
	Cd-KED2	111	104.7			
	Cd-KED2	112	102.8			
	Cd-KED2	114	99.9			
>	Rh-KED3	103		104.0		
	Ag-KED3	107	103.2			
	Ag-KED3	109	102.0			
>	In-KED1	115		98.1		
	Sn-KED1	116				
	Sn-KED1	118	96.7			
	Sn-KED1	120	101.0			
	Sb-KED1	121	102.1			
	Sb-KED1	123	102.0			
	Ba-KED1	135	103.7			
	Ba-KED1	137	106.5			
>	Lu-KED1	175		104.8		
	Tl-KED1	203	110.0			
	Tl-KED1	205	109.1			
	Pb-KED1	208	108.1			
	Bi-KED1	209	109.8			
	U-KED1	238	99.7			
>	Th-KED1	232		111.2		
	Mn-STD1	55	95.2			
>	Ge-STD1	72		89.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 2	Tl-KED1	203	Out of Control

RPM 10/4/13

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 15:27:19
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\CCB.058
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	293825.926	2.9			ppb
	Be-KED1	9	4.667	6.000	0.0	0.00047	14.0	ppb
	B-KED1	10	116.667	144.001	8.4	0.02999	61.0	ppb
	B-KED1	11	739.353	884.027	5.5	0.02879	52.5	ppb
	Al-KED1	27	861.359	668.682	6.9	-0.00108	199.3	ppb
>	Sc-KED1	45	791944.750	636914.007	1.3			ppb
	V-KED3	51	2.667	5.333	57.3	0.00515	118.2	ppb
	Cr-KED3	52	1.333	2.000	100.0	0.00088	316.3	ppb
	Cr-KED3	53	2.000	4.667	107.9	0.02909	191.8	ppb
	Co-KED3	59	4.667	10.667	10.8	0.00311	21.1	ppb
	Ni-KED3	60	4.000	2.667	43.3	-0.00252	78.2	ppb
	Ni-KED3	62	0.667	0.000		-0.00702	0.0	ppb
	Cu-KED3	63	3.333	8.667	81.0	0.00291	134.2	ppb
	Cu-KED3	65	3.333	5.333	21.7	0.00206	58.6	ppb
	Zn-KED3	66	8.000	3.333	91.7	-0.02729	63.5	ppb
>	Ge-KED3	72	18721.596	19184.207	1.0			ppb
>	Ge-KED2	72	61732.783	61079.672	2.2			ppb
	As-KED2	75	7.889	6.111	25.2	-0.00667	83.4	ppb
	Se-KED2	77	1.000	0.889	43.3	-0.01122	352.7	ppb
	Se-KED2	78	23.999	29.400	8.4	0.18122	38.0	ppb
	Se-KED2	82	0.416	-1.596	115.3	-0.11417	92.2	ppb
	Mo-KED2	95	14.667	24.667	9.4	0.00573	24.6	ppb
	Mo-KED2	97	8.000	25.333	27.7	0.01484	38.5	ppb
	Mo-KED2	98	27.114	50.374	23.3	0.00757	46.0	ppb
	Cd-KED2	111	2.000	1.667	34.6	-0.00031	189.6	ppb
	Cd-KED2	112	0.811	1.811	66.2	0.00052	118.5	ppb
	Cd-KED2	114	4.298	5.510	12.6	0.00051	50.5	ppb
>	Rh-KED3	103	171361.077	176841.218	1.0			ppb
	Ag-KED3	107	6.000	8.667	13.3	0.00057	45.7	ppb
	Ag-KED3	109	5.333	4.667	24.7	-0.00020	132.9	ppb
>	In-KED1	115	737081.597	696705.821	2.6			ppb
	Sn-KED1	116	19482.429	19575.786	1.0	0.11400	40.3	ppb
	Sn-KED1	118	354.004	554.677	5.6	0.01275	20.8	ppb
	Sn-KED1	120	490.616	756.534	10.8	0.01230	31.6	ppb
	Sb-KED1	121	191.335	532.010	6.9	0.02251	10.5	ppb
	Sb-KED1	123	174.747	398.495	3.2	0.01970	1.0	ppb
	Ba-KED1	135	62.667	40.667	24.3	-0.00443	47.6	ppb
	Ba-KED1	137	47.333	32.000	21.7	-0.00185	59.6	ppb
>	Lu-KED1	175	794743.932	819420.780	1.5			ppb
	Tl-KED1	203	72.667	127.334	32.6	0.00383	82.3	ppb
	Tl-KED1	205	154.668	280.003	13.6	0.00369	34.9	ppb
	Pb-KED1	208	165.334	180.667	29.6	0.00025	525.2	ppb
	Bi-KED1	209	960.699	1206.051	6.0	0.00634	27.0	ppb
	U-KED1	238	113.334	122.667	10.5	-0.00002	1120.2	ppb
>	Th-KED1	232	406165.238	443717.268	0.9			ppb
	Mn-STD1	55	1102.709	1164.047	3.2	0.00384	22.1	ppb
>	Ge-STD1	72	1364336.500	1206662.565	0.6			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		101.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		80.4		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102.5		
>	Ge-KED2	72		98.9		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.2		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		94.5		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		103.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		109.2		
	Mn-STD1	55				
>	Ge-STD1	72		88.4		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309638-011
Sample Date/Time: Friday, October 04, 2013 15:32:33
Sample Description:
Autosampler Position: 136
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309638-011.059
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	295546.822	3.4			ppb
	Be-KED1	9	4.667	5.333	78.1	0.00018	809.8	ppb
	B-KED1	10	116.667	393.339	5.6	0.31767	12.9	ppb
	B-KED1	11	739.353	2279.515	3.1	0.32503	8.6	ppb
	Al-KED1	27	861.359	49622.038	1.0	2.13441	0.7	ppb
>	Sc-KED1	45	791944.750	658356.405	1.7			ppb
	V-KED3	51	2.667	10.000	20.0	0.01424	28.9	ppb
	Cr-KED3	52	1.333	65.333	18.7	0.08974	19.7	ppb
	Cr-KED3	53	2.000	12.000	44.1	0.11109	53.2	ppb
	Co-KED3	59	4.667	4.000	50.0	-0.00042	257.0	ppb
	Ni-KED3	60	4.000	60.000	20.3	0.09773	21.6	ppb
	Ni-KED3	62	0.667	10.000	34.6	0.09564	37.9	ppb
	Cu-KED3	63	3.333	188.668	7.5	0.10139	7.0	ppb
	Cu-KED3	65	3.333	90.000	19.2	0.09276	19.0	ppb
	Zn-KED3	66	8.000	61.333	5.0	0.29823	4.6	ppb
>	Ge-KED3	72	18721.596	19240.950	1.0			ppb
>	Ge-KED2	72	61732.783	61370.895	1.5			ppb
	As-KED2	75	7.889	5.556	35.2	-0.00893	81.6	ppb
	Se-KED2	77	1.000	1.333	43.3	0.03615	168.7	ppb
	Se-KED2	78	23.999	29.174	22.3	0.17033	122.7	ppb
	Se-KED2	82	0.416	-2.041	16.1	-0.14019	12.6	ppb
	Mo-KED2	95	14.667	24.667	9.4	0.00564	19.4	ppb
	Mo-KED2	97	8.000	14.667	51.6	0.00575	113.7	ppb
	Mo-KED2	98	27.114	33.854	21.8	0.00220	103.7	ppb
	Cd-KED2	111	2.000	5.333	54.1	0.00336	86.6	ppb
	Cd-KED2	112	0.811	3.158	117.8	0.00122	158.6	ppb
	Cd-KED2	114	4.298	9.974	36.6	0.00228	62.1	ppb
>	Rh-KED3	103	171361.077	179909.324	1.7			ppb
	Ag-KED3	107	6.000	13.333	22.9	0.00159	40.8	ppb
	Ag-KED3	109	5.333	11.333	36.7	0.00131	69.2	ppb
>	In-KED1	115	737081.597	707321.744	0.2			ppb
	Sn-KED1	116	19482.429	19900.399	1.5	0.11579	25.7	ppb
	Sn-KED1	118	354.004	341.337	9.8	0.00009	2059.5	ppb
	Sn-KED1	120	490.616	463.248	6.1	-0.00031	375.3	ppb
	Sb-KED1	121	191.335	226.668	9.7	0.00272	50.4	ppb
	Sb-KED1	123	174.747	166.411	6.8	-0.00011	913.6	ppb
	Ba-KED1	135	62.667	113.334	22.1	0.01242	46.9	ppb
	Ba-KED1	137	47.333	158.668	7.6	0.01631	10.5	ppb
>	Lu-KED1	175	794743.932	830357.431	1.0			ppb
	Tl-KED1	203	72.667	36.667	22.0	-0.00281	20.0	ppb
	Tl-KED1	205	154.668	59.333	11.8	-0.00308	7.2	ppb
	Pb-KED1	208	165.334	164.667	17.4	-0.00019	328.7	ppb
	Bi-KED1	209	960.699	1125.378	3.6	0.00354	39.4	ppb
	U-KED1	238	113.334	70.000	12.5	-0.00103	15.3	ppb
>	Th-KED1	232	406165.238	445172.963	1.0			ppb
	Mn-STD1	55	1102.709	2200.836	2.3	0.02441	3.5	ppb
>	Ge-STD1	72	1364336.500	1220469.993	0.9			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		102.1		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		83.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		102.8		
>	Ge-KED2	72		99.4		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		105.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.5		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		109.6		
	Mn-STD1	55				
>	Ge-STD1	72		89.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309905-001
Sample Date/Time: Friday, October 04, 2013 15:37:45
Sample Description:
Autosampler Position: 137
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309905-001.060
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	299614.195	2.8			ppb
	Be-KED1	9	4.667	18.000	11.1	0.00480	12.9	ppb
	B-KED1	10	116.667	6663.555	3.4	7.45650	2.0	ppb
	B-KED1	11	739.353	36417.039	2.2	7.48798	2.4	ppb
	Al-KED1	27	861.359	1672705.533	3.1	67.20243	1.1	ppb
>	Sc-KED1	45	791944.750	714867.139	3.4			ppb
	V-KED3	51	2.667	732.019	2.2	1.38109	2.1	ppb
	Cr-KED3	52	1.333	131.334	7.0	0.17614	7.1	ppb
	Cr-KED3	53	2.000	18.667	27.0	0.17878	30.3	ppb
	Co-KED3	59	4.667	275.336	6.9	0.13779	7.2	ppb
	Ni-KED3	60	4.000	97.334	9.7	0.15748	10.2	ppb
	Ni-KED3	62	0.667	20.000	34.6	0.19106	35.7	ppb
	Cu-KED3	63	3.333	2295.518	4.7	1.21383	4.7	ppb
	Cu-KED3	65	3.333	1249.388	3.6	1.29264	3.5	ppb
	Zn-KED3	66	8.000	642.014	5.7	3.44234	6.0	ppb
>	Ge-KED3	72	18721.596	19891.172	0.3			ppb
>	Ge-KED2	72	61732.783	61764.234	0.6			ppb
	As-KED2	75	7.889	175.446	2.0	0.64480	1.5	ppb
	Se-KED2	77	1.000	1.556	24.7	-0.05896	68.0	ppb
	Se-KED2	78	23.999	27.982	19.0	0.12672	137.3	ppb
	Se-KED2	82	0.416	-0.617	553.8	-0.05871	330.3	ppb
	Mo-KED2	95	14.667	201.335	7.5	0.10395	7.5	ppb
	Mo-KED2	97	8.000	114.000	27.4	0.08967	29.3	ppb
	Mo-KED2	98	27.114	301.711	8.2	0.08767	8.4	ppb
	Cd-KED2	111	2.000	456.341	5.7	0.45133	5.3	ppb
	Cd-KED2	112	0.811	859.503	4.4	0.43673	3.9	ppb
	Cd-KED2	114	4.298	1074.218	4.9	0.42793	5.5	ppb
>	Rh-KED3	103	171361.077	177713.257	0.9			ppb
	Ag-KED3	107	6.000	16.000	25.0	0.00226	41.8	ppb
	Ag-KED3	109	5.333	16.667	50.0	0.00259	73.5	ppb
>	In-KED1	115	737081.597	702752.826	1.0			ppb
	Sn-KED1	116	19482.429	20420.325	2.5	0.17853	25.7	ppb
	Sn-KED1	118	354.004	440.673	1.9	0.00591	11.8	ppb
	Sn-KED1	120	490.616	635.895	3.3	0.00698	12.4	ppb
	Sb-KED1	121	191.335	872.693	2.2	0.04386	4.1	ppb
	Sb-KED1	123	174.747	627.506	10.0	0.03858	13.4	ppb
	Ba-KED1	135	62.667	29088.252	0.6	6.82516	1.4	ppb
	Ba-KED1	137	47.333	48071.412	0.4	6.96131	0.8	ppb
>	Lu-KED1	175	794743.932	837551.228	0.4			ppb
	Tl-KED1	203	72.667	50.667	33.6	-0.00183	66.6	ppb
	Tl-KED1	205	154.668	108.000	15.2	-0.00164	29.8	ppb
	Pb-KED1	208	165.334	18153.842	1.2	0.40743	0.9	ppb
	Bi-KED1	209	960.699	1086.041	6.6	0.00212	99.6	ppb
	U-KED1	238	113.334	450.007	11.2	0.00597	16.6	ppb
>	Th-KED1	232	406165.238	456421.078	2.0			ppb
	Mn-STD1	55	1102.709	1855992.688	0.6	36.49625	1.6	ppb
>	Ge-STD1	72	1364336.500	1247087.913	1.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		103.6		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		90.3		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		106.2		
>	Ge-KED2	72		100.1		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.7		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		95.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.4		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		112.4		
	Mn-STD1	55				
>	Ge-STD1	72		91.4		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309905-001D
Sample Date/Time: Friday, October 04, 2013 15:42:57
Sample Description:
Autosampler Position: 138
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\K1309905-001D.061
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	286634.607	1.2			ppb
	Be-KED1	9	4.667	20.000	45.8	0.00584	58.7	ppb
	B-KED1	10	116.667	6405.436	2.2	7.49224	1.1	ppb
	B-KED1	11	739.353	35843.598	2.7	7.70530	1.5	ppb
	Al-KED1	27	861.359	1707972.165	4.1	68.26728	2.5	ppb
>	Sc-KED1	45	791944.750	718479.567	3.2			ppb
	V-KED3	51	2.667	753.353	3.8	1.42907	5.6	ppb
	Cr-KED3	52	1.333	110.000	9.6	0.14776	8.0	ppb
	Cr-KED3	53	2.000	22.667	22.2	0.22391	26.5	ppb
	Co-KED3	59	4.667	268.003	6.6	0.13465	5.9	ppb
	Ni-KED3	60	4.000	100.667	8.0	0.16382	7.1	ppb
	Ni-KED3	62	0.667	22.667	5.1	0.21858	4.1	ppb
	Cu-KED3	63	3.333	2341.525	4.1	1.24410	4.3	ppb
	Cu-KED3	65	3.333	1223.386	3.2	1.27144	2.1	ppb
	Zn-KED3	66	8.000	621.347	10.9	3.34667	11.4	ppb
>	Ge-KED3	72	18721.596	19799.715	1.8			ppb
>	Ge-KED2	72	61732.783	63047.515	1.8			ppb
	As-KED2	75	7.889	177.557	4.5	0.63908	4.5	ppb
	Se-KED2	77	1.000	2.556	19.9	0.15955	31.3	ppb
	Se-KED2	78	23.999	30.056	27.3	0.17155	143.8	ppb
	Se-KED2	82	0.416	-0.265	717.8	-0.03847	273.3	ppb
	Mo-KED2	95	14.667	191.335	2.4	0.09627	3.6	ppb
	Mo-KED2	97	8.000	118.667	15.7	0.09146	15.2	ppb
	Mo-KED2	98	27.114	318.524	17.0	0.09100	18.5	ppb
	Cd-KED2	111	2.000	449.674	3.6	0.43559	2.0	ppb
	Cd-KED2	112	0.811	862.743	2.6	0.42970	4.1	ppb
	Cd-KED2	114	4.298	1068.260	4.5	0.41676	4.1	ppb
>	Rh-KED3	103	171361.077	178562.832	2.5			ppb
	Ag-KED3	107	6.000	12.000	60.1	0.00134	127.7	ppb
	Ag-KED3	109	5.333	12.667	63.8	0.00168	116.2	ppb
>	In-KED1	115	737081.597	699605.426	1.3			ppb
	Sn-KED1	116	19482.429	20266.676	2.5	0.17294	38.7	ppb
	Sn-KED1	118	354.004	418.673	8.6	0.00474	40.6	ppb
	Sn-KED1	120	490.616	576.610	2.6	0.00462	9.1	ppb
	Sb-KED1	121	191.335	843.358	9.4	0.04220	10.7	ppb
	Sb-KED1	123	174.747	584.674	2.3	0.03522	1.8	ppb
	Ba-KED1	135	62.667	29398.219	0.6	6.92962	1.9	ppb
	Ba-KED1	137	47.333	47565.738	1.7	6.91900	1.6	ppb
>	Lu-KED1	175	794743.932	844895.418	0.5			ppb
	Tl-KED1	203	72.667	41.333	2.8	-0.00253	3.7	ppb
	Tl-KED1	205	154.668	104.667	10.9	-0.00177	19.2	ppb
	Pb-KED1	208	165.334	17893.682	0.5	0.39803	0.9	ppb
	Bi-KED1	209	960.699	1113.377	5.2	0.00263	62.4	ppb
	U-KED1	238	113.334	440.007	7.1	0.00580	9.6	ppb
>	Th-KED1	232	406165.238	455493.716	0.4			ppb
	Mn-STD1	55	1102.709	1870330.385	1.1	36.41336	0.2	ppb
>	Ge-STD1	72	1364336.500	1259404.647	1.2			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
⌈>	Li-KED1	6		99.1		
|	Be-KED1	9				
|	B-KED1	10				
⌊	B-KED1	11				
⌈	Al-KED1	27				
⌊>	Sc-KED1	45		90.7		
⌈	V-KED3	51				
|	Cr-KED3	52				
|	Cr-KED3	53				
|	Co-KED3	59				
|	Ni-KED3	60				
|	Ni-KED3	62				
|	Cu-KED3	63				
|	Cu-KED3	65				
|	Zn-KED3	66				
⌊>	Ge-KED3	72		105.8		
⌈>	Ge-KED2	72		102.1		
|	As-KED2	75				
|	Se-KED2	77				
|	Se-KED2	78				
|	Se-KED2	82				
|	Mo-KED2	95				
|	Mo-KED2	97				
|	Mo-KED2	98				
|	Cd-KED2	111				
|	Cd-KED2	112				
⌊	Cd-KED2	114				
⌈>	Rh-KED3	103		104.2		
|	Ag-KED3	107				
⌊	Ag-KED3	109				
⌈>	In-KED1	115		94.9		
|	Sn-KED1	116				
|	Sn-KED1	118				
|	Sn-KED1	120				
|	Sb-KED1	121				
|	Sb-KED1	123				
|	Ba-KED1	135				
⌊	Ba-KED1	137				
⌈>	Lu-KED1	175		106.3		
|	Tl-KED1	203				
|	Tl-KED1	205				
|	Pb-KED1	208				
⌊	Bi-KED1	209				
⌈	U-KED1	238				
⌊>	Th-KED1	232		112.1		
⌈	Mn-STD1	55				
⌊>	Ge-STD1	72		92.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309905-001S
Sample Date/Time: Friday, October 04, 2013 15:48:09
Sample Description:
Autosampler Position: 139
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309905-001S.062
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	291340.392	1.2			ppb
	Be-KED1	9	4.667	6710.910	2.9	2.51522	3.5	ppb
	B-KED1	10	116.667	22080.385	0.8	25.74237	0.9	ppb
	B-KED1	11	739.353	122321.504	1.2	26.25489	1.5	ppb
	Al-KED1	27	861.359	4412165.846	2.7	172.95553	2.2	ppb
>	Sc-KED1	45	791944.750	732786.915	1.5			ppb
	V-KED3	51	2.667	13473.017	0.8	25.99350	2.7	ppb
	Cr-KED3	52	1.333	7576.009	2.2	10.46471	4.1	ppb
	Cr-KED3	53	2.000	902.029	4.5	9.91305	5.4	ppb
	Co-KED3	59	4.667	47759.039	1.1	24.79473	3.0	ppb
	Ni-KED3	60	4.000	14065.590	2.3	24.24021	4.2	ppb
	Ni-KED3	62	0.667	2400.868	2.1	24.22296	0.5	ppb
	Cu-KED3	63	3.333	24941.756	1.0	13.45354	1.5	ppb
	Cu-KED3	65	3.333	12716.994	2.9	13.43808	3.3	ppb
	Zn-KED3	66	8.000	5359.672	0.6	29.62032	2.1	ppb
>	Ge-KED3	72	18721.596	19530.010	1.9			ppb
>	Ge-KED2	72	61732.783	62497.410	0.3			ppb
	As-KED2	75	7.889	13482.026	0.5	51.24755	0.7	ppb
	Se-KED2	77	1.000	502.453	4.5	52.75443	4.7	ppb
	Se-KED2	78	23.999	1702.703	2.2	52.66995	2.4	ppb
	Se-KED2	82	0.416	916.207	1.1	51.41806	1.1	ppb
	Mo-KED2	95	14.667	37874.810	0.9	20.84283	0.6	ppb
	Mo-KED2	97	8.000	24800.843	0.5	20.73238	0.6	ppb
	Mo-KED2	98	27.114	66060.253	1.1	20.84218	1.2	ppb
	Cd-KED2	111	2.000	26203.683	2.0	25.72617	1.8	ppb
	Cd-KED2	112	0.811	50154.004	2.3	25.21357	2.5	ppb
	Cd-KED2	114	4.298	65554.889	0.5	25.90526	0.8	ppb
>	Rh-KED3	103	171361.077	176727.812	0.9			ppb
	Ag-KED3	107	6.000	55028.451	0.7	12.74985	0.3	ppb
	Ag-KED3	109	5.333	55201.115	0.7	12.98297	1.2	ppb
>	In-KED1	115	737081.597	717570.371	1.0			ppb
	Sn-KED1	116	19482.429	228546.562	1.1	19.85768	2.0	ppb
	Sn-KED1	118	354.004	339289.317	0.8	18.99258	1.6	ppb
	Sn-KED1	120	490.616	476301.130	0.7	19.34261	0.7	ppb
	Sb-KED1	121	191.335	869610.739	0.9	54.09612	1.9	ppb
	Sb-KED1	123	174.747	663150.861	2.0	54.37276	3.0	ppb
	Ba-KED1	135	62.667	494462.625	1.7	113.84907	2.5	ppb
	Ba-KED1	137	47.333	804980.077	1.5	114.26004	1.3	ppb
>	Lu-KED1	175	794743.932	843039.351	0.9			ppb
	Tl-KED1	203	72.667	780639.940	0.4	55.00278	0.6	ppb
	Tl-KED1	205	154.668	1856087.963	0.8	55.00207	1.1	ppb
	Pb-KED1	208	165.334	2413000.988	0.5	54.32306	0.4	ppb
	Bi-KED1	209	960.699	767440.097	0.8	21.95394	1.3	ppb
	U-KED1	238	113.334	1095438.271	1.4	20.36816	1.8	ppb
>	Th-KED1	232	406165.238	453910.680	0.7			ppb
	Mn-STD1	55	1102.709	3262300.118	1.7	62.39530	0.3	ppb
>	Ge-STD1	72	1364336.500	1282286.427	1.9			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		100.7		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		92.5		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		104.3		
>	Ge-KED2	72		101.2		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		97.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		106.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		111.8		
	Mn-STD1	55				
>	Ge-STD1	72		94.0		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309905-002
Sample Date/Time: Friday, October 04, 2013 15:53:21
Sample Description:
Autosampler Position: 140
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309905-002.063
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	287479.931	2.8			ppb
	Be-KED1	9	4.667	14.000	0.0	0.00356	4.3	ppb
	B-KED1	10	116.667	160844.845	2.7	190.92293	1.3	ppb
	B-KED1	11	739.353	859287.370	0.7	188.00708	3.5	ppb
	Al-KED1	27	861.359	103518.465	1.9	3.81200	1.1	ppb
>	Sc-KED1	45	791944.750	774038.519	3.0			ppb
	V-KED3	51	2.667	3520.434	3.1	6.96334	2.6	ppb
	Cr-KED3	52	1.333	136.667	15.0	0.19162	14.6	ppb
	Cr-KED3	53	2.000	20.667	24.4	0.21041	26.7	ppb
	Co-KED3	59	4.667	134.001	24.9	0.06889	26.3	ppb
	Ni-KED3	60	4.000	244.002	9.5	0.42456	10.7	ppb
	Ni-KED3	62	0.667	48.667	14.4	0.49654	13.6	ppb
	Cu-KED3	63	3.333	10141.599	0.6	5.61195	0.8	ppb
	Cu-KED3	65	3.333	5128.254	1.2	5.55766	0.4	ppb
	Zn-KED3	66	8.000	6314.062	1.3	35.80915	0.5	ppb
>	Ge-KED3	72	18721.596	19031.336	1.1			ppb
>	Ge-KED2	72	61732.783	58353.269	0.1			ppb
	As-KED2	75	7.889	445.118	0.7	1.78281	0.5	ppb
	Se-KED2	77	1.000	2.889	26.6	0.21893	39.5	ppb
	Se-KED2	78	23.999	38.225	10.4	0.52230	25.8	ppb
	Se-KED2	82	0.416	2.528	15.6	0.12838	18.5	ppb
	Mo-KED2	95	14.667	1971.469	1.4	1.15427	1.5	ppb
	Mo-KED2	97	8.000	1361.398	2.5	1.21248	2.4	ppb
	Mo-KED2	98	27.114	3493.688	3.4	1.17238	3.5	ppb
	Cd-KED2	111	2.000	56.000	19.3	0.05689	19.9	ppb
	Cd-KED2	112	0.811	92.692	9.4	0.04950	9.6	ppb
	Cd-KED2	114	4.298	127.292	5.4	0.05216	5.4	ppb
>	Rh-KED3	103	171361.077	164336.122	2.2			ppb
	Ag-KED3	107	6.000	14.667	75.1	0.00224	123.2	ppb
	Ag-KED3	109	5.333	10.667	65.8	0.00138	125.4	ppb
>	In-KED1	115	737081.597	666221.619	1.5			ppb
	Sn-KED1	116	19482.429	19252.268	0.4	0.16786	13.6	ppb
	Sn-KED1	118	354.004	2545.560	1.7	0.13435	3.6	ppb
	Sn-KED1	120	490.616	3588.940	3.4	0.13776	4.7	ppb
	Sb-KED1	121	191.335	4133.265	2.7	0.26538	2.5	ppb
	Sb-KED1	123	174.747	3215.267	1.1	0.27003	0.9	ppb
	Ba-KED1	135	62.667	29734.252	1.8	7.35954	0.2	ppb
	Ba-KED1	137	47.333	48539.658	0.4	7.41604	1.9	ppb
>	Lu-KED1	175	794743.932	817479.058	0.3			ppb
	Tl-KED1	203	72.667	65.333	24.7	-0.00068	171.8	ppb
	Tl-KED1	205	154.668	174.668	8.7	0.00048	97.9	ppb
	Pb-KED1	208	165.334	3936.214	3.8	0.08745	4.2	ppb
	Bi-KED1	209	960.699	6572.845	1.2	0.16497	1.7	ppb
	U-KED1	238	113.334	190.001	1.1	0.00126	3.6	ppb
>	Th-KED1	232	406165.238	443559.515	0.3			ppb
	Mn-STD1	55	1102.709	93574.207	1.9	1.87629	2.3	ppb
>	Ge-STD1	72	1364336.500	1210771.673	0.8			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		99.4		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		97.7		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		101.7		
>	Ge-KED2	72		94.5		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		95.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		90.4		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		109.2		
	Mn-STD1	55				
>	Ge-STD1	72		88.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309706-001
Sample Date/Time: Friday, October 04, 2013 16:08:57
Sample Description:
Autosampler Position: 143
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309706-001.066
User Name: RRM

Concentration Results

Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
Li-KED1	6	289339.162	300757.130	1.0			ppb
Be-KED1	9	4.667	8.000	66.1	0.00114	168.5	ppb
B-KED1	10	116.667	7155.125	1.5	7.98697	2.5	ppb
B-KED1	11	739.353	38997.230	4.6	7.99824	5.3	ppb
Al-KED1	27	861.359	36548.049	2.7	1.27237	3.3	ppb
Sc-KED1	45	791944.750	805596.358	1.0			ppb
V-KED3	51	2.667	16.667	13.9	0.02639	16.7	ppb
Cr-KED3	52	1.333	65.333	23.0	0.08715	23.1	ppb
Cr-KED3	53	2.000	12.000	50.0	0.10724	60.1	ppb
Co-KED3	59	4.667	14.000	28.6	0.00465	44.7	ppb
Ni-KED3	60	4.000	42.667	22.2	0.06541	24.4	ppb
Ni-KED3	62	0.667	6.667	45.8	0.05947	51.3	ppb
Cu-KED3	63	3.333	196.668	7.7	0.10289	7.7	ppb
Cu-KED3	65	3.333	123.334	6.6	0.12507	7.0	ppb
Zn-KED3	66	8.000	569.345	11.8	3.06605	12.1	ppb
Ge-KED3	72	18721.596	19774.343	0.7			ppb
Ge-KED2	72	61732.783	61982.507	0.3			ppb
As-KED2	75	7.889	7.667	4.3	-0.00097	135.9	ppb
Se-KED2	77	1.000	1.889	27.0	0.09389	57.8	ppb
Se-KED2	78	23.999	27.838	7.8	0.11842	59.0	ppb
Se-KED2	82	0.416	0.514	306.1	0.00549	1621.5	ppb
Mo-KED2	95	14.667	378.672	8.2	0.20200	8.3	ppb
Mo-KED2	97	8.000	259.336	10.5	0.21190	10.9	ppb
Mo-KED2	98	27.114	704.465	5.3	0.21552	5.4	ppb
Cd-KED2	111	2.000	6.667	67.6	0.00461	96.8	ppb
Cd-KED2	112	0.811	13.066	25.9	0.00621	27.4	ppb
Cd-KED2	114	4.298	16.698	45.2	0.00493	60.9	ppb
Rh-KED3	103	171361.077	169694.730	1.5			ppb
Ag-KED3	107	6.000	6.000	33.3	0.00002	2982.3	ppb
Ag-KED3	109	5.333	10.000	40.0	0.00115	82.3	ppb
In-KED1	115	737081.597	686483.699	2.3			ppb
Sn-KED1	116	19482.429	18881.927	1.2	0.07345	50.1	ppb
Sn-KED1	118	354.004	201.335	13.6	-0.00751	21.5	ppb
Sn-KED1	120	490.616	265.884	2.7	-0.00812	3.9	ppb
Sb-KED1	121	191.335	85.334	19.5	-0.00604	17.5	ppb
Sb-KED1	123	174.747	64.159	3.5	-0.00845	1.7	ppb
Ba-KED1	135	62.667	49617.368	1.8	11.93141	2.9	ppb
Ba-KED1	137	47.333	83048.109	2.2	12.31645	1.2	ppb
Lu-KED1	175	794743.932	827062.885	0.9			ppb
Tl-KED1	203	72.667	26.667	43.9	-0.00352	23.6	ppb
Tl-KED1	205	154.668	56.667	14.3	-0.00315	7.5	ppb
Pb-KED1	208	165.334	876.678	8.2	0.01617	10.1	ppb
Bi-KED1	209	960.699	962.032	1.9	-0.00110	72.2	ppb
U-KED1	238	113.334	105.334	5.5	-0.00040	21.4	ppb
Th-KED1	232	406165.238	454037.183	1.8			ppb
Mn-STD1	55	1102.709	1088428.673	0.7	21.43792	0.9	ppb
Ge-STD1	72	1364336.500	1244407.722	0.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		103.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		101.7		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		105.6		
>	Ge-KED2	72		100.4		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		99.0		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		93.1		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.1		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		111.8		
	Mn-STD1	55				
>	Ge-STD1	72		91.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309757-001
Sample Date/Time: Friday, October 04, 2013 16:14:09
Sample Description:
Autosampler Position: 144
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309757-001.067
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	301089.394	1.1			ppb
	Be-KED1	9	4.667	20.667	24.4	0.00574	31.6	ppb
	B-KED1	10	116.667	2290.851	4.0	2.45999	3.6	ppb
	B-KED1	11	739.353	12684.303	4.5	2.48911	4.0	ppb
	Al-KED1	27	861.359	26898.657	3.8	0.97409	4.0	ppb
>	Sc-KED1	45	791944.750	768730.720	0.3			ppb
	V-KED3	51	2.667	232.002	0.9	0.43090	2.3	ppb
	Cr-KED3	52	1.333	48.000	4.2	0.06269	5.0	ppb
	Cr-KED3	53	2.000	6.667	45.8	0.04826	65.5	ppb
	Co-KED3	59	4.667	12.000	60.1	0.00358	103.8	ppb
	Ni-KED3	60	4.000	111.334	10.4	0.17996	12.1	ppb
	Ni-KED3	62	0.667	19.333	23.9	0.18308	24.6	ppb
	Cu-KED3	63	3.333	393.339	17.9	0.20496	18.4	ppb
	Cu-KED3	65	3.333	216.002	5.6	0.21890	6.7	ppb
	Zn-KED3	66	8.000	179.334	12.7	0.92209	14.5	ppb
>	Ge-KED3	72	18721.596	20039.381	1.4			ppb
>	Ge-KED2	72	61732.783	64594.385	1.1			ppb
	As-KED2	75	7.889	17.111	11.7	0.03263	24.2	ppb
	Se-KED2	77	1.000	1.556	32.7	0.05219	102.3	ppb
	Se-KED2	78	23.999	25.642	5.0	0.01597	208.0	ppb
	Se-KED2	82	0.416	0.965	420.6	0.03033	729.0	ppb
	Mo-KED2	95	14.667	413.339	8.1	0.21192	7.7	ppb
	Mo-KED2	97	8.000	278.003	3.3	0.21820	4.0	ppb
	Mo-KED2	98	27.114	695.204	9.8	0.20381	11.4	ppb
	Cd-KED2	111	2.000	8.000	12.5	0.00561	17.3	ppb
	Cd-KED2	112	0.811	17.199	12.0	0.00796	13.8	ppb
	Cd-KED2	114	4.298	19.122	35.0	0.00561	46.5	ppb
>	Rh-KED3	103	171361.077	183536.883	1.0			ppb
	Ag-KED3	107	6.000	56.667	10.8	0.01121	12.2	ppb
	Ag-KED3	109	5.333	62.667	23.1	0.01292	26.3	ppb
>	In-KED1	115	737081.597	719216.984	0.2			ppb
	Sn-KED1	116	19482.429	19626.403	0.4	0.05825	17.3	ppb
	Sn-KED1	118	354.004	180.001	21.5	-0.00925	23.3	ppb
	Sn-KED1	120	490.616	278.610	8.6	-0.00811	12.3	ppb
	Sb-KED1	121	191.335	261.336	15.0	0.00463	52.1	ppb
	Sb-KED1	123	174.747	168.747	22.1	-0.00015	2040.5	ppb
	Ba-KED1	135	62.667	11218.405	2.4	2.56293	2.2	ppb
	Ba-KED1	137	47.333	18590.756	0.6	2.62632	0.4	ppb
>	Lu-KED1	175	794743.932	841037.912	1.9			ppb
	Tl-KED1	203	72.667	39.333	43.8	-0.00265	46.9	ppb
	Tl-KED1	205	154.668	110.000	22.8	-0.00159	47.9	ppb
	Pb-KED1	208	165.334	487.337	7.2	0.00705	12.1	ppb
	Bi-KED1	209	960.699	1051.372	5.7	0.00100	181.7	ppb
	U-KED1	238	113.334	305.337	18.2	0.00328	30.7	ppb
>	Th-KED1	232	406165.238	457552.056	0.6			ppb
	Mn-STD1	55	1102.709	7681.399	3.0	0.12913	3.1	ppb
>	Ge-STD1	72	1364336.500	1265029.801	1.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		104.1		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		97.1		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		107.0		
>	Ge-KED2	72		104.6		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		107.1		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		97.6		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		105.8		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		112.7		
	Mn-STD1	55				
>	Ge-STD1	72		92.7		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: K1309757-002
Sample Date/Time: Friday, October 04, 2013 16:19:22
Sample Description:
Autosampler Position: 145
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\K1309757-002.068
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	297717.020	0.7			ppb
	Be-KED1	9	4.667	28.667	39.7	0.00875	47.6	ppb
	B-KED1	10	116.667	13321.543	1.4	15.14258	2.2	ppb
	B-KED1	11	739.353	72952.577	3.0	15.25613	3.3	ppb
	Al-KED1	27	861.359	63680.964	1.1	2.35380	1.1	ppb
>	Sc-KED1	45	791944.750	767180.965	1.7			ppb
	V-KED3	51	2.667	722.018	3.1	1.36093	3.0	ppb
	Cr-KED3	52	1.333	77.334	18.2	0.10284	18.6	ppb
	Cr-KED3	53	2.000	7.333	41.7	0.05617	58.3	ppb
	Co-KED3	59	4.667	20.000	0.0	0.00766	0.5	ppb
	Ni-KED3	60	4.000	78.667	15.5	0.12579	16.5	ppb
	Ni-KED3	62	0.667	18.667	16.4	0.17786	17.3	ppb
	Cu-KED3	63	3.333	417.339	8.0	0.21894	8.0	ppb
	Cu-KED3	65	3.333	231.335	4.0	0.23612	3.6	ppb
	Zn-KED3	66	8.000	191.335	12.6	0.99247	13.2	ppb
>	Ge-KED3	72	18721.596	19908.529	0.4			ppb
>	Ge-KED2	72	61732.783	62688.586	1.0			ppb
	As-KED2	75	7.889	67.778	6.8	0.22664	7.7	ppb
	Se-KED2	77	1.000	2.111	32.9	0.11513	64.2	ppb
	Se-KED2	78	23.999	27.104	11.2	0.08580	113.9	ppb
	Se-KED2	82	0.416	1.970	73.6	0.08710	94.8	ppb
	Mo-KED2	95	14.667	312.003	1.3	0.16308	1.4	ppb
	Mo-KED2	97	8.000	195.335	3.1	0.15612	4.3	ppb
	Mo-KED2	98	27.114	540.385	5.7	0.16139	6.1	ppb
	Cd-KED2	111	2.000	10.667	21.7	0.00844	25.8	ppb
	Cd-KED2	112	0.811	19.185	29.4	0.00922	31.8	ppb
	Cd-KED2	114	4.298	24.325	31.0	0.00786	37.6	ppb
>	Rh-KED3	103	171361.077	174653.424	2.0			ppb
	Ag-KED3	107	6.000	136.001	14.0	0.03050	16.3	ppb
	Ag-KED3	109	5.333	120.667	17.7	0.02743	18.5	ppb
>	In-KED1	115	737081.597	707504.293	1.7			ppb
	Sn-KED1	116	19482.429	18929.760	2.2	0.02199	92.0	ppb
	Sn-KED1	118	354.004	296.670	11.0	-0.00246	66.1	ppb
	Sn-KED1	120	490.616	417.947	7.2	-0.00218	63.4	ppb
	Sb-KED1	121	191.335	302.003	11.6	0.00746	29.1	ppb
	Sb-KED1	123	174.747	221.414	14.3	0.00446	57.5	ppb
	Ba-KED1	135	62.667	19696.905	1.7	4.58695	3.0	ppb
	Ba-KED1	137	47.333	32523.655	1.7	4.67763	3.4	ppb
>	Lu-KED1	175	794743.932	834005.760	1.7			ppb
	Tl-KED1	203	72.667	25.333	31.9	-0.00363	16.3	ppb
	Tl-KED1	205	154.668	66.000	26.4	-0.00289	17.9	ppb
	Pb-KED1	208	165.334	470.670	4.3	0.00676	6.8	ppb
	Bi-KED1	209	960.699	1032.704	1.8	0.00071	63.8	ppb
	U-KED1	238	113.334	1376.067	7.2	0.02314	6.7	ppb
>	Th-KED1	232	406165.238	455298.440	1.4			ppb
	Mn-STD1	55	1102.709	91412.893	1.1	1.77627	1.4	ppb
>	Ge-STD1	72	1364336.500	1248715.168	1.5			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		102.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		96.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		106.3		
>	Ge-KED2	72		101.5		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		101.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96.0		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		104.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		112.1		
	Mn-STD1	55				
>	Ge-STD1	72		91.5		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCV
Sample Date/Time: Friday, October 04, 2013 16:24:35
Sample Description:
Autosampler Position: 2
Number of Replicates: 3
Dataset File: C:\NexION Data\DataSet\100413B1\CCV.069
User Name: RRM

Concentration Results

Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
> Li-KED1	6	289339.162	287846.410	2.0			ppb
Be-KED1	9	4.667	66385.232	1.0	25.19736	0.9	ppb
B-KED1	10	116.667	20345.146	1.6	24.00491	3.0	ppb
B-KED1	11	739.353	109417.643	2.8	23.76330	4.1	ppb
Al-KED1	27	861.359	585828.140	1.2	24.58755	2.0	ppb
> Sc-KED1	45	791944.750	683780.790	1.5			ppb
V-KED3	51	2.667	12673.621	2.2	24.08620	3.1	ppb
Cr-KED3	52	1.333	17803.759	2.6	24.22399	3.5	ppb
Cr-KED3	53	2.000	2196.169	0.7	23.80163	1.0	ppb
Co-KED3	59	4.667	46482.846	1.6	23.77206	2.9	ppb
Ni-KED3	60	4.000	13965.490	0.8	23.70348	2.1	ppb
Ni-KED3	62	0.667	2301.519	2.1	22.87593	1.1	ppb
Cu-KED3	63	3.333	44298.580	0.9	23.53970	0.8	ppb
Cu-KED3	65	3.333	22810.865	0.8	23.74666	1.0	ppb
Zn-KED3	66	8.000	4375.337	1.8	23.80991	2.2	ppb
> Ge-KED3	72	18721.596	19823.747	1.4			ppb
> Ge-KED2	72	61732.783	63143.915	0.8			ppb
As-KED2	75	7.889	6653.772	2.1	25.02010	2.7	ppb
Se-KED2	77	1.000	244.002	9.0	25.31183	9.8	ppb
Se-KED2	78	23.999	880.457	1.6	26.58431	1.7	ppb
Se-KED2	82	0.416	473.531	0.9	26.29117	0.2	ppb
Mo-KED2	95	14.667	45643.481	1.7	24.86148	0.9	ppb
Mo-KED2	97	8.000	29786.358	1.5	24.64554	0.8	ppb
Mo-KED2	98	27.114	79019.610	1.5	24.67702	1.3	ppb
Cd-KED2	111	2.000	26257.780	1.5	25.51611	1.4	ppb
Cd-KED2	112	0.811	51227.325	1.5	25.49000	1.9	ppb
Cd-KED2	114	4.298	64783.807	1.9	25.33955	2.2	ppb
> Rh-KED3	103	171361.077	181970.385	1.1			ppb
Ag-KED3	107	6.000	110914.258	0.8	24.96215	1.8	ppb
Ag-KED3	109	5.333	111164.233	1.5	25.39108	0.6	ppb
> In-KED1	115	737081.597	714278.337	1.4			ppb
Sn-KED1	116	19482.429	286389.604	1.5	25.46263	1.8	ppb
Sn-KED1	118	354.004	446890.902	2.1	25.13404	1.2	ppb
Sn-KED1	120	490.616	619888.451	1.3	25.29780	1.8	ppb
Sb-KED1	121	191.335	409002.987	0.3	25.55460	1.6	ppb
Sb-KED1	123	174.747	315561.182	0.4	25.98433	1.7	ppb
Ba-KED1	135	62.667	112986.452	1.5	26.12018	0.6	ppb
Ba-KED1	137	47.333	186320.826	2.0	26.56276	1.2	ppb
> Lu-KED1	175	794743.932	829197.625	0.3			ppb
Tl-KED1	203	72.667	376535.788	1.5	26.96983	1.6	ppb
Tl-KED1	205	154.668	895358.026	0.4	26.97170	0.4	ppb
Pb-KED1	208	165.334	1185383.287	1.2	27.12876	1.1	ppb
Bi-KED1	209	960.699	938966.243	1.4	27.31441	1.3	ppb
U-KED1	238	113.334	1325428.840	0.6	24.49342	0.3	ppb
> Th-KED1	232	406165.238	456693.190	0.5			ppb
Mn-STD1	55	1102.709	1228678.758	1.5	24.19259	0.5	ppb
> Ge-STD1	72	1364336.500	1244884.830	1.1			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		99.5		
	Be-KED1	9	100.8			
	B-KED1	10	96.0			
	B-KED1	11	95.1			
	Al-KED1	27	98.4			
>	Sc-KED1	45		86.3		
	V-KED3	51	96.3			
	Cr-KED3	52	96.9			
	Cr-KED3	53	95.2			
	Co-KED3	59	95.1			
	Ni-KED3	60	94.8			
	Ni-KED3	62	91.5			
	Cu-KED3	63	94.2			
	Cu-KED3	65	95.0			
	Zn-KED3	66	95.2			
>	Ge-KED3	72		105.9		
>	Ge-KED2	72		102.3		
	As-KED2	75	100.1			
	Se-KED2	77	101.2			
	Se-KED2	78	106.3			
	Se-KED2	82	105.2			
	Mo-KED2	95	99.4			
	Mo-KED2	97	98.6			
	Mo-KED2	98	98.7			
	Cd-KED2	111	102.1			
	Cd-KED2	112	102.0			
	Cd-KED2	114	101.4			
>	Rh-KED3	103		106.2		
	Ag-KED3	107	99.8			
	Ag-KED3	109	101.6			
>	In-KED1	115		96.9		
	Sn-KED1	116				
	Sn-KED1	118	100.5			
	Sn-KED1	120	101.2			
	Sb-KED1	121	102.2			
	Sb-KED1	123	103.9			
	Ba-KED1	135	104.5			
	Ba-KED1	137	106.3			
>	Lu-KED1	175		104.3		
	Tl-KED1	203	107.9			
	Tl-KED1	205	107.9			
	Pb-KED1	208	108.5			
	Bi-KED1	209	109.3			
	U-KED1	238	98.0			
>	Th-KED1	232		112.4		
	Mn-STD1	55	96.8			
>	Ge-STD1	72		91.2		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

LABWORKS - Summary Report

Sample ID: CCB
Sample Date/Time: Friday, October 04, 2013 16:31:58
Sample Description:
Autosampler Position: 1
Number of Replicates: 3
Dataset File: C:\NexION\Data\DataSet\100413B1\CCB.070
User Name: RRM

Concentration Results

	Analyte	Mass	Blank Intensity	Meas. Intens. Mean	Meas. Intens. RSD	Conc. Mean	Conc. RSD	Sample Unit
>	Li-KED1	6	289339.162	289006.165	0.6			ppb
	Be-KED1	9	4.667	6.000	57.7	0.00051	258.0	ppb
	B-KED1	10	116.667	153.334	10.6	0.04347	43.9	ppb
	B-KED1	11	739.353	878.694	3.7	0.03053	24.6	ppb
	Al-KED1	27	861.359	2584.234	5.3	0.08180	6.5	ppb
>	Sc-KED1	45	791944.750	656618.980	0.7			ppb
	V-KED3	51	2.667	4.667	65.5	0.00357	157.7	ppb
	Cr-KED3	52	1.333	4.000	100.0	0.00361	155.3	ppb
	Cr-KED3	53	2.000	4.000	100.0	0.02188	205.2	ppb
	Co-KED3	59	4.667	8.000	43.3	0.00165	112.7	ppb
	Ni-KED3	60	4.000	8.667	48.0	0.00777	92.9	ppb
	Ni-KED3	62	0.667	0.000		-0.00702	0.0	ppb
	Cu-KED3	63	3.333	26.000	42.8	0.01211	47.3	ppb
	Cu-KED3	65	3.333	9.333	24.7	0.00624	41.3	ppb
	Zn-KED3	66	8.000	43.333	30.0	0.19334	34.5	ppb
>	Ge-KED3	72	18721.596	19474.604	2.5			ppb
>	Ge-KED2	72	61732.783	62018.685	1.6			ppb
	As-KED2	75	7.889	7.333	27.3	-0.00219	370.6	ppb
	Se-KED2	77	1.000	0.889	108.3	-0.01258	805.3	ppb
	Se-KED2	78	23.999	26.272	20.2	0.07019	258.8	ppb
	Se-KED2	82	0.416	-3.267	61.9	-0.20863	54.5	ppb
	Mo-KED2	95	14.667	8.667	74.2	-0.00339	103.3	ppb
	Mo-KED2	97	8.000	4.667	24.7	-0.00285	32.6	ppb
	Mo-KED2	98	27.114	22.594	20.7	-0.00148	98.4	ppb
	Cd-KED2	111	2.000	5.333	39.0	0.00330	63.9	ppb
	Cd-KED2	112	0.811	6.932	54.4	0.00309	60.5	ppb
	Cd-KED2	114	4.298	9.607	30.7	0.00211	56.3	ppb
>	Rh-KED3	103	171361.077	177985.074	2.7			ppb
	Ag-KED3	107	6.000	10.000	20.0	0.00088	59.0	ppb
	Ag-KED3	109	5.333	11.333	10.2	0.00135	17.0	ppb
>	In-KED1	115	737081.597	709672.236	1.4			ppb
	Sn-KED1	116	19482.429	19940.551	1.1	0.11372	41.9	ppb
	Sn-KED1	118	354.004	281.336	10.8	-0.00338	46.6	ppb
	Sn-KED1	120	490.616	386.596	6.2	-0.00353	25.1	ppb
	Sb-KED1	121	191.335	197.335	8.2	0.00083	124.6	ppb
	Sb-KED1	123	174.747	144.579	10.2	-0.00197	58.3	ppb
	Ba-KED1	135	62.667	52.667	7.9	-0.00178	62.0	ppb
	Ba-KED1	137	47.333	50.667	23.8	0.00072	229.3	ppb
>	Lu-KED1	175	794743.932	817468.610	1.6			ppb
	Tl-KED1	203	72.667	79.334	14.8	0.00034	261.9	ppb
	Tl-KED1	205	154.668	192.001	17.1	0.00100	92.5	ppb
	Pb-KED1	208	165.334	156.000	5.6	-0.00033	52.4	ppb
	Bi-KED1	209	960.699	1129.378	4.8	0.00417	32.2	ppb
	U-KED1	238	113.334	107.334	7.5	-0.00032	48.6	ppb
>	Th-KED1	232	406165.238	445239.378	1.4			ppb
	Mn-STD1	55	1102.709	2294.185	5.5	0.02586	10.7	ppb
>	Ge-STD1	72	1364336.500	1232485.367	2.4			ppb

QC Calculated Values

IS Symbol	Analyte	Mass	QC Std % Recovery	IS % Recovery	Spike % ReDuplicate Rel. % Difference	Dilution % Difference
>	Li-KED1	6		99.9		
	Be-KED1	9				
	B-KED1	10				
	B-KED1	11				
	Al-KED1	27				
>	Sc-KED1	45		82.9		
	V-KED3	51				
	Cr-KED3	52				
	Cr-KED3	53				
	Co-KED3	59				
	Ni-KED3	60				
	Ni-KED3	62				
	Cu-KED3	63				
	Cu-KED3	65				
	Zn-KED3	66				
>	Ge-KED3	72		104.0		
>	Ge-KED2	72		100.5		
	As-KED2	75				
	Se-KED2	77				
	Se-KED2	78				
	Se-KED2	82				
	Mo-KED2	95				
	Mo-KED2	97				
	Mo-KED2	98				
	Cd-KED2	111				
	Cd-KED2	112				
	Cd-KED2	114				
>	Rh-KED3	103		103.9		
	Ag-KED3	107				
	Ag-KED3	109				
>	In-KED1	115		96.3		
	Sn-KED1	116				
	Sn-KED1	118				
	Sn-KED1	120				
	Sb-KED1	121				
	Sb-KED1	123				
	Ba-KED1	135				
	Ba-KED1	137				
>	Lu-KED1	175		102.9		
	Tl-KED1	203				
	Tl-KED1	205				
	Pb-KED1	208				
	Bi-KED1	209				
	U-KED1	238				
>	Th-KED1	232		109.6		
	Mn-STD1	55				
>	Ge-STD1	72		90.3		

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA Method 504.1

Organic Analysis:
EPA Method 504.1

Validation Package

Organic Analysis:
EPA Method 504.1

Validation Package

QC Reports

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/17/2013

Matrix Spike/Duplicate Matrix Spike Summary
EPA Method 504.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310054

Analyte Name	Sample Result	13254-BW-4MS KWG1310054-1 Matrix Spike Result	Spike Amount	%Rec	13254-BW-4DMS KWG1310054-2 Duplicate Matrix Spike Result	Spike Amount	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND	0.249	0.242	103	0.253	0.245	103	65-135	2	30
1,2,3-Trichloropropane	ND	0.233	0.242	97	0.238	0.245	97	65-135	2	30
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.222	0.242	92	0.232	0.245	95	65-135	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310054

	Lab Control Sample KWG1310054-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	0.254	0.250	102	70-130
1,2,3-Trichloropropane	0.237	0.250	95	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.232	0.250	93	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013

Lab Control Spike Summary
EPA Method 504.1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310054

Lab Control Sample
KWG1310054-4
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.250	0.250	100	70-130
1,2,3-Trichloropropane	0.239	0.250	95	70-130
1,2-Dibromo-3-chloropropane (DBCP)	0.230	0.250	92	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/16/2013
Date Analyzed: 09/16/2013
Time Analyzed: 23:18

Method Blank Summary
EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1310054-5

Extraction Method: METHOD
Analysis Method: 504.1

Instrument ID: GC33
File ID: J:\GC33\DATA\091613-504\0916015.D

Level: Low
Extraction Lot: KWG1310054

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310054-3	J:\GC33\DATA\091613-504\0916013.D	09/16/13	22:28
Lab Control Sample	KWG1310054-4	J:\GC33\DATA\091613-504\0916014.D	09/16/13	22:53
13254-BW-4	K1309638-001	J:\GC33\DATA\091613-504\0916022.D	09/17/13	02:13
13254-BW-4MS	KWG1310054-1	J:\GC33\DATA\091613-504\0916023.D	09/17/13	02:38
13254-BW-4DMS	KWG1310054-2	J:\GC33\DATA\091613-504\0916024.D	09/17/13	03:04
13254-BW-2	K1309638-002	J:\GC33\DATA\091613-504\0916027.D	09/17/13	04:19
13253-BW-3	K1309638-004	J:\GC33\DATA\091613-504\0916028.D	09/17/13	04:44
13253-Well D	K1309638-005	J:\GC33\DATA\091613-504\0916029.D	09/17/13	05:09
13255-BW-5	K1309638-007	J:\GC33\DATA\091613-504\0916030.D	09/17/13	05:34
13255-BW-1	K1309638-008	J:\GC33\DATA\091613-504\0916031.D	09/17/13	05:59
13255-DUP	K1309638-010	J:\GC33\DATA\091613-504\0916032.D	09/17/13	06:25
13255-Rinse	K1309638-011	J:\GC33\DATA\091613-504\0916033.D	09/17/13	06:50

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/16/2013
Sample Matrix:	Water	**Date Analyzed:**	09/16/2013
		Time Analyzed:	22:28

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1310054-3	**File ID:**	J:\GC33\DATA\091613-504\0916013.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1310054

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310054-5	J:\GC33\DATA\091613-504\0916015.D	09/16/13	23:18

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/16/2013
Sample Matrix:	Water	**Date Analyzed:**	09/16/2013
		Time Analyzed:	22:53

Lab Control Sample Summary
EPA Method 504.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1310054-4	**File ID:**	J:\GC33\DATA\091613-504\0916014.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1	**Extraction Lot:**	KWG1310054

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
13254-BW-4	K1309638-001	J:\GC33\DATA\091613-504\0916022.D	09/17/13	02:13
13254-BW-4MS	KWG1310054-1	J:\GC33\DATA\091613-504\0916023.D	09/17/13	02:38
13254-BW-4DMS	KWG1310054-2	J:\GC33\DATA\091613-504\0916024.D	09/17/13	03:04
13254-BW-2	K1309638-002	J:\GC33\DATA\091613-504\0916027.D	09/17/13	04:19
13253-BW-3	K1309638-004	J:\GC33\DATA\091613-504\0916028.D	09/17/13	04:44
13253-Well D	K1309638-005	J:\GC33\DATA\091613-504\0916029.D	09/17/13	05:09
13255-BW-5	K1309638-007	J:\GC33\DATA\091613-504\0916030.D	09/17/13	05:34
13255-BW-1	K1309638-008	J:\GC33\DATA\091613-504\0916031.D	09/17/13	05:59
13255-DUP	K1309638-010	J:\GC33\DATA\091613-504\0916032.D	09/17/13	06:25
13255-Rinse	K1309638-011	J:\GC33\DATA\091613-504\0916033.D	09/17/13	06:50

Organic Analysis:
EPA Method 504.1

Validation Package

Raw Data

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0095	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.096	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0095	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916022.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 02:13
Date Quantitated: 09/17/2013 09:47
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: M

Exception Report

Data File: J:\GC33\DATA\091613-504\0916022.D\0916022C.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 02:13
Date Quantitated: 09/17/2013 09:47
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916022.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916022.D\0916022c.d			**Vial:**	20
Acqu Date:	09/17/2013 02:13	**Quant Date:**	09/17/2013 09:47	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-001				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282342	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa			0	0	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.53 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916022.D
Acq On : 17-Sep-2013, 02:13:46 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 Vial : 20
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:47:02 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

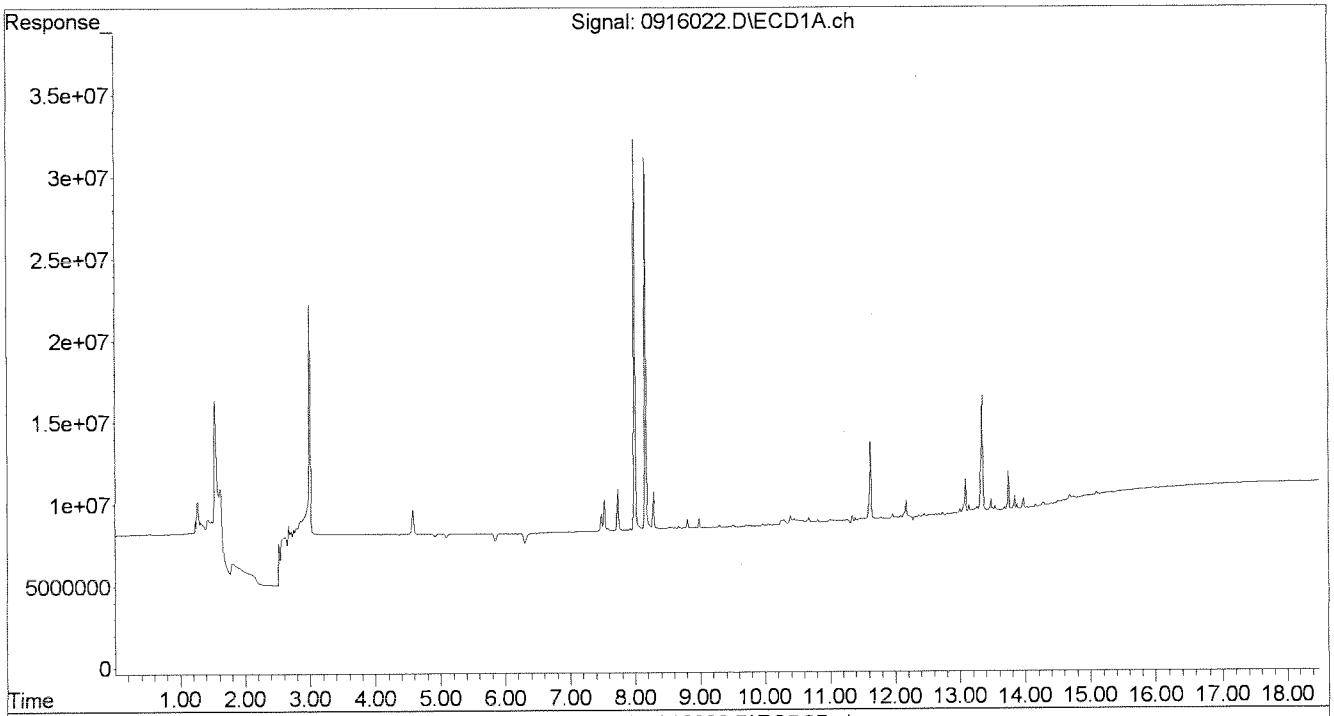
Target Compounds

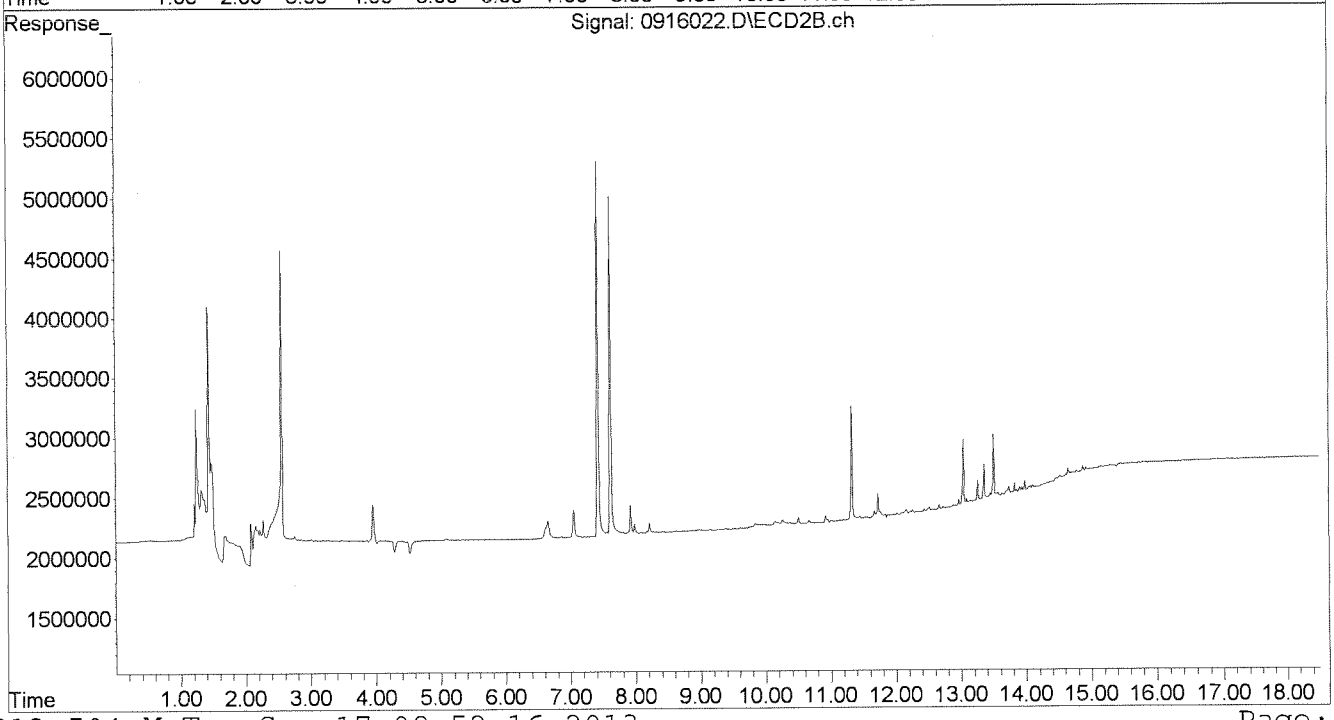
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916022.D
Acq On : 17-Sep-2013, 02:13:46 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 Vial : 20
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:47:02 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916027.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 04:19
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916027.D\0916027C.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 04:19
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916027.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916027.D\0916027c.d			**Vial:**	23
Acqu Date:	09/17/2013 04:19	**Quant Date:**	09/17/2013 09:50	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282343	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0d	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa			0d	0	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.16 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916027.D
Acq On : 17-Sep-2013, 04:19:20 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-002 Vial : 23
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

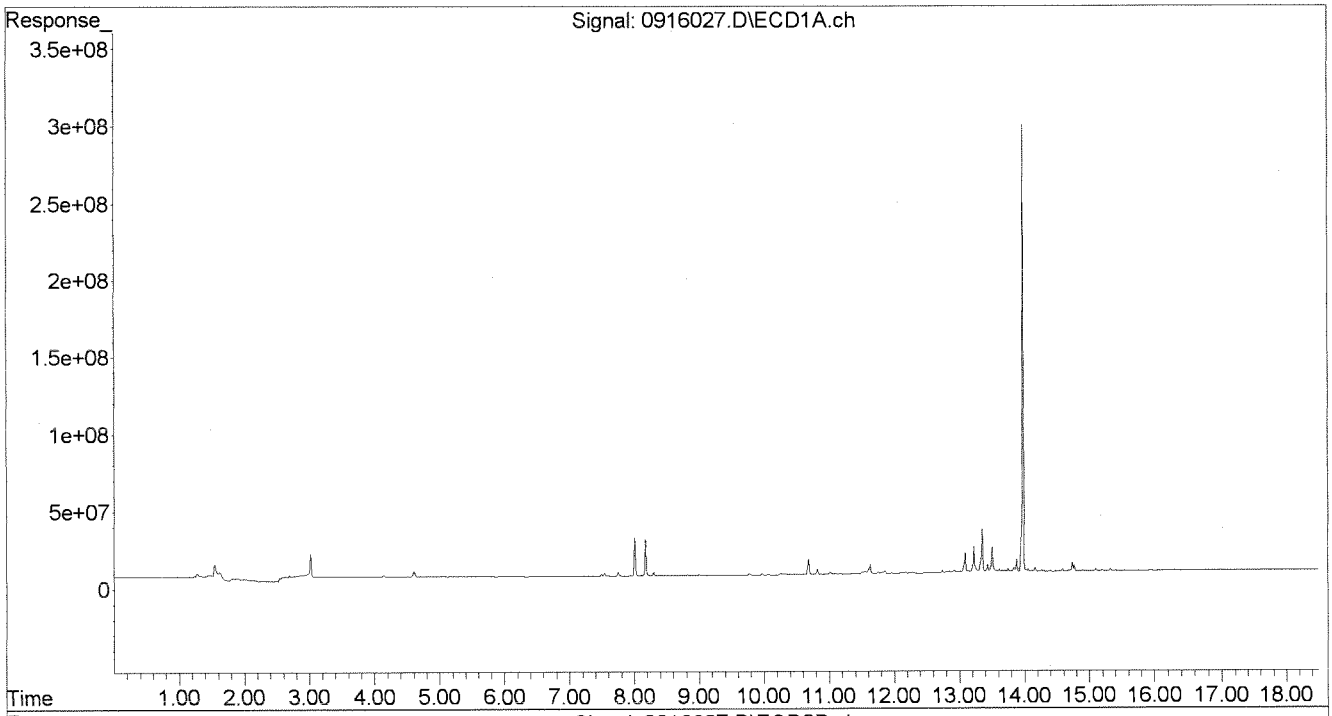
Target Compounds

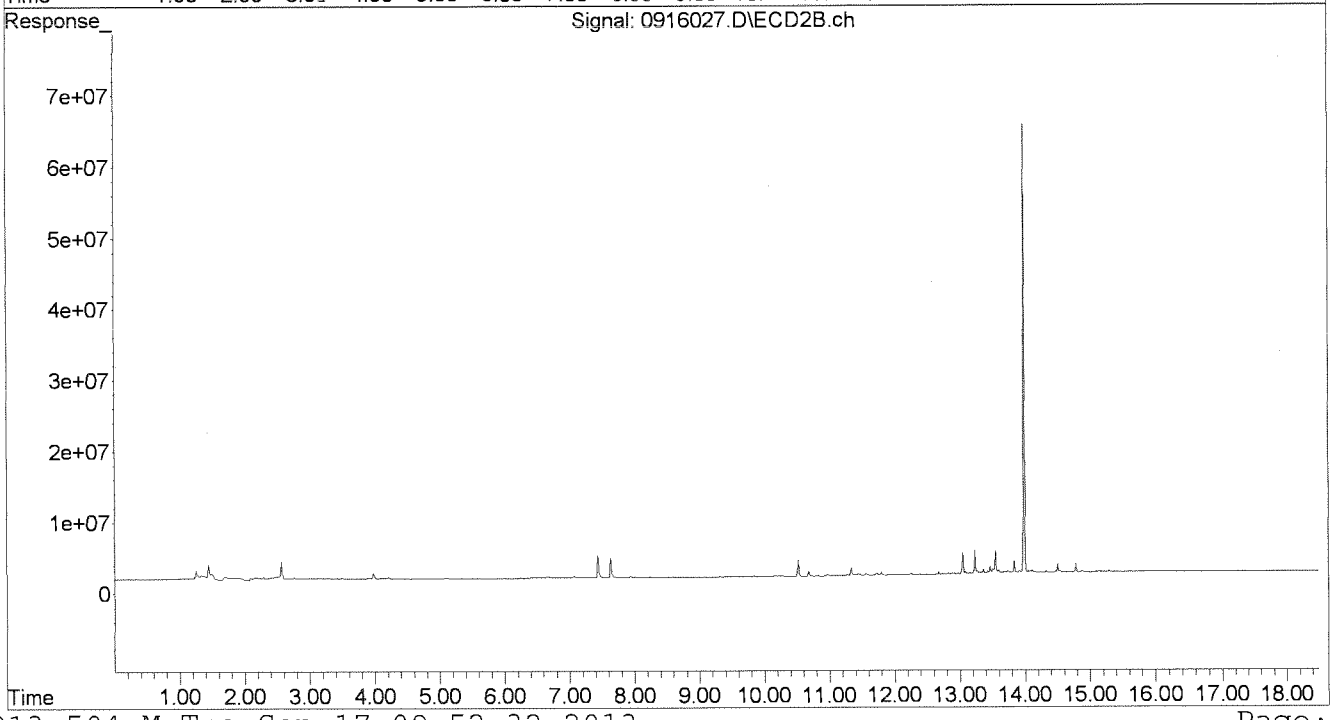
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916027.D
Acq On : 17-Sep-2013, 04:19:20 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-002 Vial : 23
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0095	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.096	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0095	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916028.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 04:44
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916028.D\0916028C.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 04:44
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916028.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916028.D\0916028c.d			**Vial:**	24
Acqu Date:	09/17/2013 04:44	**Quant Date:**	09/17/2013 09:50	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-004				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282344	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa			0	0	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.56 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916028.D
Acq On : 17-Sep-2013, 04:44:23 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-004 Vial : 24
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

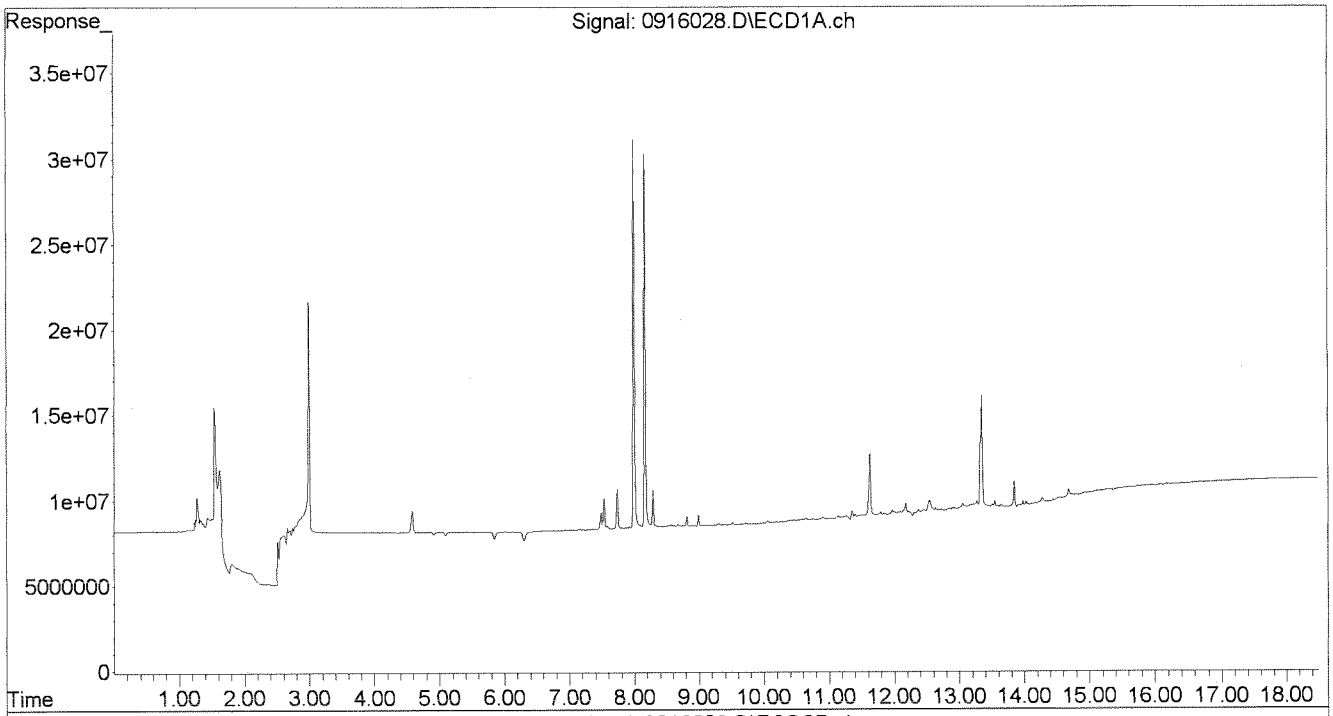
Target Compounds

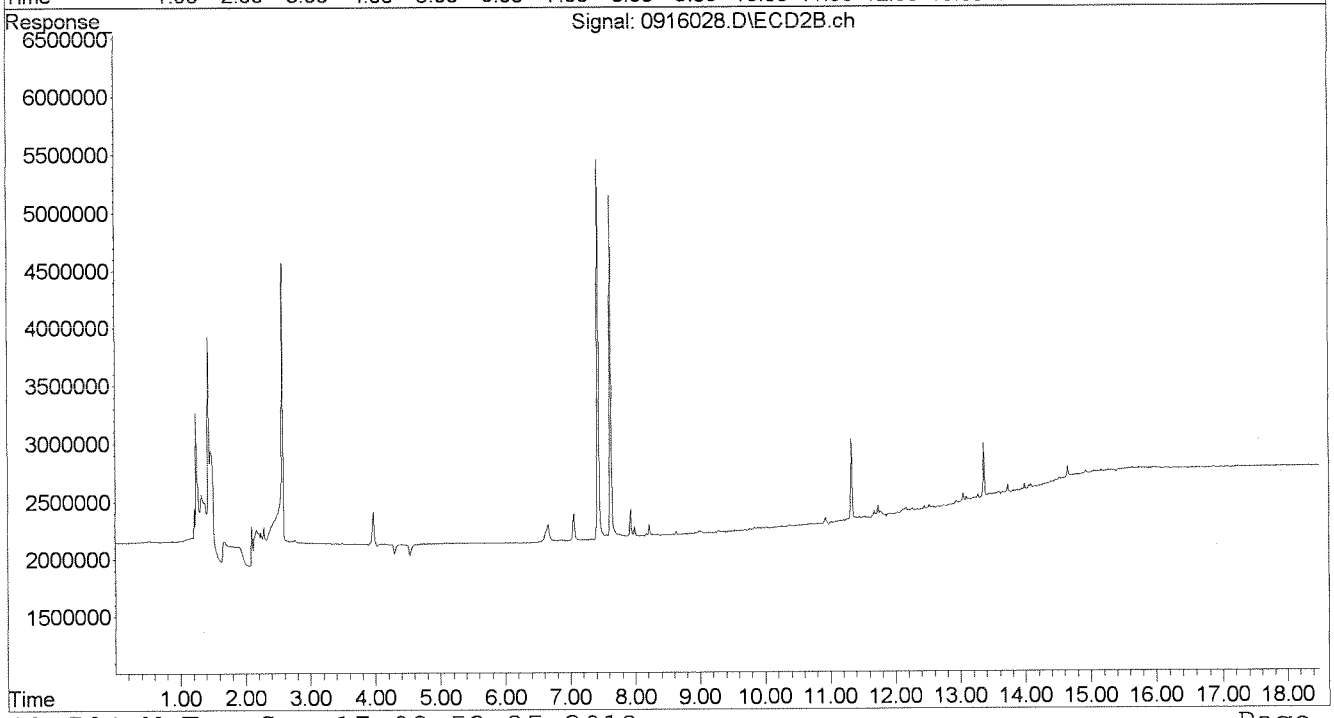
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916028.D
Acq On : 17-Sep-2013, 04:44:23 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-004 Vial : 24
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13253-Well D
Lab Code: K1309638-005

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 504.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916029.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:09
Date Quantitated: 09/17/2013 09:51
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: MW

Exception Report

Data File: J:\GC33\DATA\091613-504\0916029.D\0916029C.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:09
Date Quantitated: 09/17/2013 09:51
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916029.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916029.D\0916029c.d			**Vial:**	25
Acqu Date:	09/17/2013 05:09	**Quant Date:**	09/17/2013 09:51	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-005				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282345	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa			0	0d	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.34 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916029.D
Acq On : 17-Sep-2013, 05:09:42 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-005 Vial : 25
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:51:04 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

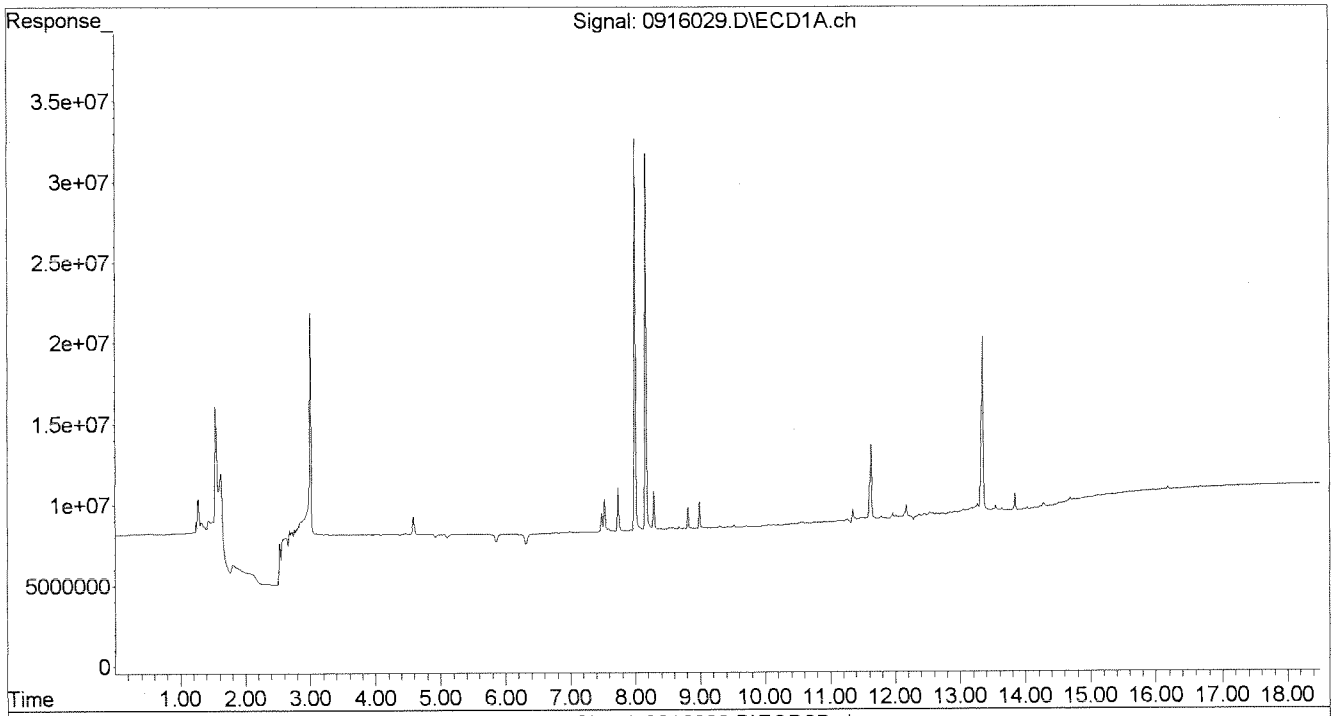
Target Compounds

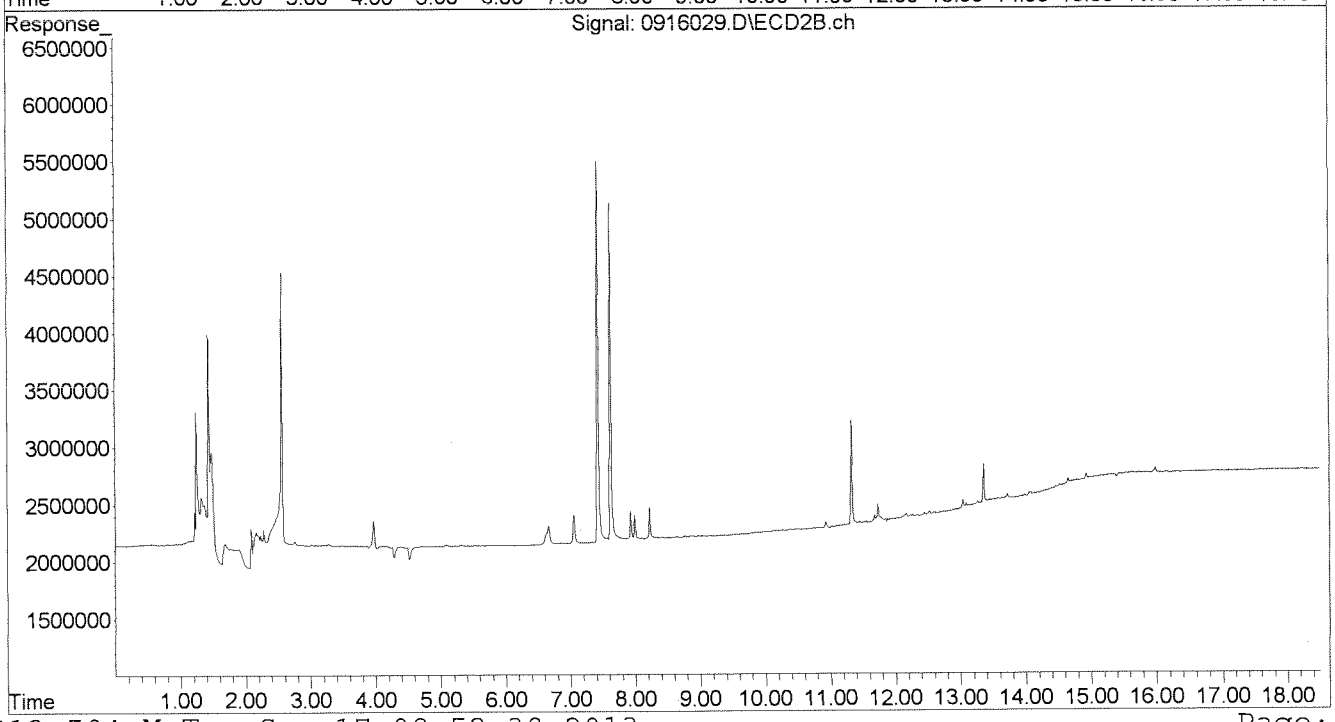
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916029.D
Acq On : 17-Sep-2013, 05:09:42 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-005 Vial : 25
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:51:04 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-BW-5
Lab Code: K1309638-007

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.10**		0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	**0.019**		0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916030.D
Lab ID: K1309638-007
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:34
Date Quantitated: 09/17/2013 09:51
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916030.D\0916030C.D
Lab ID: K1309638-007
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:34
Date Quantitated: 09/17/2013 09:51
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916030.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916030.D\0916030c.d			**Vial:**	26
Acqu Date:	09/17/2013 05:34	**Quant Date:**	09/17/2013 09:51	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-007				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282346	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80 +0.01	4.60 -0.01	27791995	4221167m	1.92	1.87	0.11	0.10	**0.10**
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa	9.43	9.46	10134965	1776675	0.3460	0.3680	0.019	0.020	**0.019**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.35 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916030.D
Acq On : 17-Sep-2013, 05:34:56 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-007 Vial : 26
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:51:49 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

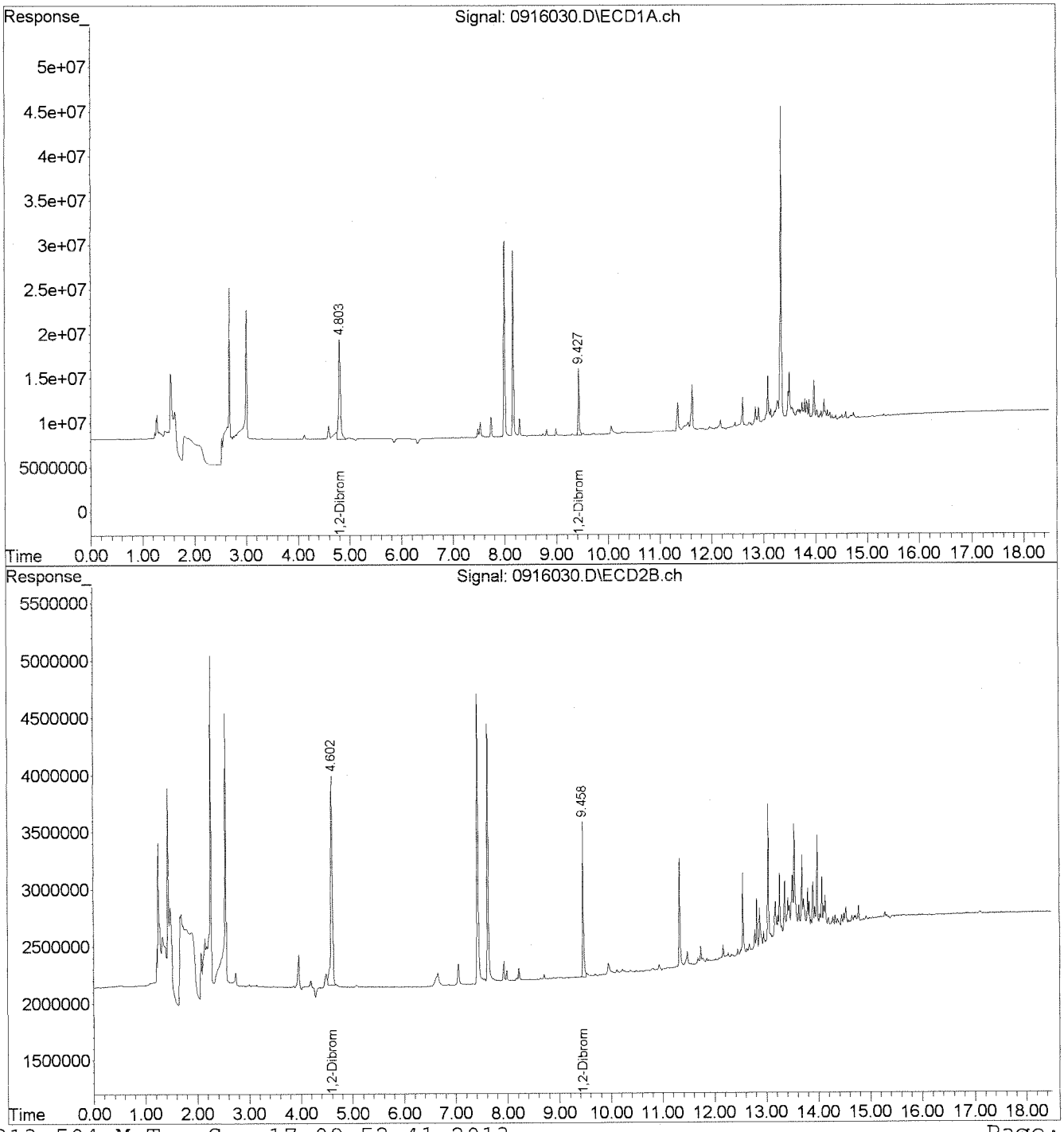
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	27791995	4221167	1.924	1.874m
3) 1,2-Dibromo-3-chl...	9.43	9.46	10134965	1776675	0.346	0.368

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916030.D
Acq On : 17-Sep-2013, 05:34:56 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-007 Vial : 26
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:51:49 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

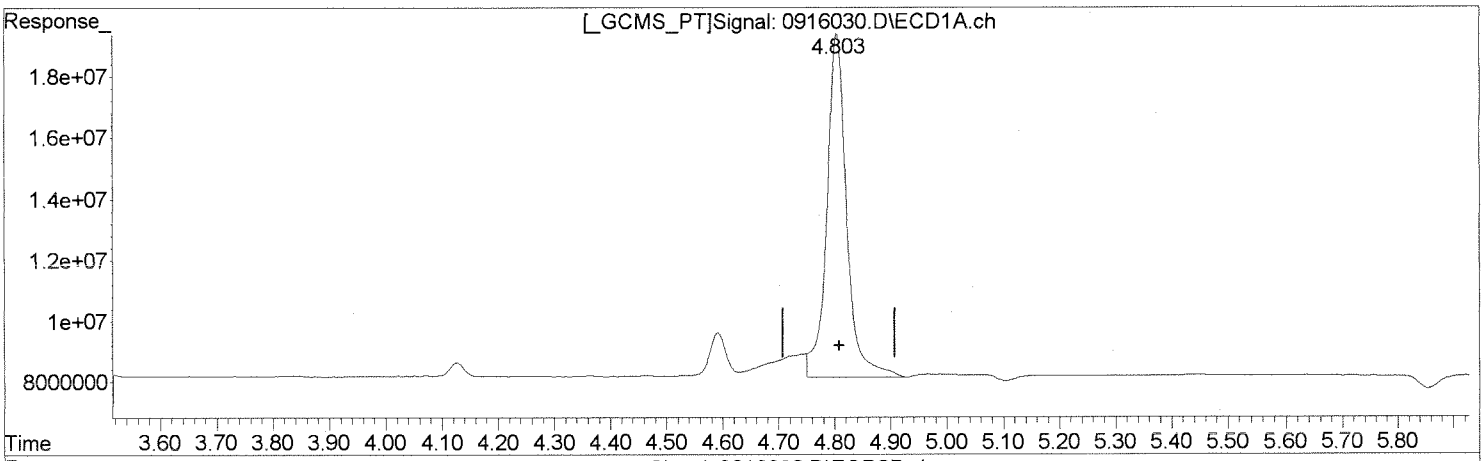
Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

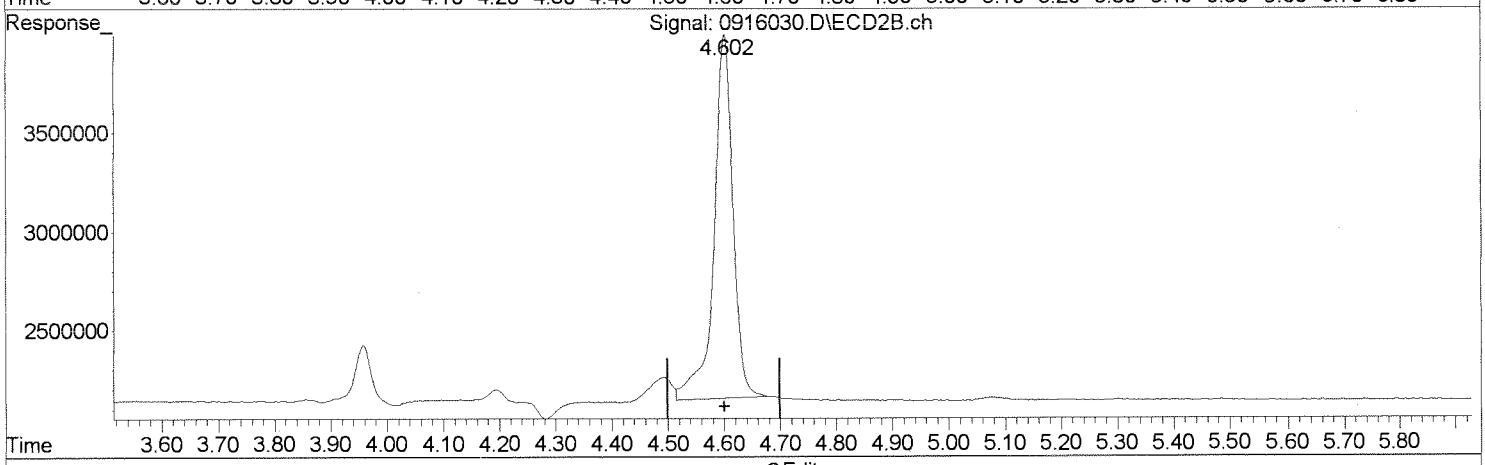


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916030.D
Acq On : 17-Sep-2013, 05:34:56 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-007 Vial : 26
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.803min 1.924 ppb

response 27791995

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.602min 1.919 ppb

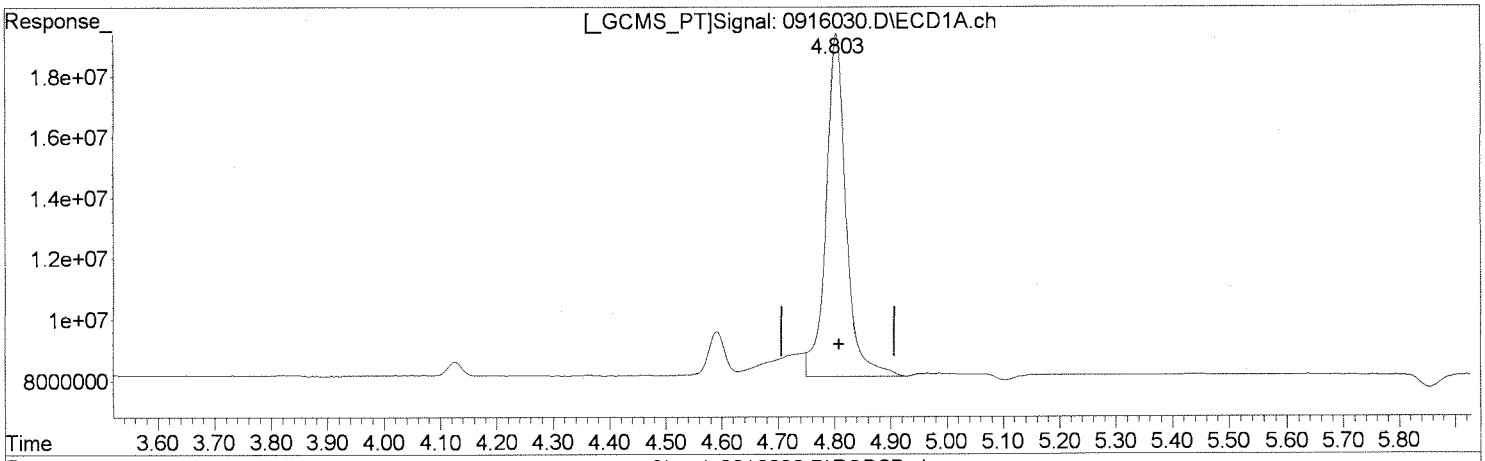
response 4322370

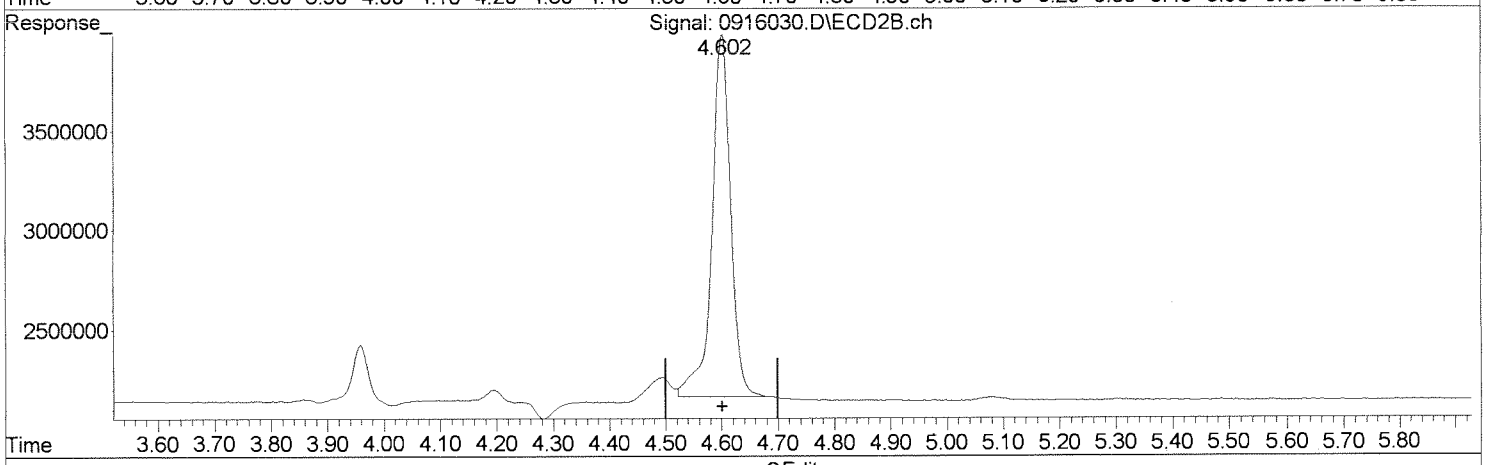
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916030.D
Acq On : 17-Sep-2013, 05:34:56 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-007 Vial : 26
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.803min 1.924 ppb

response 27791995

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.602min 1.874 ppb m

response 4221167

Manual Integration:

After

Baseline/Shoulder

09/17/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.19**		0.0097	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.098	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0097	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916031.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:59
Date Quantitated: 09/17/2013 09:52
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916031.D\0916031C.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 05:59
Date Quantitated: 09/17/2013 09:52
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916031.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916031.D\0916031c.d			**Vial:**	27
Acqu Date:	09/17/2013 05:59	**Quant Date:**	09/17/2013 09:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-008				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282347	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80 +0.01	4.60 -0.01	49946589m	7857713m	3.46	3.49	0.19	0.19	**0.19**
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa	9.43	9.46	263918	50861	0.0090	0.0110	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.88 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916031.D
Acq On : 17-Sep-2013, 05:59:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-008 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:52:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

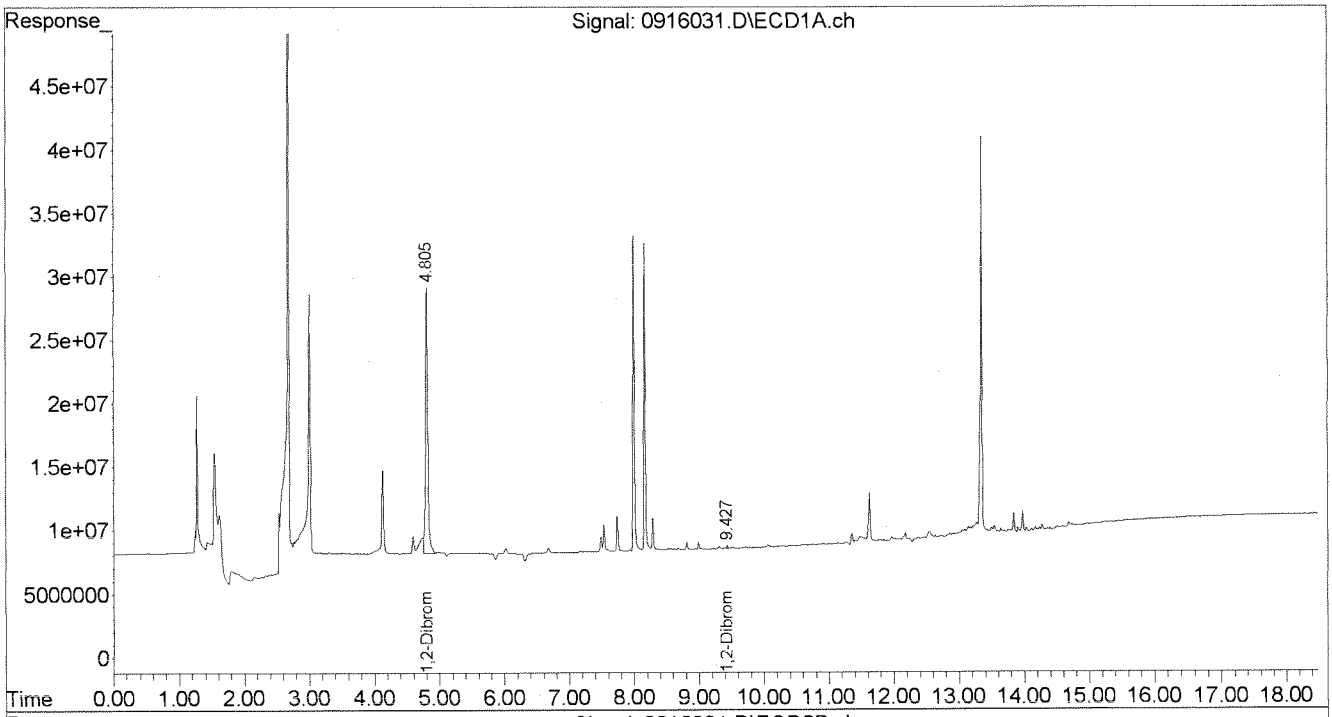
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	49946589	7857713	3.457m	3.488m
3) 1,2-Dibromo-3-chl...	9.43	9.46	263918	50861	0.009	0.011

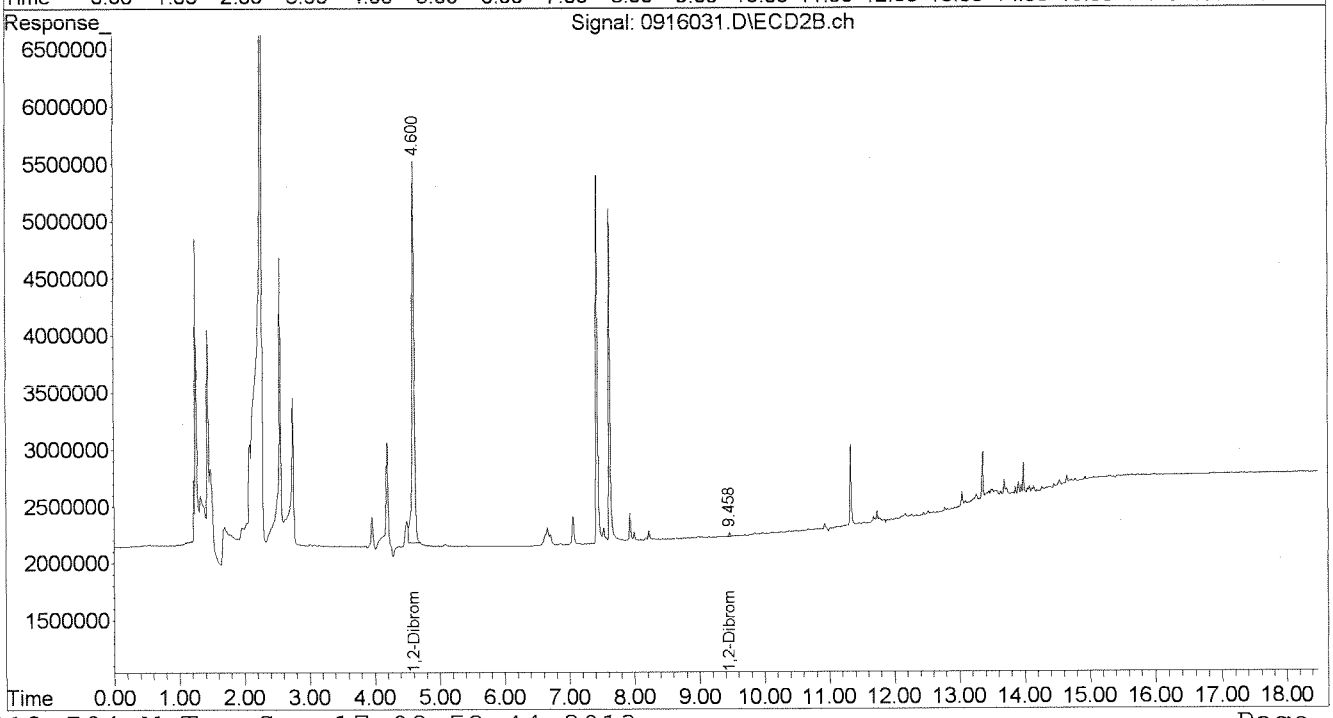
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916031.D
Acq On : 17-Sep-2013, 05:59:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-008 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:52:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

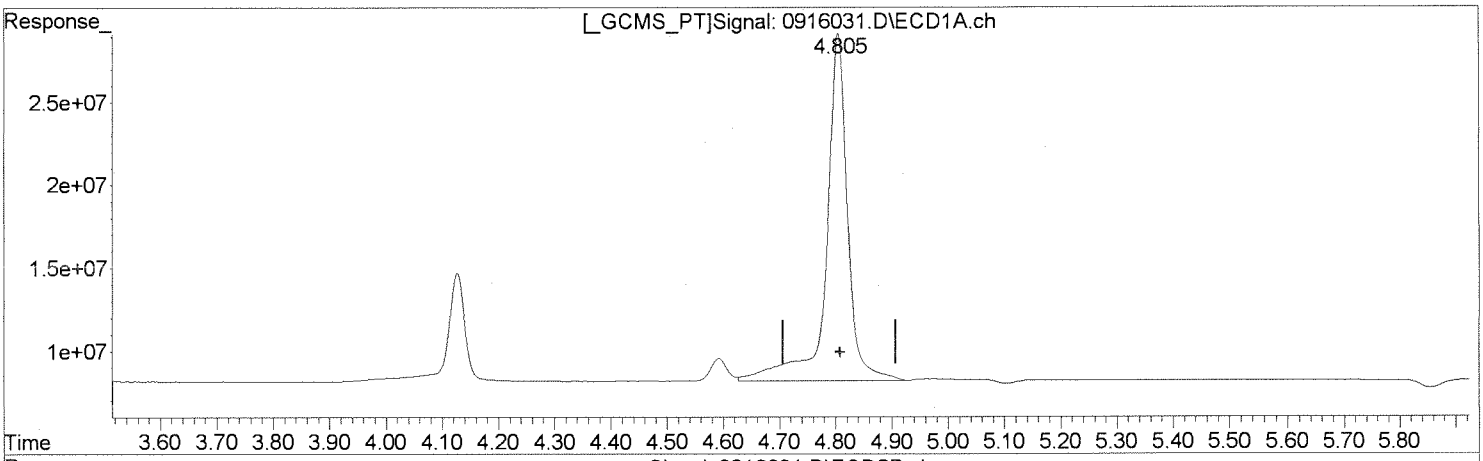


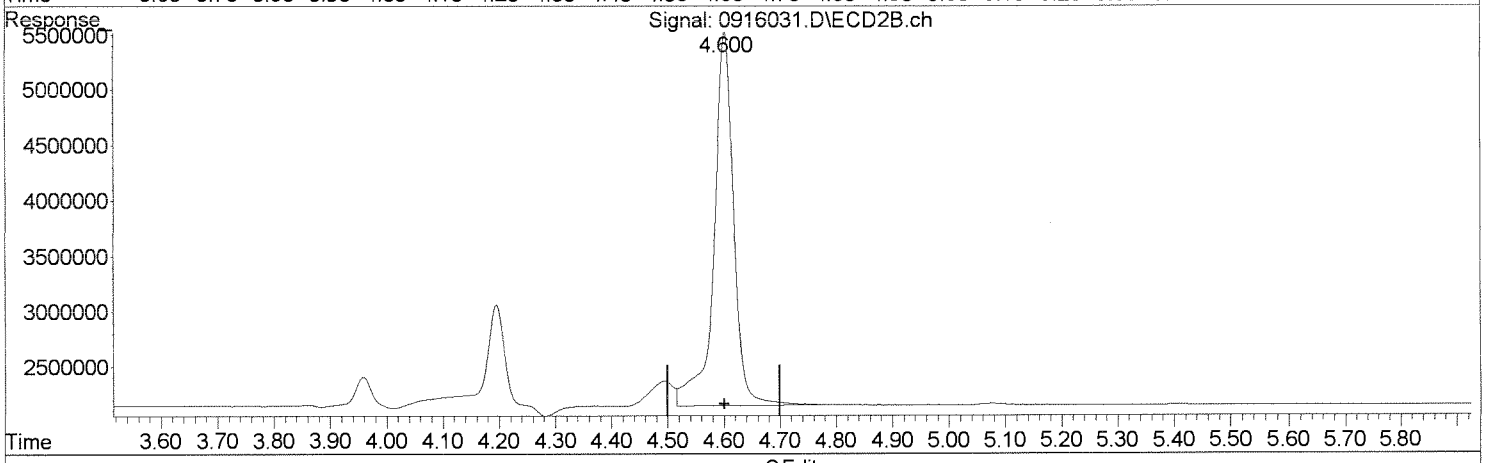


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916031.D
Acq On : 17-Sep-2013, 05:59:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-008 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.805min 3.849 ppb

response 55601595

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.600min 3.684 ppb

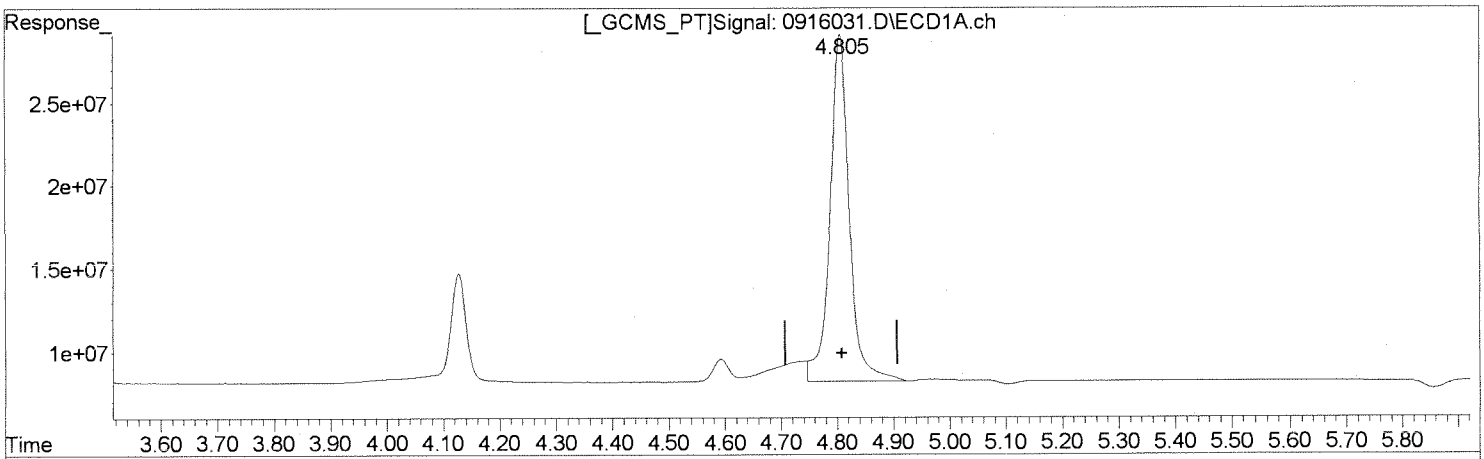
response 8300179

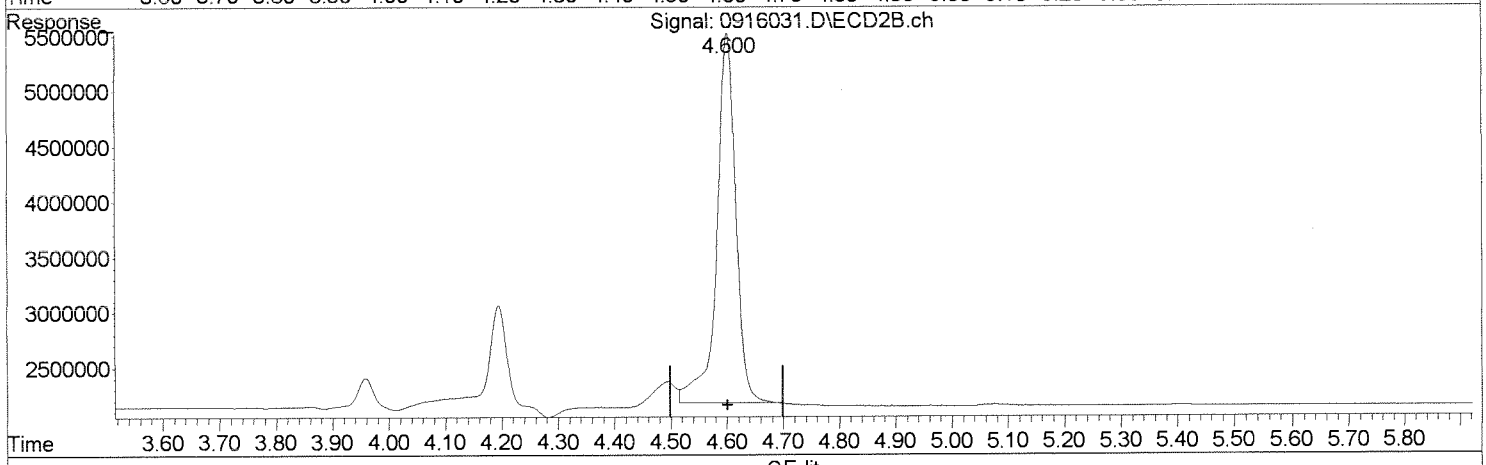
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916031.D
Acq On : 17-Sep-2013, 05:59:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-008 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.805min 3.457 ppb m

response 49946589

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.600min 3.488 ppb m

response 7857713

Manual Integration:

After

Baseline/Shoulder

09/17/13

(+) = Expected Retention Time

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.19**		0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916032.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 06:25
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916032.D\0916032C.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 06:25
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916032.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916032.D\0916032c.d			**Vial:**	28
Acqu Date:	09/17/2013 06:25	**Quant Date:**	09/17/2013 09:53	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-010				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282348	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80 +0.01	4.61	49625711m	8888118m	3.44	3.95	0.19	0.22	**0.19**
1,2,3-Trichloropropane			0	0d	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa	9.43	9.46	308343	58021	0.0110	0.0120	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.23 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916032.D
Acq On : 17-Sep-2013, 06:25:13 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-010 Vial : 28
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:13 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

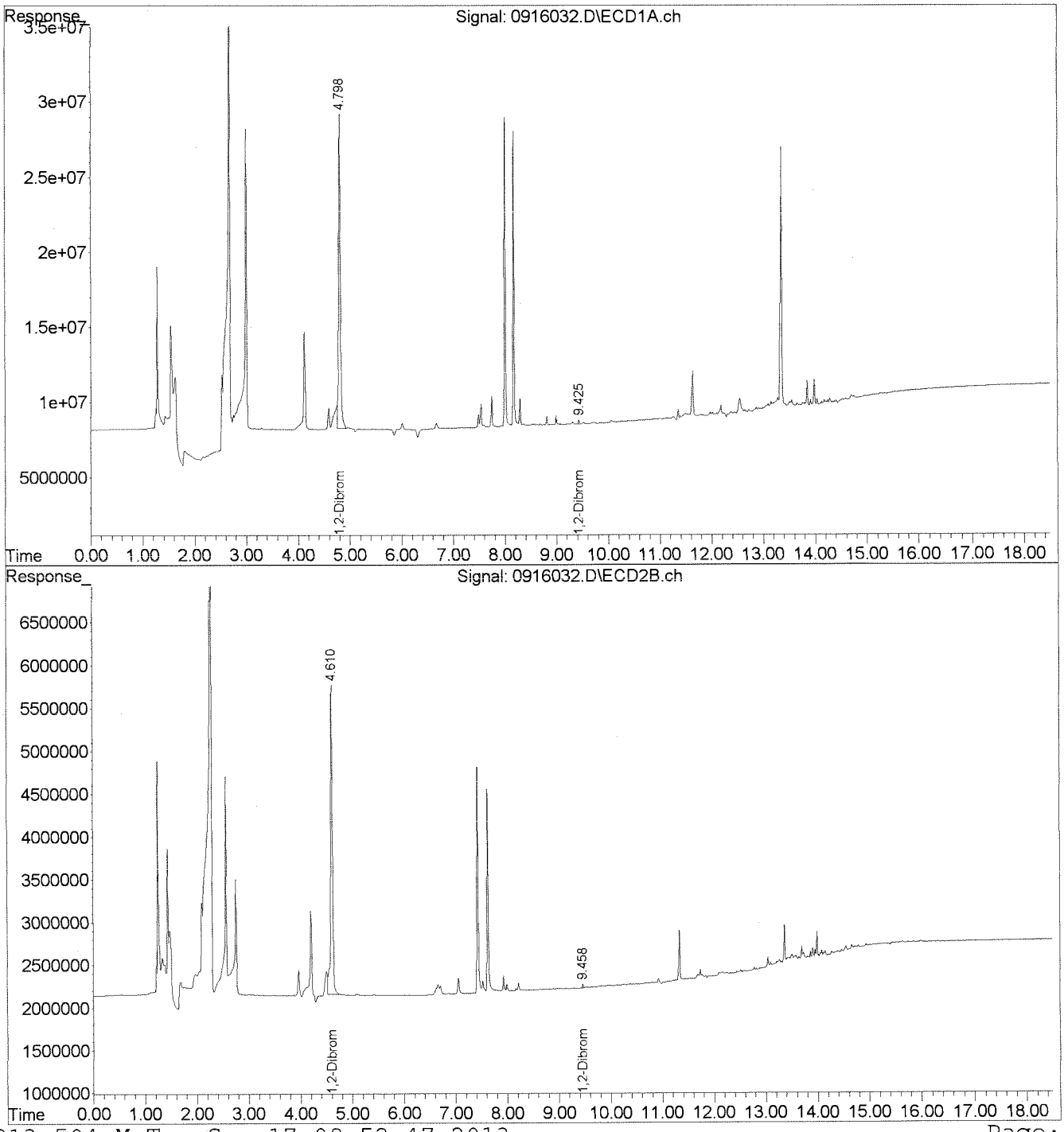
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.61	49625711	8888118	3.435m	3.945m
3) 1,2-Dibromo-3-chl...	9.43	9.46	308343	58021	0.011	0.012

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916032.D
Acq On : 17-Sep-2013, 06:25:13 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-010 Vial : 28
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:13 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

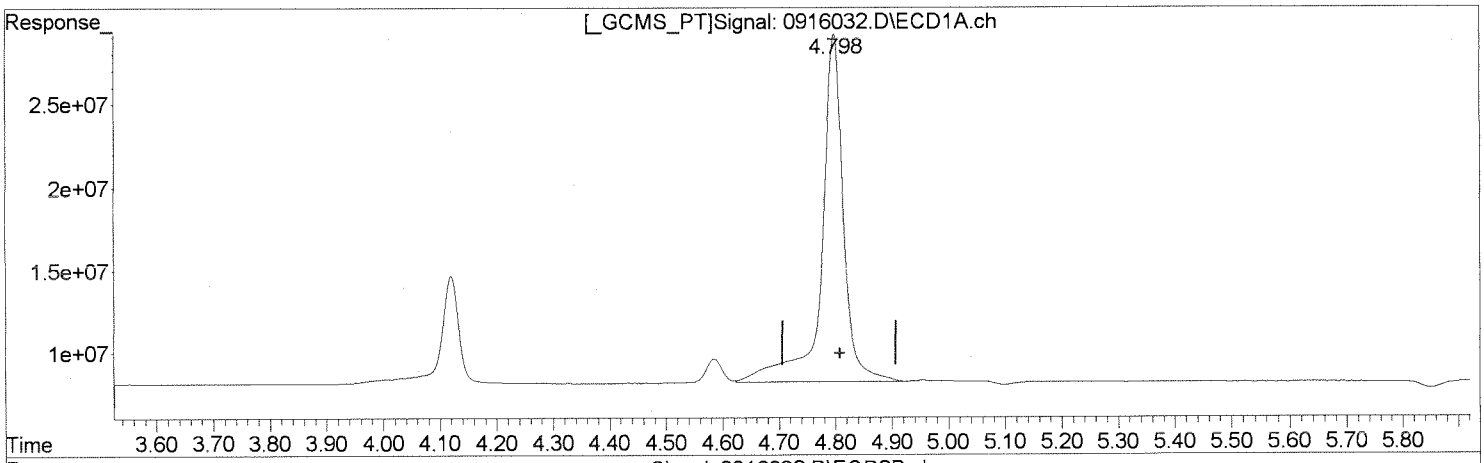
Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

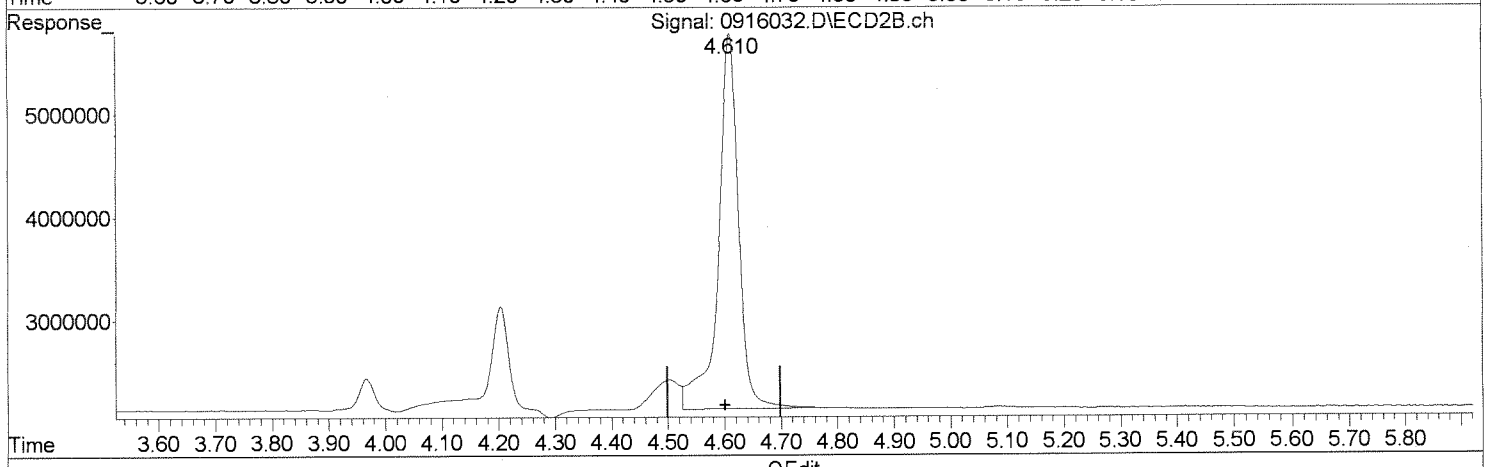


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916032.D
Acq On : 17-Sep-2013, 06:25:13 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-010 Vial : 28
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:14 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

Manual Integration:
Before

(1) 1,2-Dibromoethane (EDB) (M)
4.798min 3.911 ppb
response 56497270

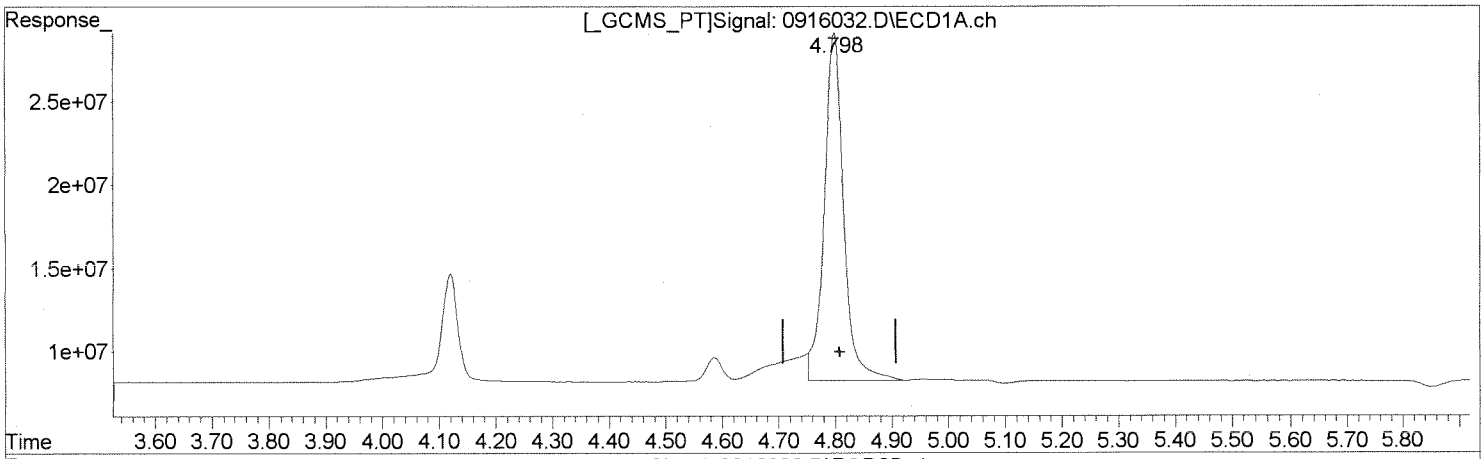
(1) 1,2-Dibromoethane (EDB) #2 (M)
4.610min 3.993 ppb
response 8996491

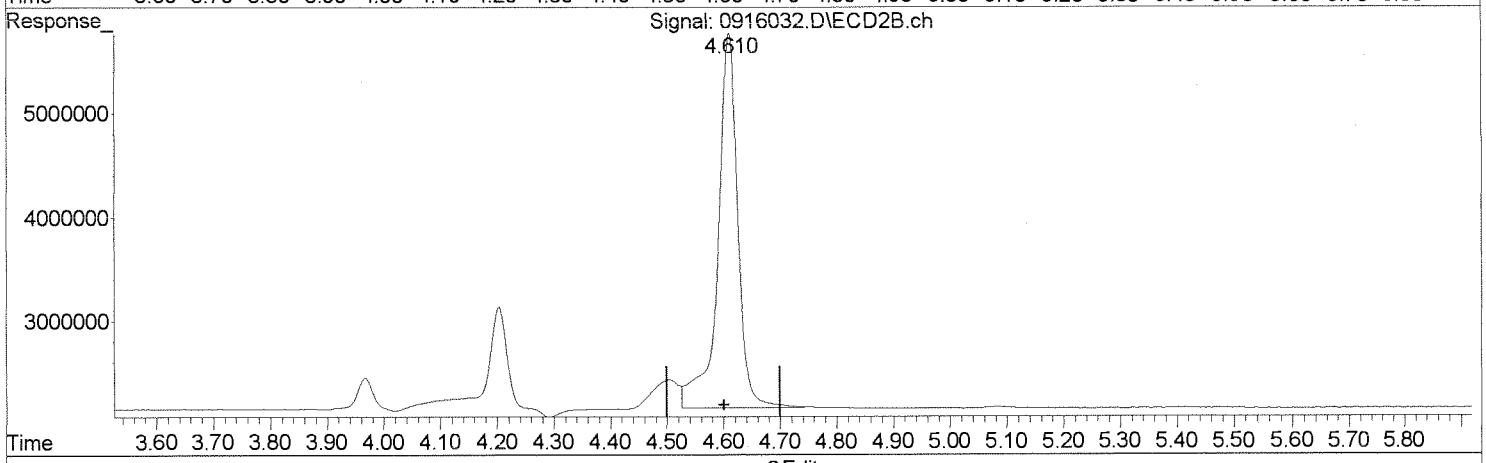
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916032.D
Acq On : 17-Sep-2013, 06:25:13 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-010 Vial : 28
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:14 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.798min 3.435 ppb m

response 49625711

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.610min 3.945 ppb m

response 8888118

Manual Integration:

After

Baseline/Shoulder

09/17/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0097	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.098	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0097	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916033.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 06:50
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916033.D\0916033C.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 06:50
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
ListJoinID: LJ4194

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916033.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916033.D\0916033c.d			**Vial:**	29
Acqu Date:	09/17/2013 06:50	**Quant Date:**	09/17/2013 09:53	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-011				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	K1309638
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282349	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:	EPA Method 504.1	**Report List ID:**	LJ4194
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ480
		Quant based on Report List	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.0370U	0.0370U	0.0370U
1,2-Dibromo-3-chloropropa			0	0	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.08 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916033.D
Acq On : 17-Sep-2013, 06:50:19 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-011 Vial : 29
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:20 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

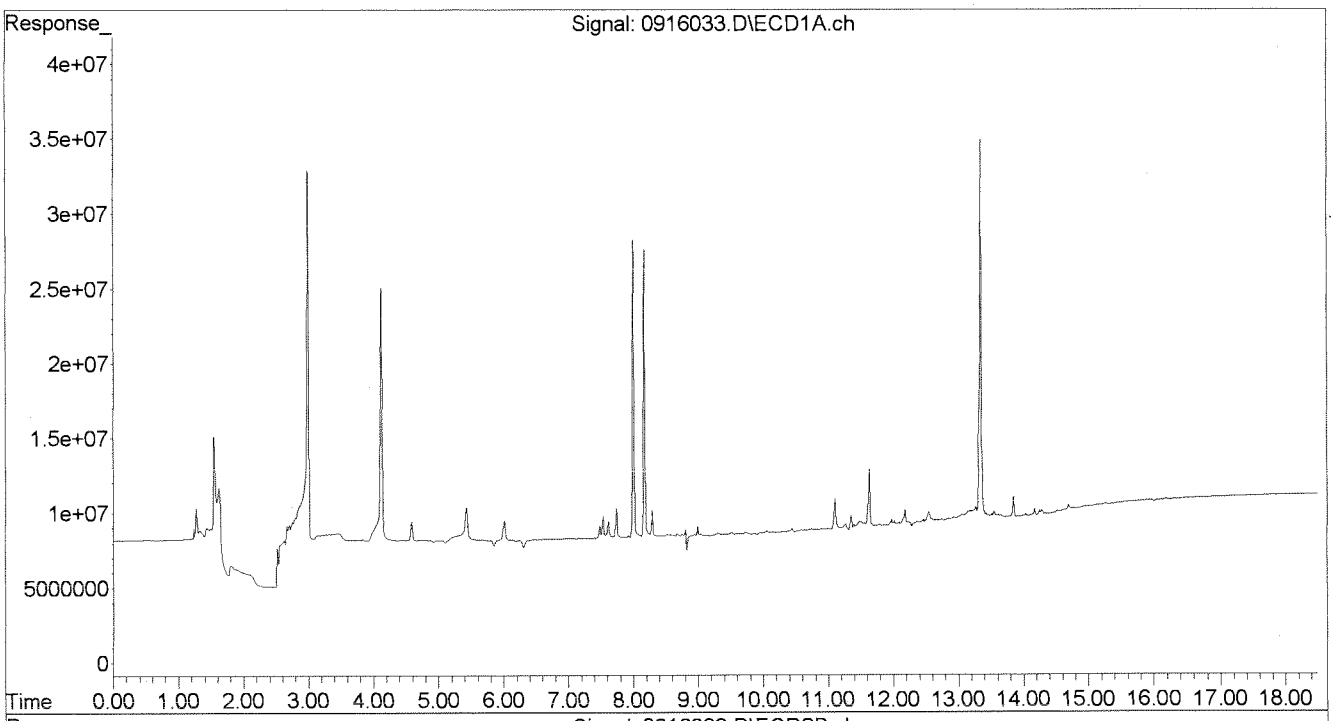
Target Compounds

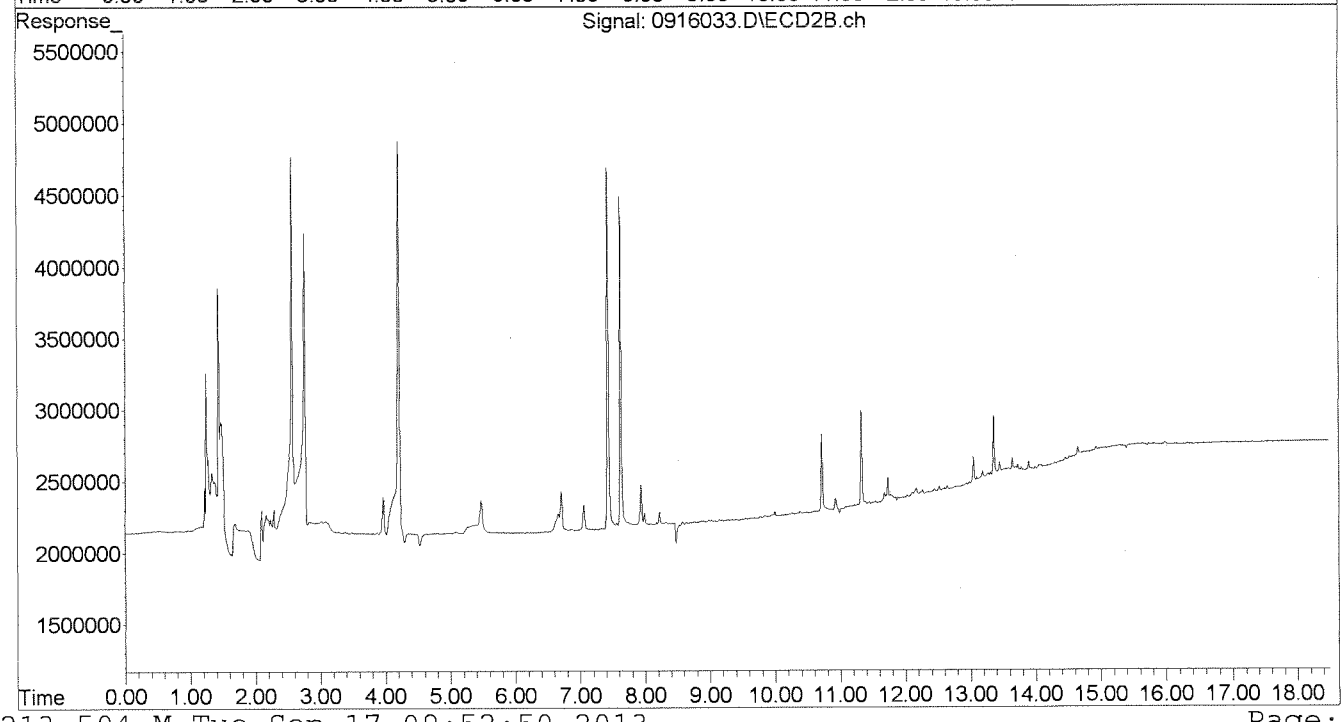
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916033.D
Acq On : 17-Sep-2013, 06:50:19 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-011 Vial : 29
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:20 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Method Blank
Lab Code: KWG1310054-5

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	0.0099	0.00300	1	09/16/13	09/16/13	KWG1310054	
1,2,3-Trichloropropane	ND	U	0.10	0.037	1	09/16/13	09/16/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	ND	U	0.0099	0.00360	1	09/16/13	09/16/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916015.D
Lab ID: KWG1310054-5
RunType: MB
Matrix: WATER

Date Acquired: 09/16/2013 23:18
Date Quantitated: 09/17/2013 09:45
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916015.D\0916015C.D
Lab ID: KWG1310054-5
RunType: MB
Matrix: WATER

Date Acquired: 09/16/2013 23:18
Date Quantitated: 09/17/2013 09:45
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: M

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916015.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916015.D\0916015c.d			**Vial:**	13
Acqu Date:	09/16/2013 23:18	**Quant Date:**	09/17/2013 09:45	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310054-5				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/16/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282354	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:		**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)			0	0d	0.0000	0.0000	0.00300U	0.00300U	0.00300U
1,2,3-Trichloropropane			0	0	0.0000	0.0000	0.037U	0.037U	0.037U
1,2-Dibromo-3-chloropropa			0	0d	0.0000	0.0000	0.00360U	0.00360U	0.00360U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.00 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916015.D
Acq On : 16-Sep-2013, 23:18:24 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-MB Vial : 13
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:45:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

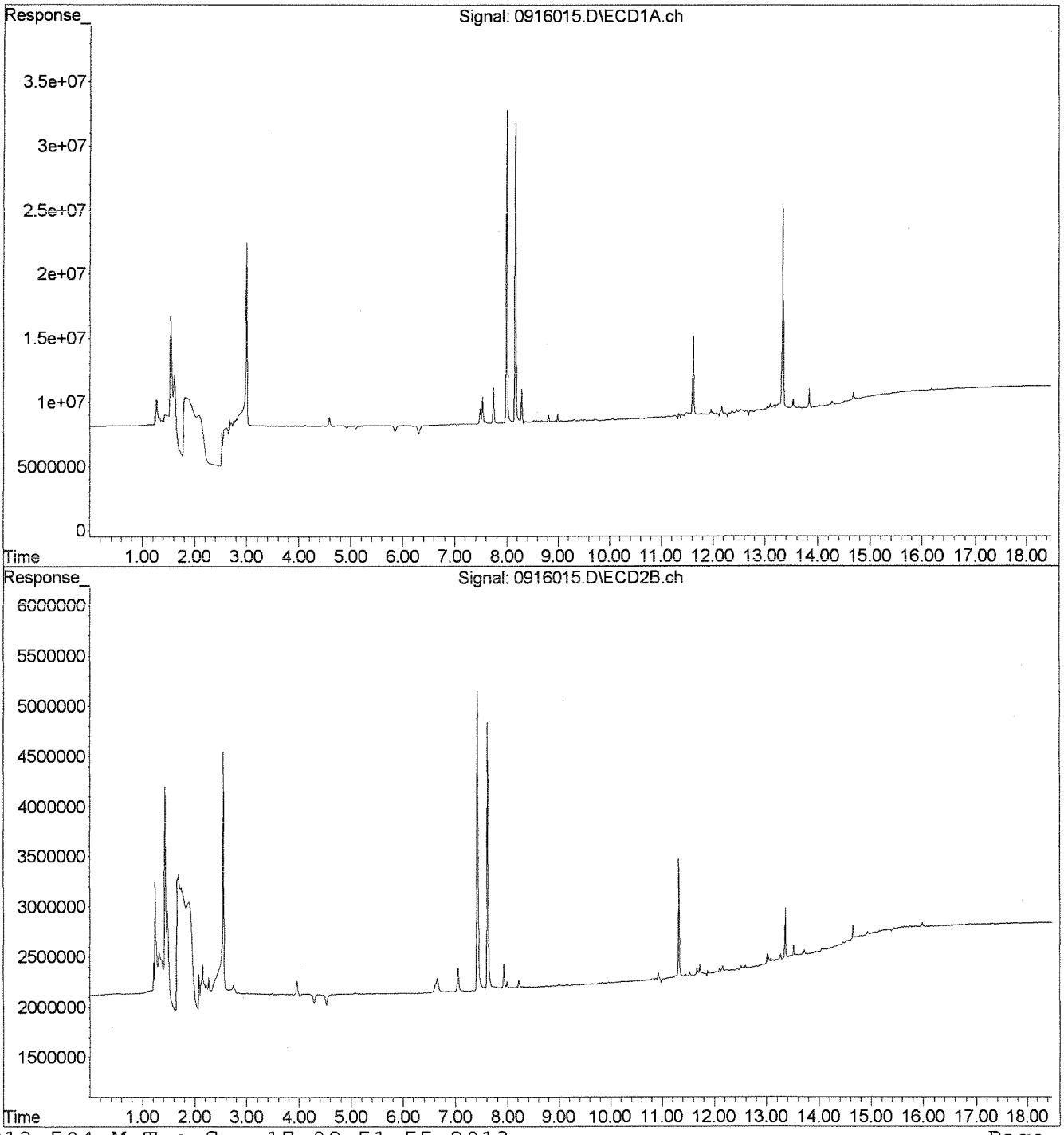
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916015.D
Acq On : 16-Sep-2013, 23:18:24 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-MB Vial : 13
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:45:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-4MS
Lab Code: KWG1310054-1

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.249**		0.0096	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	**0.233**		0.097	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	**0.222**		0.0096	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916023.D
Lab ID: KWG1310054-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/17/2013 02:38
Date Quantitated: 09/17/2013 09:47
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916023.D\0916023C.D
Lab ID: KWG1310054-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/17/2013 02:38
Date Quantitated: 09/17/2013 09:47
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916023.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916023.D\0916023c.d			**Vial:**	21
Acqu Date:	09/17/2013 02:38	**Quant Date:**	09/17/2013 09:47	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310054-1 -- K1309638-001MS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/16/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282350	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80	4.60	65098003m	10576221m	4.51	4.70	0.249	0.260	**0.249**
1,2,3-Trichloropropane	7.84	7.67	8741915	1582564m	4.22	4.95	0.233	0.274	**0.233**
1,2-Dibromo-3-chloropropai	9.43	9.46	117378712	21374132	4.01	4.43	0.222	0.245	**0.222**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	36.18 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:47:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

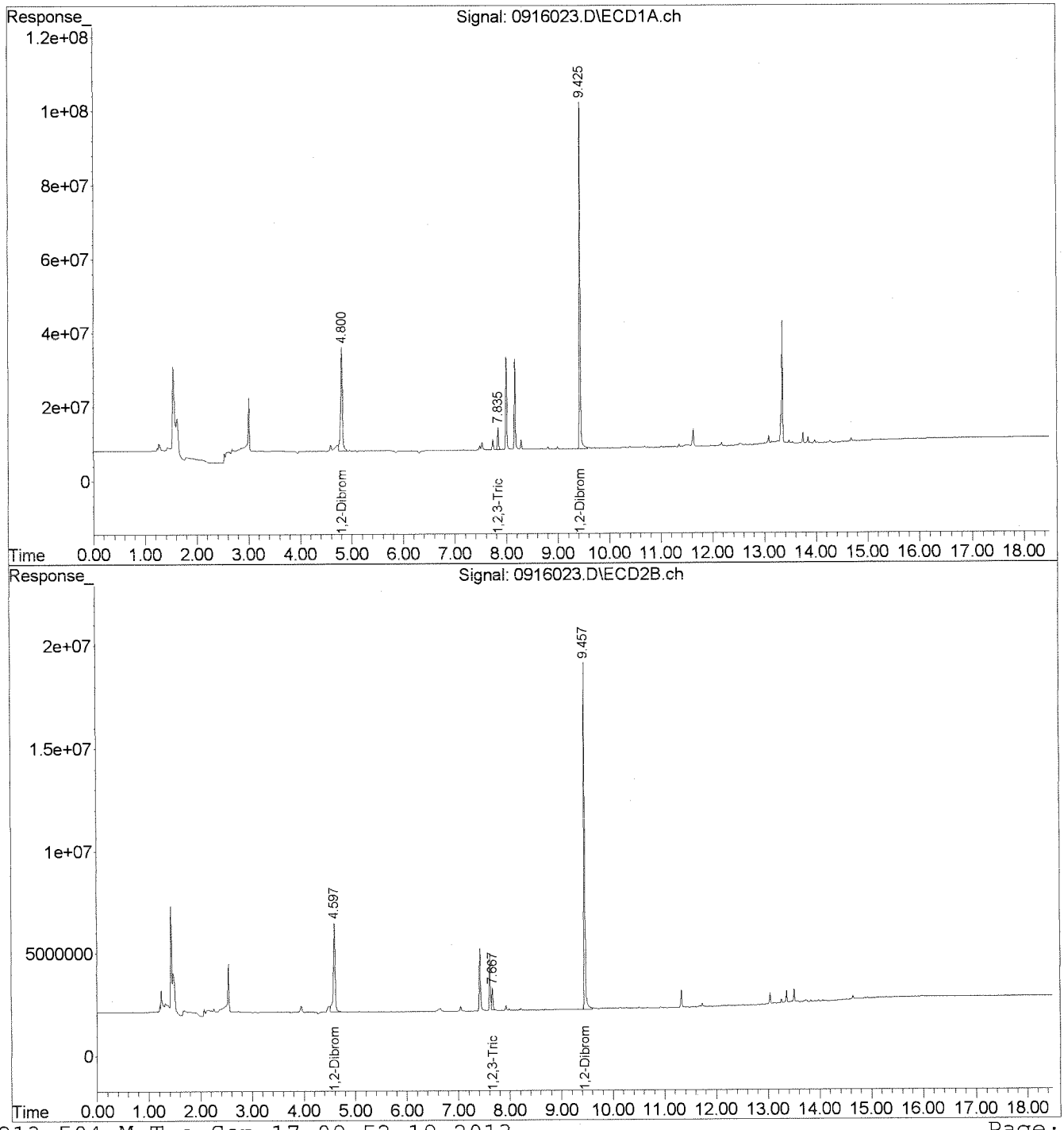
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	65098003	10576221	4.506m	4.695m
2) 1,2,3-Trichloropr...	7.84	7.67	8741915	1582564	4.222	4.954m
3) 1,2-Dibromo-3-chl...	9.43	9.46	117.4E6	21374132	4.008	4.427

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:47:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

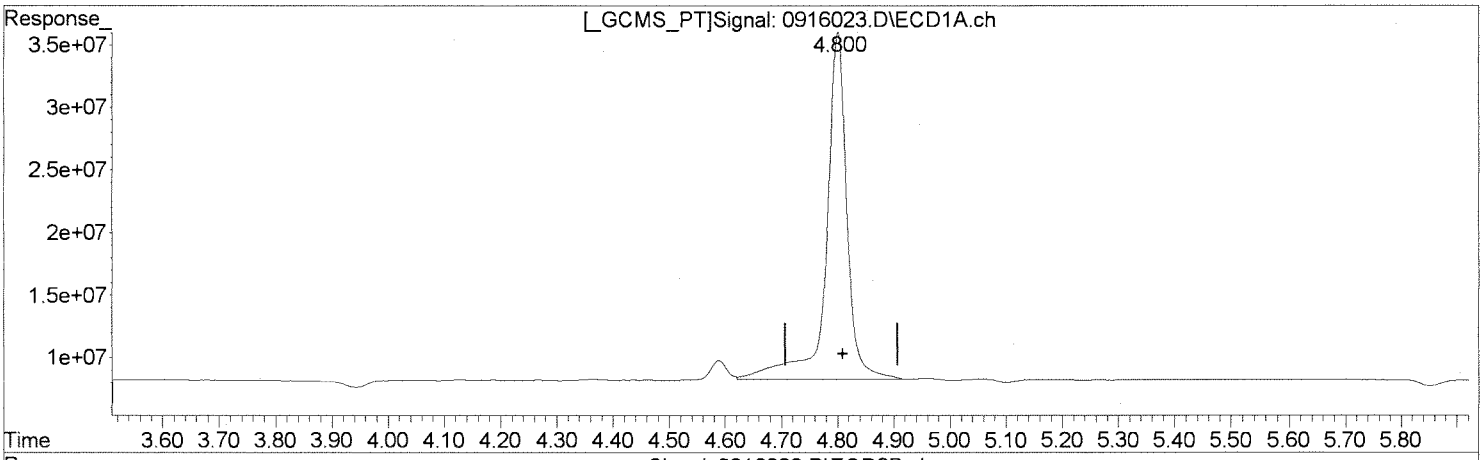
Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

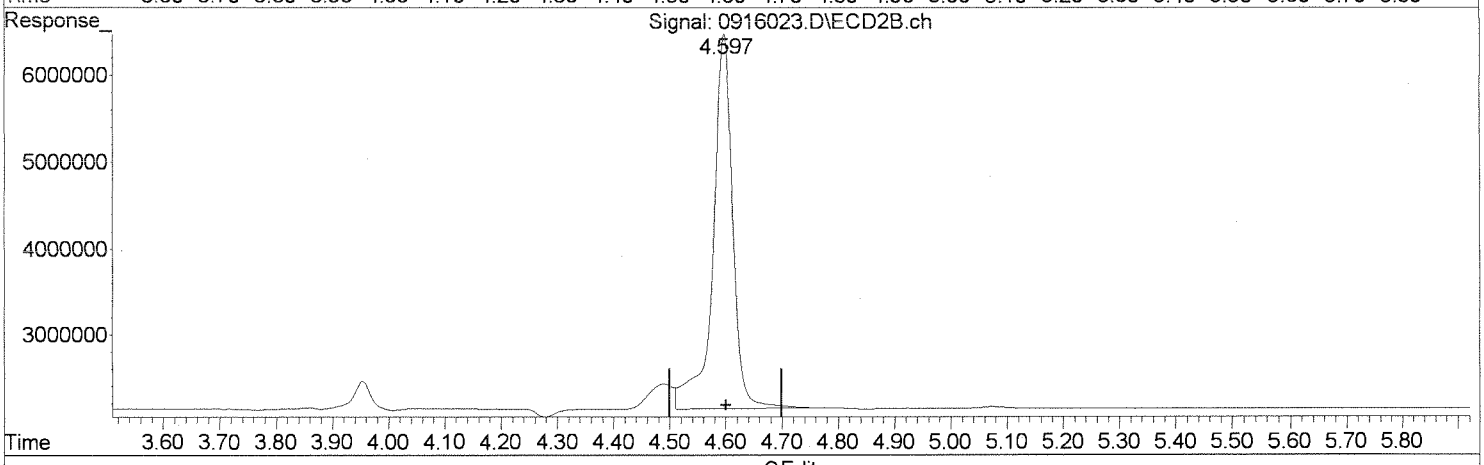


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 4.996 ppb

response 72180957

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.597min 4.742 ppb

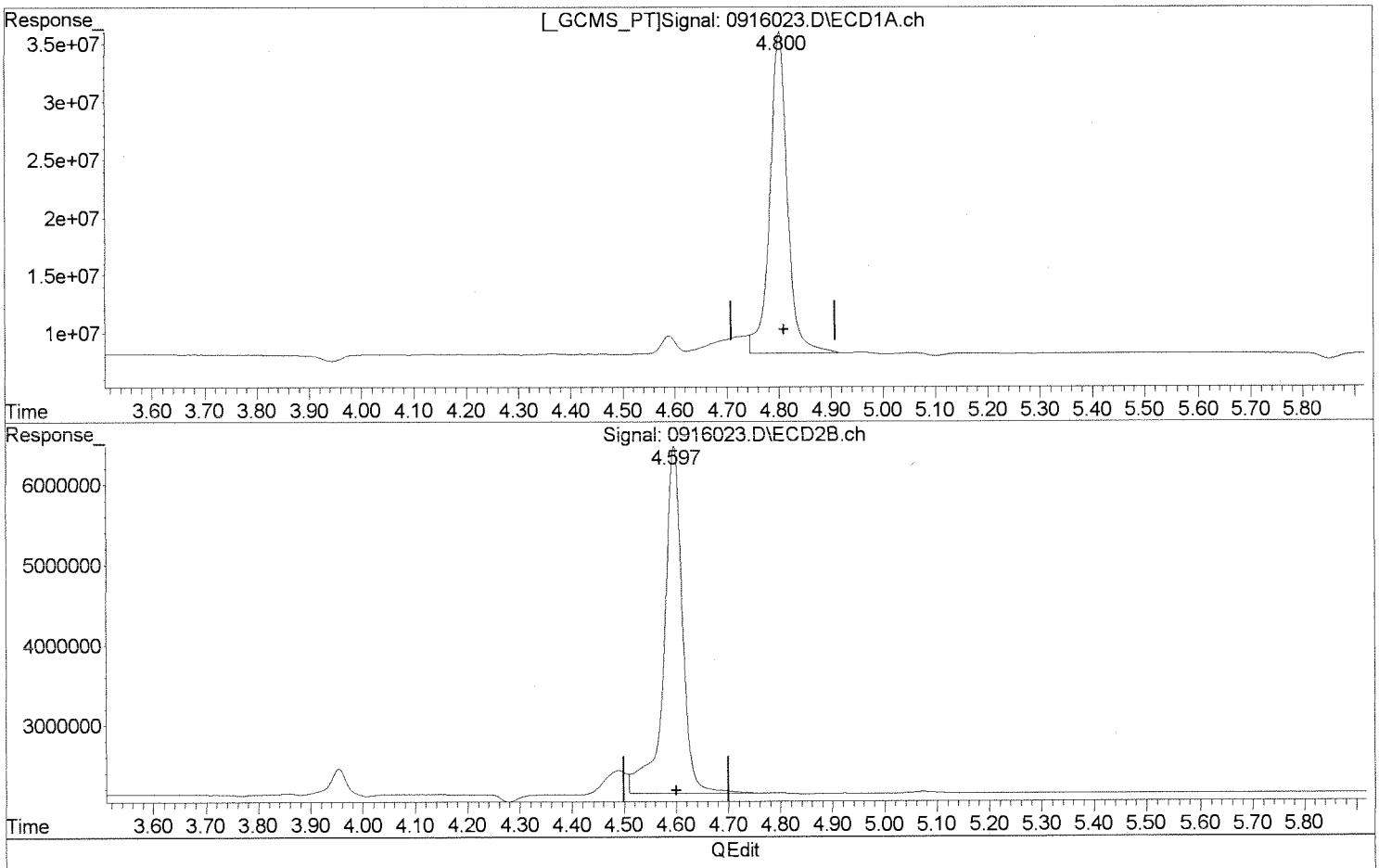
response 10682063

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 4.506 ppb m

response 65098003

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.597min 4.695 ppb m

response 10576221

Manual Integration:

After

Baseline/Shoulder

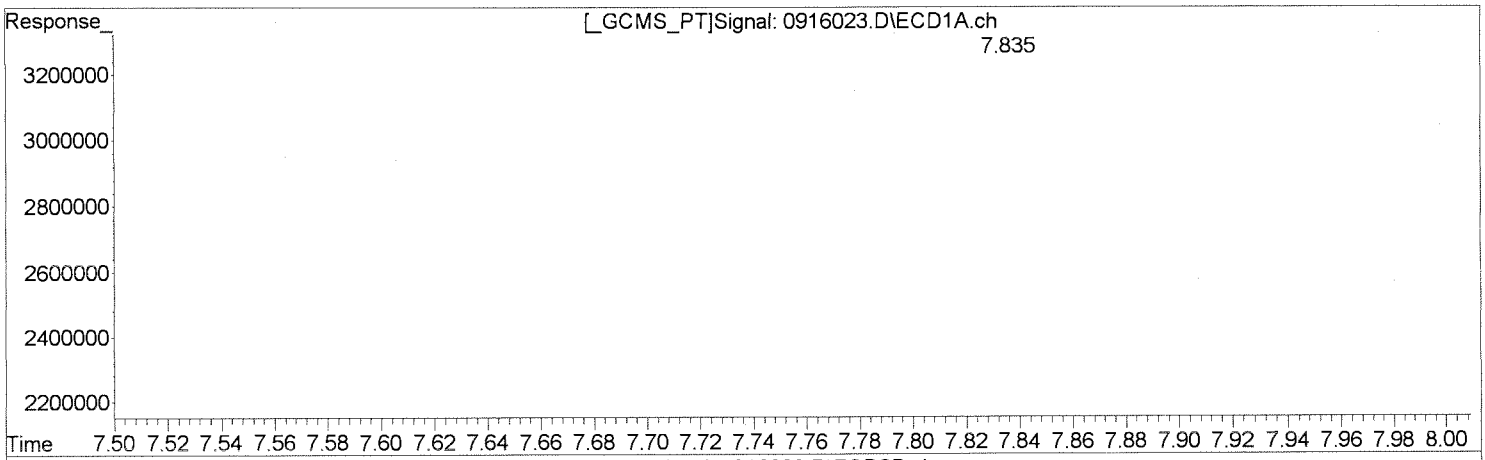
09/17/13

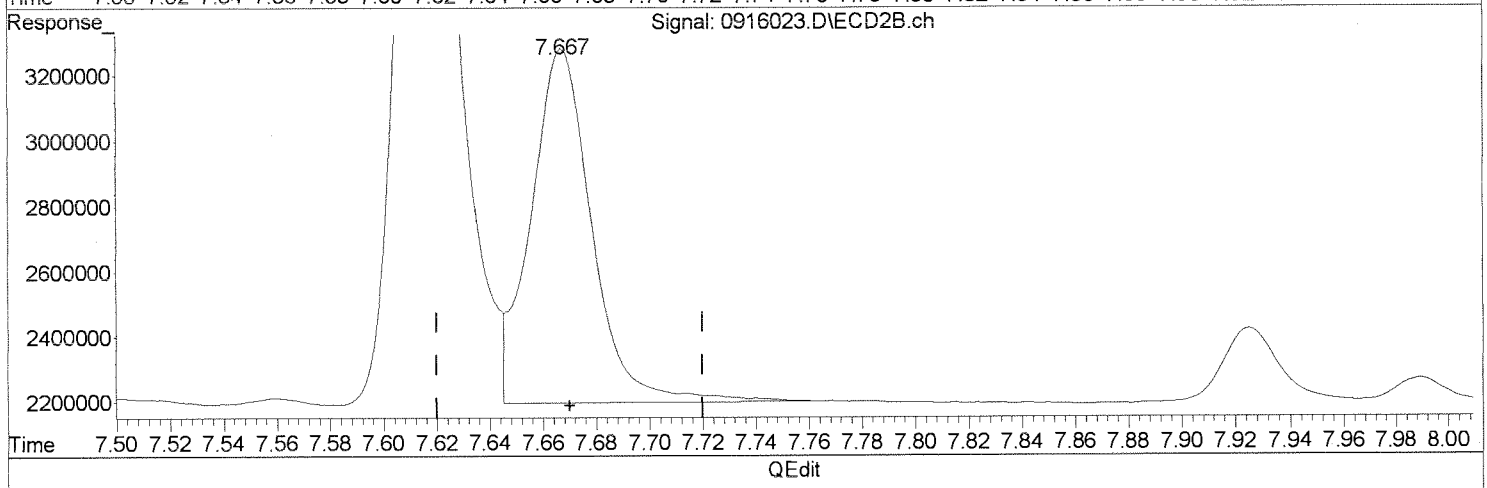
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)

7.835min 4.222 ppb

response 8741915

(2) 1,2,3-Trichloropropane #2 (M)

7.667min 5.441 ppb

response 1725201

Manual Integration:

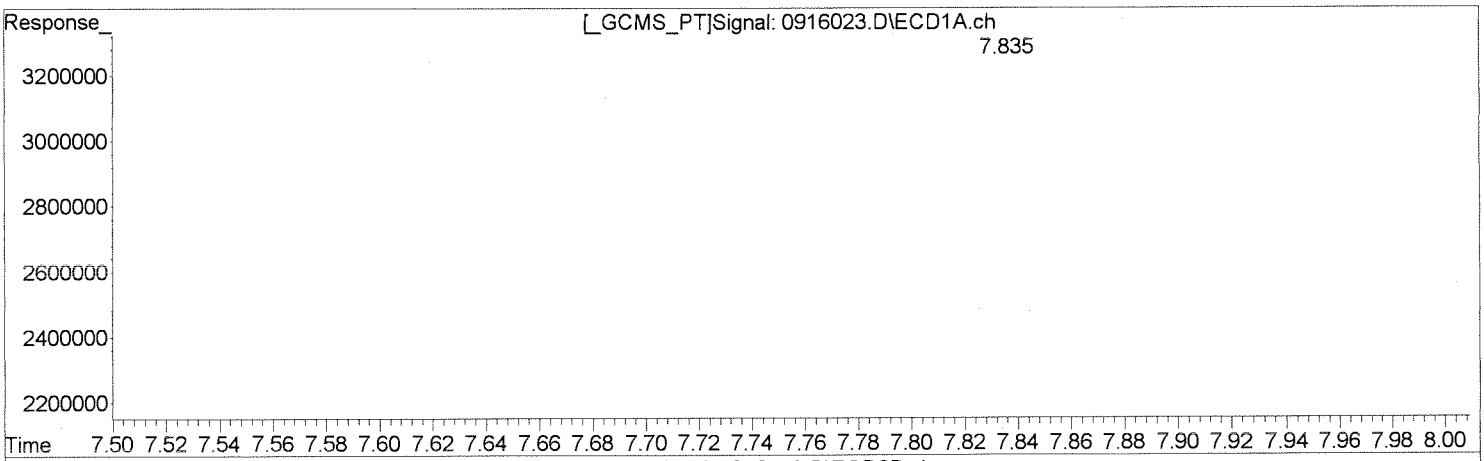
Before

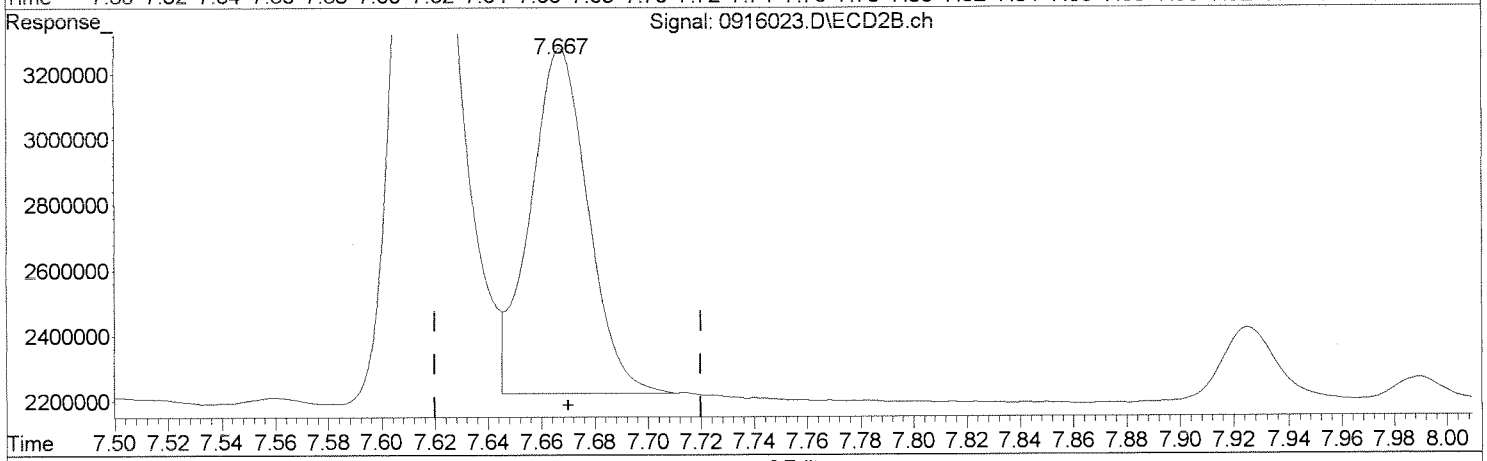
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916023.D
Acq On : 17-Sep-2013, 02:38:58 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 MS Vial : 21
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.835min 4.222 ppb
response 8741915

(2) 1,2,3-Trichloropropane #2 (M)
7.667min 4.954 ppb m
response 1582564

Manual Integration:
After
Baseline/Shoulder
09/17/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

EPA Method 504.1

Sample Name: 13254-BW-4DMS
Lab Code: KWG1310054-2

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.253**		0.0098	0.00300	1	09/16/13	09/17/13	KWG1310054	
1,2,3-Trichloropropane	**0.238**		0.099	0.0370	1	09/16/13	09/17/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	**0.232**		0.0098	0.00360	1	09/16/13	09/17/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916024.D
Lab ID: KWG1310054-2 -- K1309638-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/17/2013 03:04
Date Quantitated: 09/17/2013 09:48
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916024.D\0916024C.D
Lab ID: KWG1310054-2 -- K1309638-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/17/2013 03:04
Date Quantitated: 09/17/2013 09:48
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916024.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916024.D\0916024c.d			**Vial:**	22
Acqu Date:	09/17/2013 03:04	**Quant Date:**	09/17/2013 09:48	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310054-2 -- K1309638-001DMS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/16/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	
Analysis Method:	504.1	**Prep Method:**	METHOD		
		Prep Date:	09/16/2013		
Prep Ref:	1282351				

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80	4.59 -0.01	65211668m	10392664m	4.51	4.61	0.253	0.258	**0.253**
1,2,3-Trichloropropane	7.83 -0.01	7.67	8802800	1476581m	4.25	4.59	0.238	0.257	**0.238**
1,2-Dibromo-3-chloropropai	9.42 -0.01	9.46	121211198	20545231	4.14	4.26	0.232	0.238	**0.232**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.70 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:48:34 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

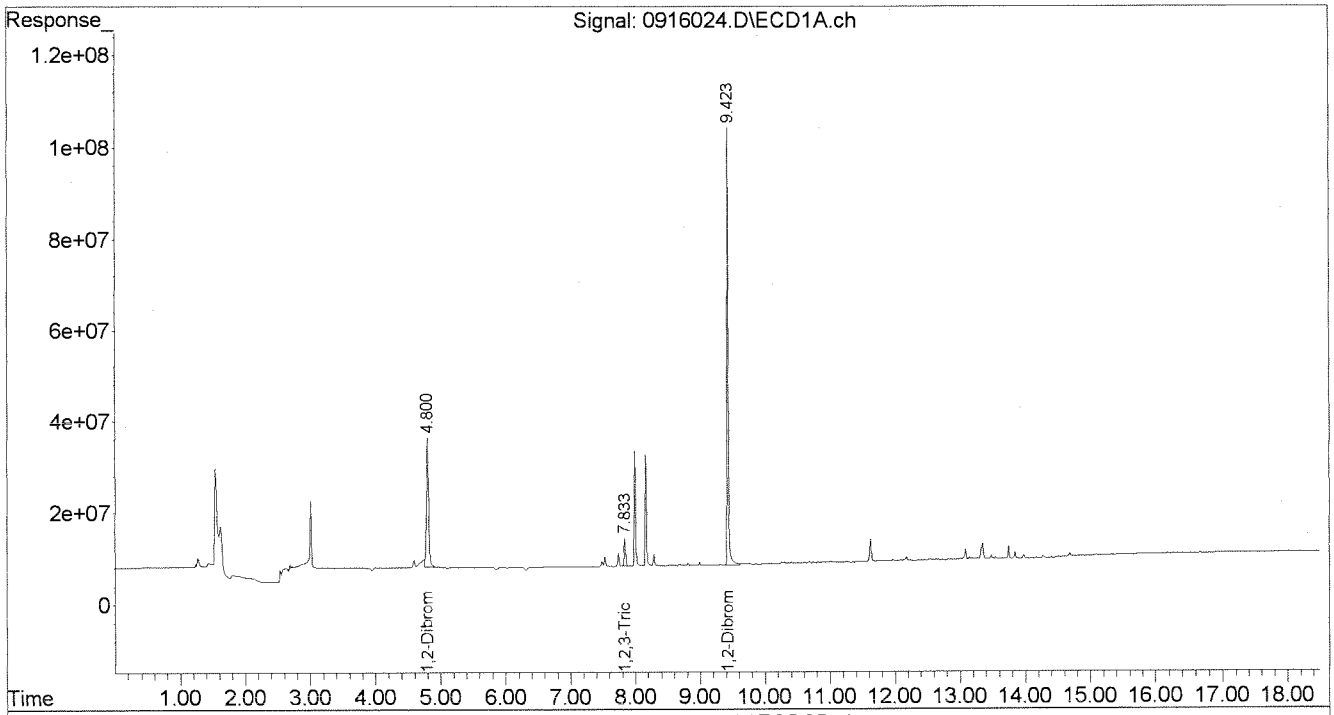
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.59	65211668	10392664	4.514m	4.613m
2) 1,2,3-Trichloropr...	7.83	7.67	8802800	1476581	4.252	4.593m
3) 1,2-Dibromo-3-chl...	9.42	9.46	121.2E6	20545231	4.139	4.255

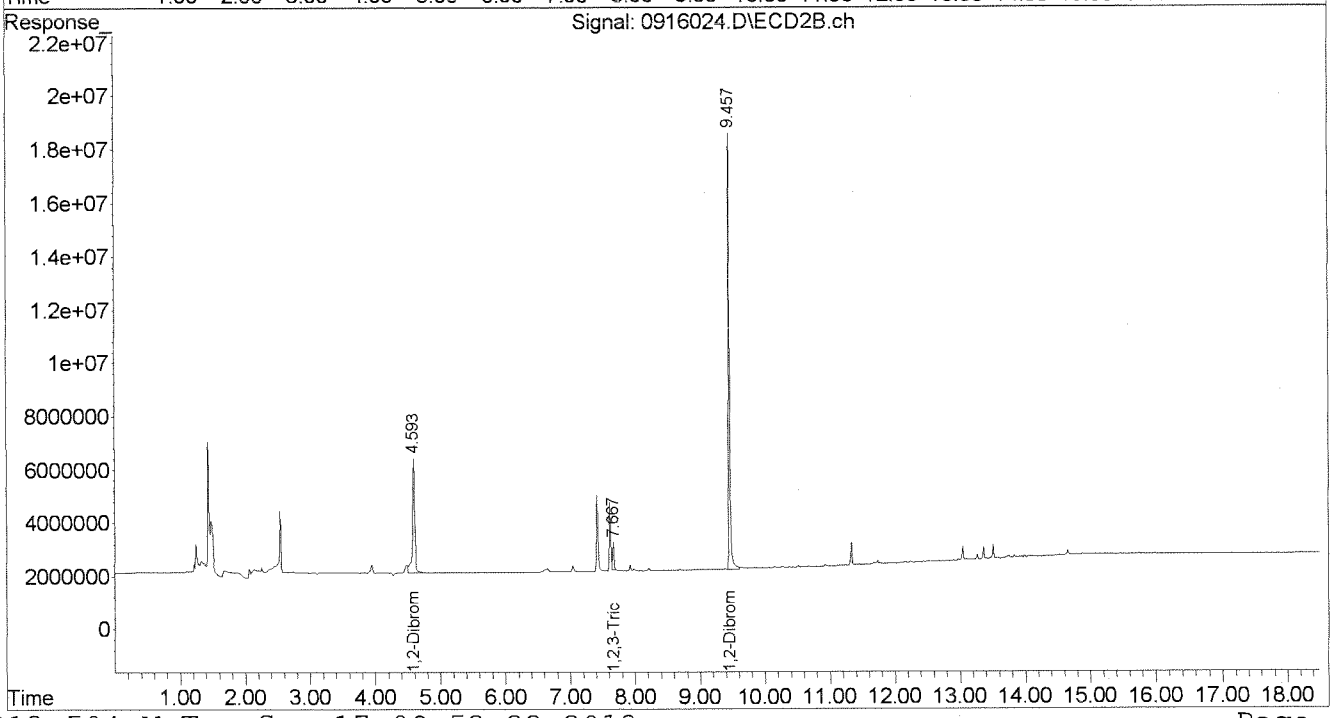
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:48:34 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

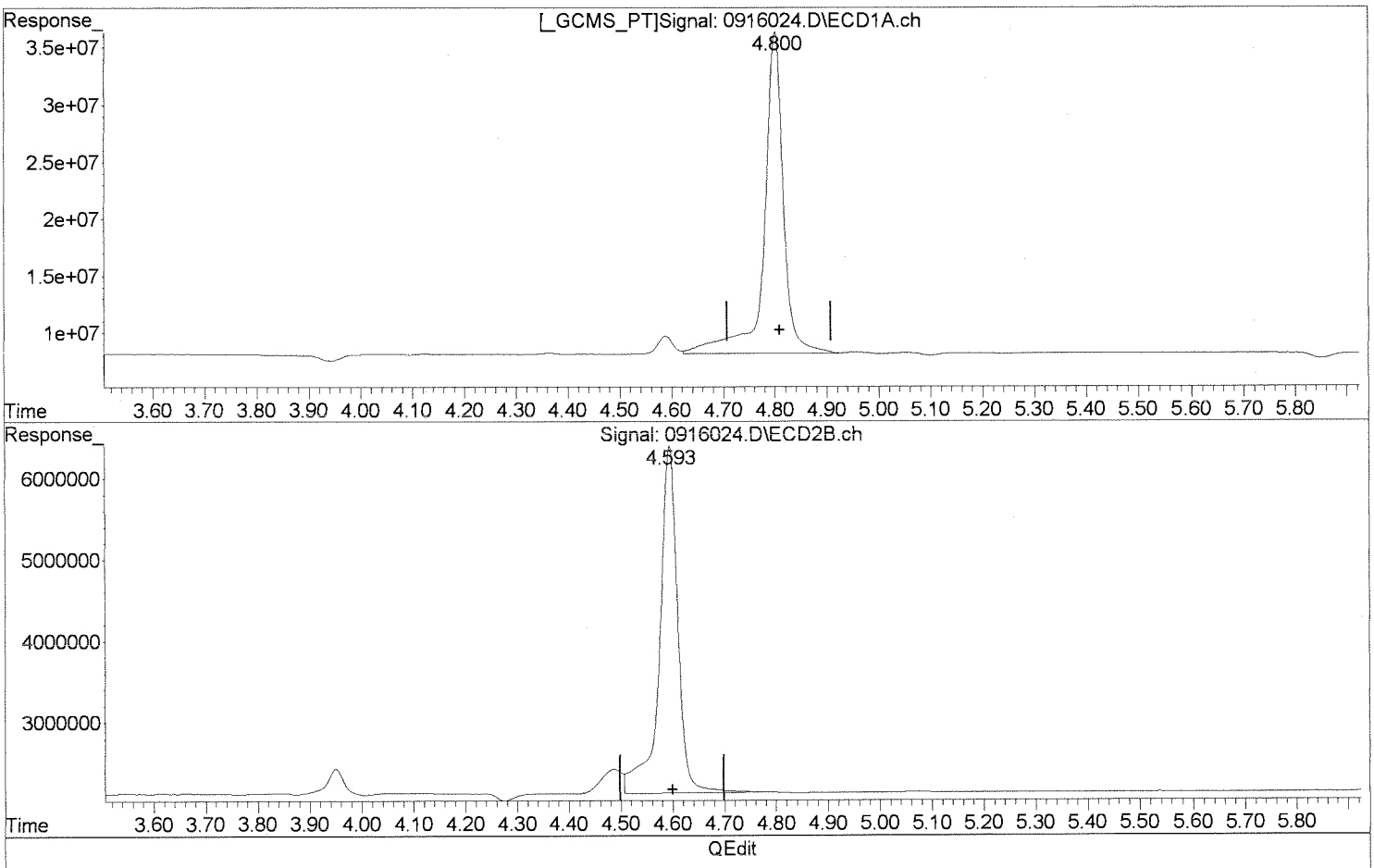




Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 5.071 ppb

response 73264190

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.593min 4.666 ppb

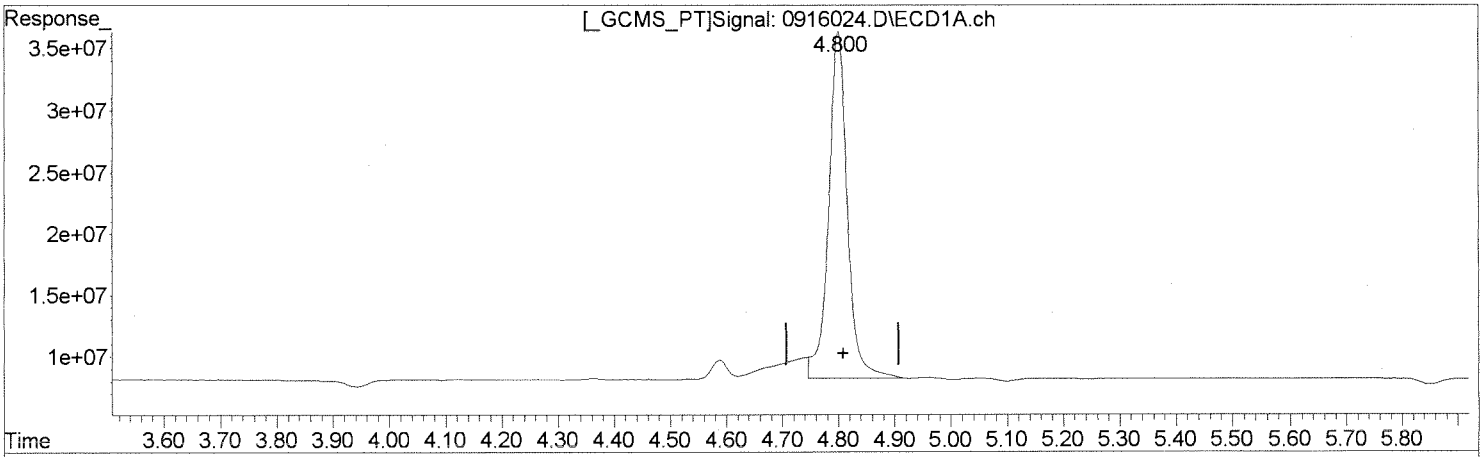
response 10511699

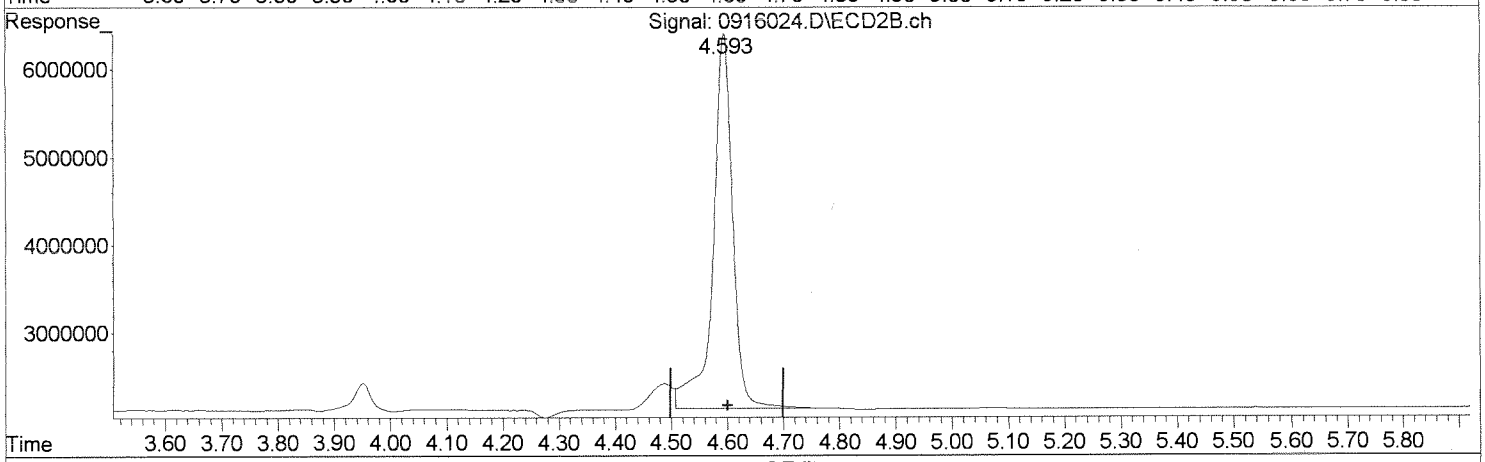
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 4.514 ppb m

response 65211668

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.593min 4.613 ppb m

response 10392664

Manual Integration:

After

Baseline/Shoulder

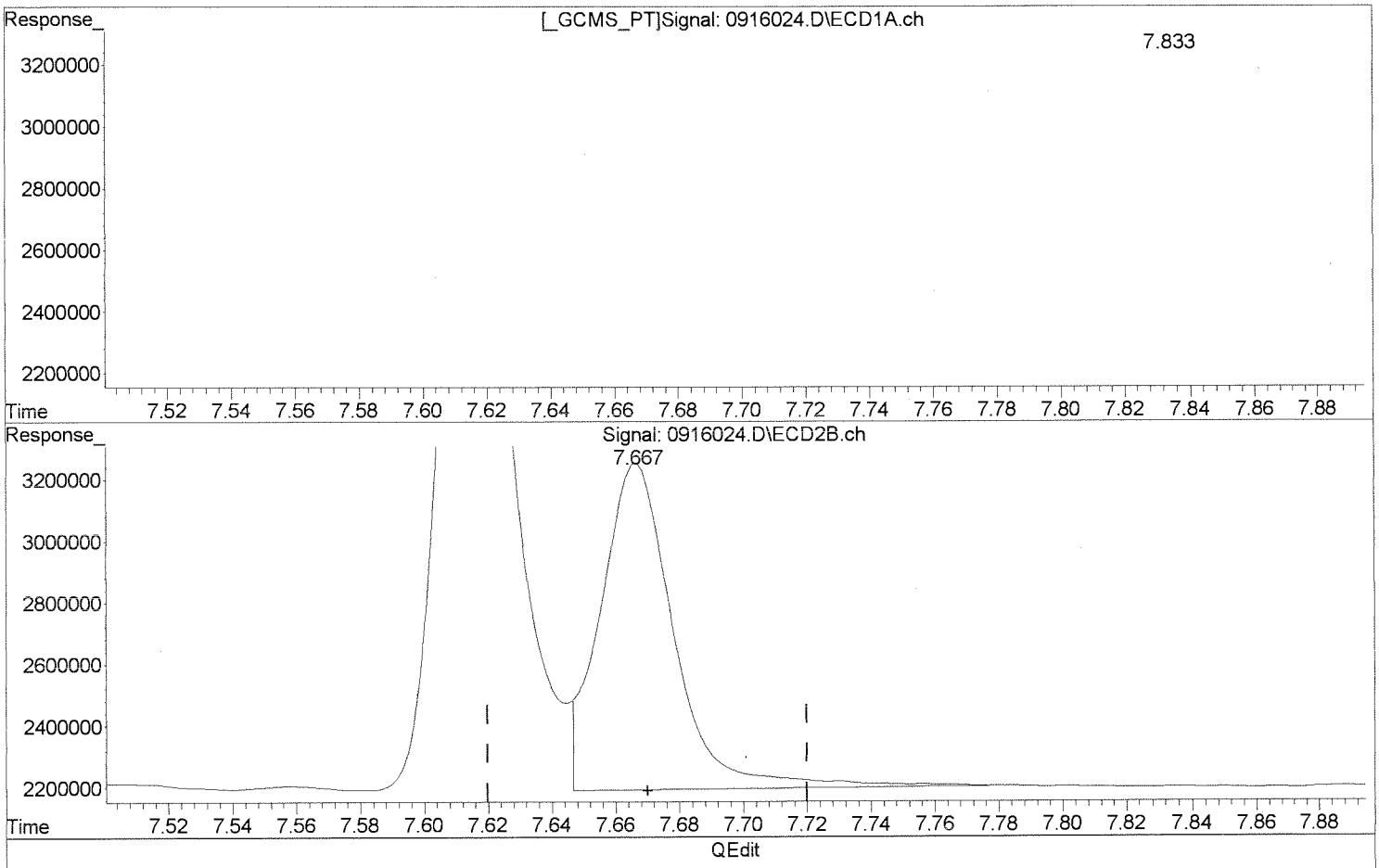
09/17/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

7.833min 4.252 ppb

response 8802800

Manual Integration:

Before

(2) 1,2,3-Trichloropropane #2 (M)

7.667min 5.300 ppb

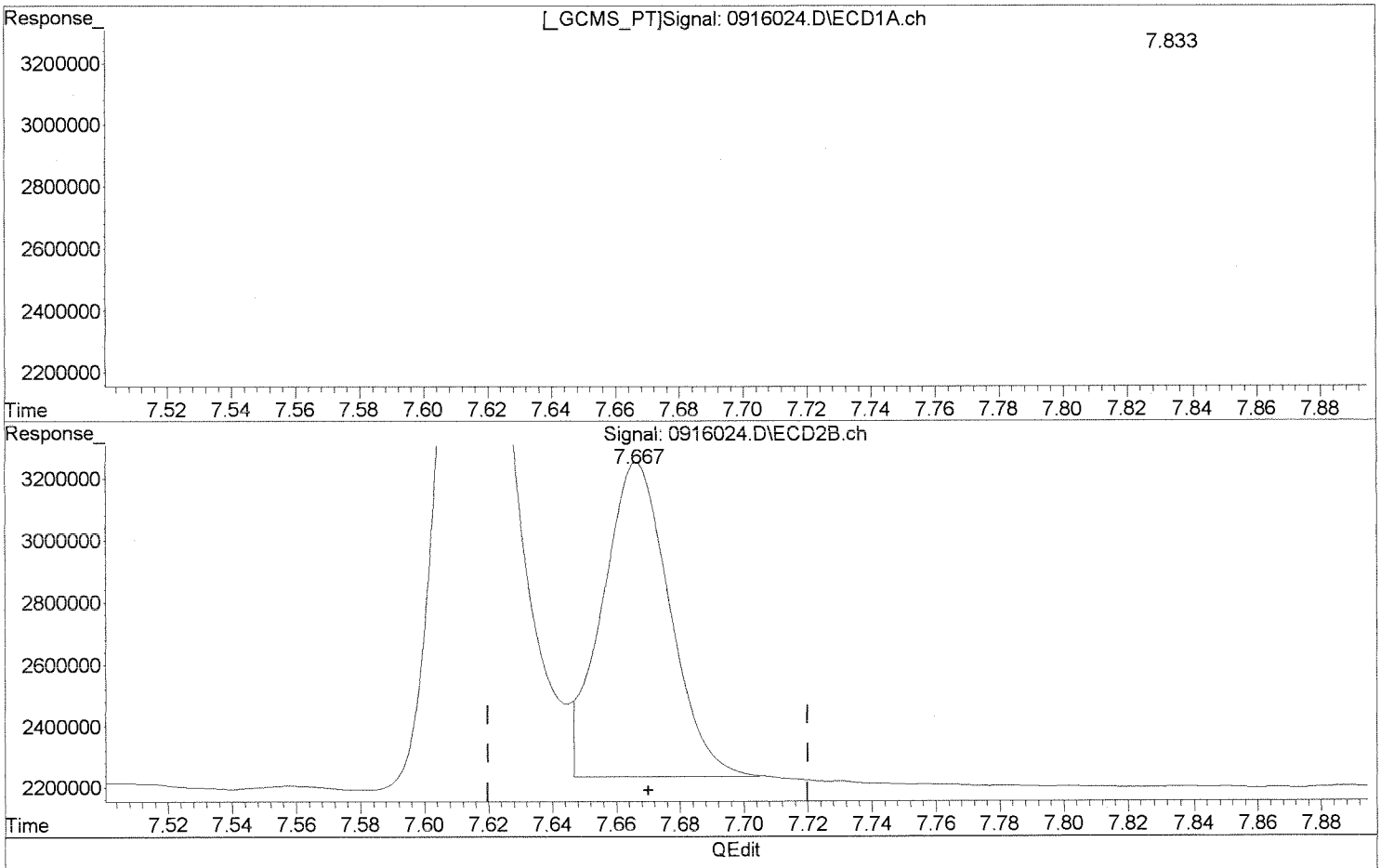
response 1683781

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916024.D
Acq On : 17-Sep-2013, 03:04:00 Operator : SSullivan
Acq Meth : 504-1.M
Sample : K1309638-001 DMS Vial : 22
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

7.833min 4.252 ppb

response 8802800

(2) 1,2,3-Trichloropropane #2 (M)

7.667min 4.593 ppb m

response 1476581

Manual Integration:

After

Baseline/Shoulder

09/17/13

(+) = Expected Retention Time

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

EPA Method 504.1

Sample Name:	Lab Control Sample	**Units:**	ug/L
Lab Code:	KWG1310054-3	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	504.1		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.254**		0.0099	0.00300	1	09/16/13	09/16/13	KWG1310054	
1,2,3-Trichloropropane	**0.237**		0.10	0.037	1	09/16/13	09/16/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	**0.232**		0.0099	0.00360	1	09/16/13	09/16/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916013.D
Lab ID: KWG1310054-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/16/2013 22:28
Date Quantitated: 09/17/2013 09:43
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916013.D\0916013C.D
Lab ID: KWG1310054-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/16/2013 22:28
Date Quantitated: 09/17/2013 09:43
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916013.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916013.D\0916013c.d			**Vial:**	11
Acqu Date:	09/16/2013 22:28	**Quant Date:**	09/17/2013 09:43	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310054-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/16/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282352	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80	4.60	64254866m	10339751m	4.45	4.59	0.254	0.262	**0.254**
1,2,3-Trichloropropane	7.84	7.67	8583409	1498517m	4.15	4.67	0.237	0.267	**0.237**
1,2-Dibromo-3-chloropropa	9.43	9.46	119061329	21107277	4.07	4.37	0.232	0.250	**0.232**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.00 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 1 Vial : 11
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:43:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	64254866	10339751	4.448m	4.590m
2) 1,2,3-Trichloropr...	7.84	7.67	8583409	1498517	4.146	4.668m
3) 1,2-Dibromo-3-chl...	9.43	9.46	119.1E6	21107277	4.066	4.371

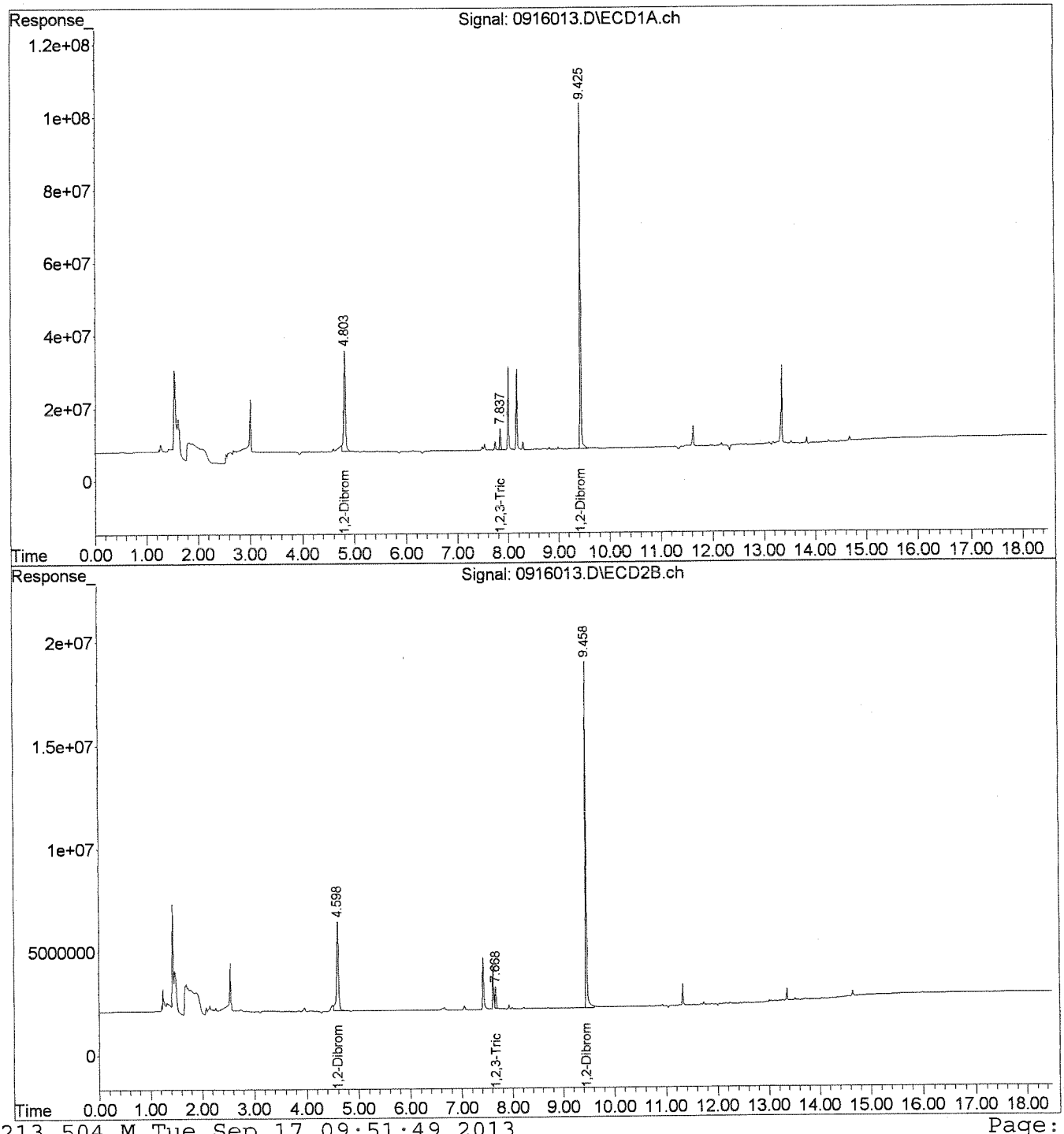
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11
Acq Meth : 504-1.M
Sample : 091613-LCS 1
Misc :
Quant Time : Sep 17 09:43:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Operator : SSullivan
Vial : 11
Multiplier : 1.00

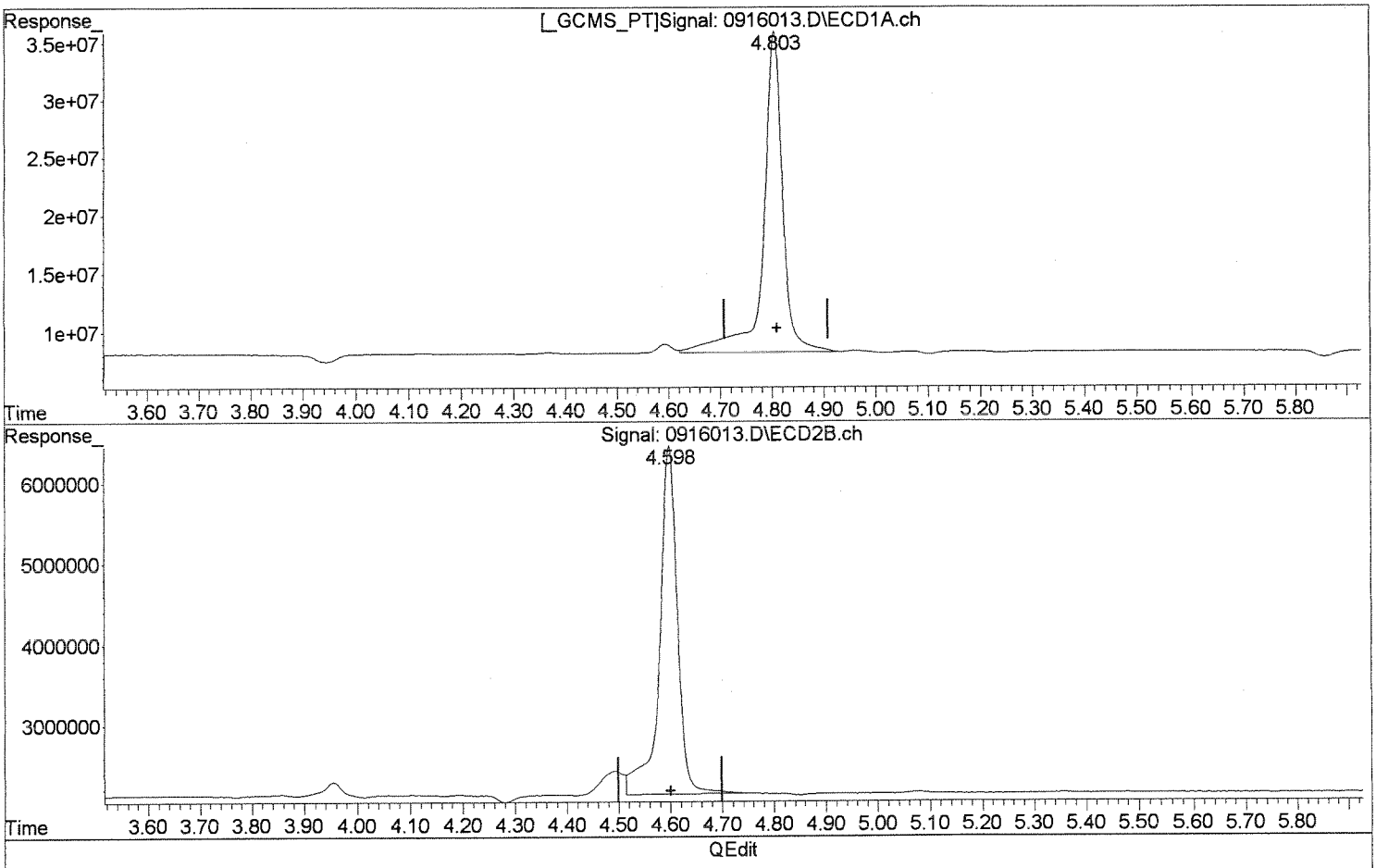
Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 1 Vial : 11
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.803min 4.967 ppb

response 71757081

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.598min 4.630 ppb

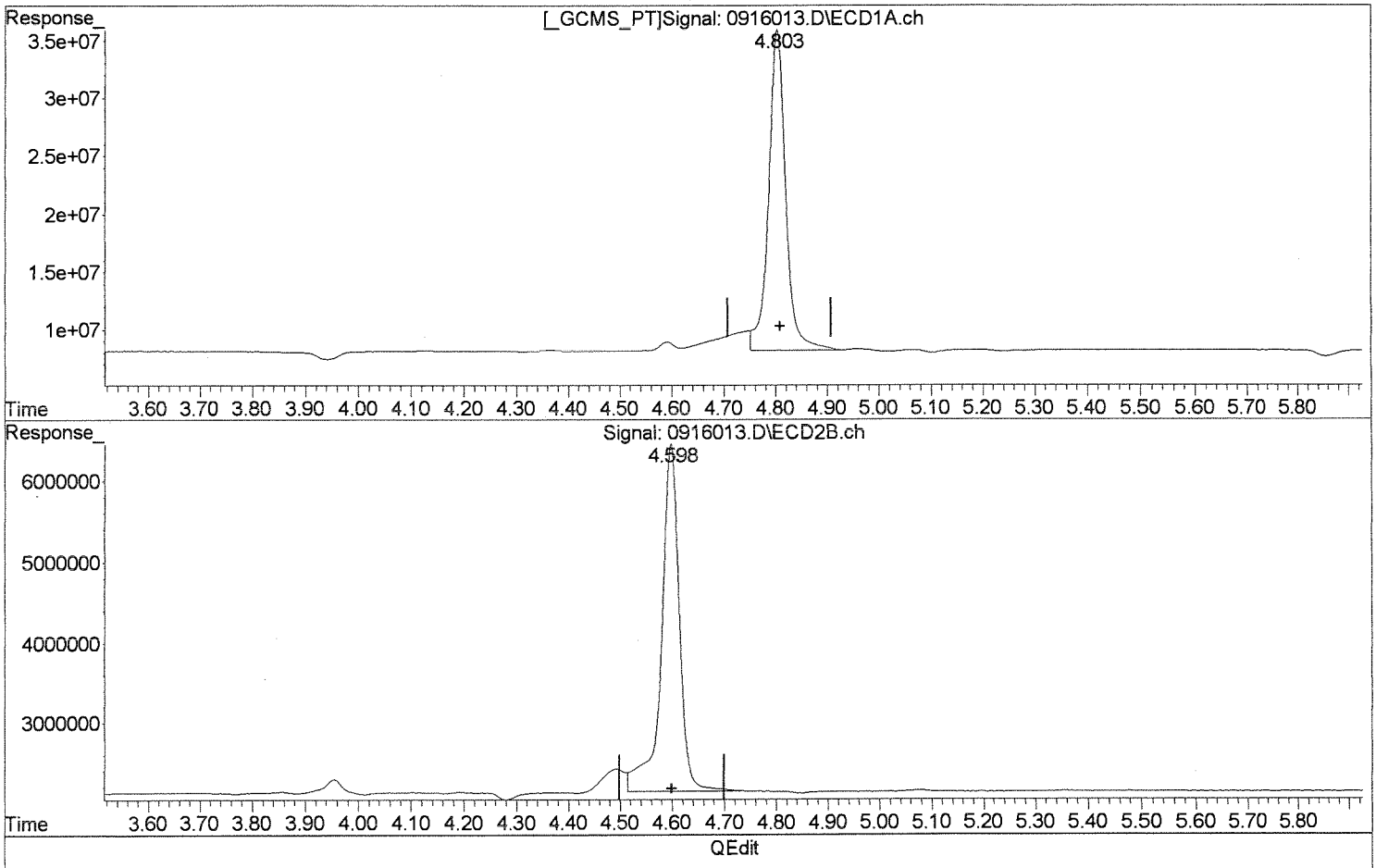
response 10431233

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 1 Vial : 11
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.803min 4.448 ppb m

response 64254866

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.598min 4.590 ppb m

response 10339751

Manual Integration:

After

Baseline/Shoulder

09/17/13

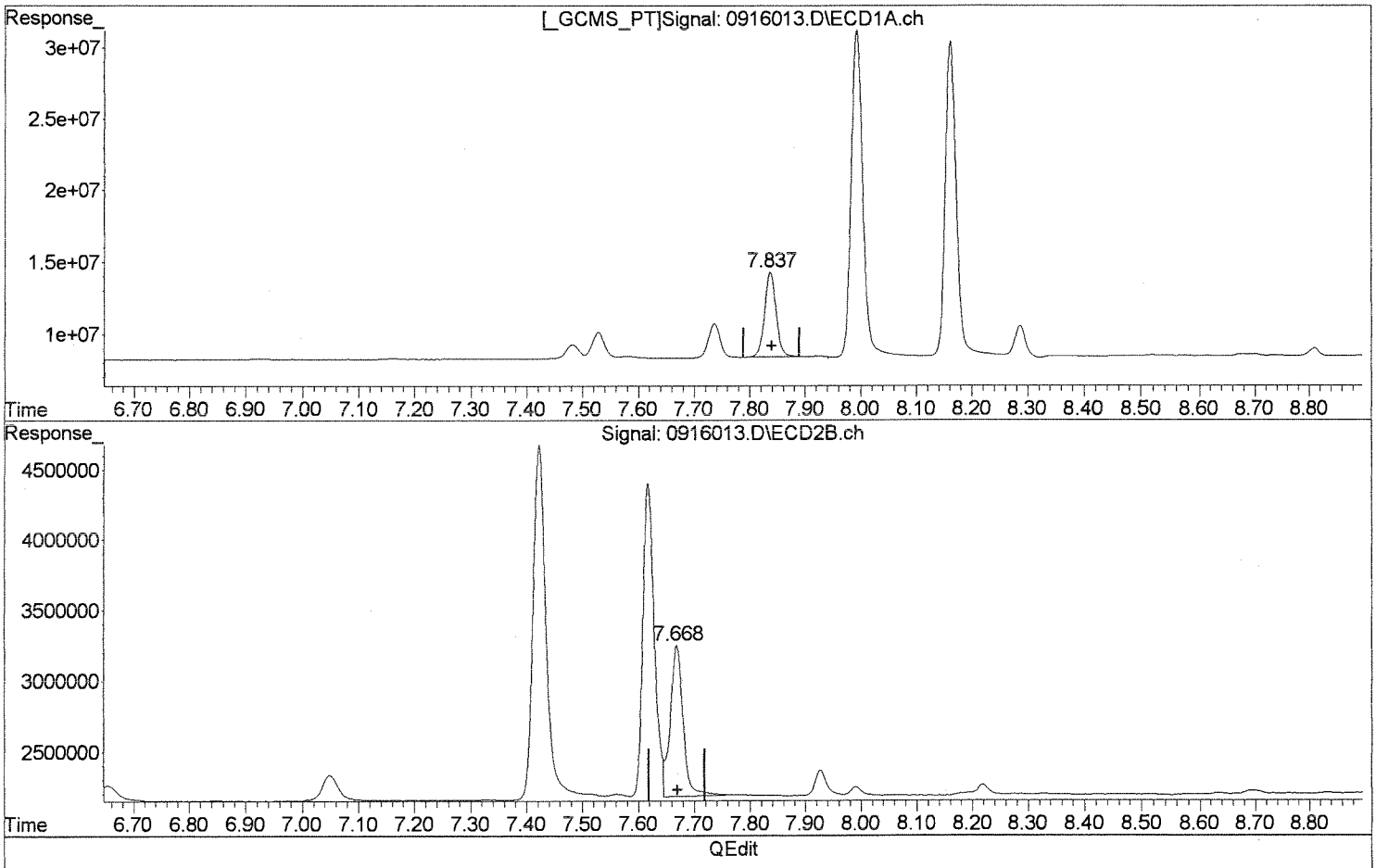
SS

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 1 Vial : 11
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

7.837min 4.146 ppb

response 8583409

Manual Integration:

Before

(2) 1,2,3-Trichloropropane #2 (M)

7.668min 5.388 ppb

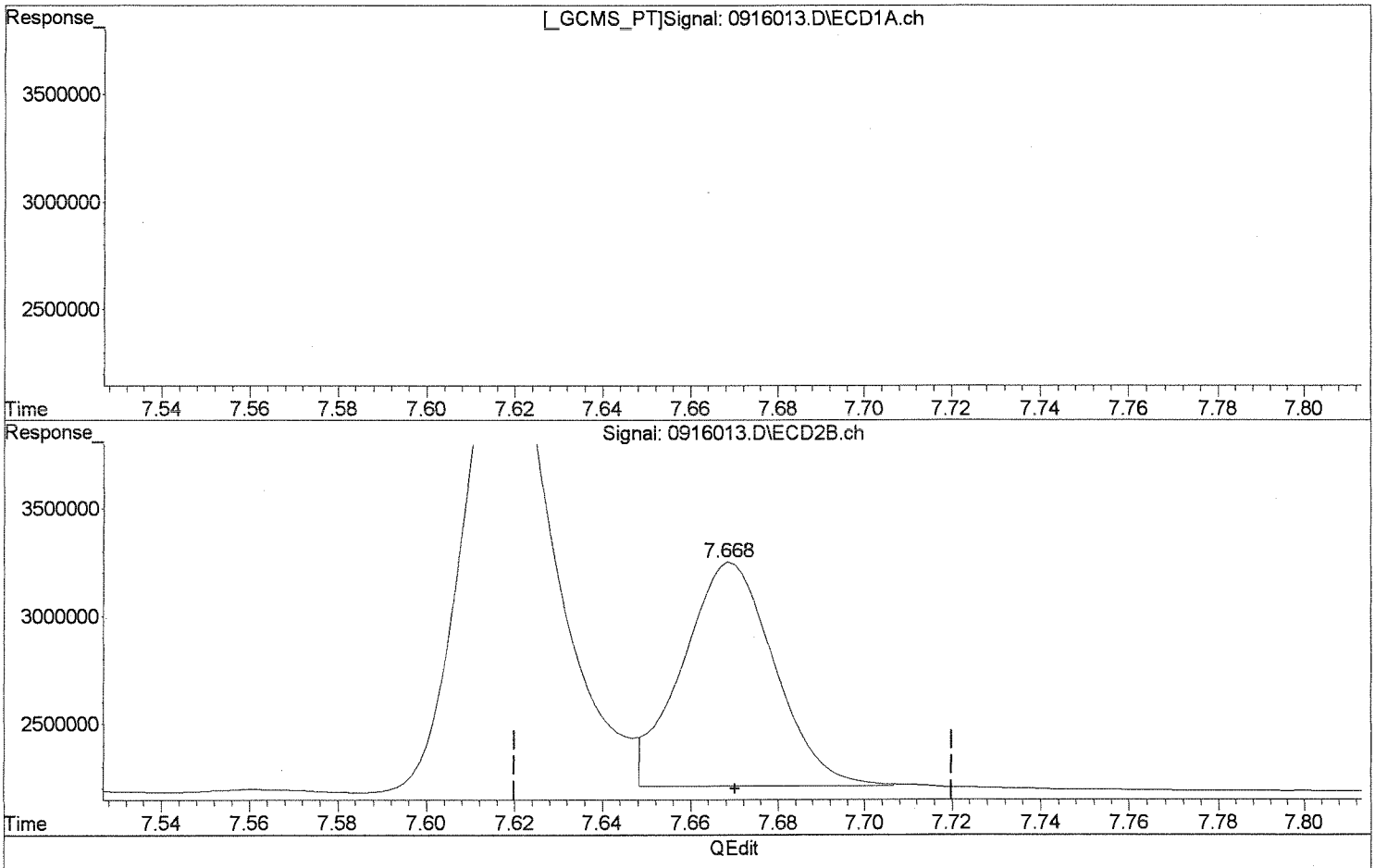
response 1709599

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916013.D
Acq On : 16-Sep-2013, 22:28:11 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 1 Vial : 11
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.837min 4.146 ppb
response 8583409

(2) 1,2,3-Trichloropropane #2 (M)
7.668min 4.668 ppb m
response 1498517

Manual Integration:
After
Baseline/Shoulder
09/17/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

EPA Method 504.1

Sample Name: Lab Control Sample
Lab Code: KWG1310054-4

Extraction Method: METHOD
Analysis Method: 504.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	**0.250**		0.0099	0.00300	1	09/16/13	09/16/13	KWG1310054	
1,2,3-Trichloropropane	**0.239**		0.10	0.037	1	09/16/13	09/16/13	KWG1310054	
1,2-Dibromo-3-chloropropane (DBCP	**0.230**		0.0099	0.00360	1	09/16/13	09/16/13	KWG1310054	

Comments:

Exception Report

Data File: J:\GC33\DATA\091613-504\0916014.D
Lab ID: KWG1310054-4
RunType: LCS
Matrix: WATER

Date Acquired: 09/16/2013 22:53
Date Quantitated: 09/17/2013 09:44
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916014.D\0916014C.D
Lab ID: KWG1310054-4
RunType: LCS
Matrix: WATER

Date Acquired: 09/16/2013 22:53
Date Quantitated: 09/17/2013 09:44
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: JM

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916014.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916014.D\0916014c.d			**Vial:**	12
Acqu Date:	09/16/2013 22:53	**Quant Date:**	09/17/2013 09:44	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310054-4				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/16/2013

Analysis Lot:	KWG1310084	**Prep Lot:**	KWG1310054	**Report Group:**	
Analysis Method:	504.1	**Prep Method:**	METHOD		
Prep Ref:	1282353	**Prep Date:**	09/16/2013		

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:	J:\GC33\DATA\091613-504\0916015.D	**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80	4.60	63234705m	10199156m	4.38	4.53	0.250	0.259	**0.250**
1,2,3-Trichloropropane	7.84	7.67	8644669	1488875m	4.18	4.64	0.239	0.265	**0.239**
1,2-Dibromo-3-chloropropa	9.43	9.46	117917627	20977620	4.03	4.35	0.230	0.248	**0.230**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	35.00 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 2 Vial : 12
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:44:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

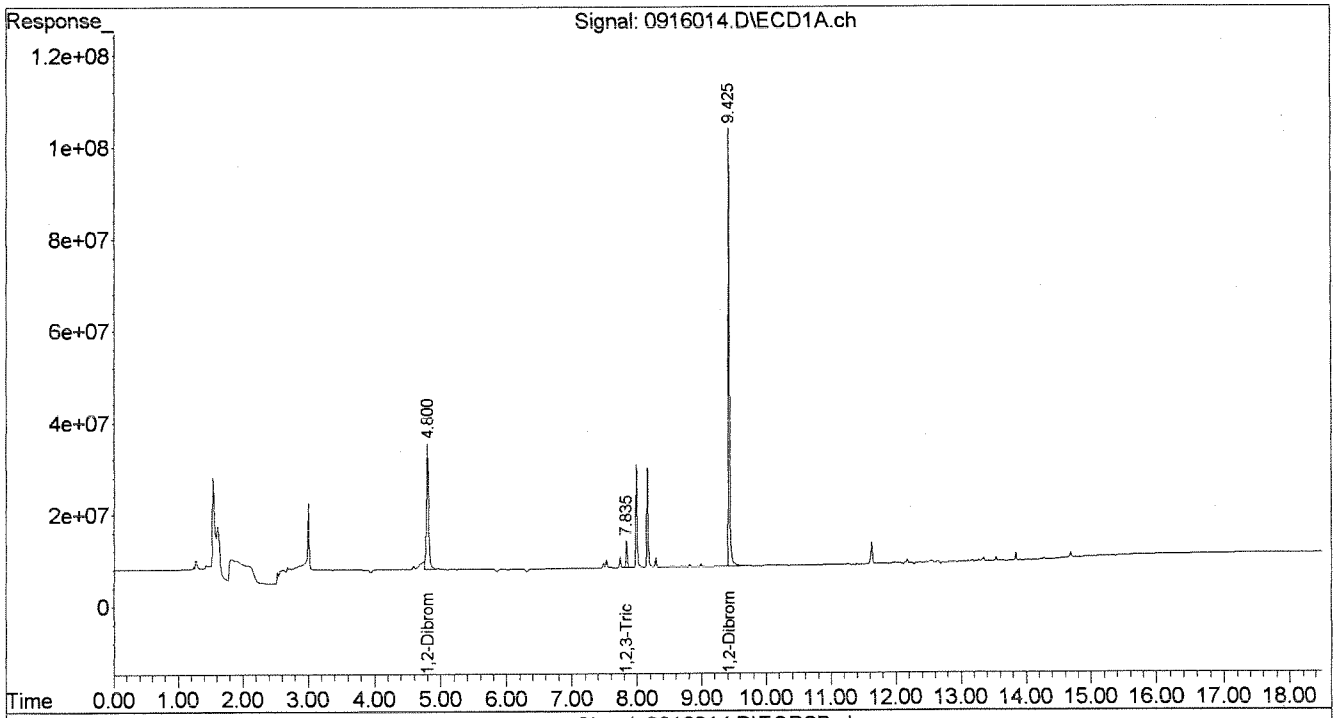
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	63234705	10199156	4.377m	4.527m
2) 1,2,3-Trichloropr...	7.84	7.67	8644669	1488875	4.175	4.635m
3) 1,2-Dibromo-3-chl...	9.43	9.46	117.9E6	20977620	4.027	4.345

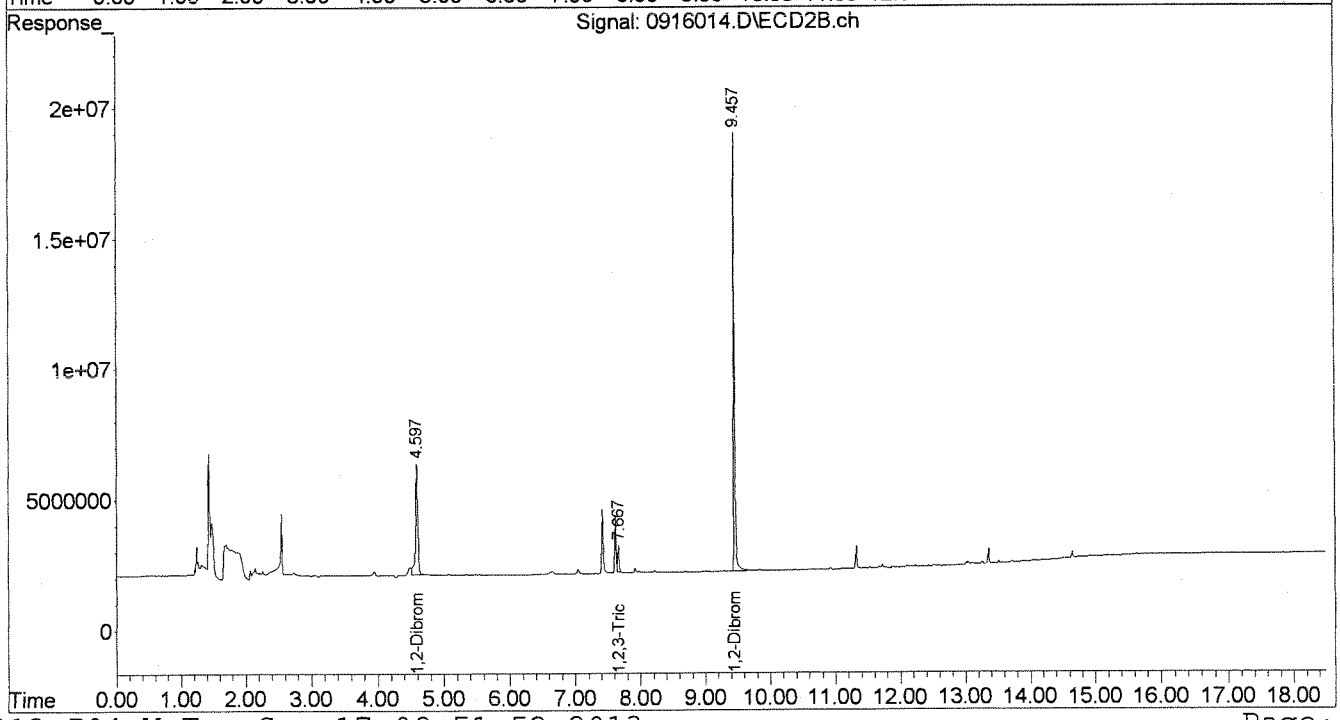
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 2 Vial : 12
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:44:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

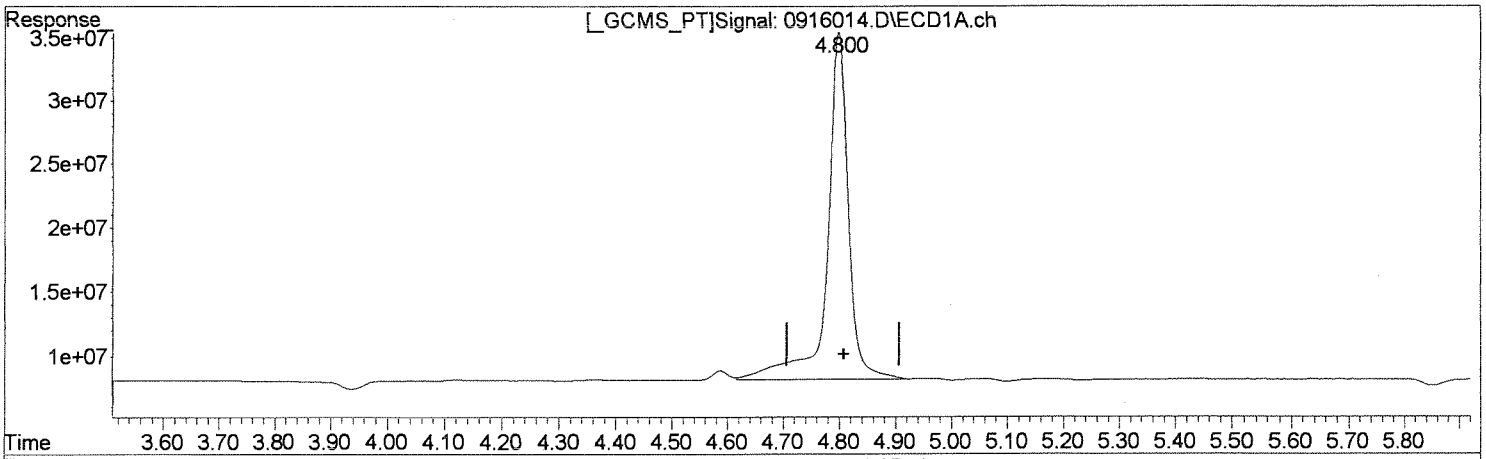


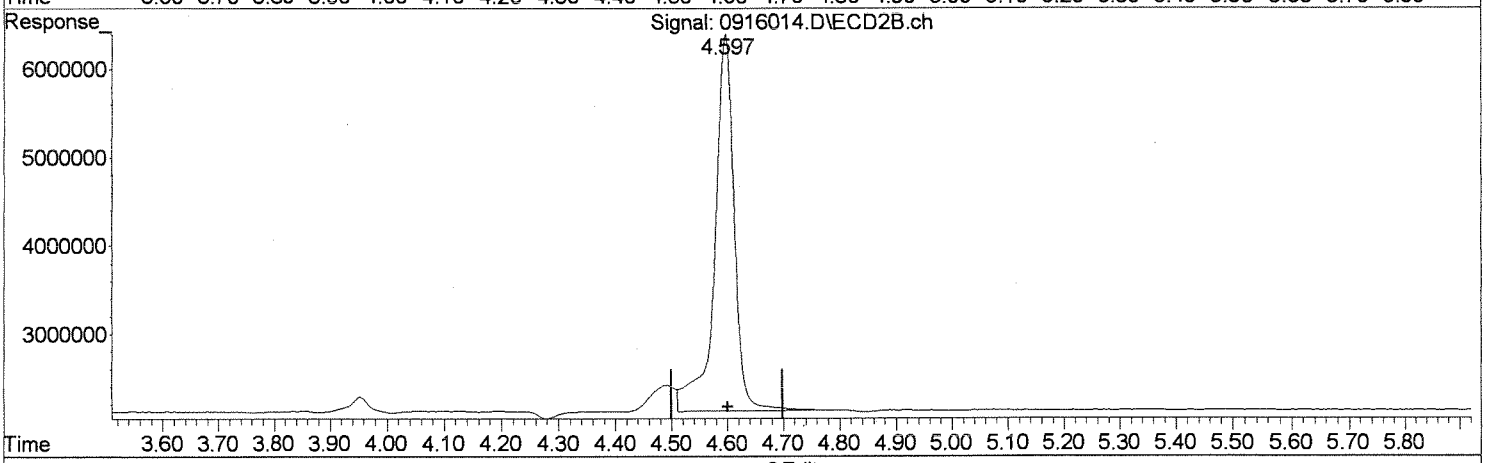


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 2 Vial : 12
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 4.915 ppb

response 71015151

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.597min 4.614 ppb

response 10393777

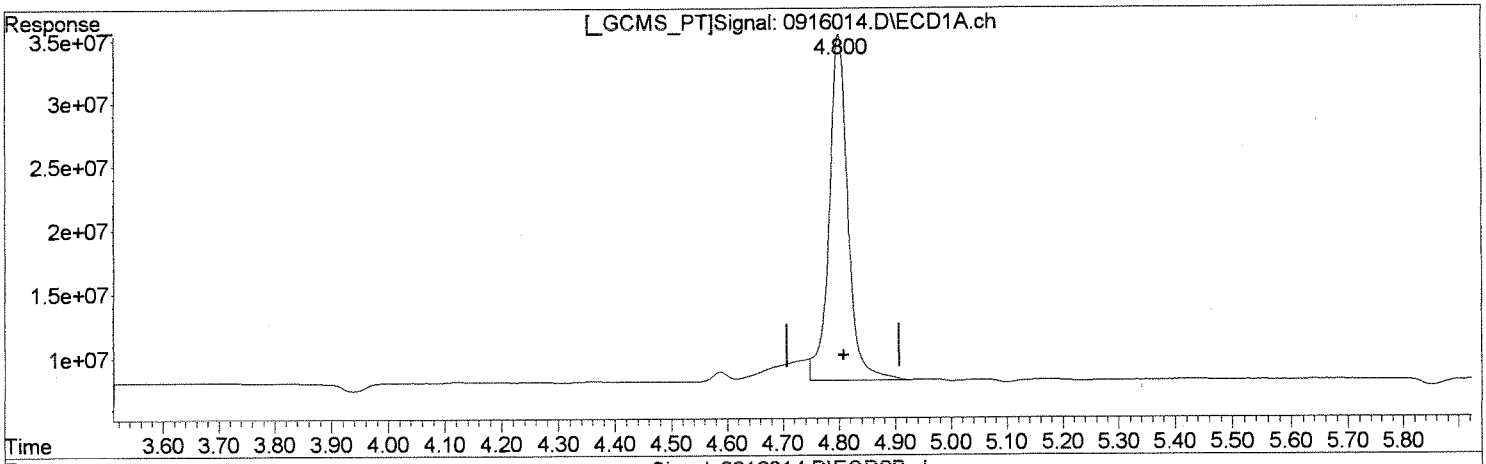
(+) = Expected Retention Time

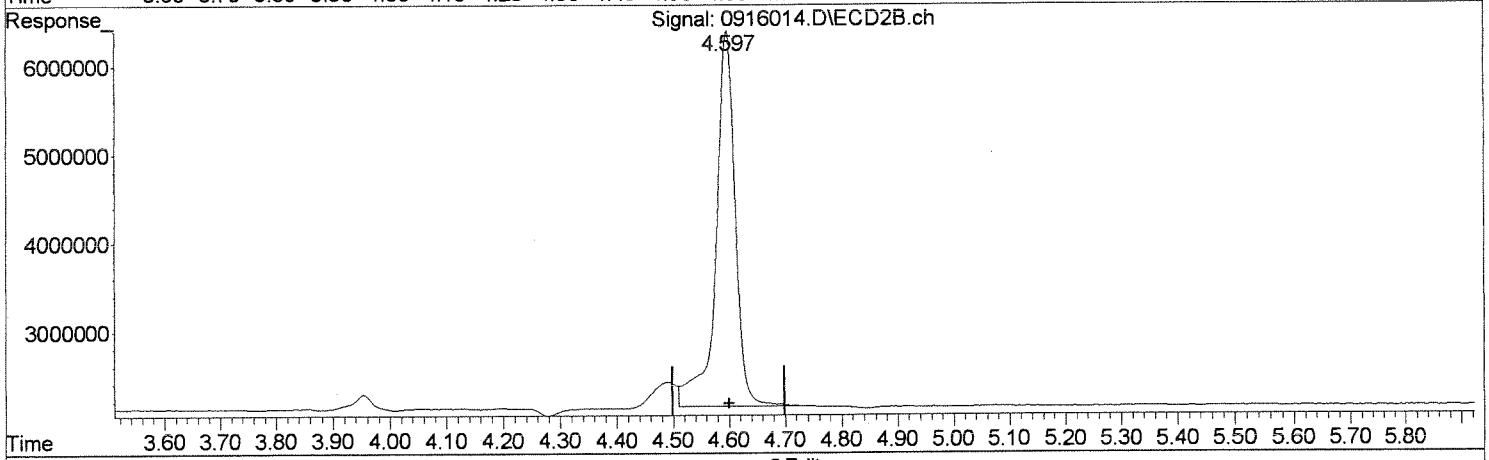
Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16
Acq Meth : 504-1.M
Sample : 091613-LCS 2
Misc :
Quant Time : Sep 17 09:41:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Operator : SSullivan
Vial : 12
Multiplier : 1.00

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.800min 4.377 ppb m

response 63234705

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.597min 4.527 ppb m

response 10199156

Manual Integration:

After

Baseline/Shoulder

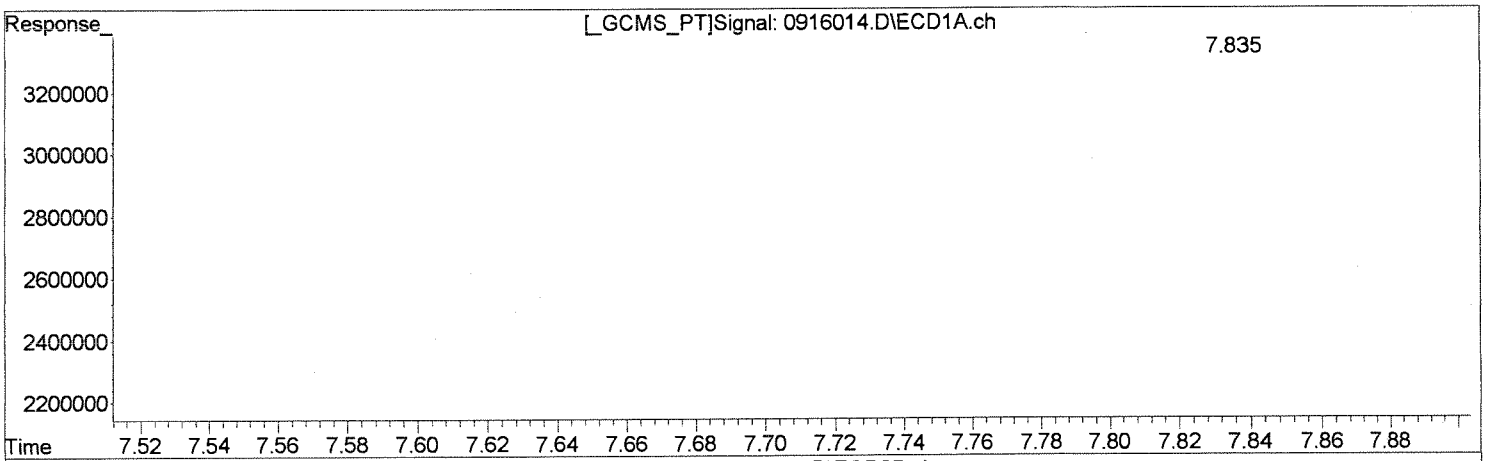
09/17/13

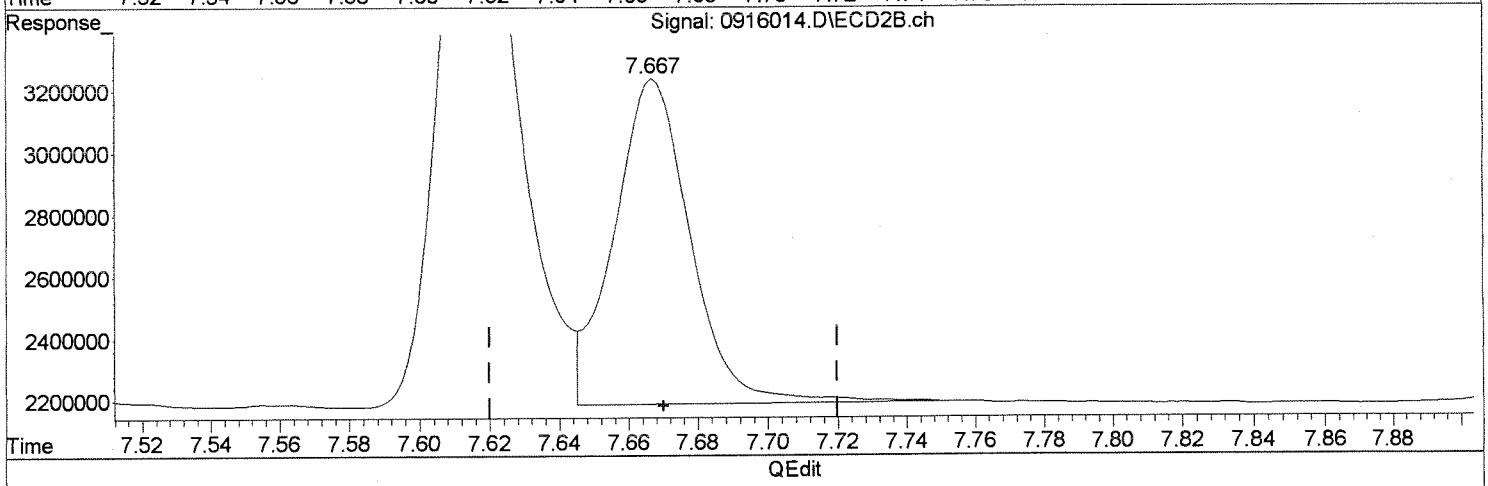
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 2 Vial : 12
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)

7.835min 4.175 ppb

response 8644669

Manual Integration:

Before

(2) 1,2,3-Trichloropropane #2 (M)

7.667min 5.036 ppb

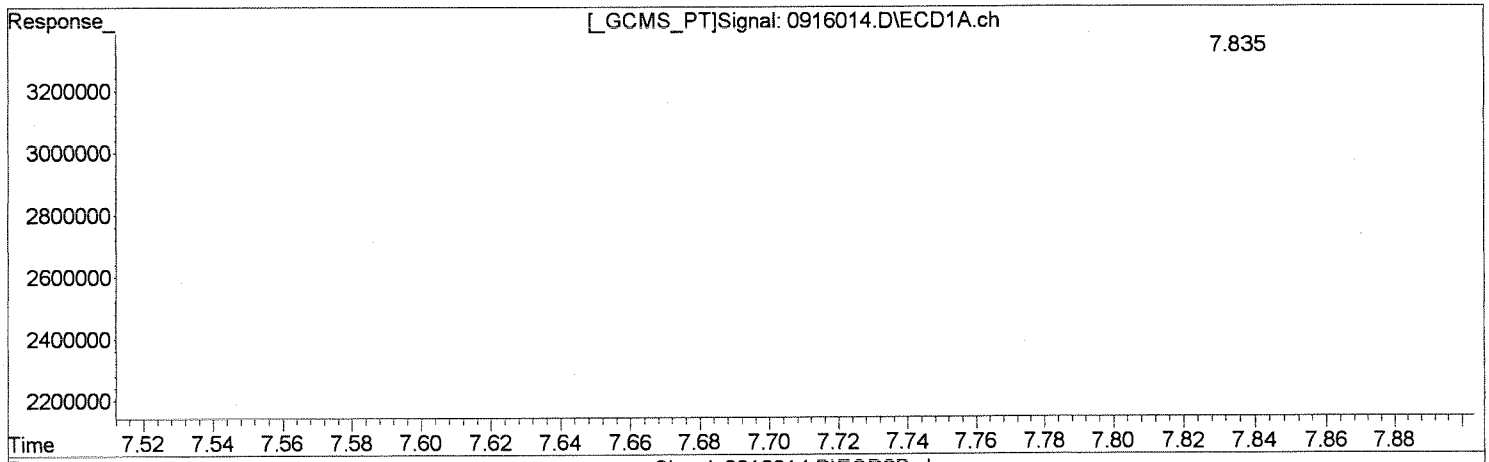
response 1606454

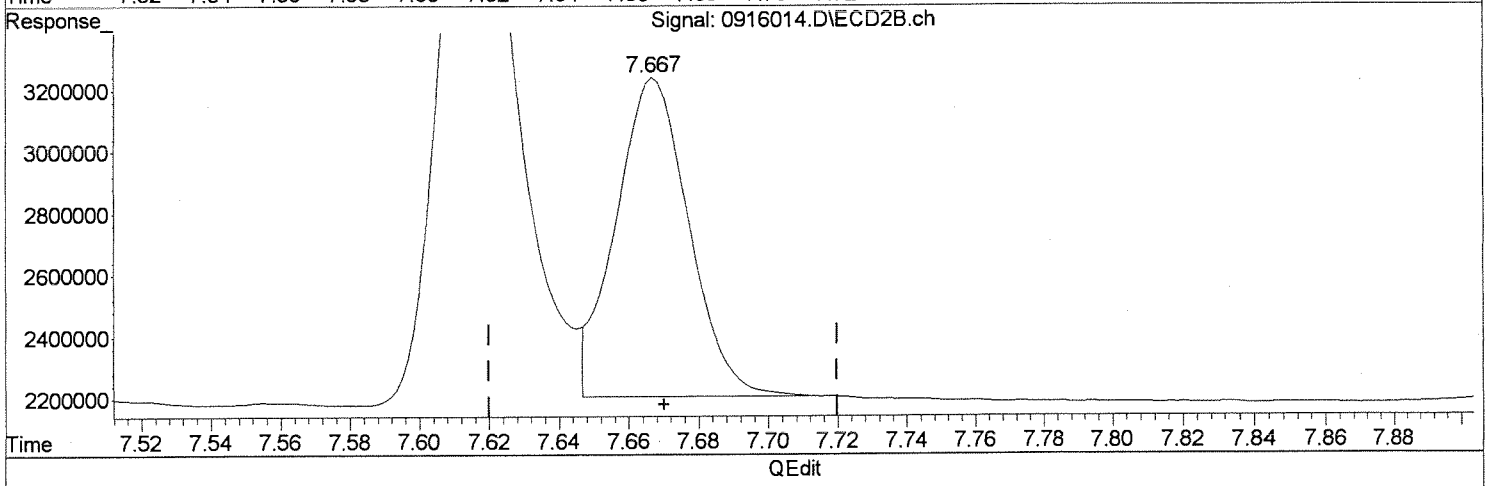
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916014.D
Acq On : 16-Sep-2013, 22:53:16 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LCS 2 Vial : 12
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.835min 4.175 ppb
response 8644669

(2) 1,2,3-Trichloropropane #2 (M)
7.667min 4.635 ppb m
response 1488875

Manual Integration:
After
Baseline/Shoulder
09/17/13

(+) = Expected Retention Time

Organic Analysis:
EPA Method 504.1

Validation Package

Standards Data

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID
A	J:\GC33\Data\091213-504\0912009.D
B	J:\GC33\Data\091213-504\0912010.D
C	J:\GC33\Data\091213-504\0912011.D
D	J:\GC33\Data\091213-504\0912012.D
E	J:\GC33\Data\091213-504\0912013.D
F	J:\GC33\Data\091213-504\0912014.D
G	J:\GC33\Data\091213-504\0912015.D
H	J:\GC33\Data\091213-504\0912016.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	1.20E+7	B	0.13	1.33E+7	C	0.25	1.48E+7	D	0.63	1.51E+7	E	1.3	1.53E+7
	F	3.8	1.54E+7	G	5.0	1.53E+7	H	10	1.43E+7						
1,2,3-Trichloropropane										D	0.63	2.20E+6	E	1.3	2.14E+6
	F	3.8	2.06E+6	G	5.0	2.08E+6	H	10	1.88E+6						
1,2-Dibromo-3-chloropropane (DBCP	A	0.075	3.54E+7	B	0.13	3.04E+7	C	0.25	2.94E+7	D	0.63	2.77E+7	E	1.3	2.72E+7
	F	3.8	2.76E+7	G	5.0	2.91E+7	H	10	2.76E+7						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	8.3		≤ 20
1,2,3-Trichloropropane	MS	AverageRF	% RSD	5.8		≤ 20
1,2-Dibromo-3-chloropropane (DBCP)	MS	AverageRF	% RSD	9.2		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013
Date Analyzed: 09/12/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12774
Units: ppb

File ID: J:\GC33\Data\091213-504\0912017.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14800000	3	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2190000	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	29300000	28400000	-3	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID
A	J:\GC33\Data\091213-504\0912009.D\0912009c.d
B	J:\GC33\Data\091213-504\0912010.D\0912010c.d
C	J:\GC33\Data\091213-504\0912011.D\0912011c.d
D	J:\GC33\Data\091213-504\0912012.D\0912012c.d
E	J:\GC33\Data\091213-504\0912013.D\0912013c.d
F	J:\GC33\Data\091213-504\0912014.D\0912014c.d
G	J:\GC33\Data\091213-504\0912015.D\0912015c.d
H	J:\GC33\Data\091213-504\0912016.D\0912016c.d

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
1,2-Dibromoethane (EDB)	A	0.075	2.14E+6	B	0.13	1.97E+6	C	0.25	2.43E+6	D	0.63	2.41E+6	E	1.3	2.28E+6
	F	3.8	2.27E+6	G	5.0	2.25E+6	H	10	2.28E+6						
1,2,3-Trichloropropane										D	0.63	5.43E+5	E	1.3	3.74E+5
	F	3.8	3.12E+5	G	5.0	3.06E+5	H	10	3.19E+5						
1,2-Dibromo-3-chloropropane (DBCP	A	0.075	5.18E+6	B	0.13	4.49E+6	C	0.25	5.18E+6	D	0.63	5.00E+6	E	1.3	4.72E+6
	F	3.8	4.58E+6	G	5.0	4.55E+6	H	10	4.92E+6						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013

Initial Calibration Summary
EPA Method 504.1

Calibration ID: CAL12774
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	6.6		≤ 20
1,2,3-Trichloropropane	MS	Linear	R2	0.995		≥ 0.99
1,2-Dibromo-3-chloropropane (DBCP)	MS	AverageRF	% RSD	5.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/12/2013
Date Analyzed: 09/12/2013

Second Source Calibration Verification
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration ID: CAL12774
Units: ppb

File ID: J:\GC33\Data\091213-504\0912017.D\0912017c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.2	2250000	2180000	-3	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.1	371000	369000	NA	-10	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	4830000	4720000	-2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	1	Vial 100	504-1 HEXANE PRIMER	0912001	F:01:01	
No	2	Vial 98	504-1 CHROMO CHECK LOW	0912002	F:02:01	
No	3	Vial 99	504-1 CHROMO CHECK MID	0912003	F:03:01	
No	4	Vial 100	504-1 HEXANE PRIMER	0912004	F:04:01	
No	5	Vial 1	504 091213-LEV1	0912005	F:05:01	
No	6	Vial 2	504 091213-LEV2	0912006	F:06:01	
No	7	Vial 3	504 091213-LEV3	0912007	F:07:01	
No	8	Vial 100	504-1 HEXANE PRIMER	0912008	F:08:01	
No	9	Vial 1	504-1 091213-LEV1	0912009	F:09:01	
No	10	Vial 2	504-1 091213-LEV2	0912010	F:10:01	
No	11	Vial 3	504-1 091213-LEV3	0912011	F:11:01	
No	12	Vial 4	504-1 091213-LEV4	0912012	F:12:01	
No	13	Vial 5	504-1 091213-LEV5	0912013	F:13:01	
No	14	Vial 6	504-1 091213-LEV6	0912014	F:14:01	
No	15	Vial 7	504-1 091213-LEV7	0912015	F:15:01	
No	16	Vial 8	504-1 091213-LEV8	0912016	F:16:01	
No	17	Vial 9	504-1 091213-ICV	0912017	F:17:01	
No	18	Vial 5	504-1 091213-LEV5 CCV	0912018	F:18:01	
No	19	Vial 100	504-1 IB	0912019	F:19:01	
No	20	Vial 11	504-1 KWG1309843-3 LCS	0912020	F:20:01	
No	21	Vial 12	504-1 KWG1309843-2 DLCS	0912021	F:21:01	
No	22	Vial 13	504-1 KWG1309843-4 MB	0912022	F:22:01	
No	23	Vial 14	504-1 K1309356-001	0912023	F:23:01	
No	24	Vial 15	504-1 K1309356-003	0912024	F:24:01	

CAL12774

NR for 1,2,3-TCP Reanalyzed 9/13/13

09-13-13

9/14/13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 17:55:54
Operator : SSullivan
Sample : HEXANE PRIMER
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 15:30:21 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:16:31 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
Target Compounds								
2) M	1,2,3-Tri...	0.000	7.707f	0	310860	N.D.	0.710	#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

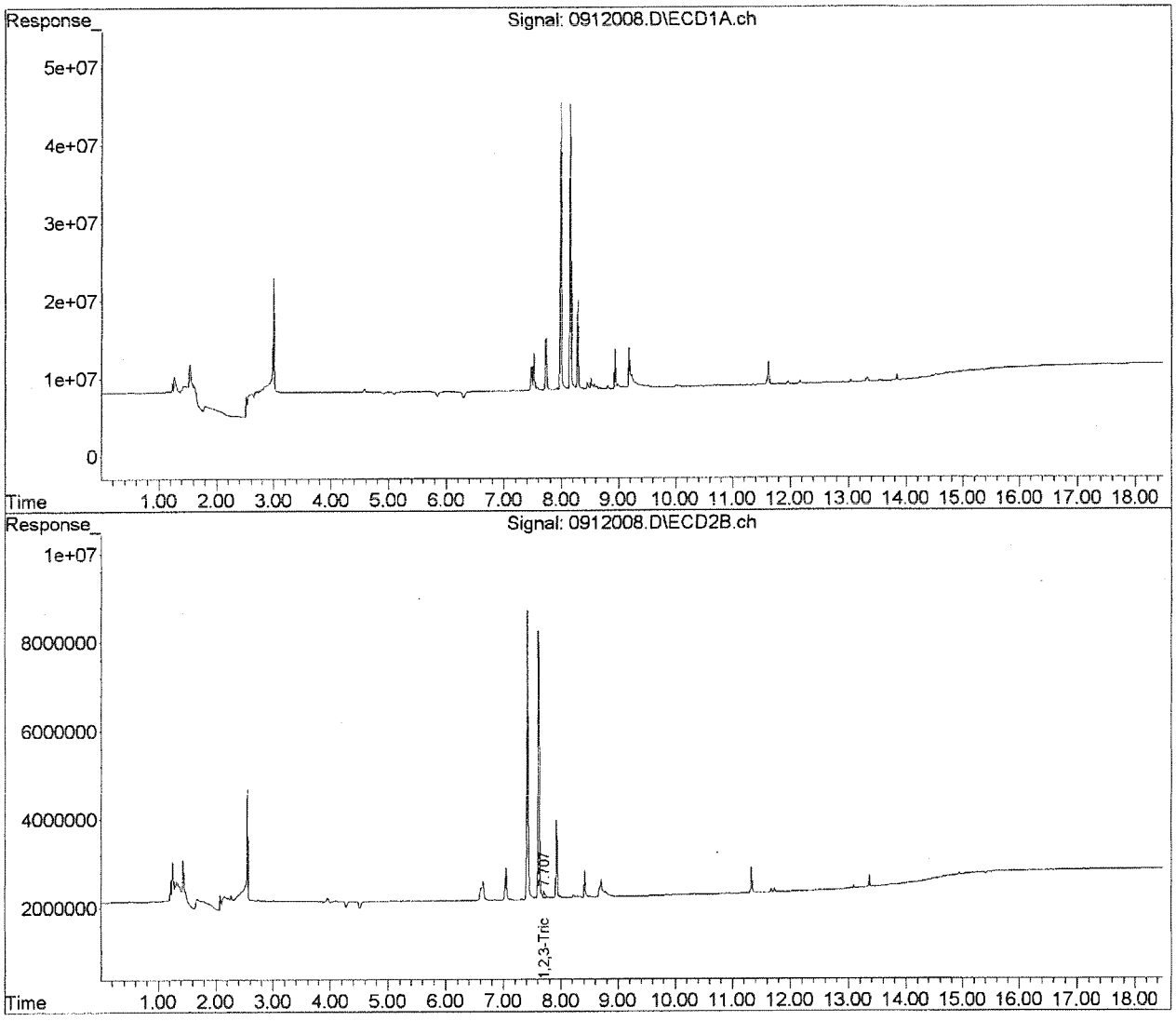
JES
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912008.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 17:55:54
Operator : SSullivan
Sample : HEXANE PRIMER
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 15:30:21 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:16:31 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:41:21 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
	Target Compounds						
1)	M 1,2-Dibro...	4.790	4.600	902307	160182	0.062	0.071m
2)	M 1,2,3-Tri...	7.832	7.655	116584	139234	0.060m	0.375m#
3)	M 1,2-Dibro...	9.427	9.458	2654443	388604	0.092	0.080

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

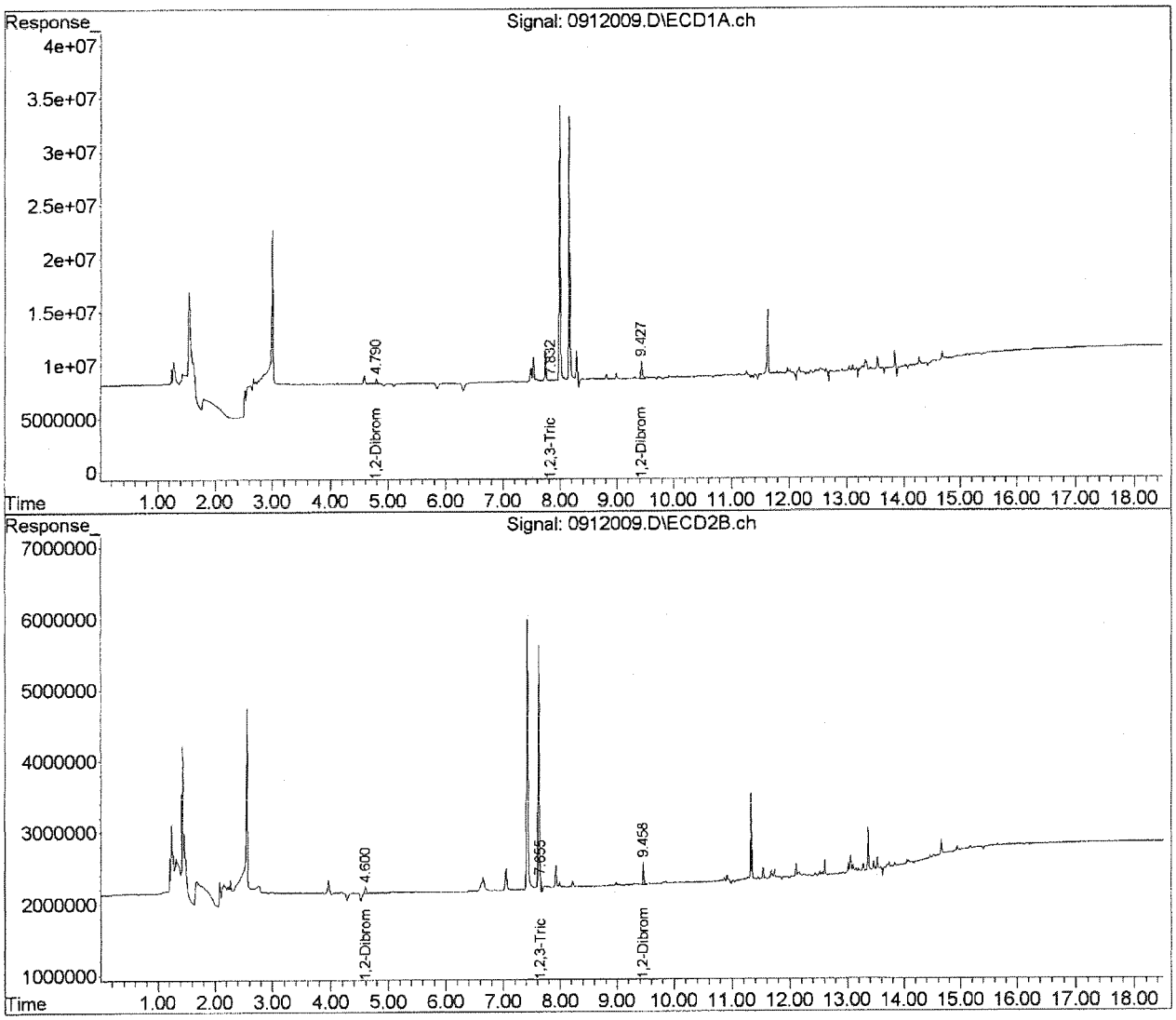
JDS
09-13-13
MV

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:41:21 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

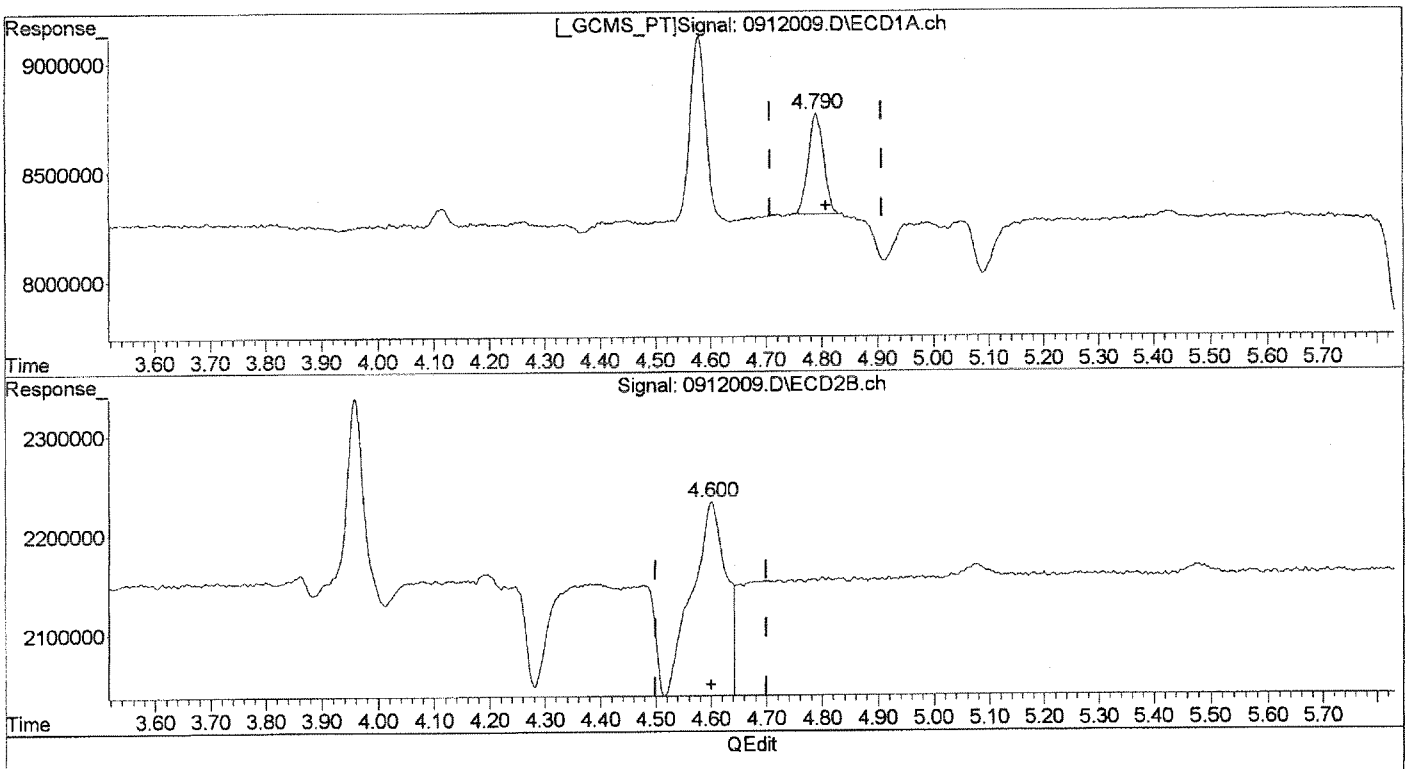


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:16 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.790min 0.062 ppb
response 902307

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.600min 0.371 ppb
response 838871

Manual Integration:
Before

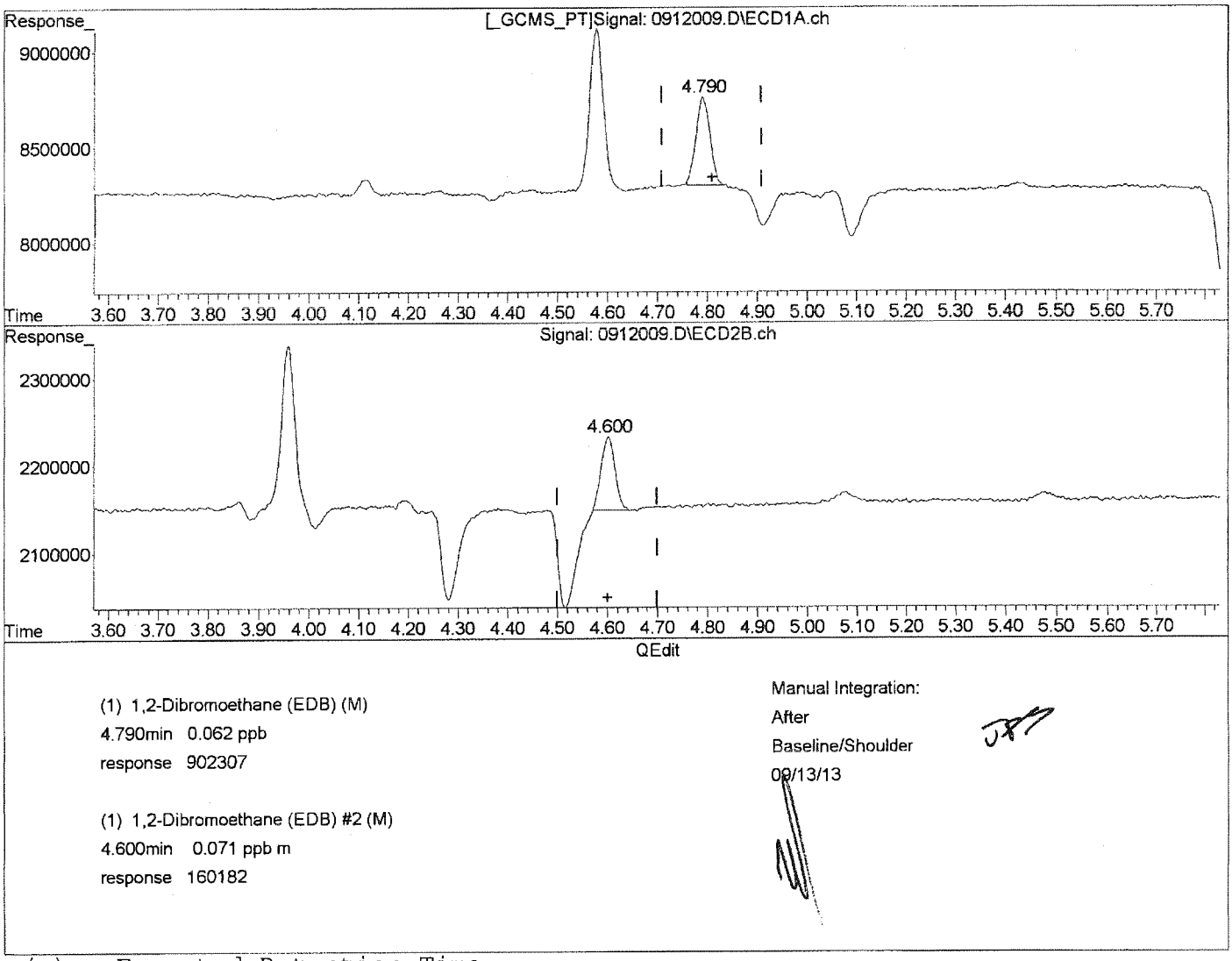
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:16 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



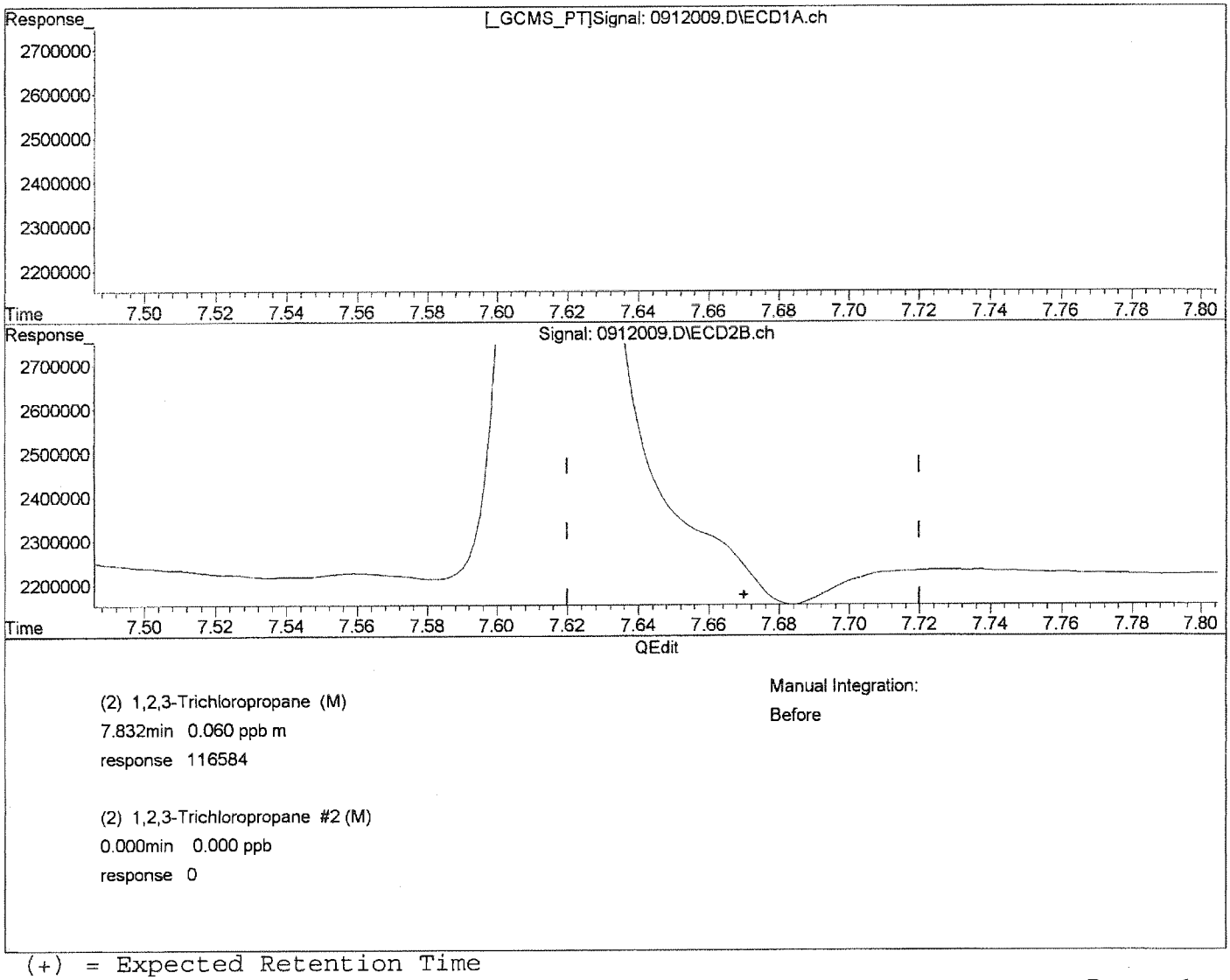
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:31:32 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



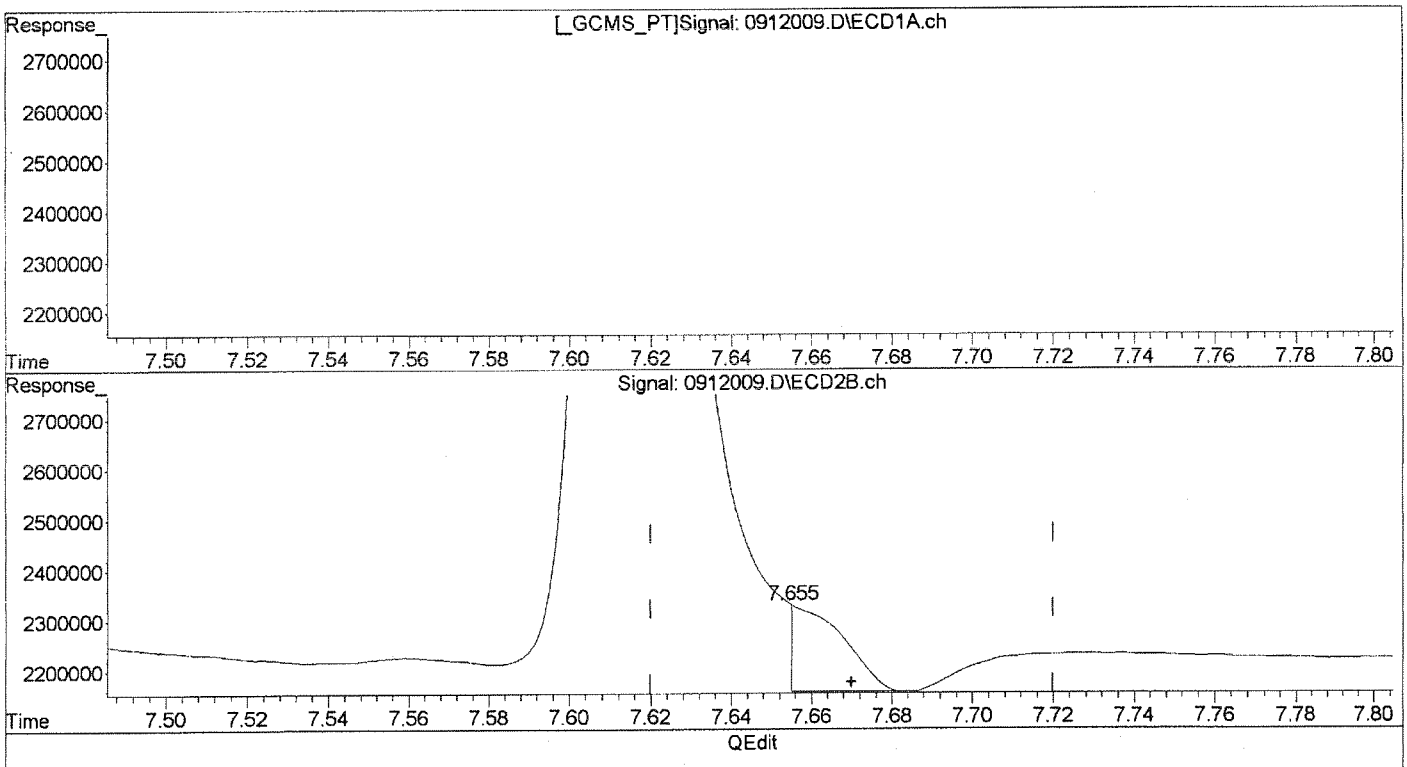
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:31:32 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.832min 0.060 ppb m
response 116584

(2) 1,2,3-Trichloropropane #2 (M)
7.655min 0.375 ppb m
response 139234

Manual Integration:
After
Missed Peak
09/13/13

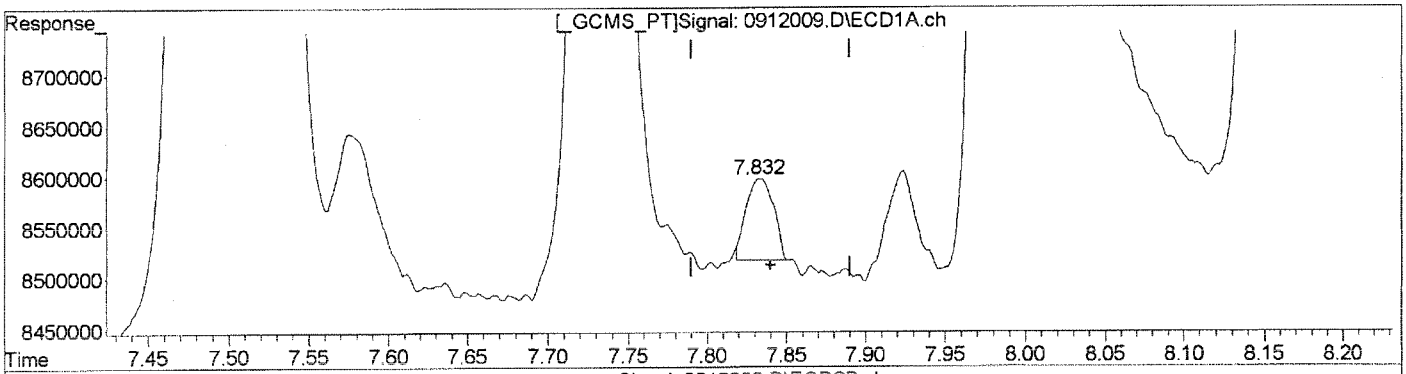
(+) = Expected Retention Time

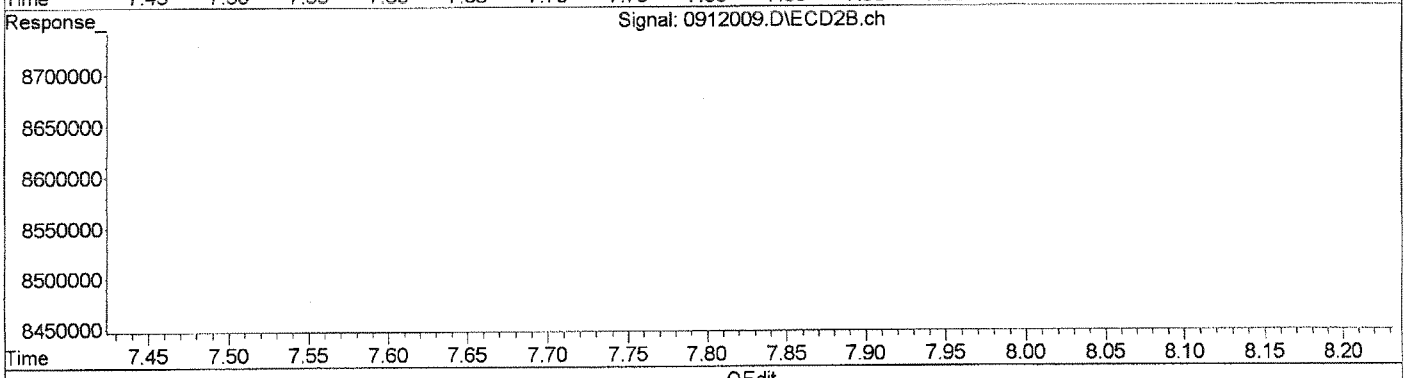
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:16 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.832min 0.050 ppb
response 97187

(2) 1,2,3-Trichloropropane #2 (M)
0.000min 0.000 ppb
response 0

Manual Integration:
Before

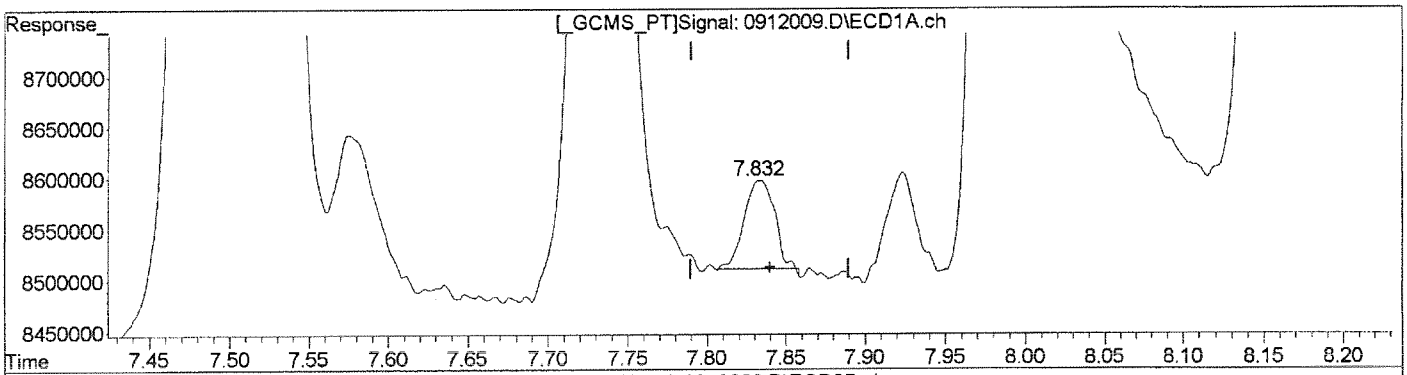
(+) = Expected Retention Time

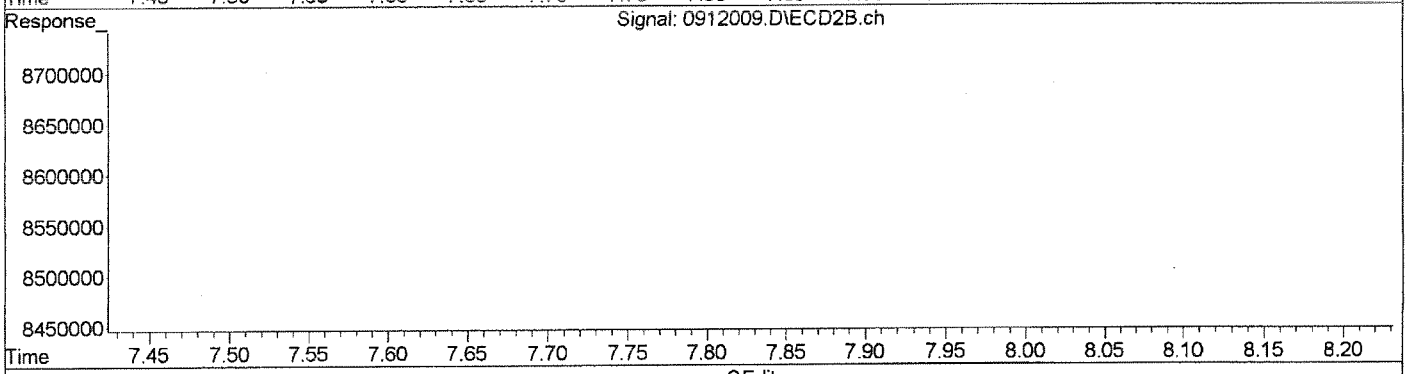
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912009.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:20:55
Operator : SSullivan
Sample : 091213-LEV1
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:16 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.832min 0.060 ppb m
response 116584

(2) 1,2,3-Trichloropropane #2 (M)
0.000min 0.000 ppb
response 0

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:42:06 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.807	4.587	1663683	246050	0.114	0.109m
2) M	1,2,3-Tri...	7.835	7.655	245307	118475	0.126m	0.319m#
3) M	1,2-Dibro...	9.425	9.458	3795856	561766	0.132	0.116

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

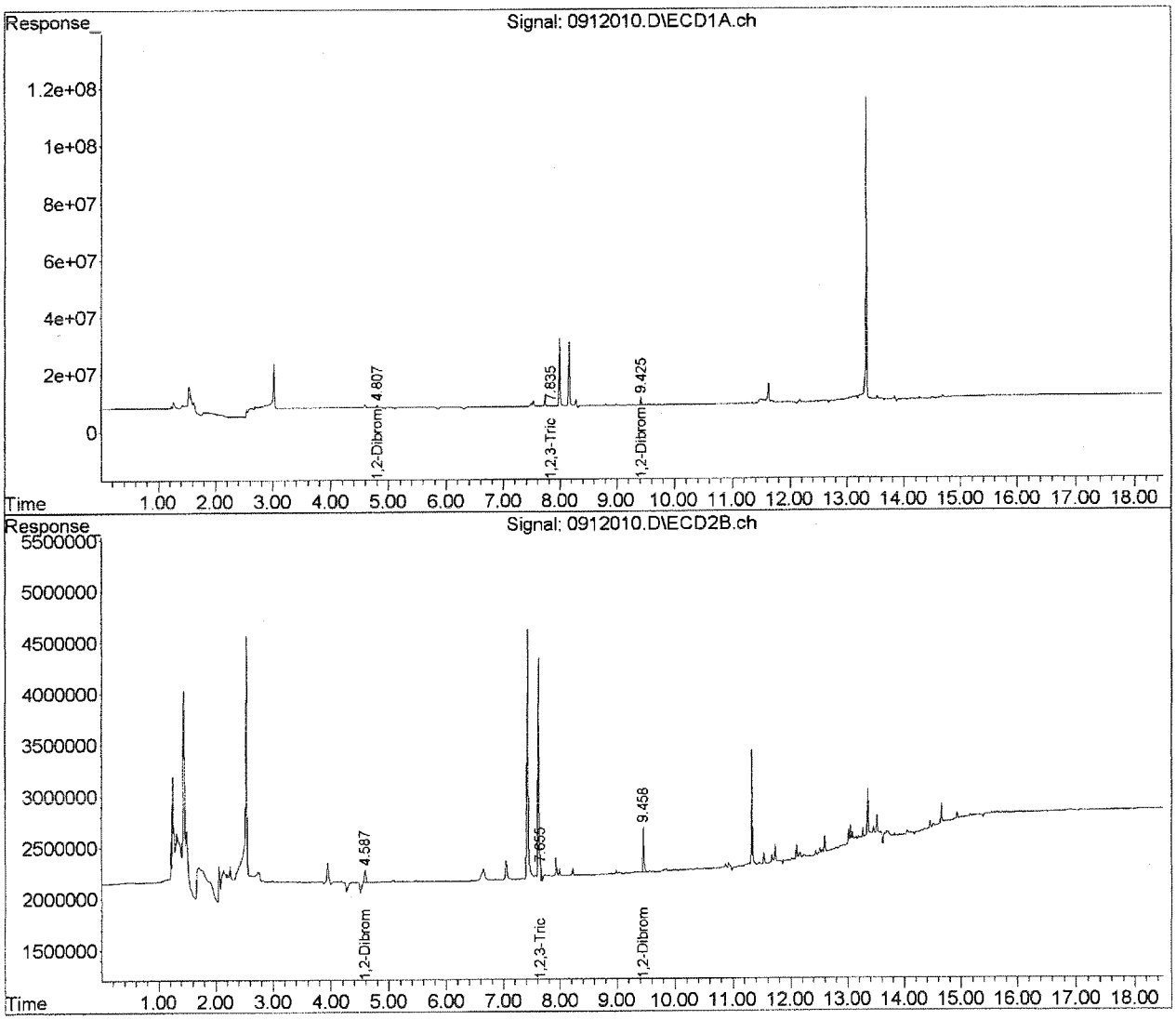
JBS
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:42:06 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

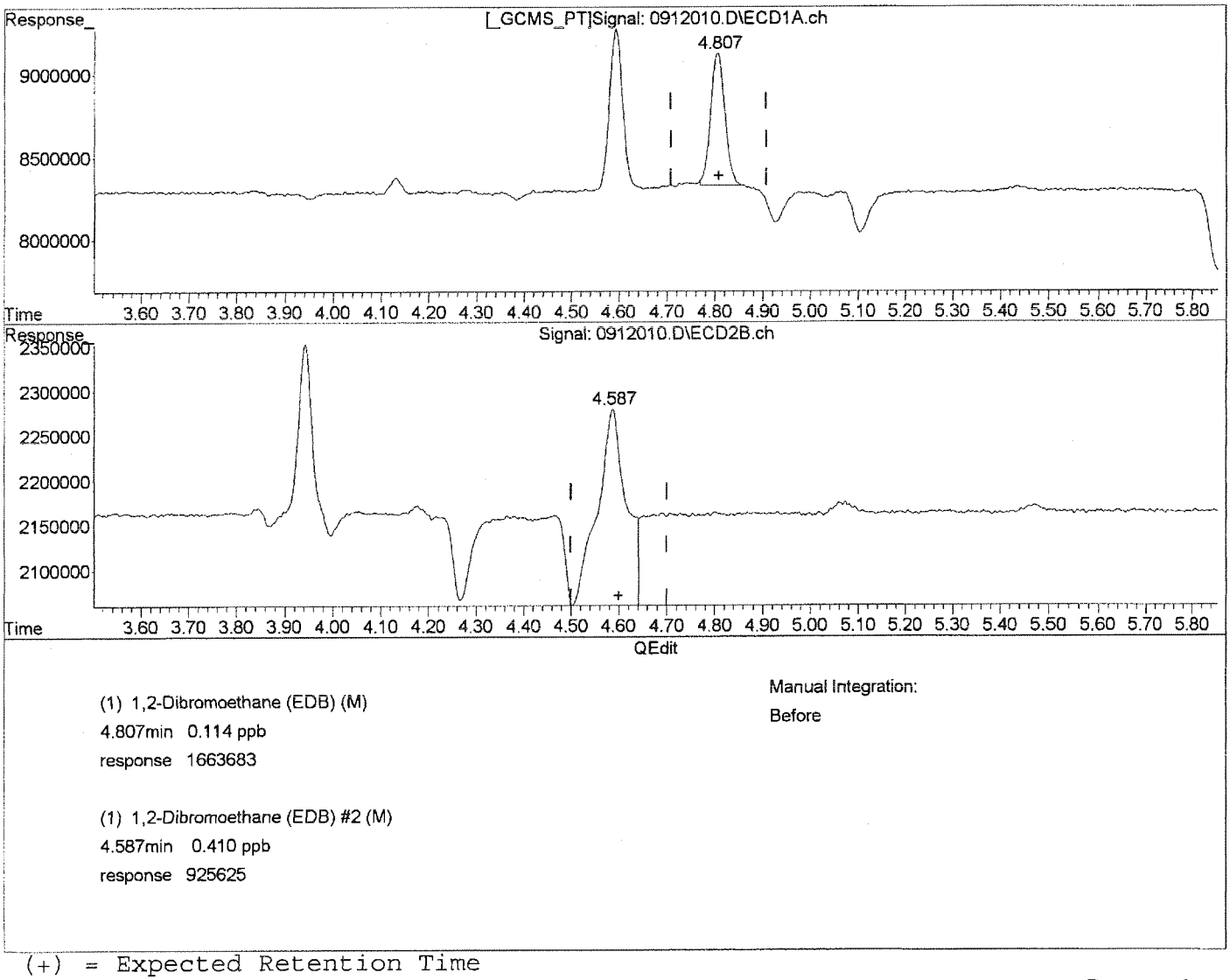


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:18 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.807min 0.114 ppb
response 1663683

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.587min 0.410 ppb
response 925625

Manual Integration:
Before

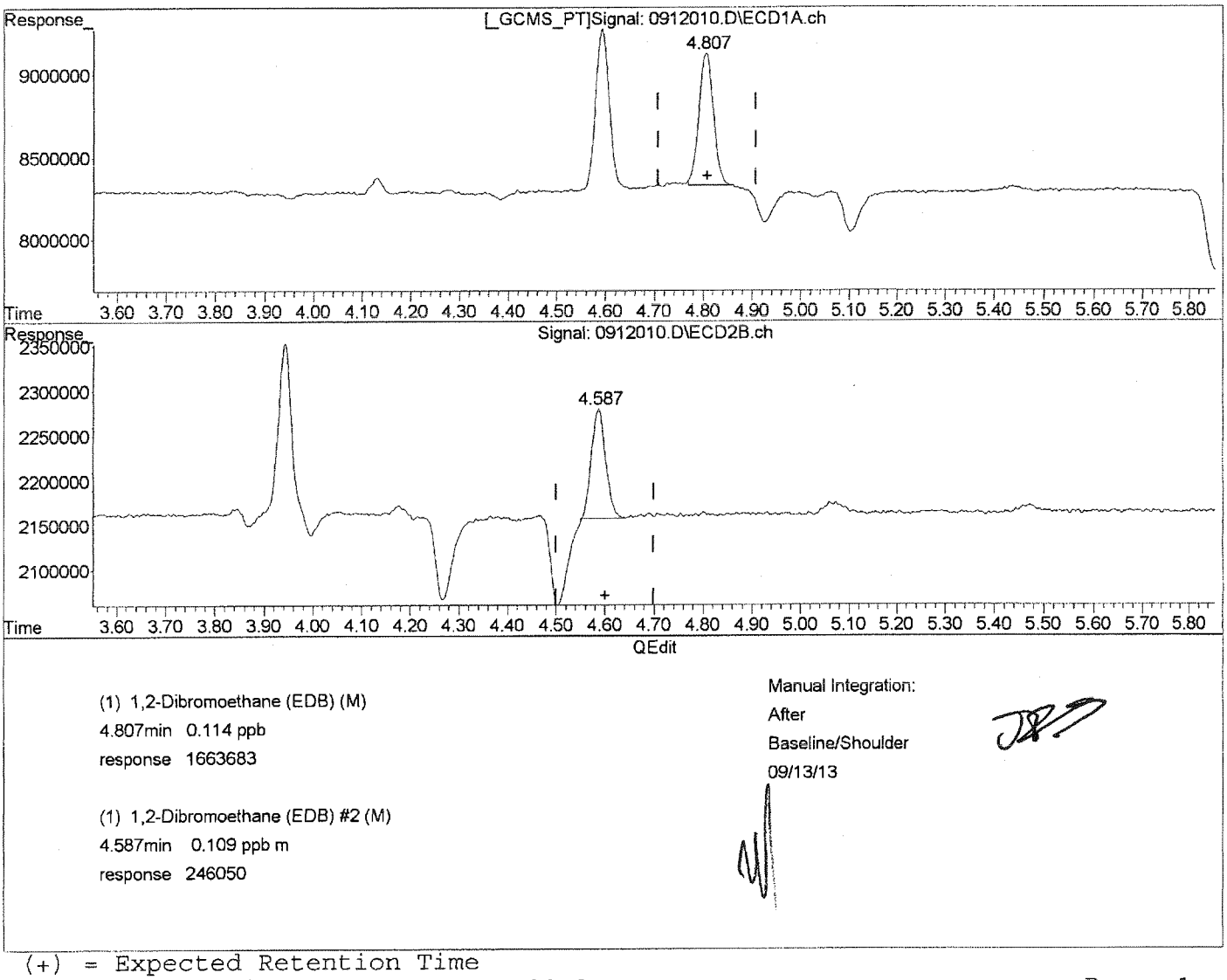
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:18 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



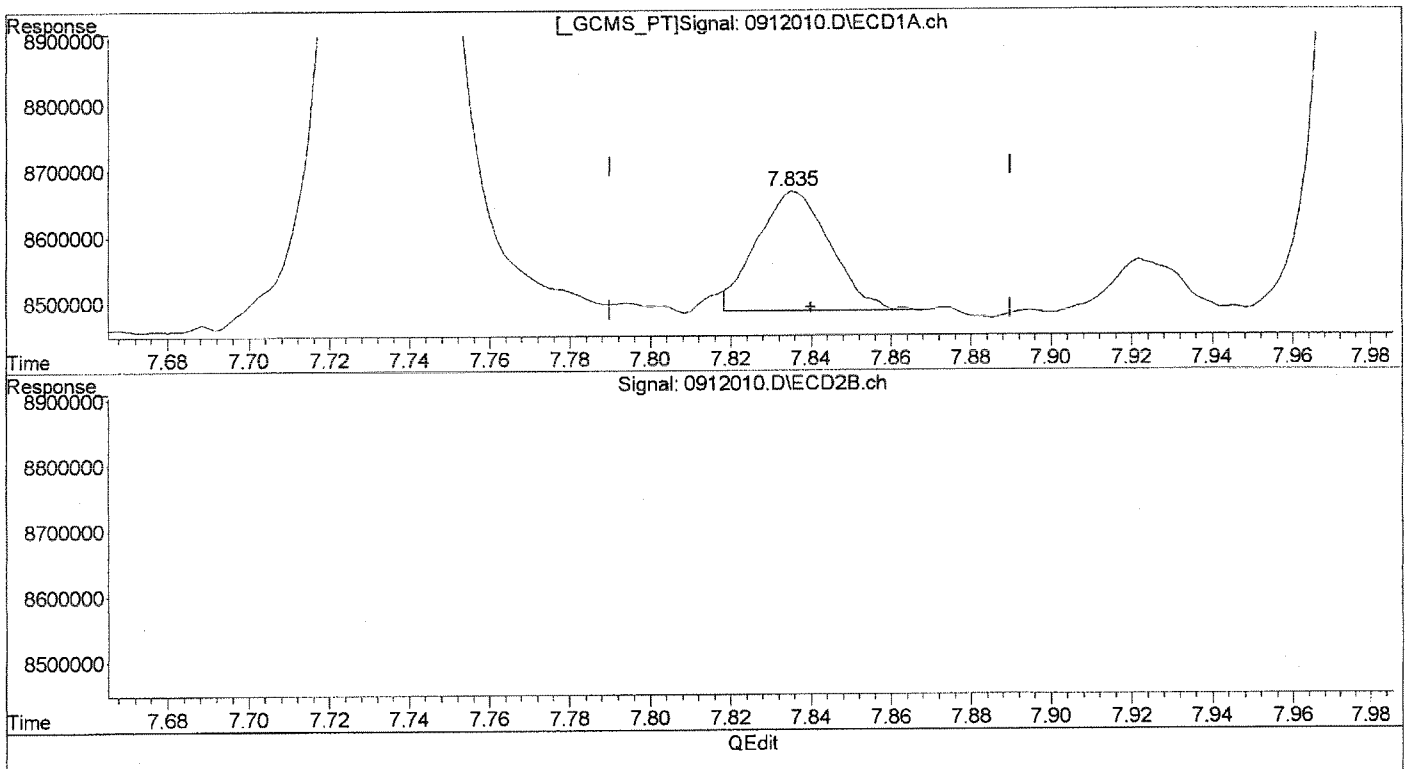
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:18 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.835min 0.117 ppb
response 228325

(2) 1,2,3-Trichloropropane #2 (M)
0.000min 0.000 ppb
response 0

Manual Integration:
Before

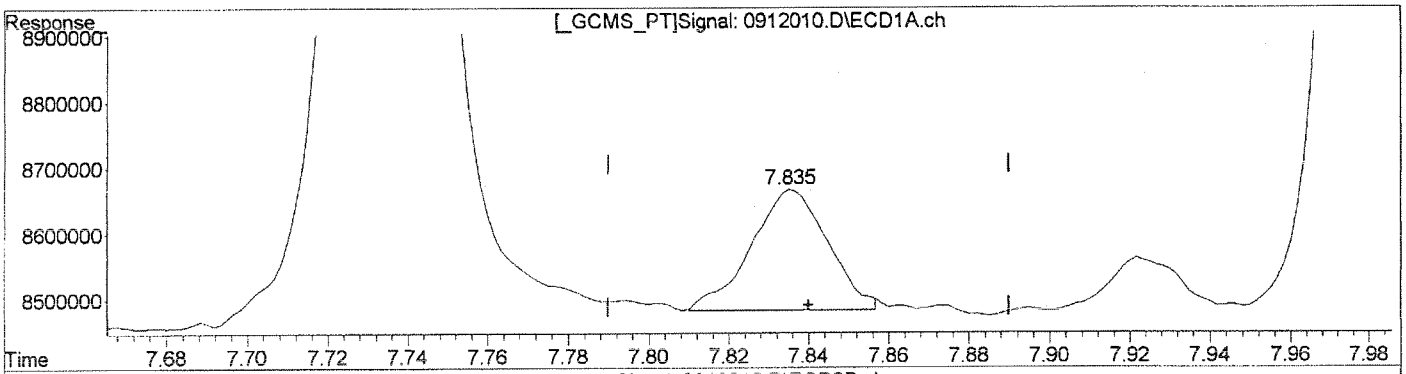
(+) = Expected Retention Time

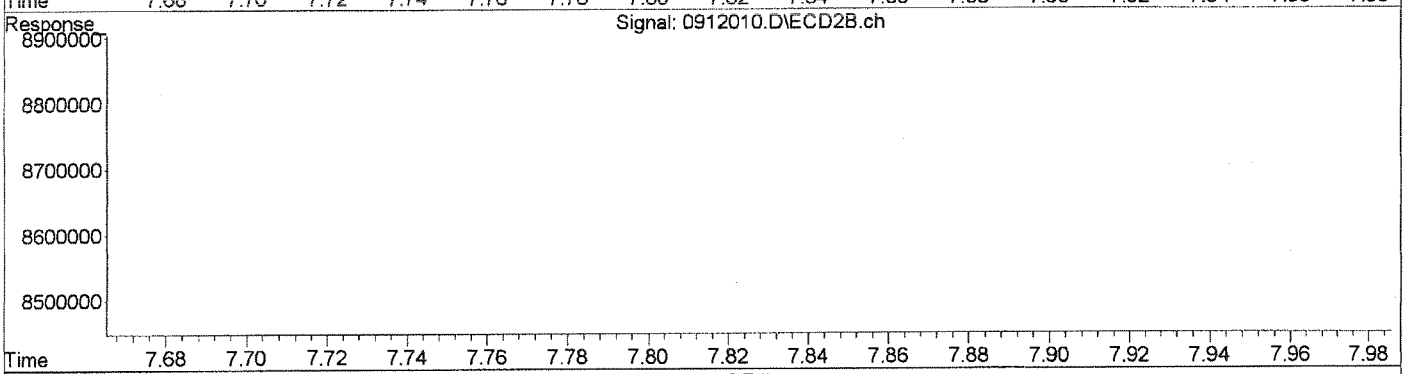
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:18 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.835min 0.126 ppb m
response 245307

(2) 1,2,3-Trichloropropane #2 (M)
0.000min 0.000 ppb
response 0

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

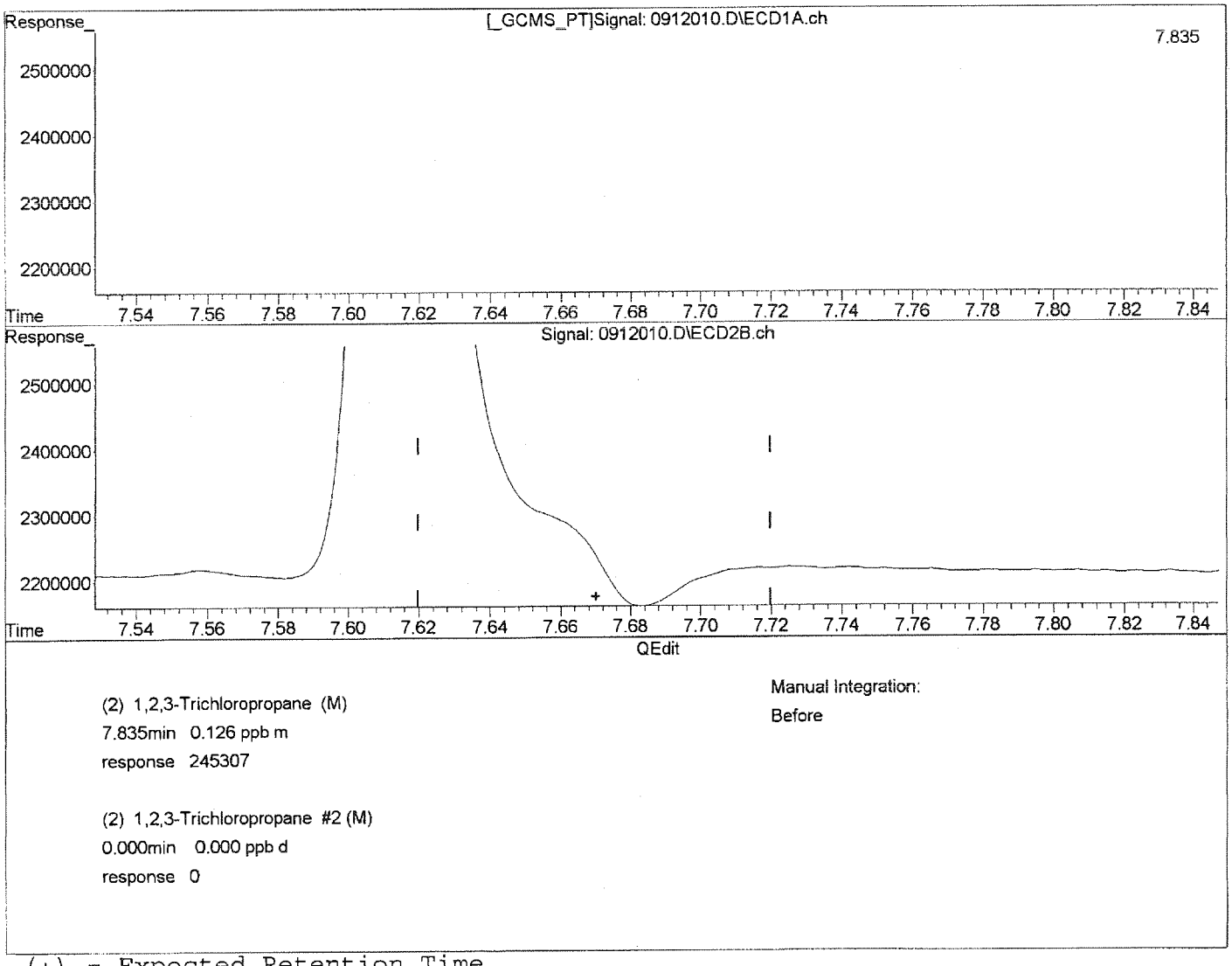
091213_504.M Fri Sep 13 14:29:32 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:34:02 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

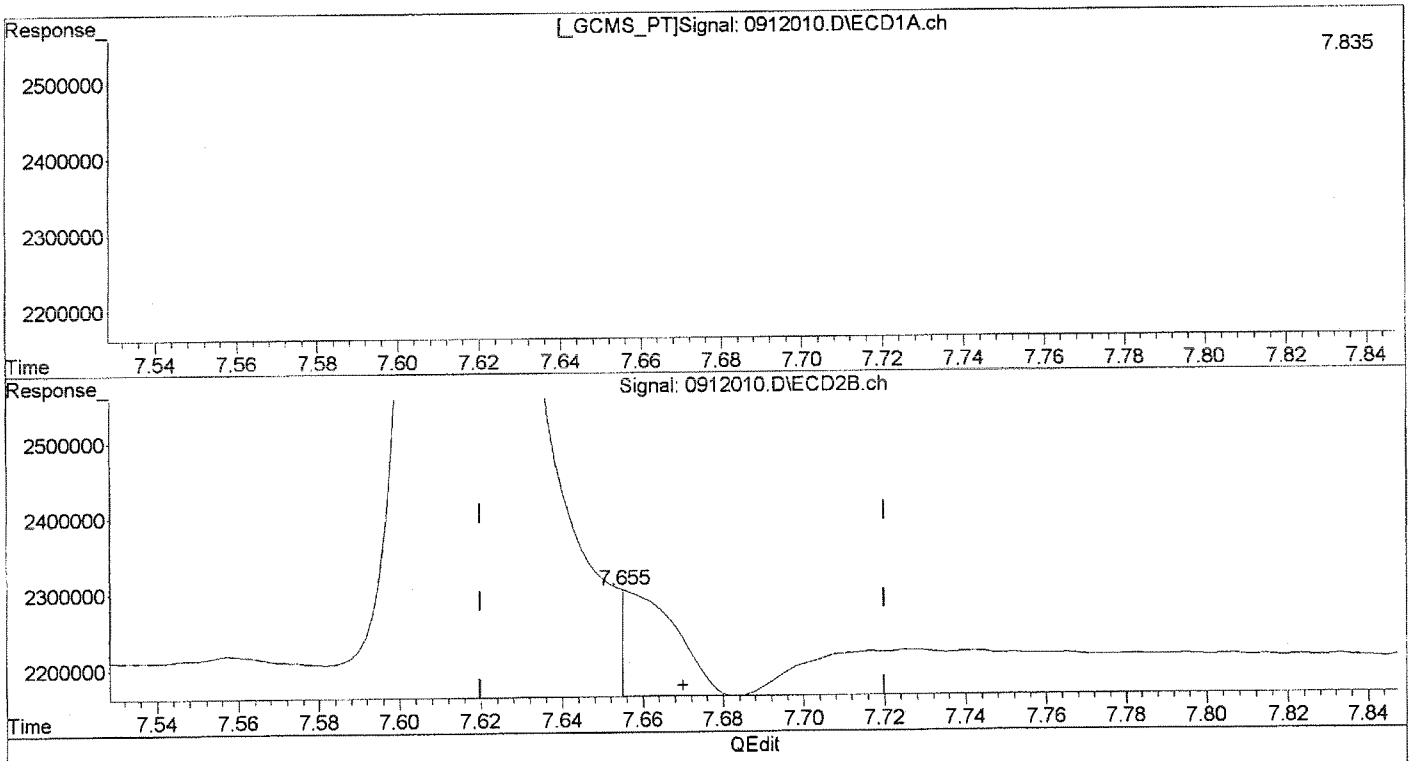
091213_504.M Fri Sep 13 14:38:23 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 18:45:55
Operator : SSullivan
Sample : 091213-LEV2
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:34:02 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.835min 0.126 ppb m
response 245307

(2) 1,2,3-Trichloropropane #2 (M)
7.655min 0.319 ppb m
response 118475

Manual Integration:
After
Missed Peak
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:35:44 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.798	4.593	3701690	608448	0.254m	0.269m
2) M	1,2,3-Tri...	7.835	7.658	533325	157181	0.273	0.423m#
3) M	1,2-Dibro...	9.427	9.458	7348061	1294793	0.255	0.268

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

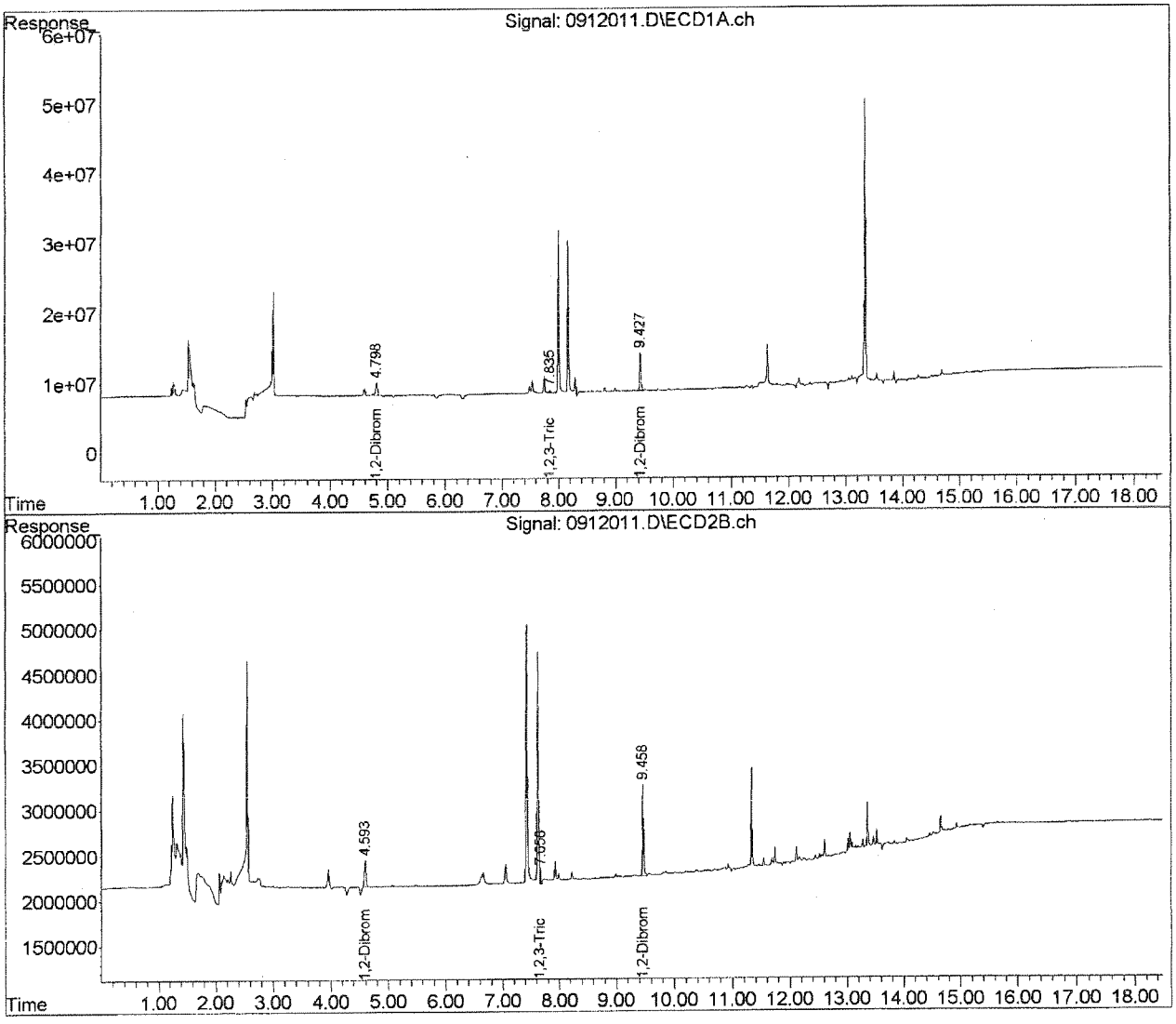
JRS
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:35:44 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

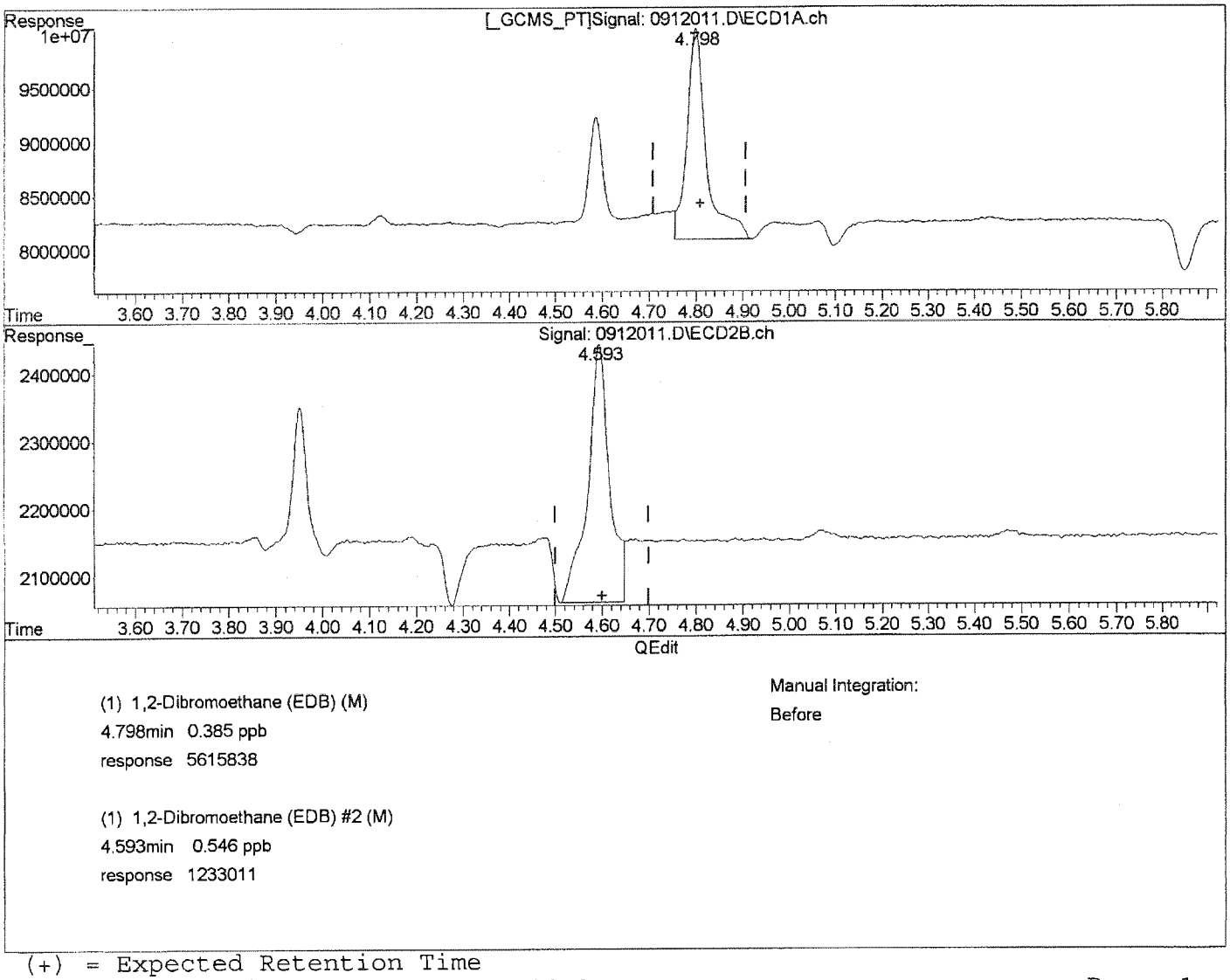


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:20 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

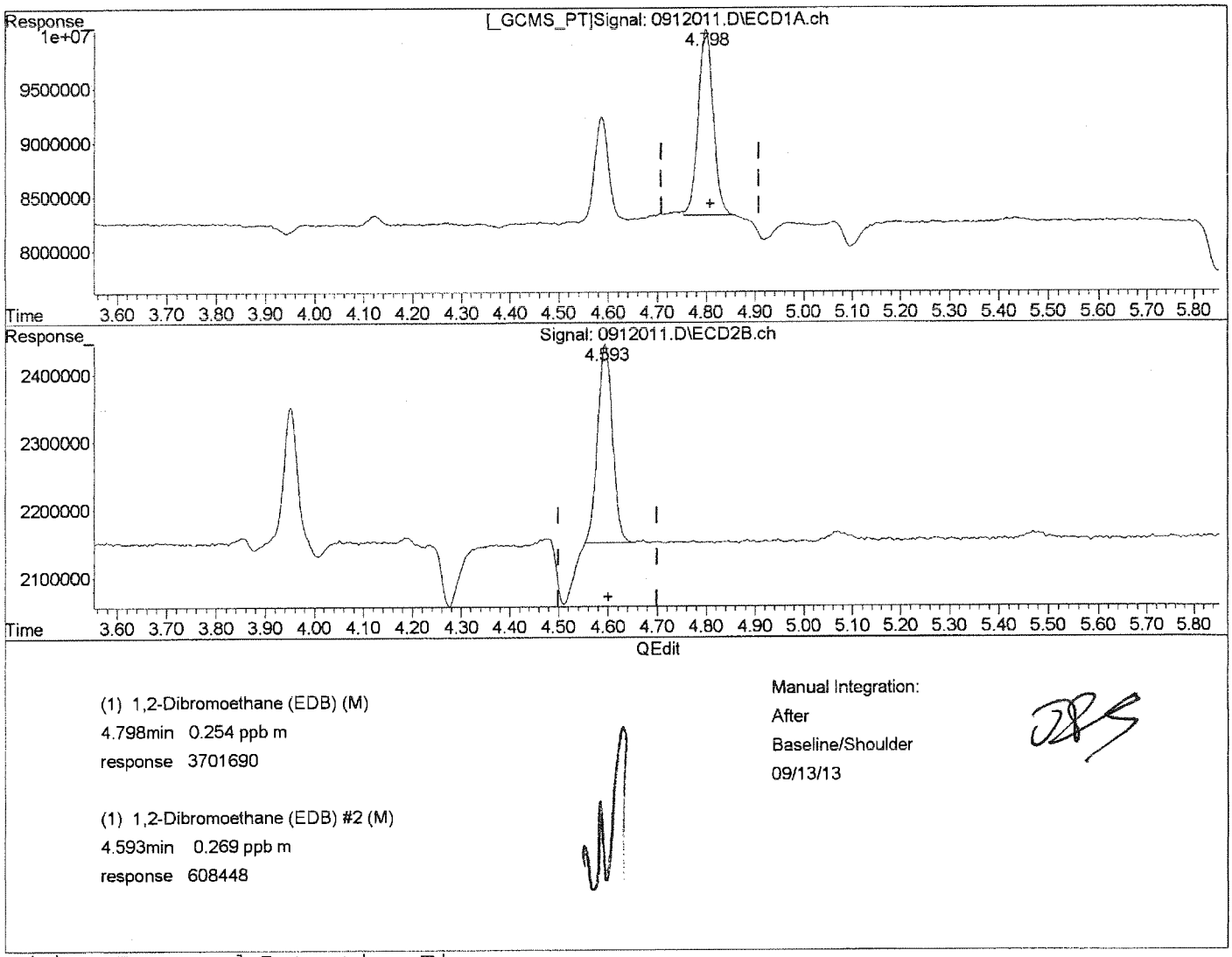
091213_504.M Fri Sep 13 14:30:44 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:20 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



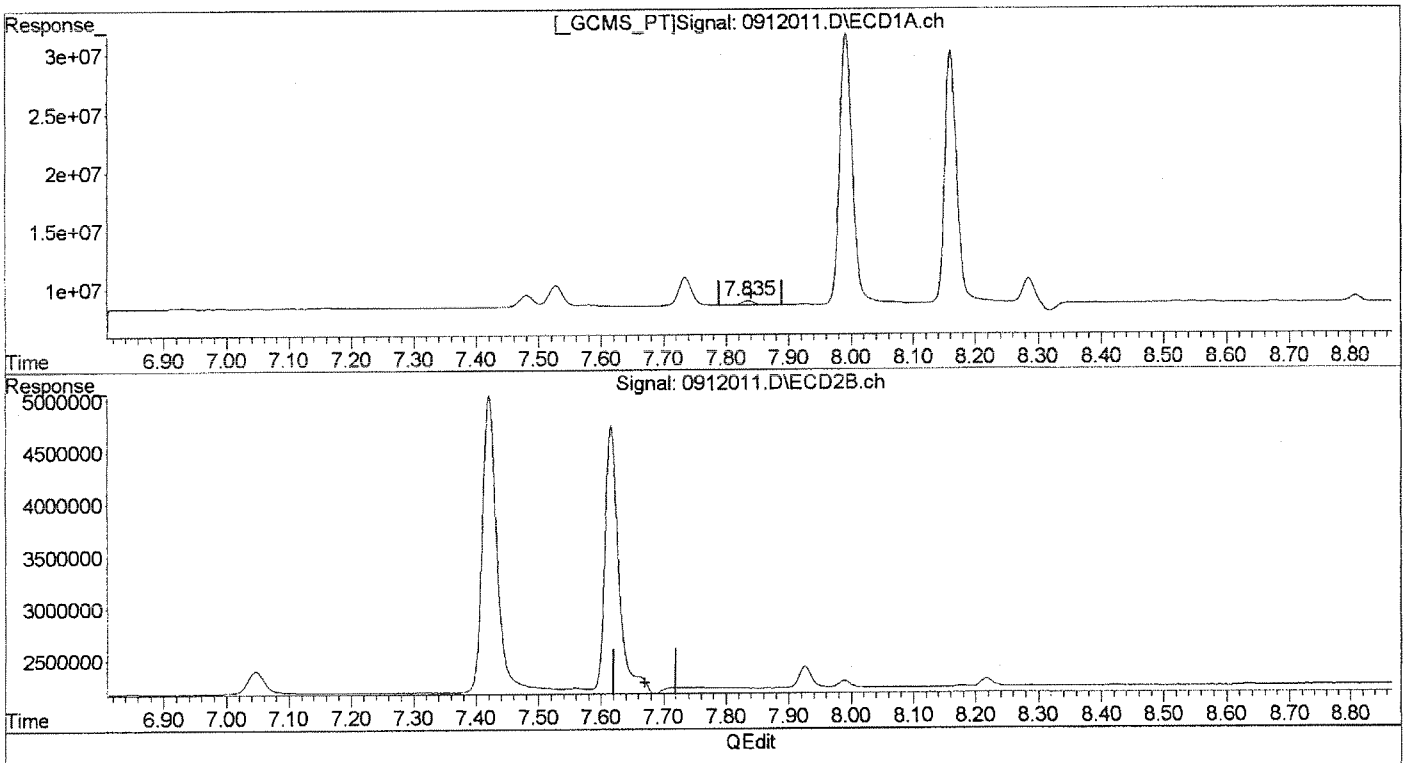
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:20 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.835min 0.273 ppb
response 533325

(2) 1,2,3-Trichloropropane #2 (M)
0.000min 0.000 ppb
response 0

Manual Integration:
Before

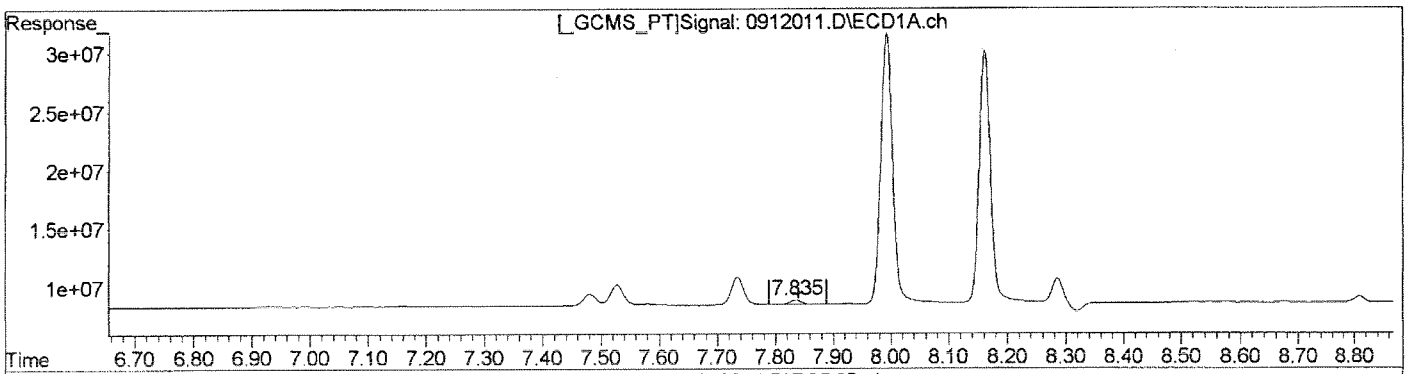
(+) = Expected Retention Time

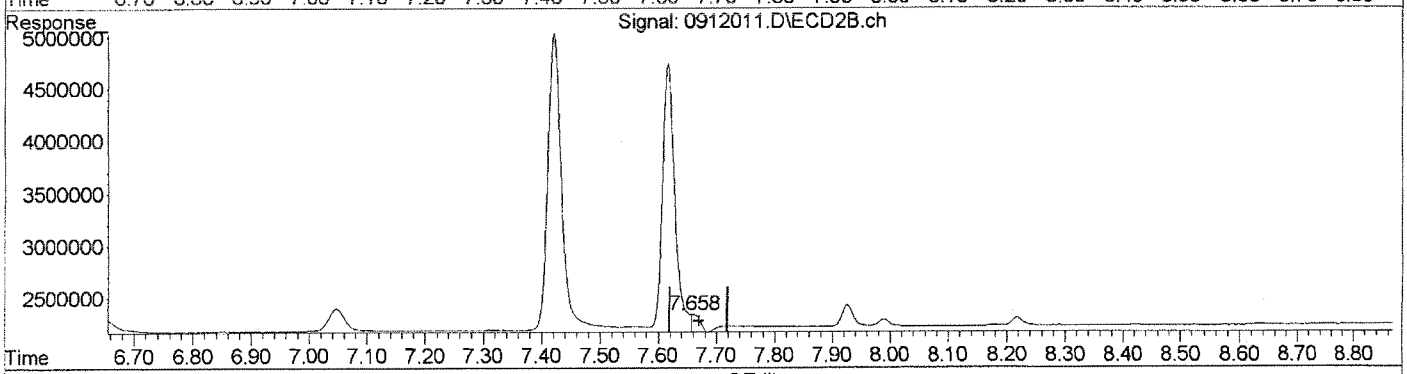
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:11:04
Operator : SSullivan
Sample : 091213-LEV3
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:20 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(2) 1,2,3-Trichloropropane (M)
7.835min 0.273 ppb
response 533325

(2) 1,2,3-Trichloropropane #2 (M)
7.658min 0.423 ppb m
response 157181

Manual Integration:
After
Missed Peak
09/13/13

JRS

(+) = Expected Retention Time

091213_504.M Fri Sep 13 14:32:23 2013 Page: 1

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:36:06
Operator : SSullivan
Sample : 091213-LEV4
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:36:24 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.797	4.598	9412021	1505277	0.646m	0.666m
2) M	1,2,3-Tri...	7.837	7.665	1372610	339373	0.704	0.913 #
3) M	1,2-Dibro...	9.427	9.460	17331845	3123300	0.602	0.647

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

JDS

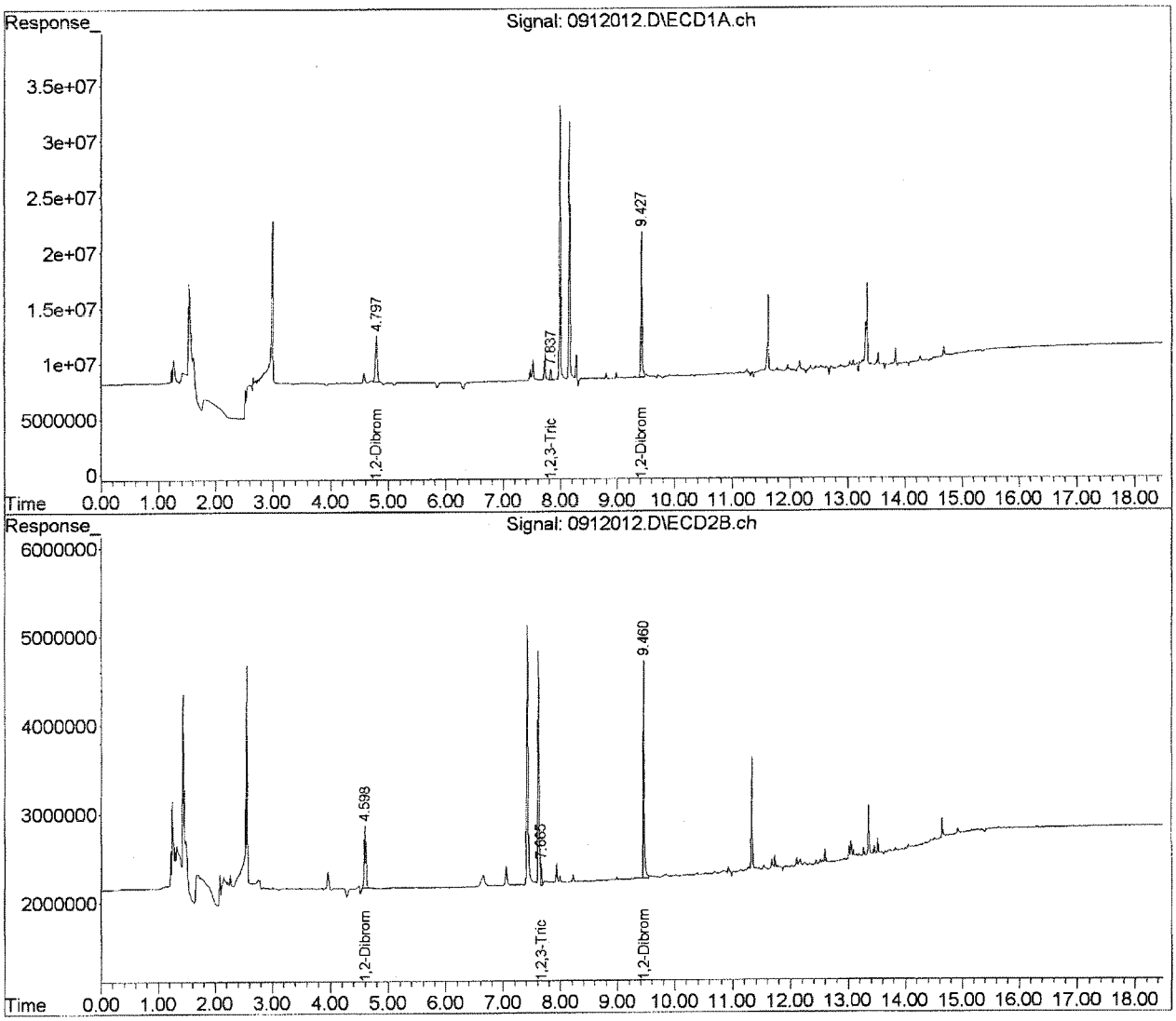
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:36:06
Operator : SSullivan
Sample : 091213-LEV4
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:36:24 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

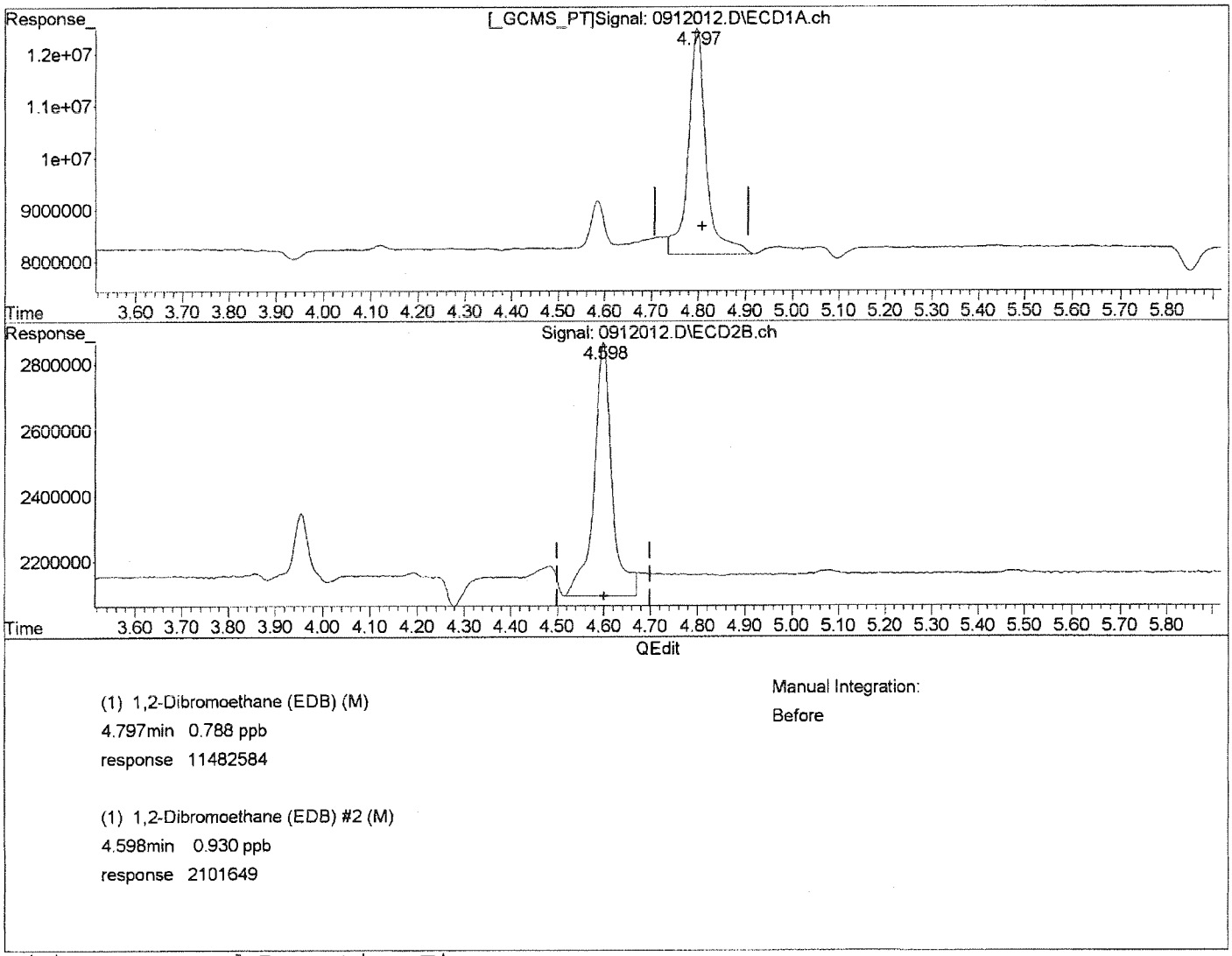


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:36:06
Operator : SSullivan
Sample : 091213-LEV4
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:22 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



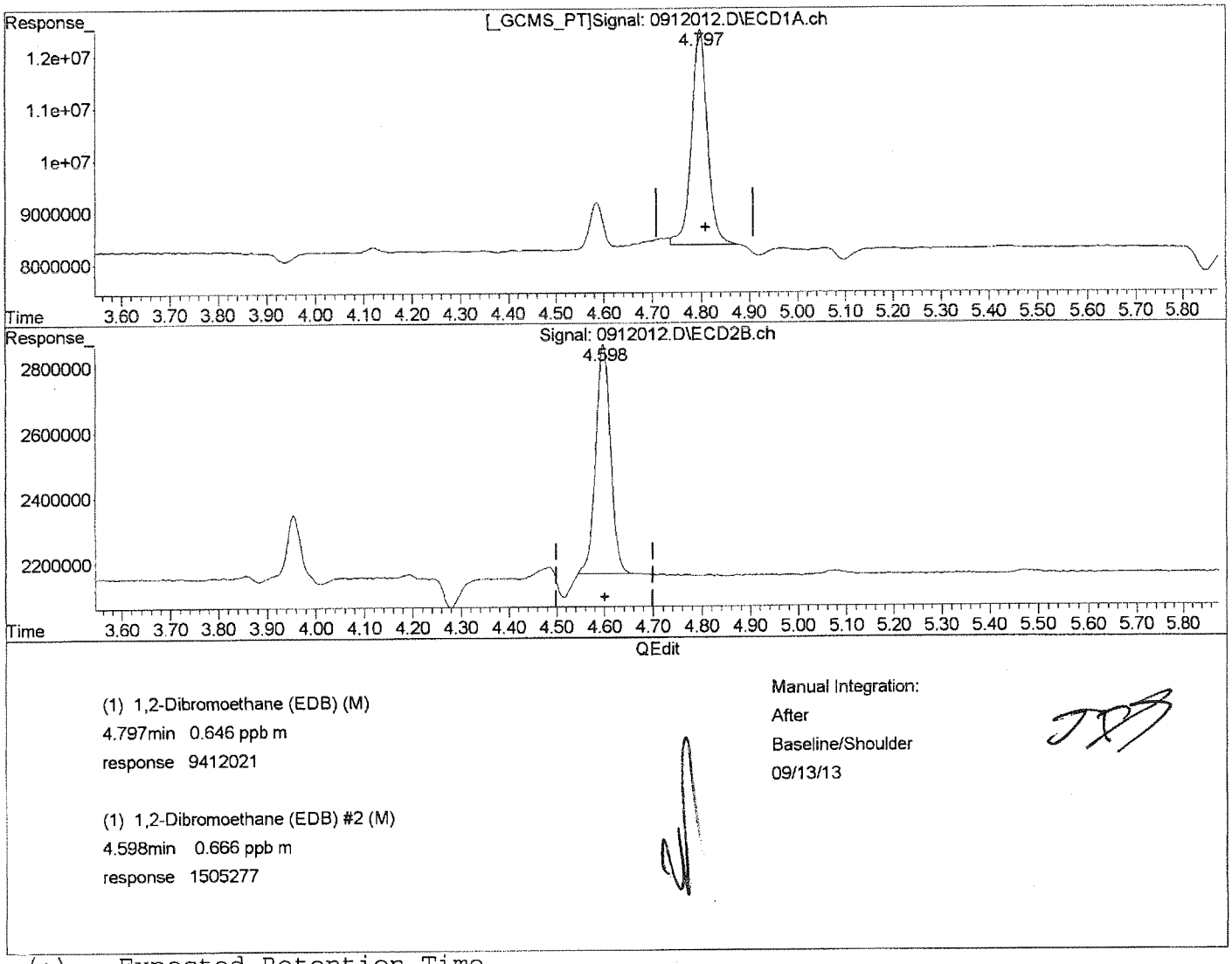
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 19:36:06
Operator : SSullivan
Sample : 091213-LEV4
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:22 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:01:20
Operator : SSullivan
Sample : 091213-LEV5
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:37:19 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.810	4.590	19168949	2852157	1.316m	1.262m
2) M	1,2,3-Tri...	7.838	7.667	2671755	466875	1.369	1.257
3) M	1,2-Dibro...	9.427	9.460	33939529	5896875	1.180	1.221

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

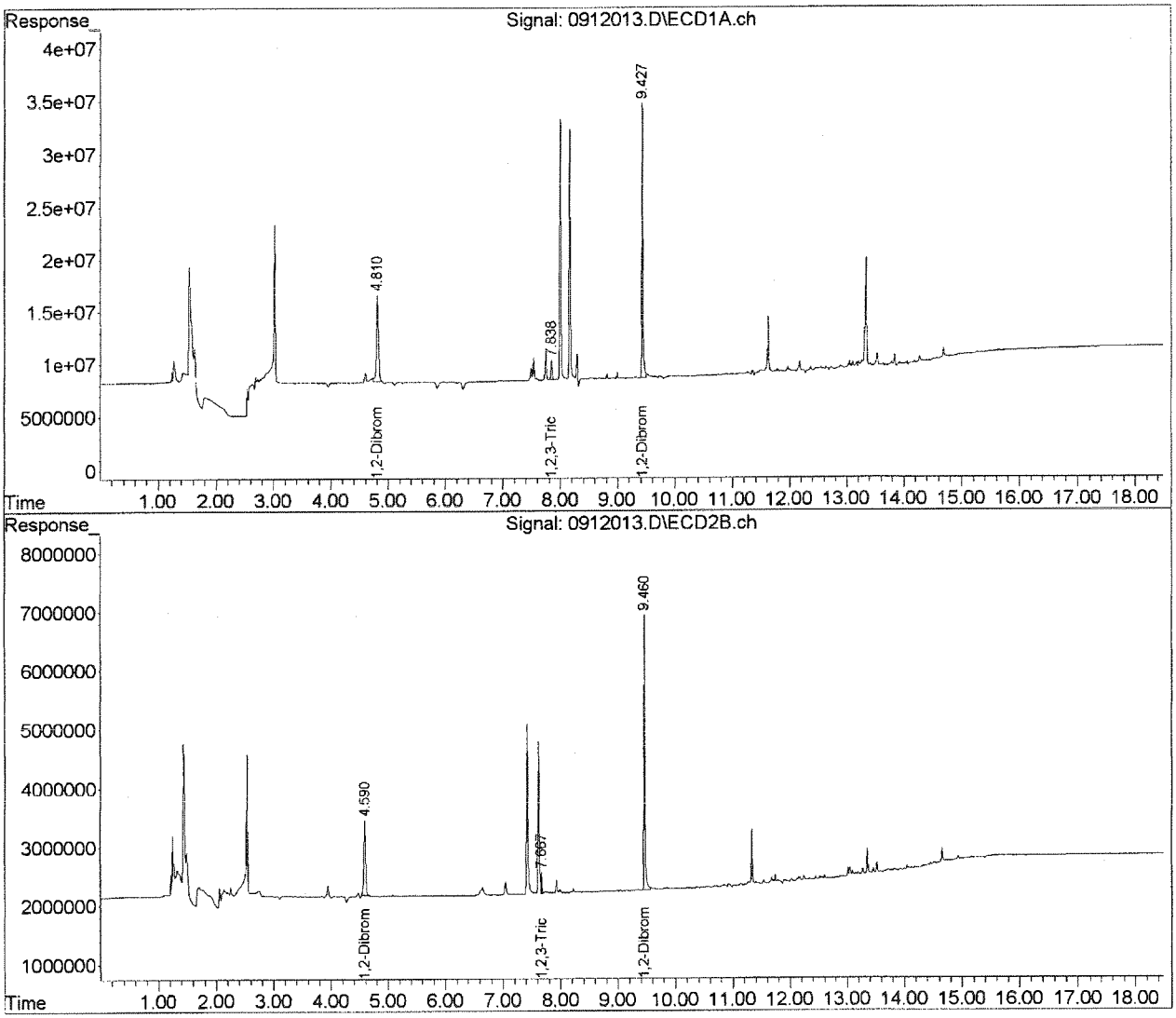
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:01:20
Operator : SSullivan
Sample : 091213-LEV5
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:37:19 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

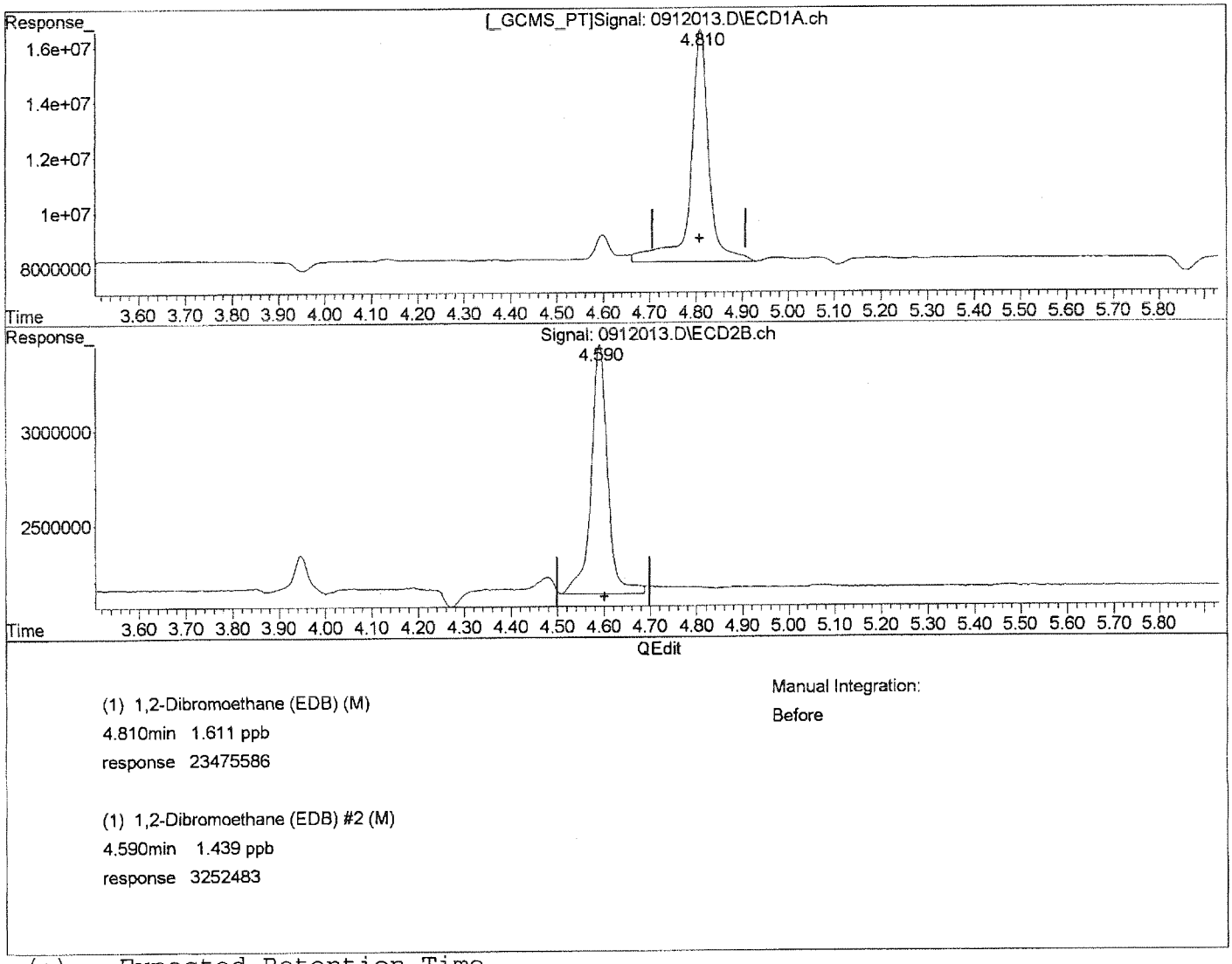


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:01:20
Operator : SSullivan
Sample : 091213-LEV5
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:24 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



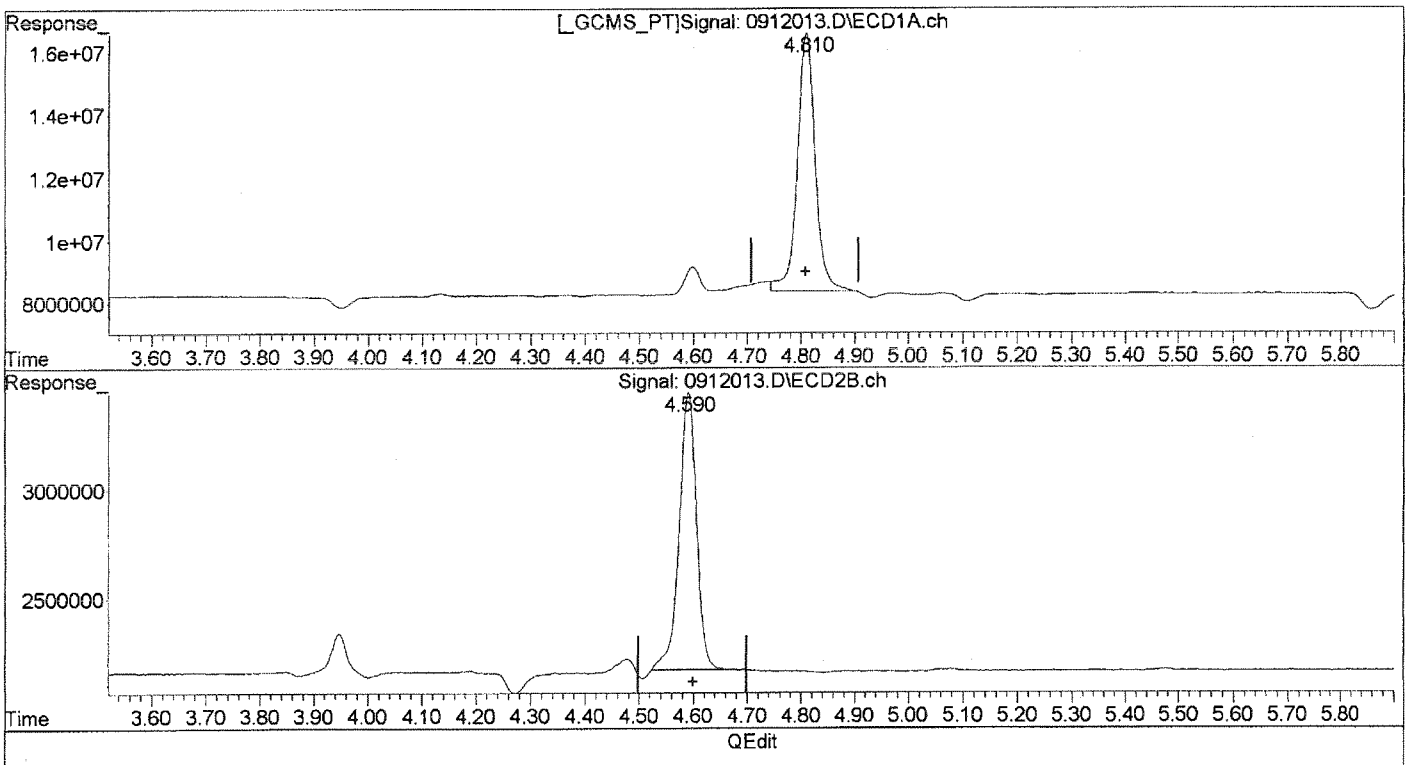
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912013.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:01:20
Operator : SSullivan
Sample : 091213-LEV5
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:24 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.810min 1.316 ppb m
response 19168949

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.590min 1.262 ppb m
response 2852157

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:26:25
Operator : SSullivan
Sample : 091213-LEV6
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:38:11 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.810	4.590	57807008	8497417	3.968m	3.760m
2) M	1,2,3-Tri...	7.837	7.667	7722486	1168214	3.958	3.144
3) M	1,2-Dibro...	9.427	9.458	103.4E6	17190687	3.595	3.560

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

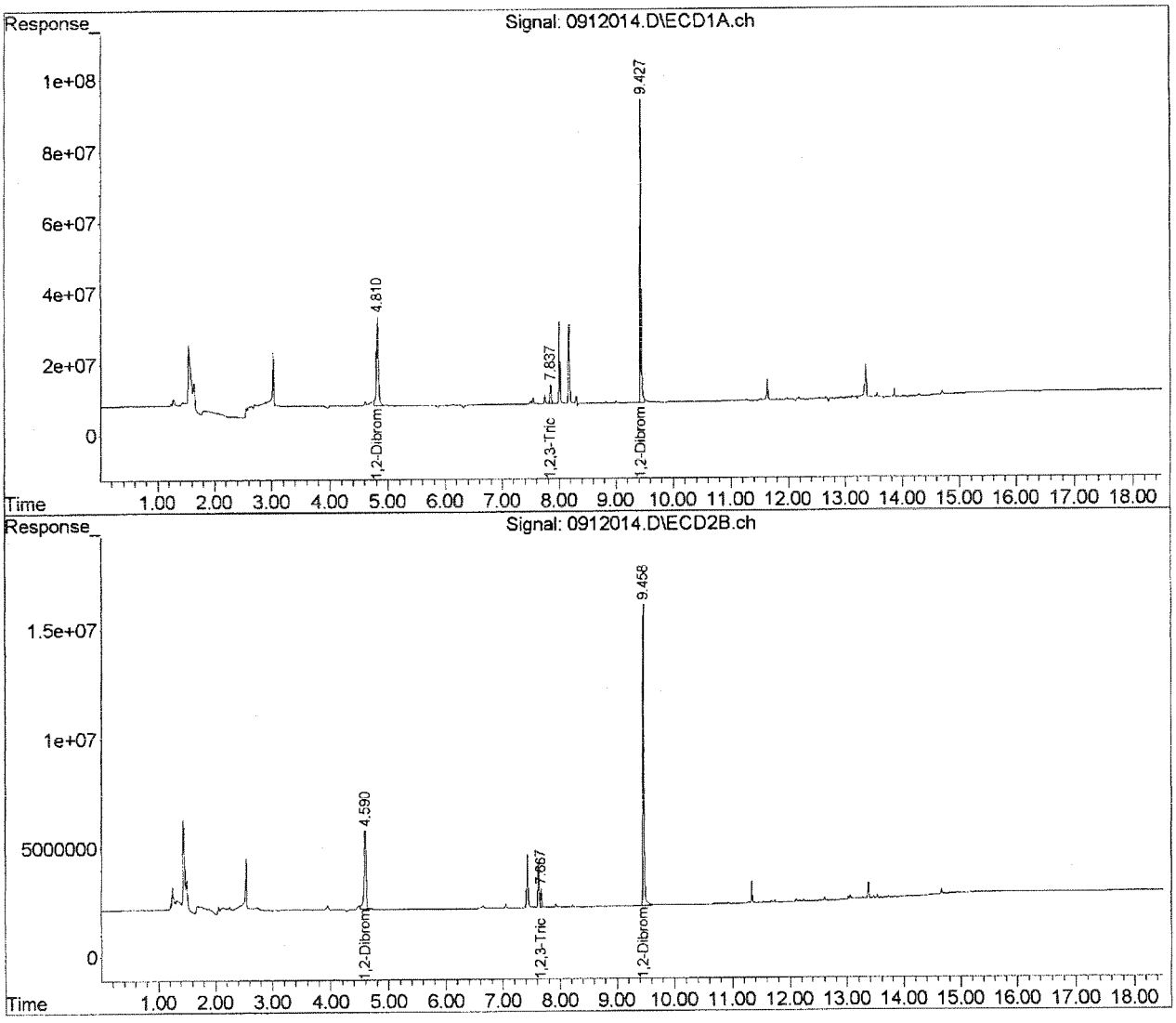
JDS
09-13-13
MM

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:26:25
Operator : SSullivan
Sample : 091213-LEV6
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:38:11 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

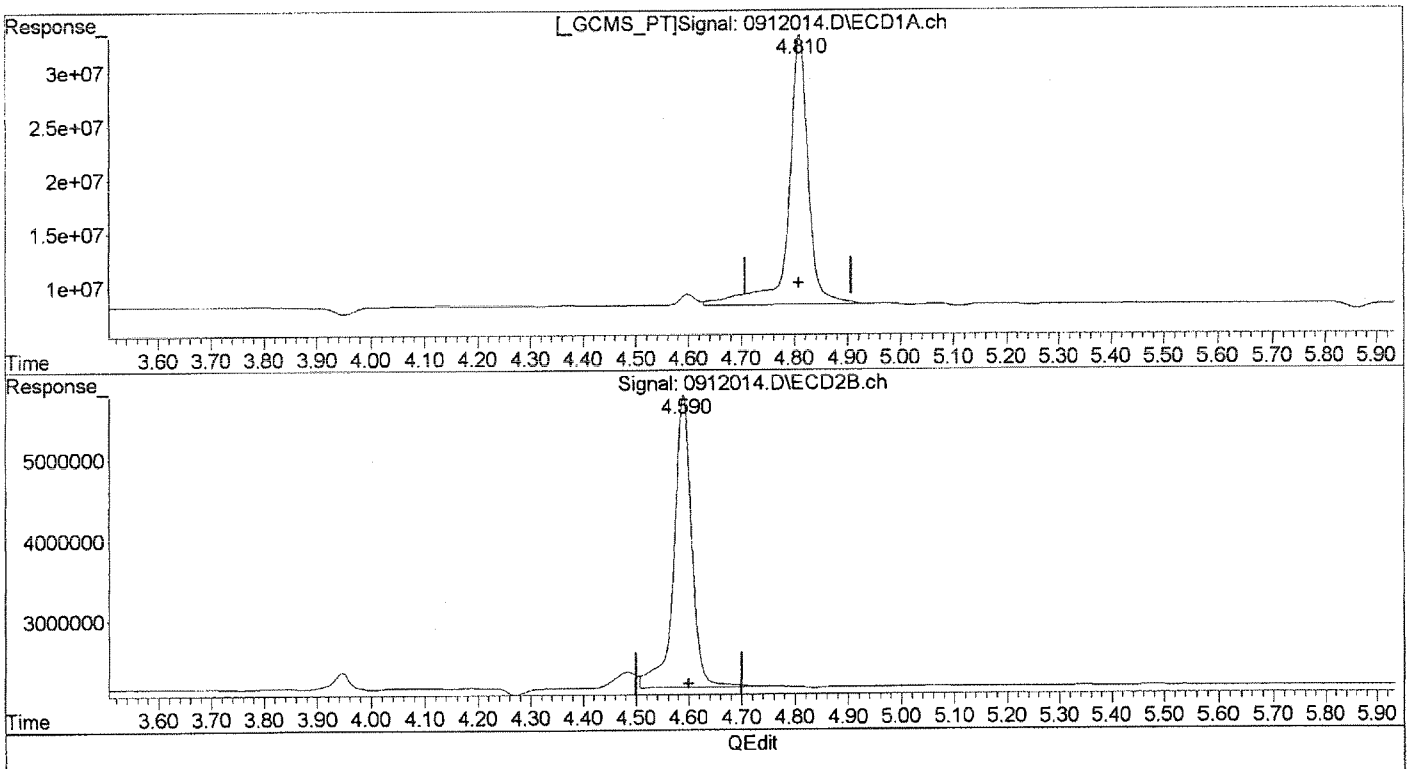


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:26:25
Operator : SSullivan
Sample : 091213-LEV6
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:26 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.810min 4.418 ppb
response 64365061

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.590min 3.851 ppb
response 8703111

Manual Integration:
Before

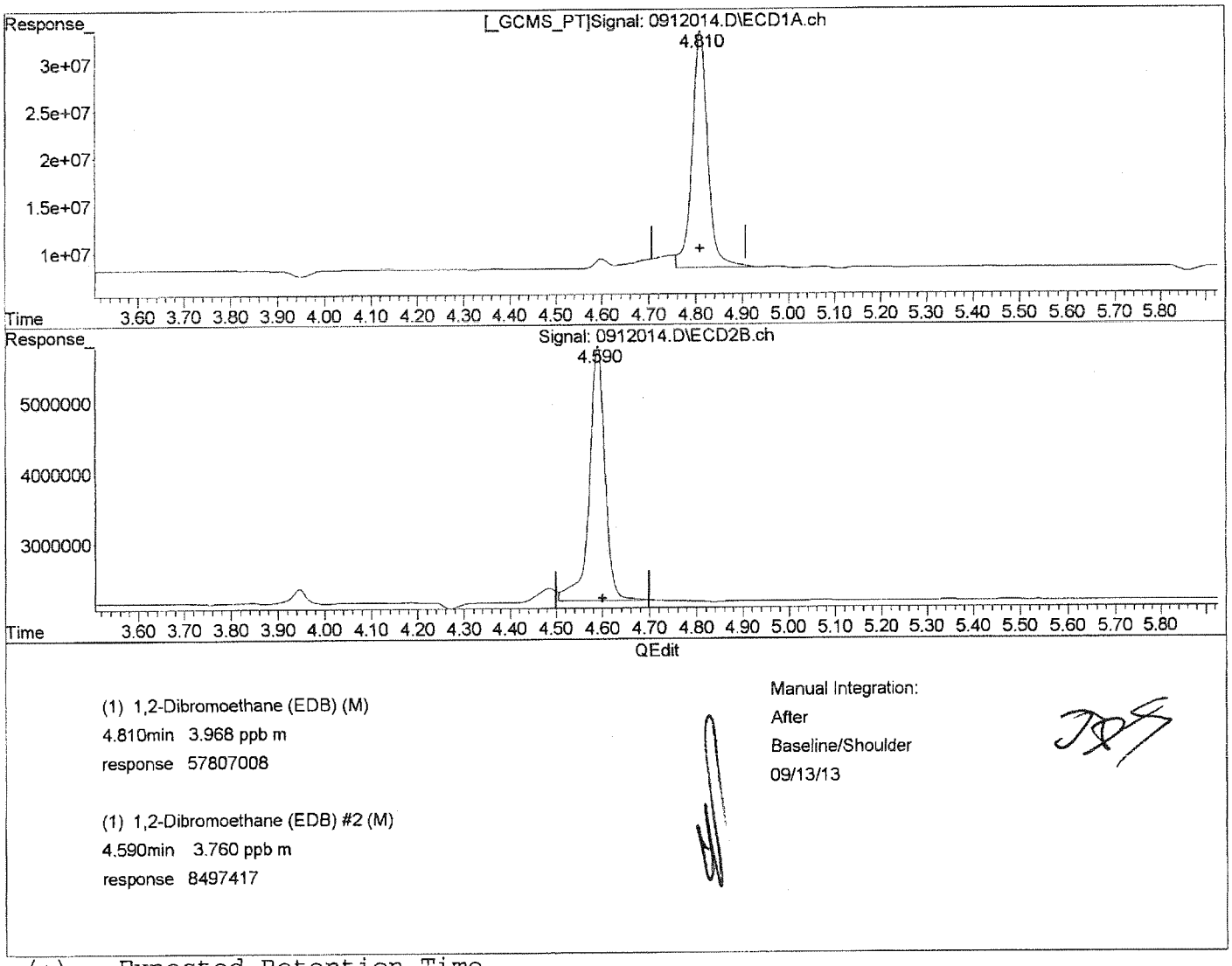
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:26:25
Operator : SSullivan
Sample : 091213-LEV6
Misc :
ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:26 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.810min 3.968 ppb m
response 57807008

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.590min 3.760 ppb m
response 8497417

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:51:30
Operator : SSullivan
Sample : 091213-LEV7
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:38:42 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.810	4.588	76634264	11241047	5.260	4.974m
2) M	1,2,3-Tri...	7.837	7.667	10407125	1529095	5.334	4.116
3) M	1,2-Dibro...	9.425	9.458	145.3E6	22755563	5.049	4.713

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

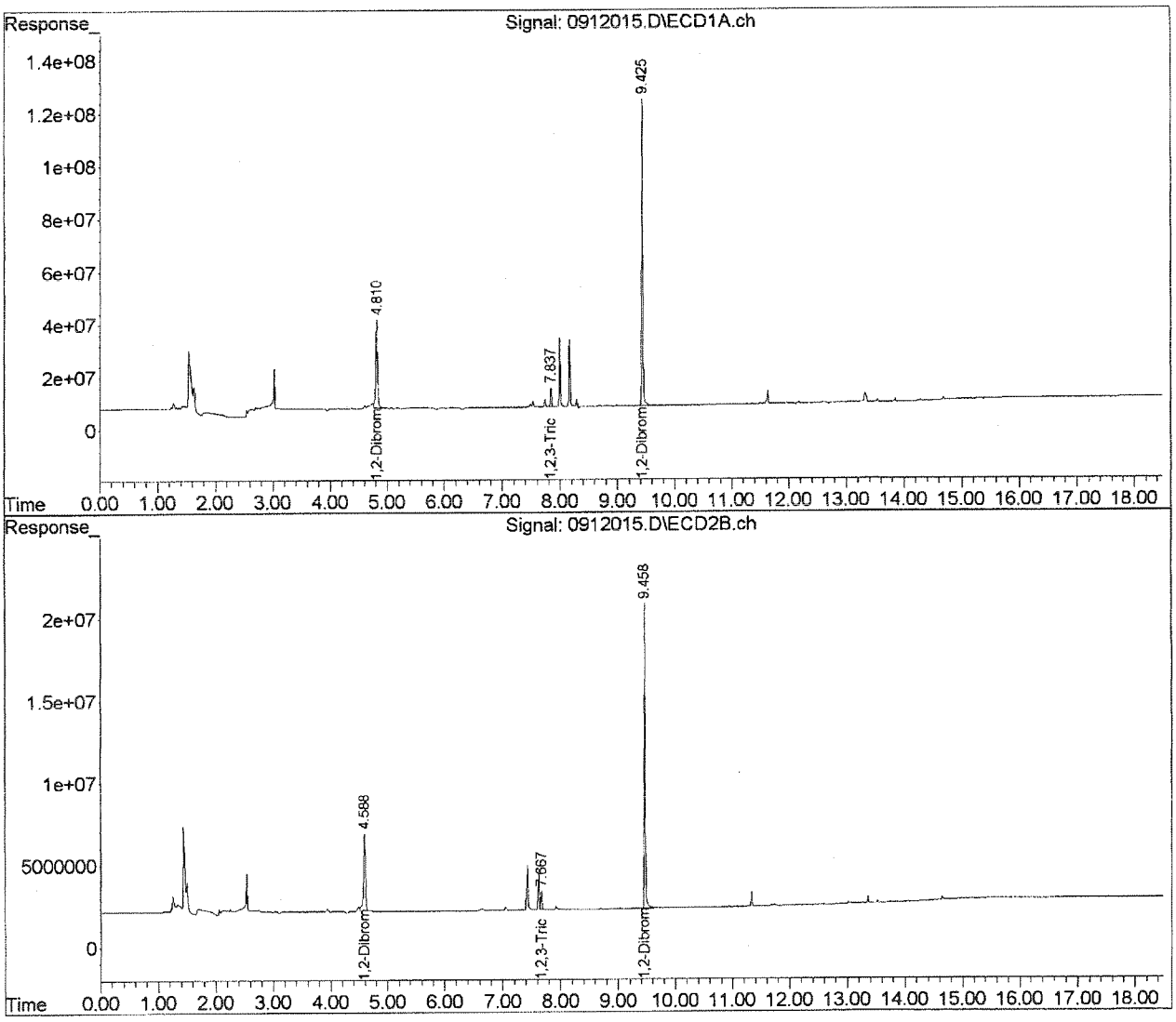
JBS
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:51:30
Operator : SSullivan
Sample : 091213-LEV7
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:38:42 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

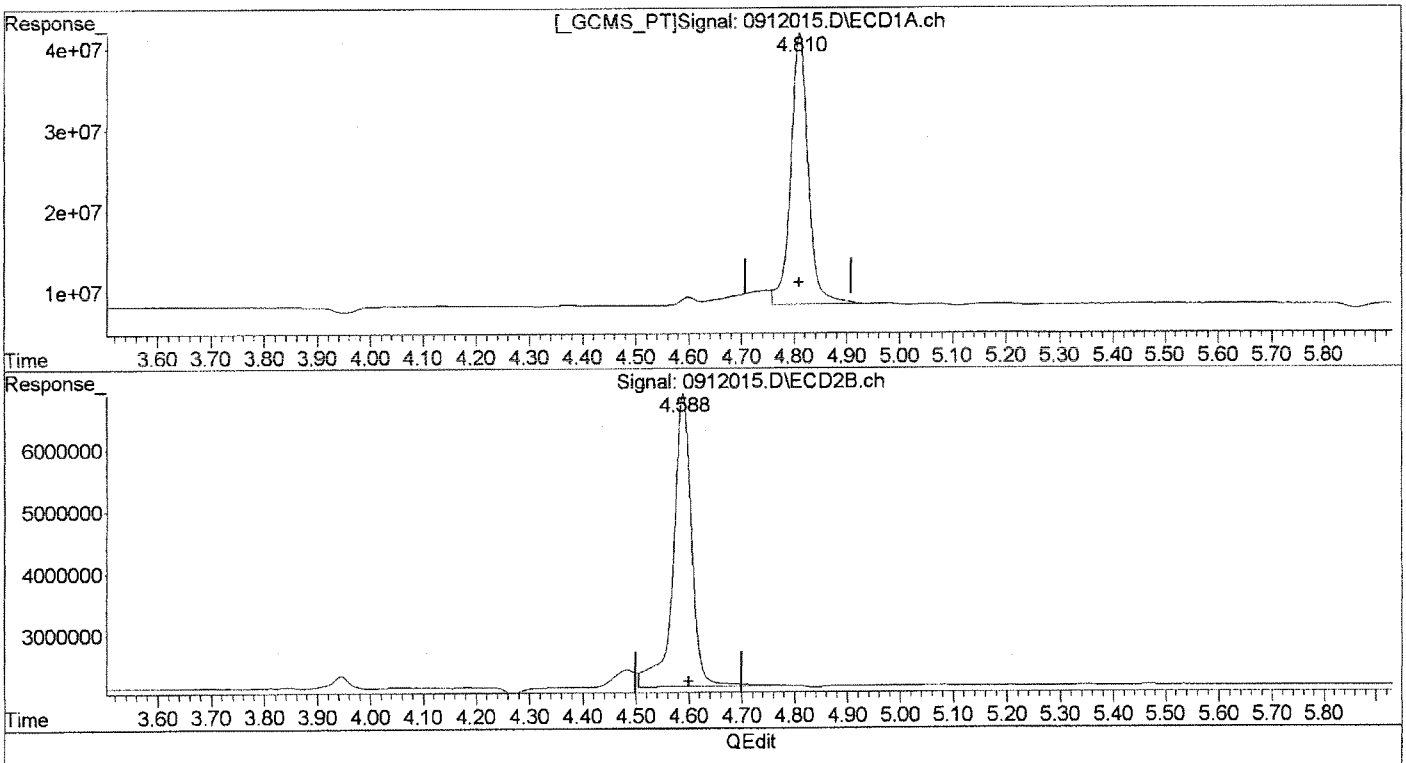


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:51:30
Operator : SSullivan
Sample : 091213-LEV7
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:28 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

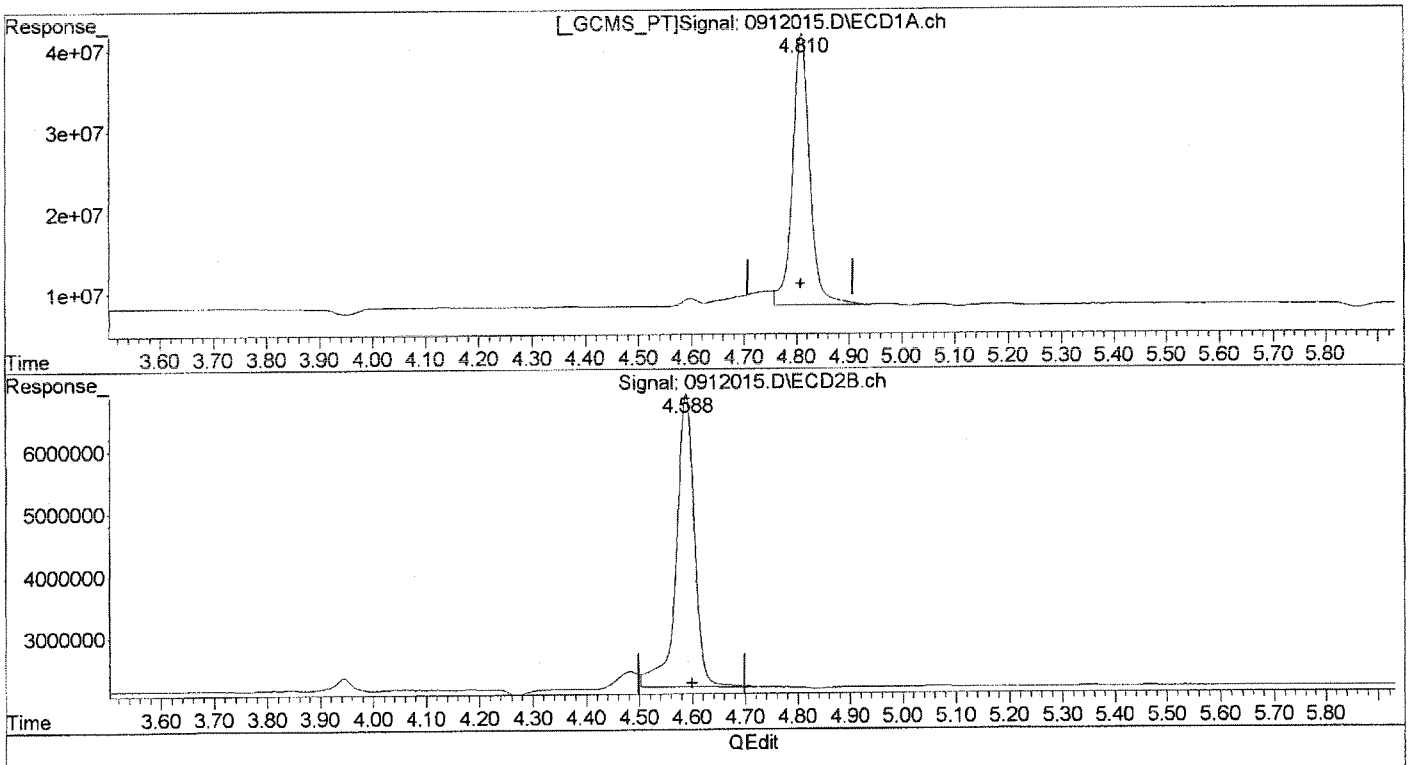
091213_504.M Fri Sep 13 14:35:03 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 20:51:30
Operator : SSullivan
Sample : 091213-LEV7
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:28 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.810min 5.260 ppb
response 76634264

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.588min 4.974 ppb m
response 11241047

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:40:15 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.808	4.600	143.0E6	22801940	9.812m	10.089m
2) M	1,2,3-Tri...	7.840	7.670	18774227	3194161	9.623	8.598m
3) M	1,2-Dibro...	9.428	9.460	275.9E6	49227785	9.590	10.195

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

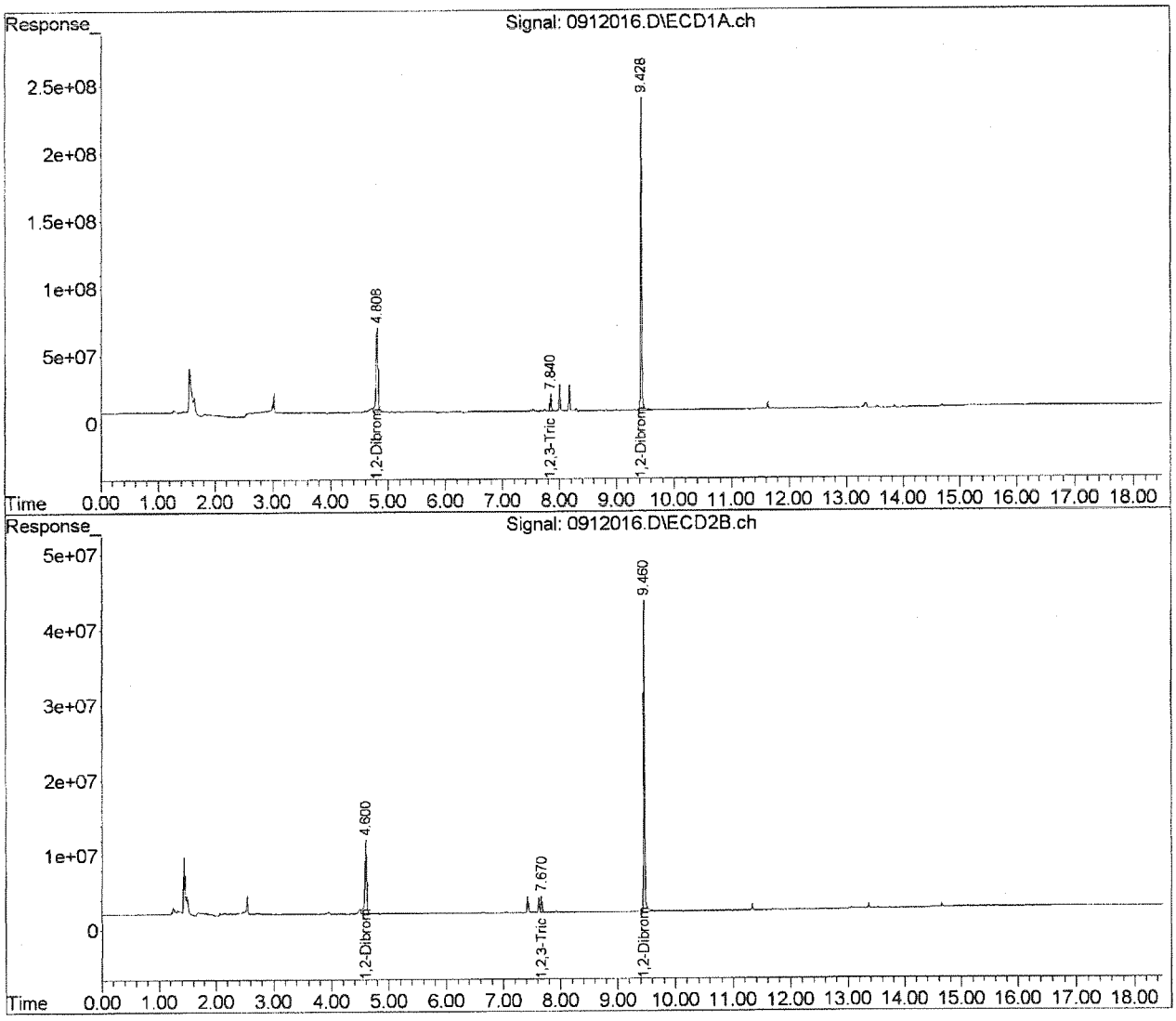
SDS
09-13-13
MM

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:40:15 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

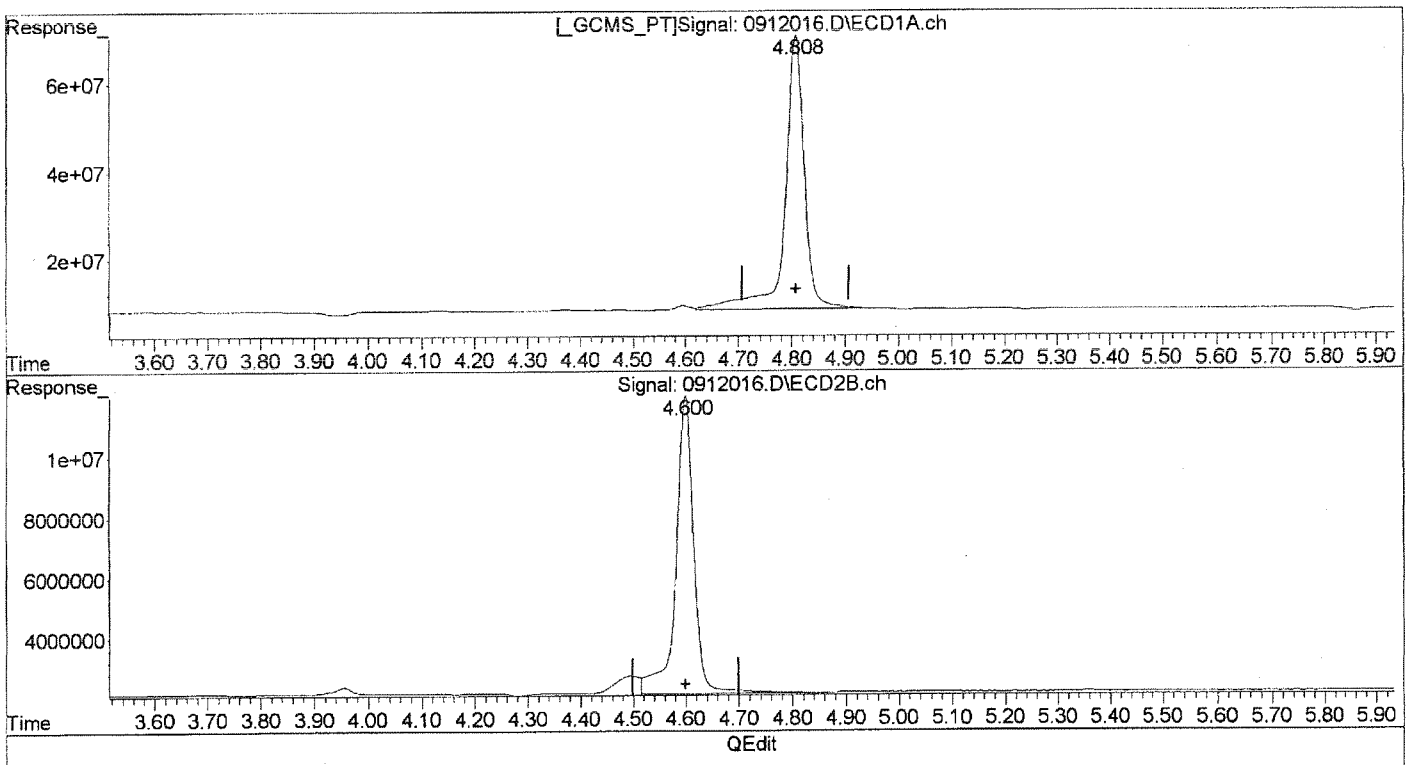


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:30 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.808min 10.726 ppb
response 156271261

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.600min 10.562 ppb
response 23871552

Manual Integration:
Before

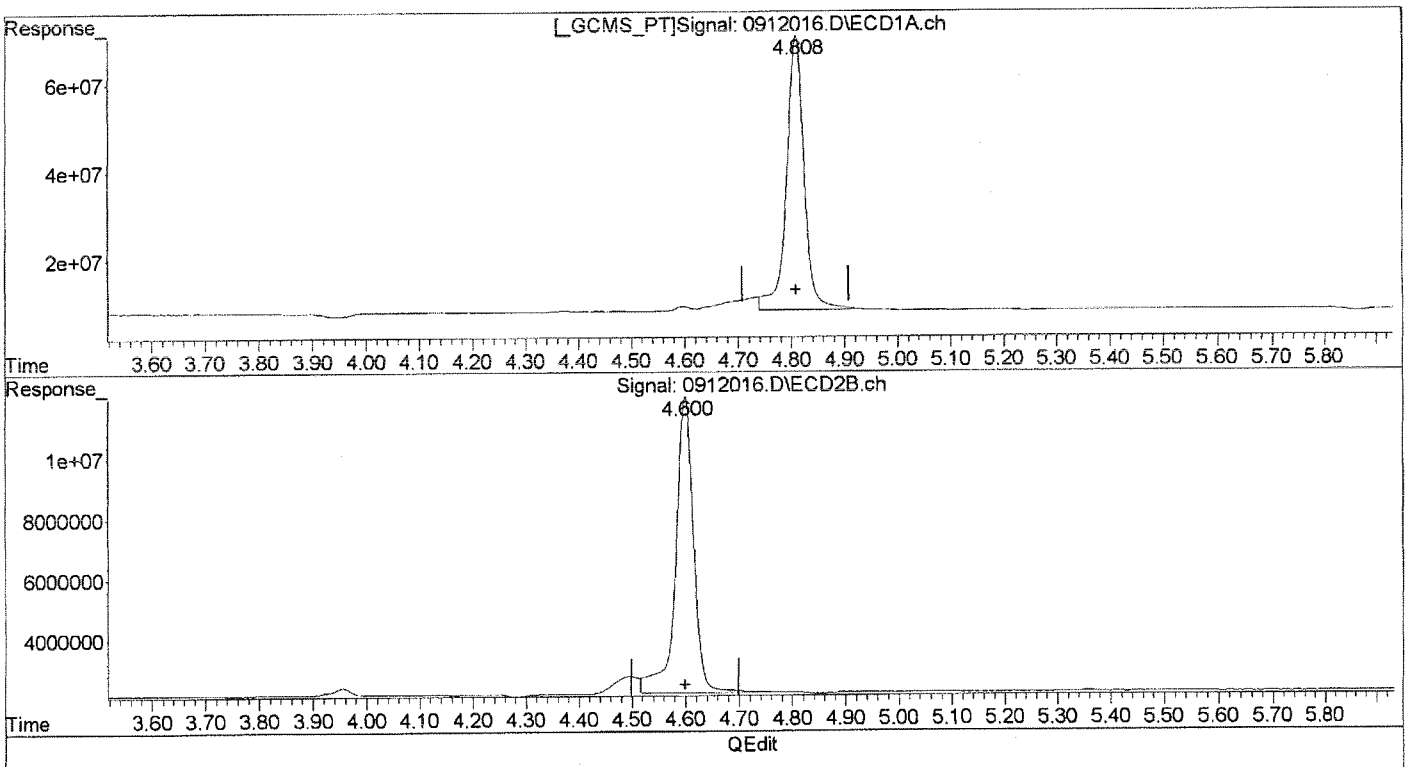
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:30 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.808min 9.812 ppb m
response 142950364

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.600min 10.089 ppb m
response 22801940

Manual Integration:
After
Baseline/Shoulder
09/13/13

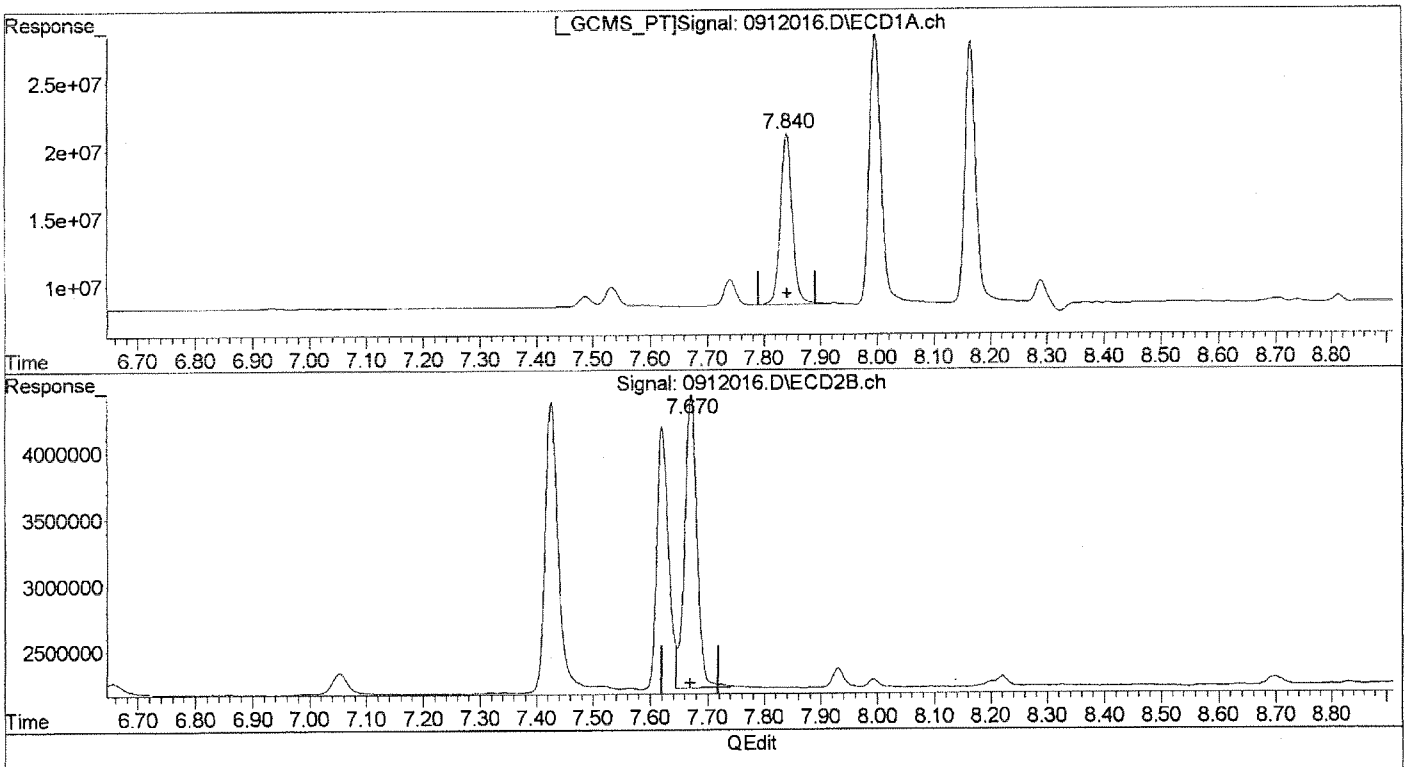
(+) = Expected Retention Time
091213_504.M Fri Sep 13 14:36:28 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:30 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.840min 9.623 ppb
response 18774227

(2) 1,2,3-Trichloropropane #2 (M)
7.670min 8.714 ppb
response 3237251

Manual Integration:
Before

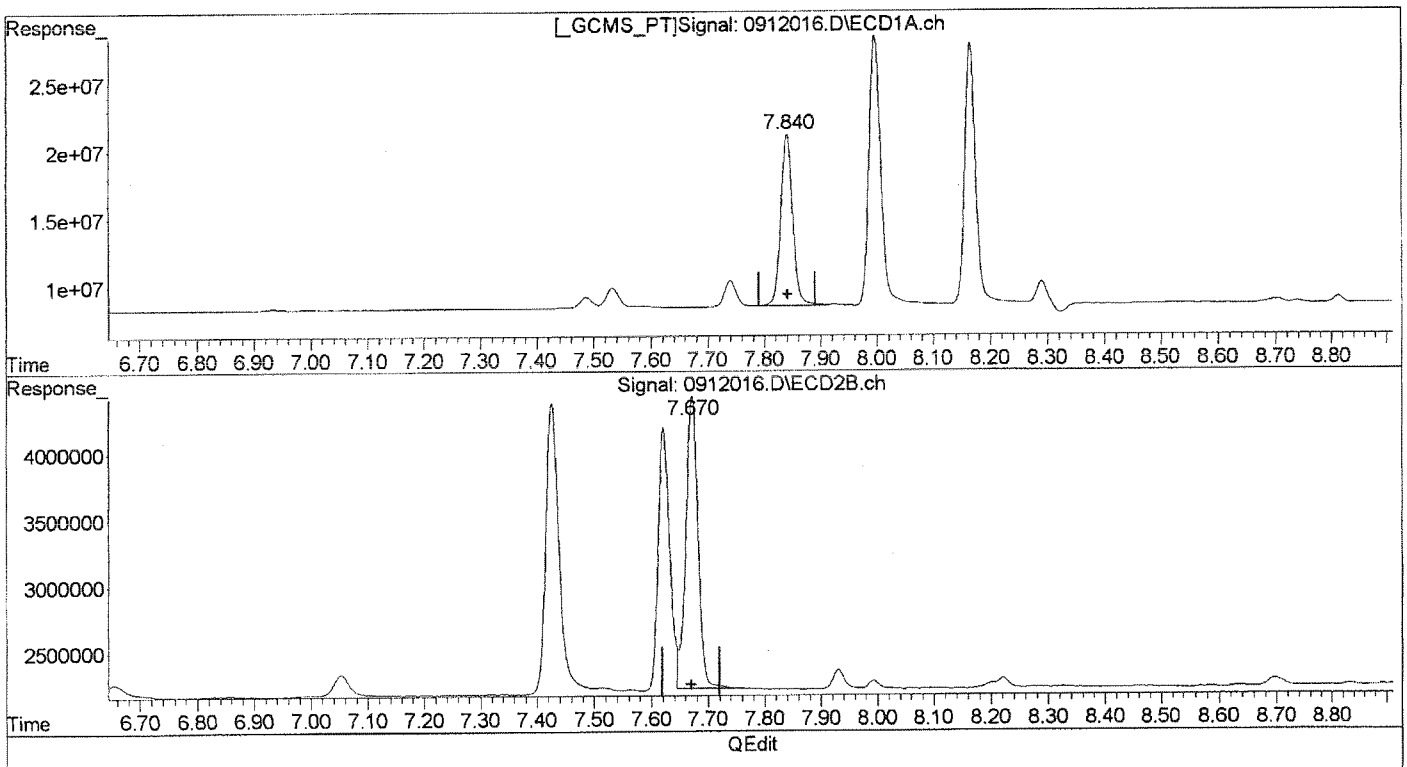
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:16:30
Operator : SSullivan
Sample : 091213-LEV8
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 14:29:30 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12???
QLast Update : Fri Sep 13 09:13:30 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(2) 1,2,3-Trichloropropane (M)
7.840min 9.623 ppb
response 18774227

(2) 1,2,3-Trichloropropane #2 (M)
7.670min 8.598 ppb m
response 3194161

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:41:39
Operator : SSullivan
Sample : 091213-ICV
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 16:00:53 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:56:04 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds							
1) M	1,2-Dibro...	4.842	4.620	18558938	2727143	1.285m	1.211m
2) M	1,2,3-Tri...	7.855	7.685	2732107	461381	1.320	1.128
3) M	1,2-Dibro...	9.437	9.470	35471183	5902363	1.211	1.222

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

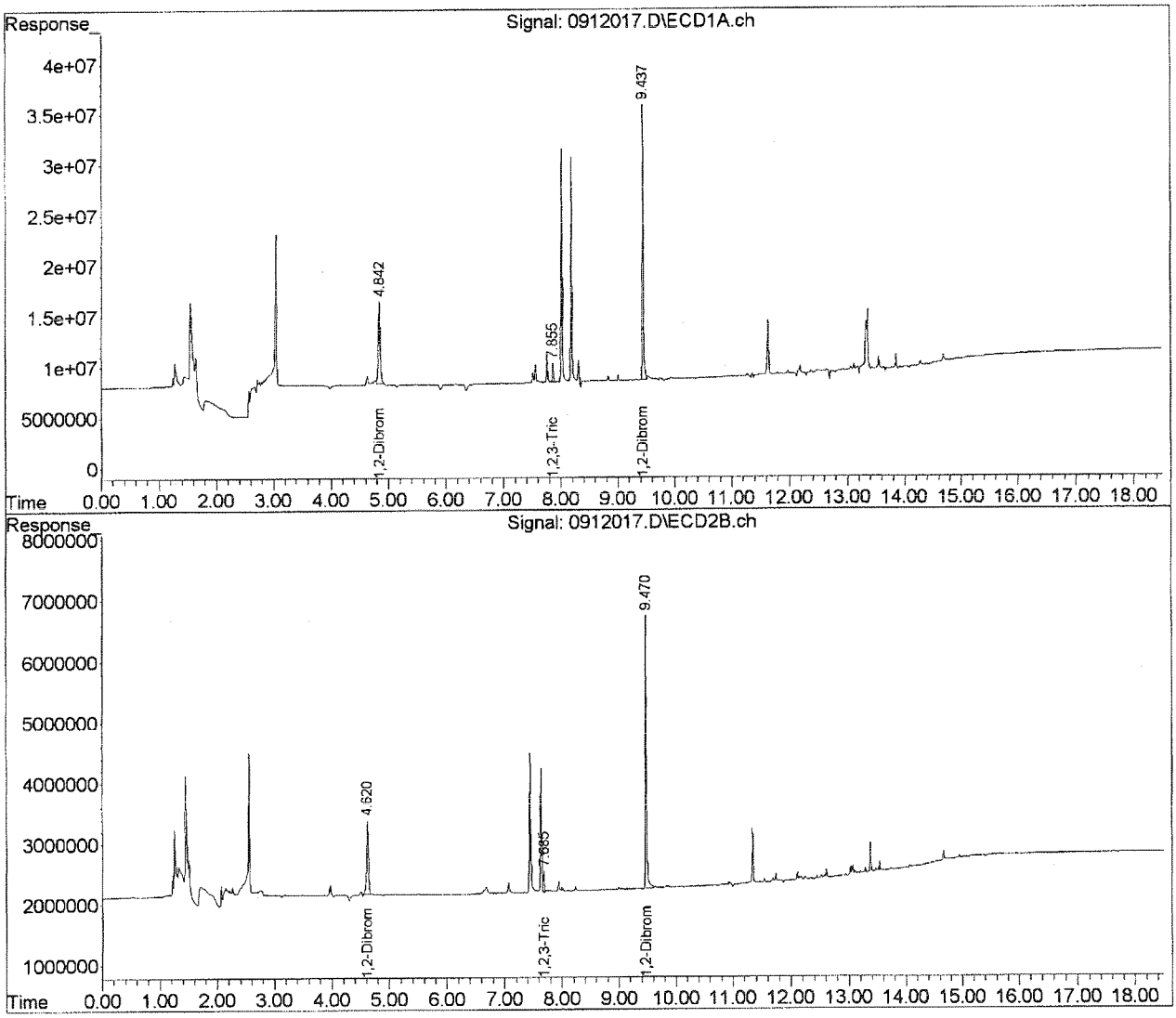
JBS
09-13-13

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:41:39
Operator : SSullivan
Sample : 091213-ICV
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 16:00:53 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:56:04 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

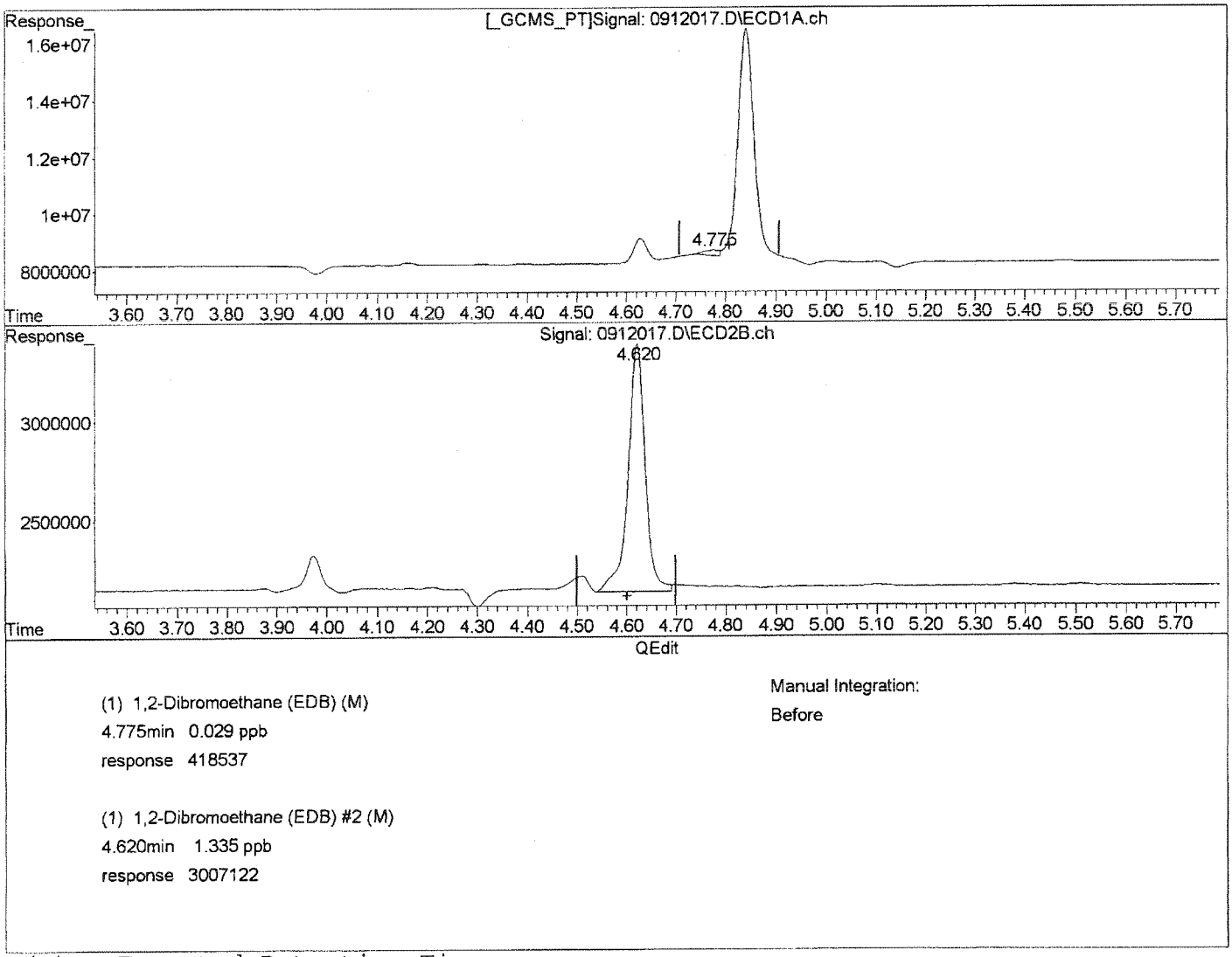


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:41:39
Operator : SSullivan
Sample : 091213-ICV
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 16:00:07 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:56:04 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

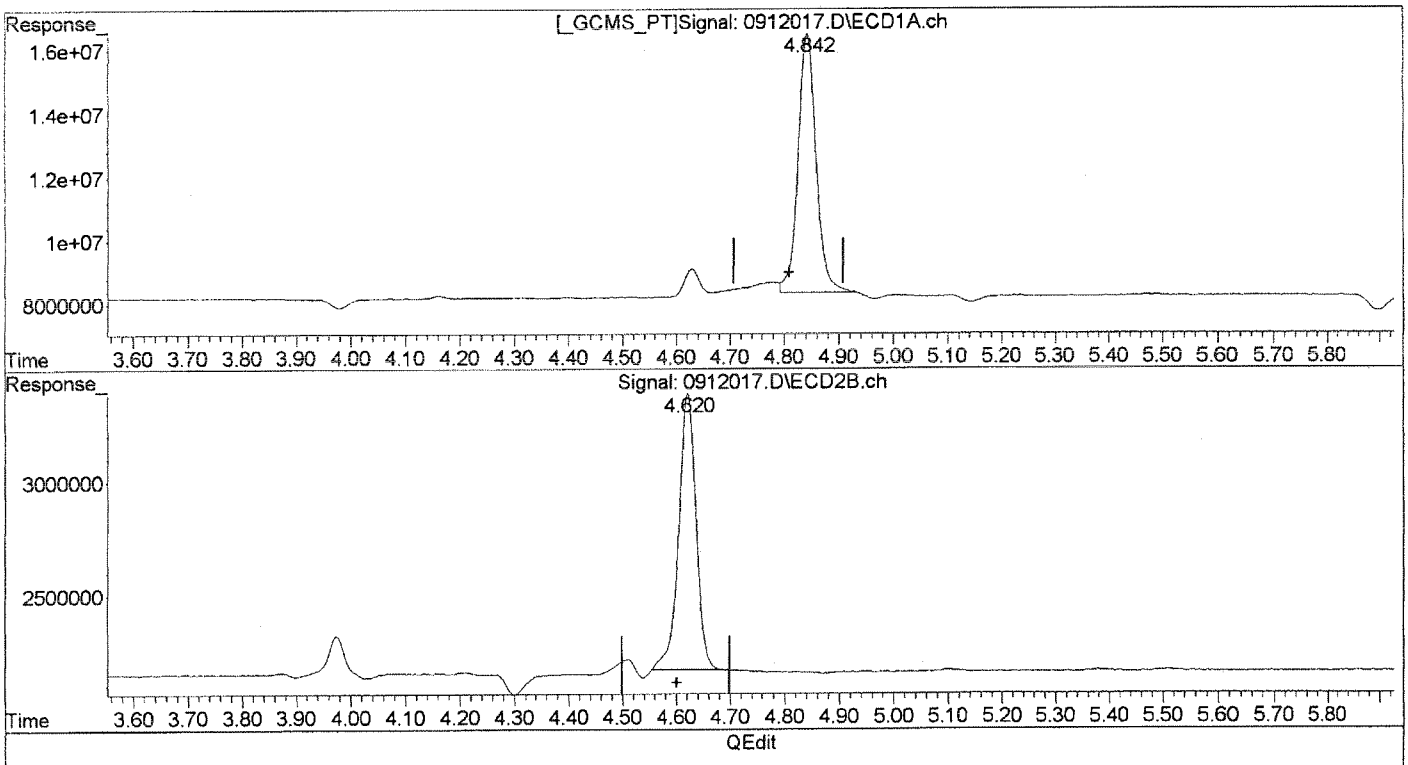
091213_504.M Fri Sep 13 15:56:46 2013 Page: 1

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\091213-504\
Data File : 0912017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12-Sep-2013, 21:41:39
Operator : SSullivan
Sample : 091213-ICV
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 13 16:00:07 2013
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:56:04 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)
4.842min 1.285 ppb m
response 18558938

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.620min 1.211 ppb m
response 2727143

Manual Integration:
After
Baseline/Shoulder
09/13/13

(+) = Expected Retention Time

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/16/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916011.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14700000	2	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2100000	1	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.1	29300000	26400000	-10	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/16/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916011.D\0916011C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.5	2250000	2620000	16	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.4	371000	444000	NA	16	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.3	4830000	5190000	7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\091613-504\0916011.D
Lab ID: KWG1310084-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/16/2013 21:37
Date Quantitated: 09/17/2013 09:41
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916011.D\0916011C.D
Lab ID: KWG1310084-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/16/2013 21:37
Date Quantitated: 09/17/2013 09:41
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916011.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916011.D\0916011c.d			**Vial:**	5
Acqu Date:	09/16/2013 21:37	**Quant Date:**	09/17/2013 09:41	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310084-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310084	**Prep Lot:**		**Report Group:**	
Analysis Method:	504.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:		**Method ID:**	MJ480
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.80	4.60	18407333m	3275128	1.27	1.45			
1,2,3-Trichloropropane	7.84	7.67	2625851	554511	1.27	1.45			
1,2-Dibromo-3-chloropropa	9.43	9.46	33013934	6484978	1.13	1.34			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916011.D
Acq On : 16-Sep-2013, 21:37:55 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:00 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

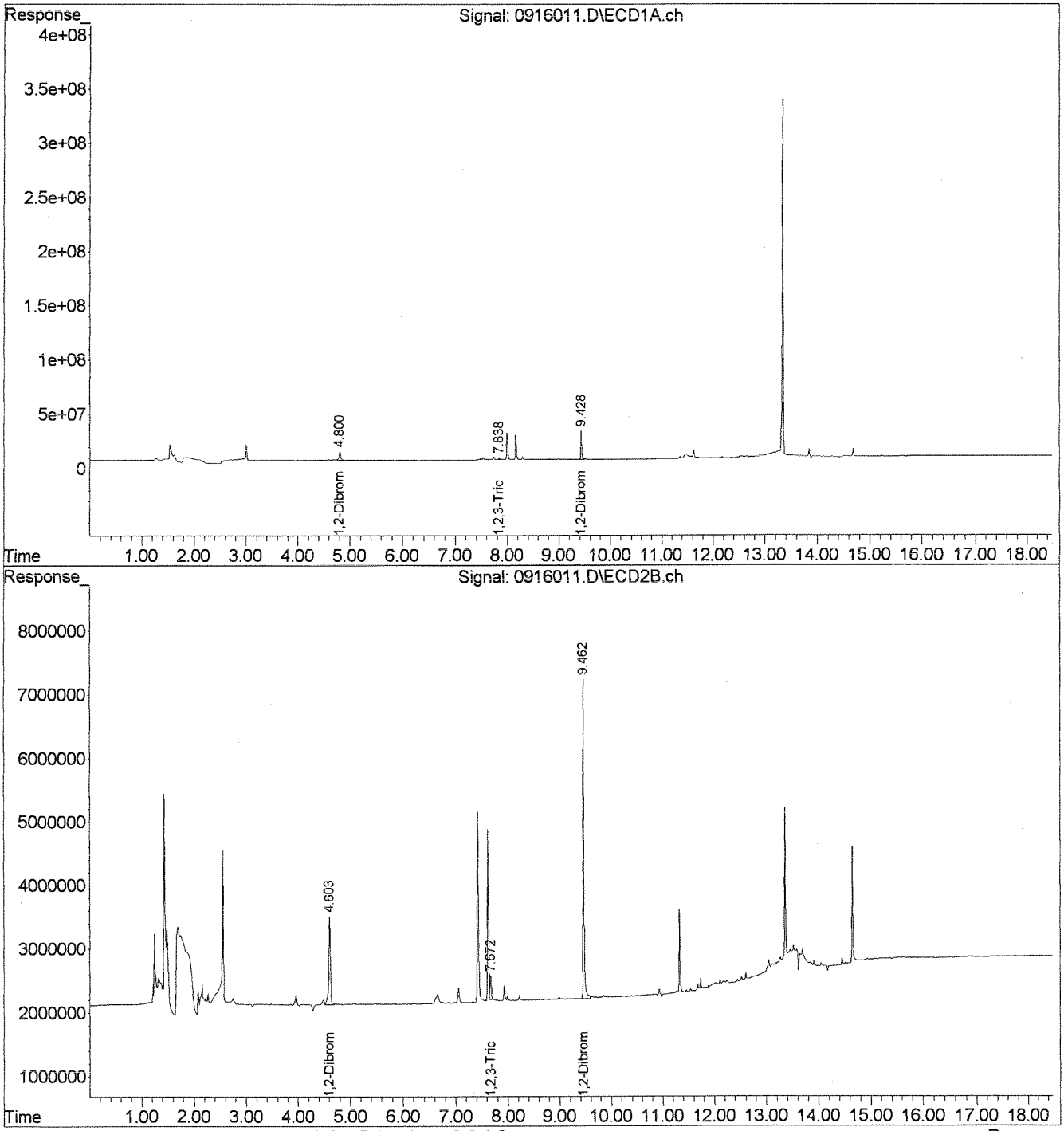
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.80	4.60	18407333	3275128	1.274m	1.454
2) 1,2,3-Trichloropr...	7.84	7.67	2625851	554511	1.268	1.446
3) 1,2-Dibromo-3-chl...	9.43	9.46	33013934	6484978	1.127	1.343

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916011.D
Acq On : 16-Sep-2013, 21:37:55 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:00 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

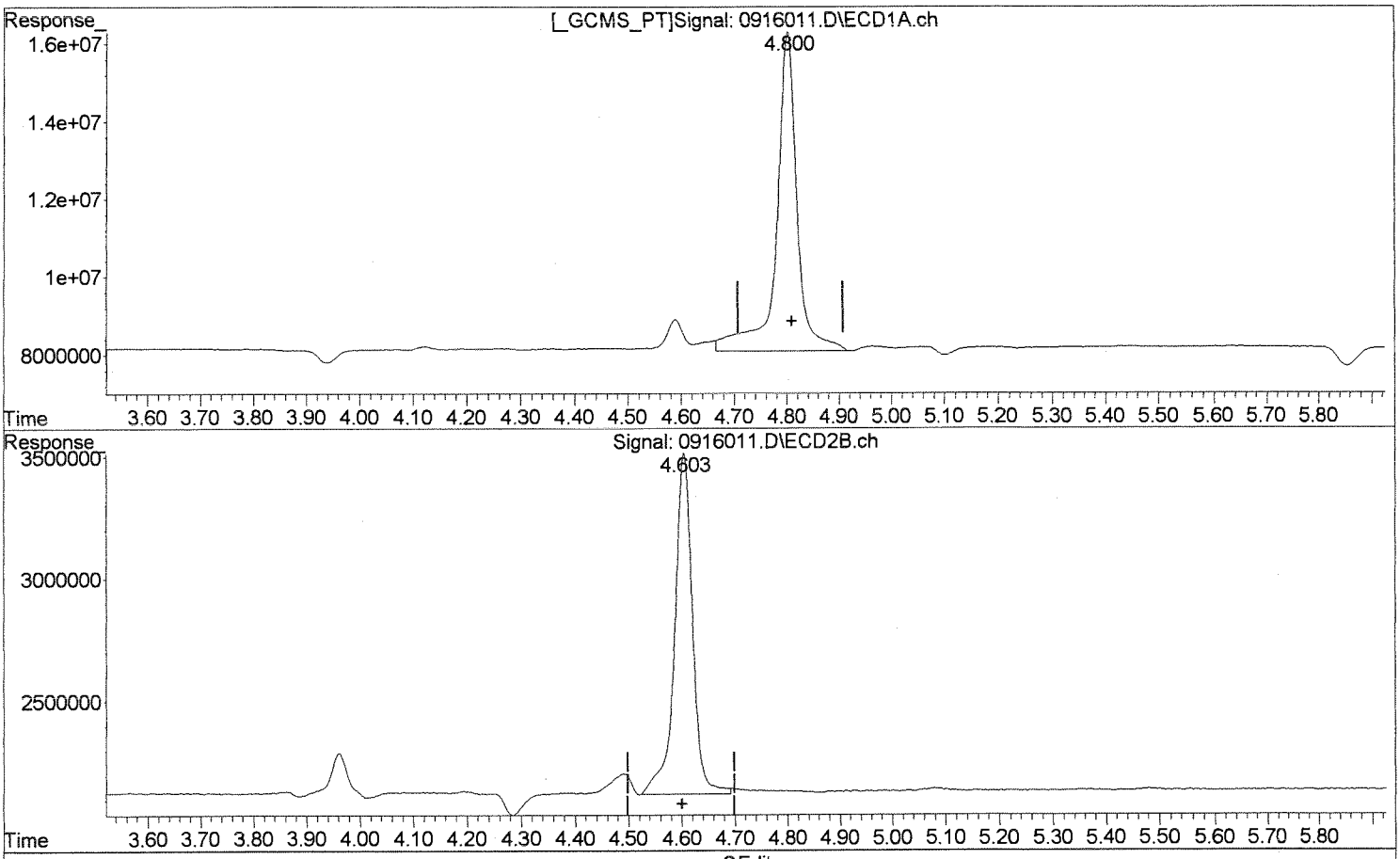
Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916011.D
Acq On : 16-Sep-2013, 21:37:55 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:35:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.800min 1.564 ppb

response 22588869

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.603min 1.454 ppb

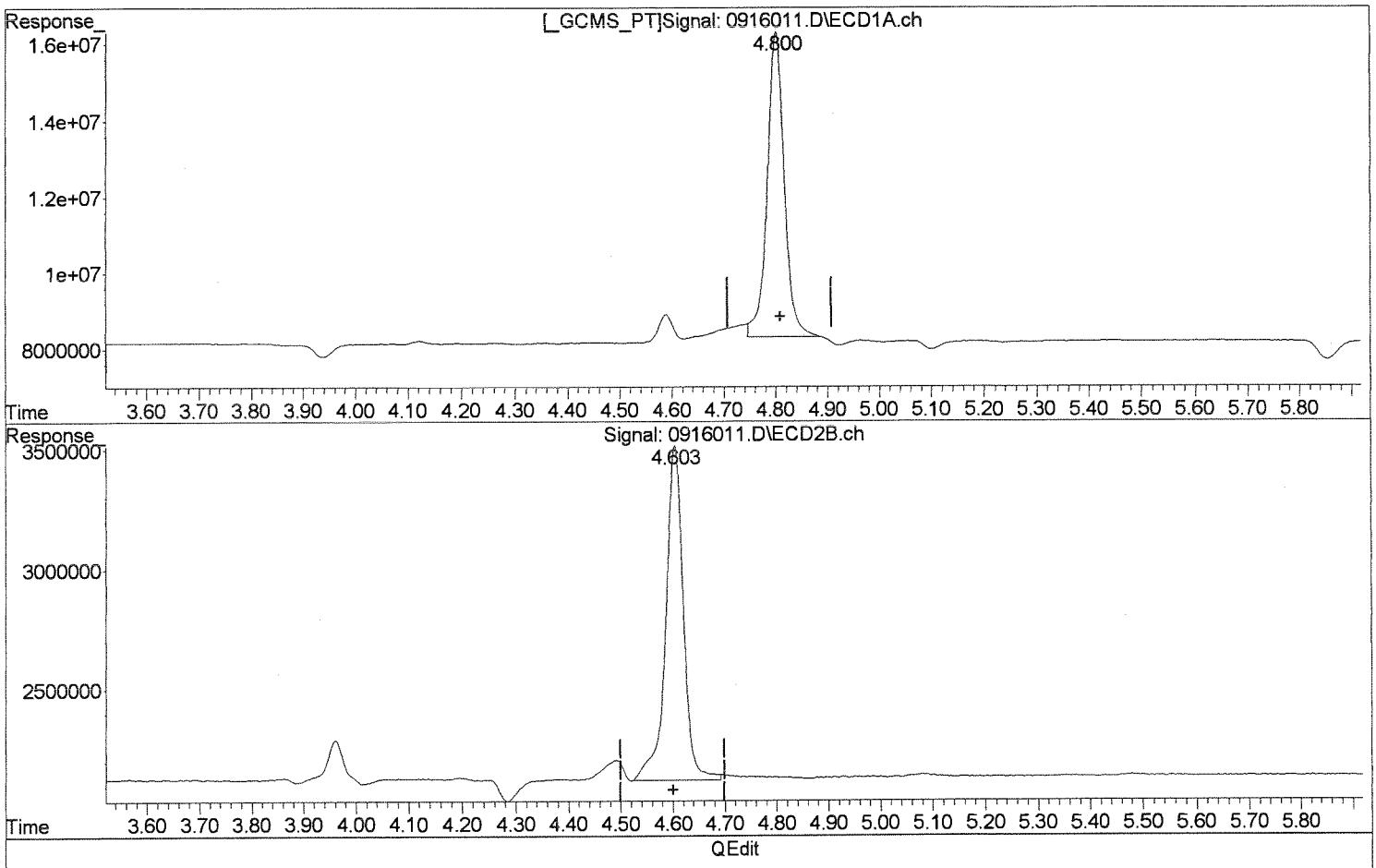
response 3275128

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916011.D
Acq On : 16-Sep-2013, 21:37:55 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091613-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:35:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) 1,2-Dibromoethane (EDB) (M)

4.800min 1.274 ppb m

response 18407333

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.603min 1.454 ppb

response 3275128

Manual Integration:

After

Baseline/Shoulder

09/17/13

(+) = Expected Retention Time

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916025.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.4	14400000	15600000	8	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	5.0	5.2	2070000	2150000	4	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	5.0	5.1	29300000	29800000	2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916025.D\0916025C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	5.0	5.9	2250000	2660000	18	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	5.0	6.1	371000	383000	NA	22	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	5.0	5.9	4830000	5690000	18	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\091613-504\0916025.D
Lab ID: KWG1310084-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/17/2013 03:29
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916025.D\0916025C.D
Lab ID: KWG1310084-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/17/2013 03:29
Date Quantitated: 09/17/2013 09:50
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 55 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916025.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916025.D\0916025c.d			**Vial:**	7
Acqu Date:	09/17/2013 03:29	**Quant Date:**	09/17/2013 09:50	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310084-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310084	**Prep Lot:**		**Report Group:**	
Analysis Method:	504.1	**Prep Method:**			
		Prep Date:			
Prep Ref:					

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:		**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.79	4.61	77759832m	13297822m	5.38	5.90			
1,2,3-Trichloropropane	7.84	7.67	10741173	1913815m	5.19	6.09			
1,2-Dibromo-3-chloropropa	9.43	9.46	149241115	28440110	5.10	5.89			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

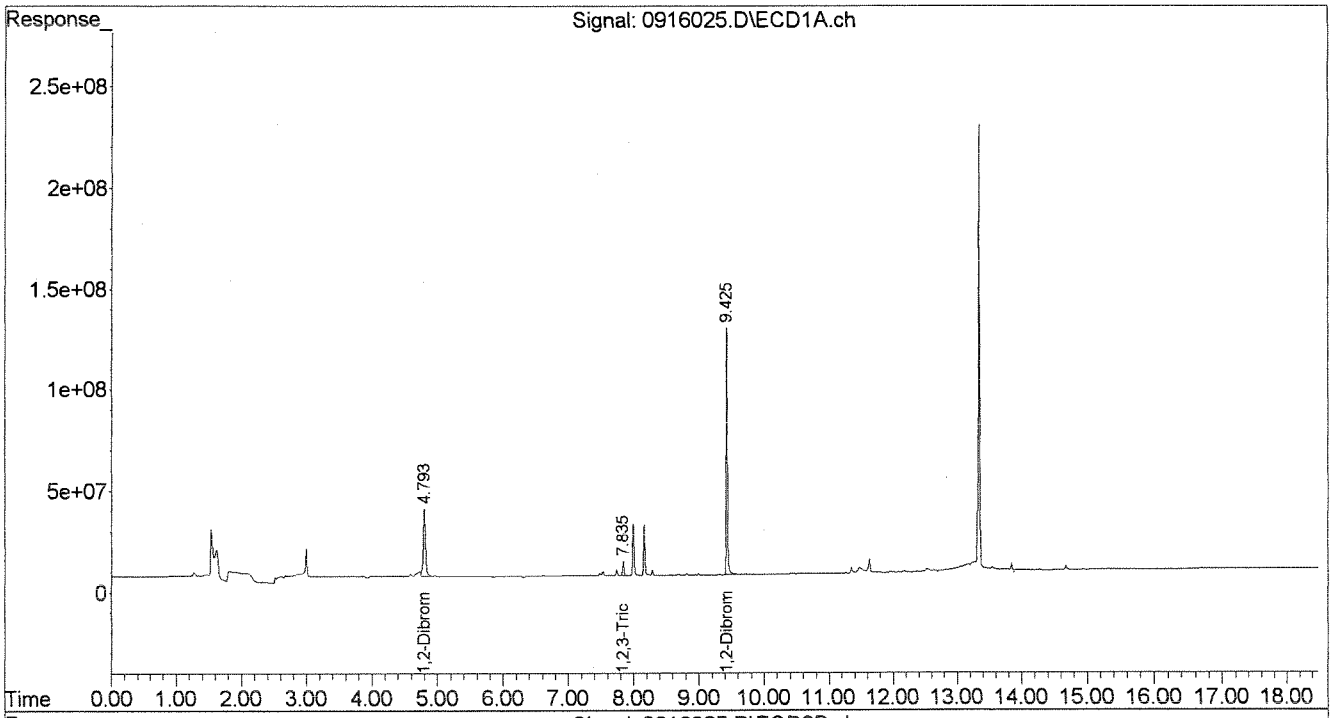
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.79	4.61	77759832	13297822	5.382m	5.903m
2) 1,2,3-Trichloropr...	7.84	7.67	10741173	1913815	5.188	6.085m
3) 1,2-Dibromo-3-chl...	9.43	9.46	149.2E6	28440110	5.096	5.890

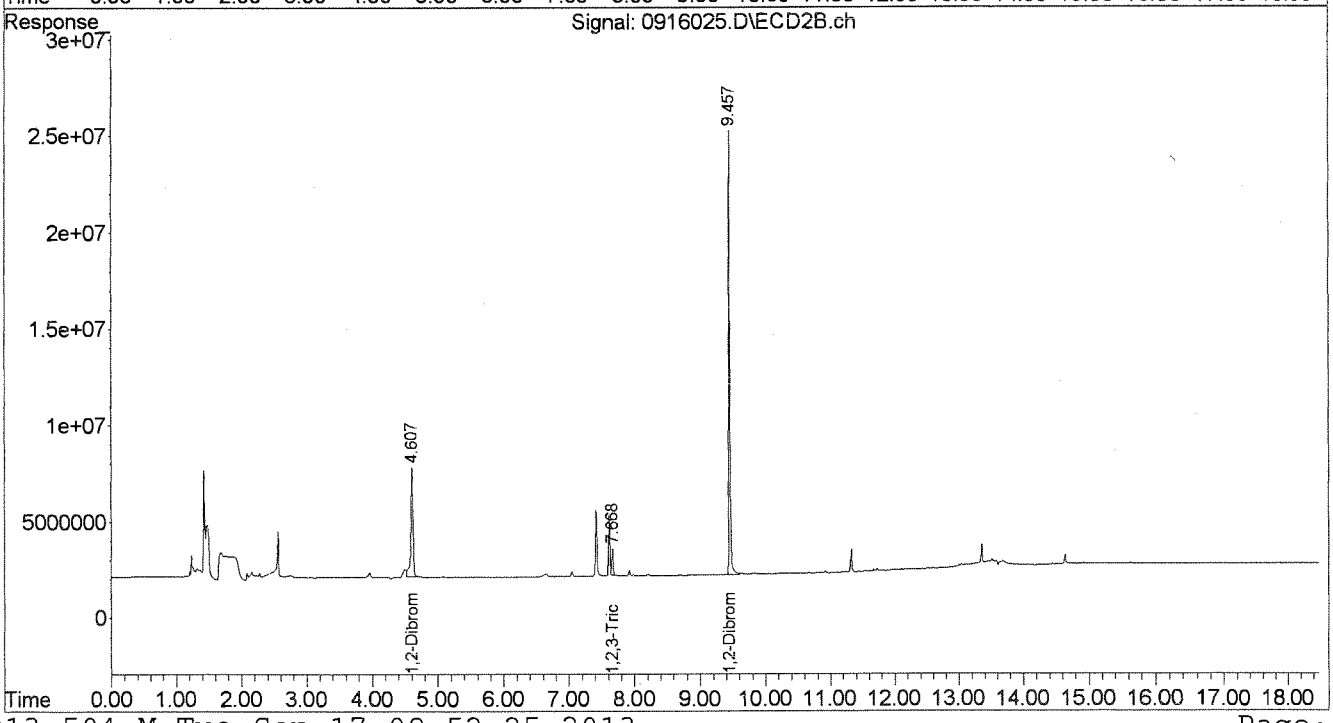
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:50:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

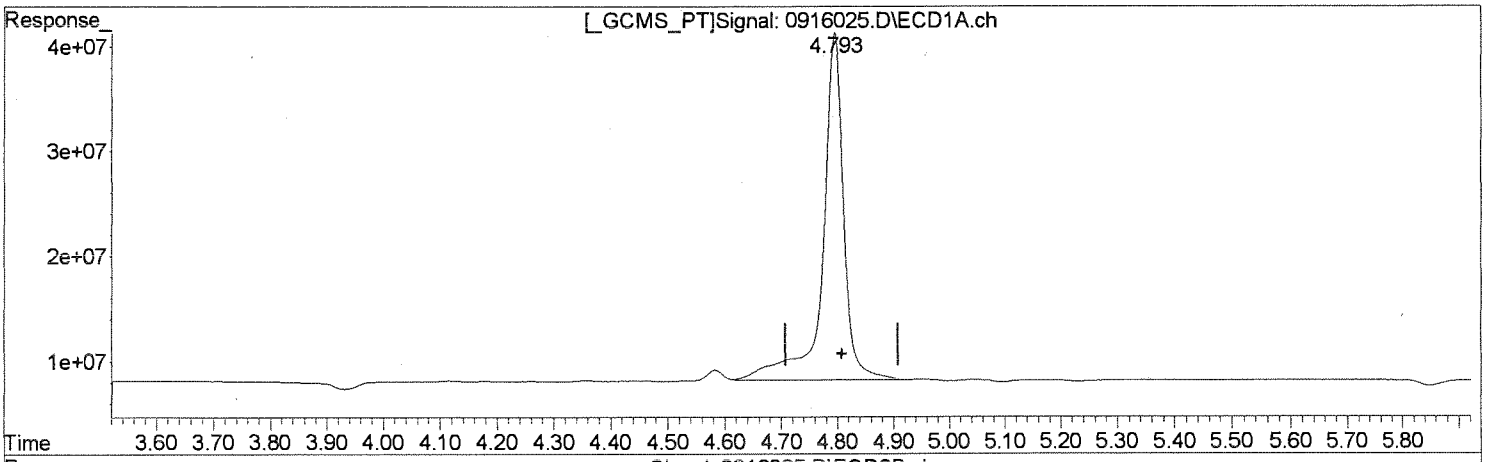


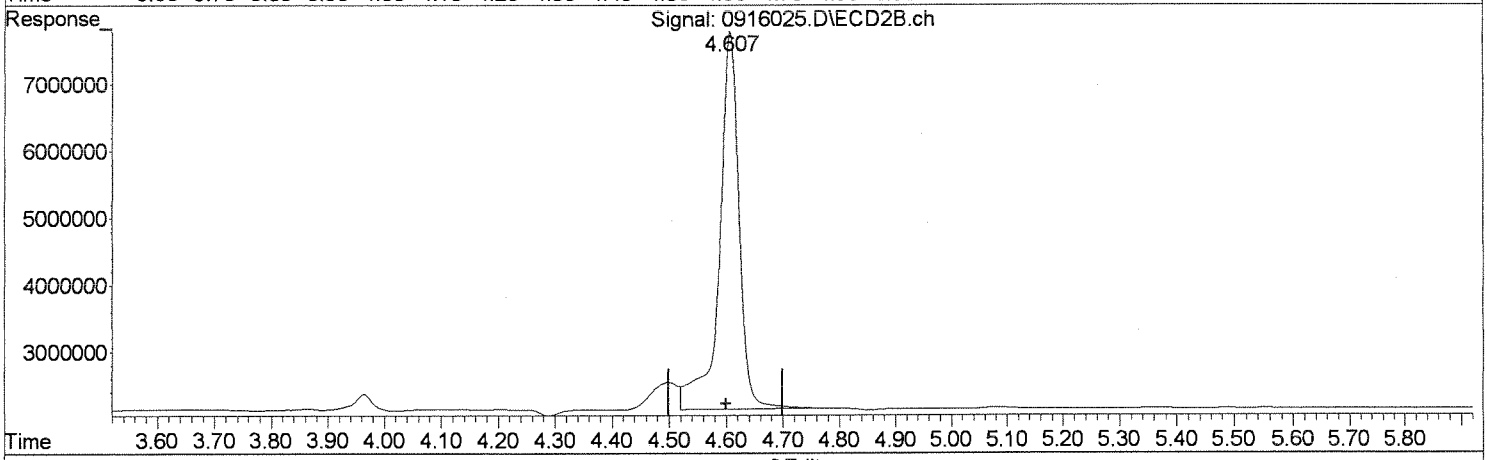


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.793min 6.043 ppb

response 87310441

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.607min 6.058 ppb

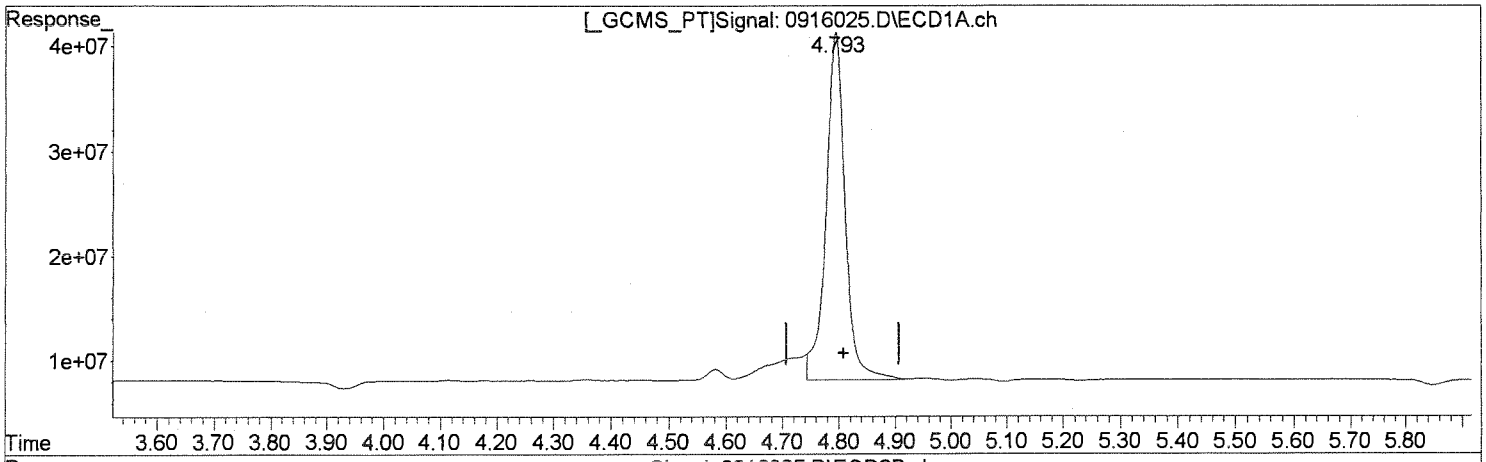
response 13648501

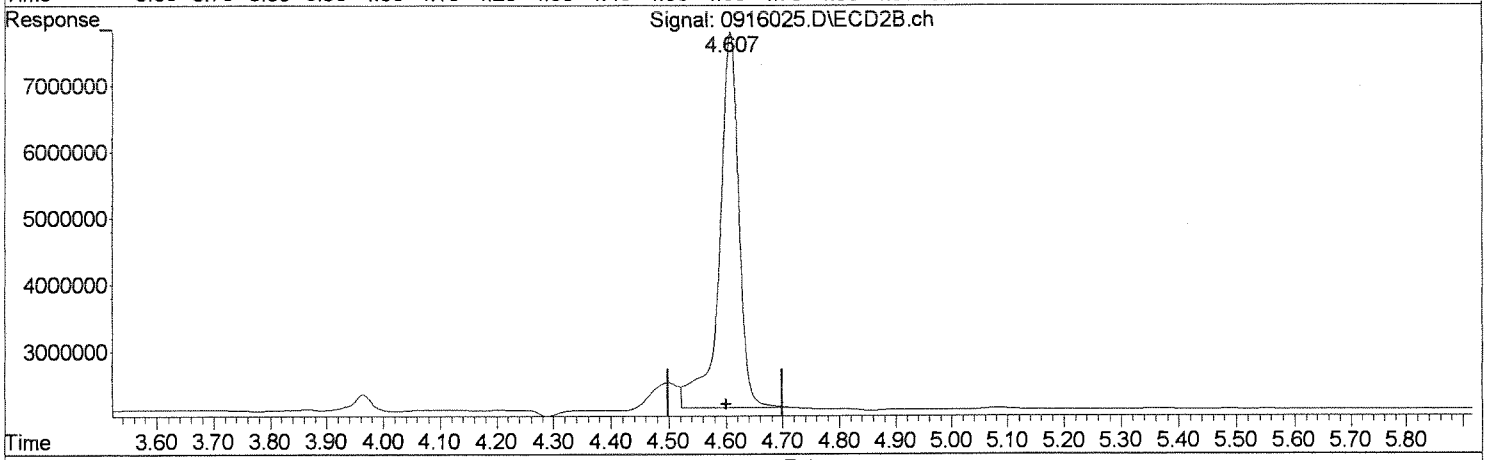
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.793min 5.382 ppb m

response 77759832

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.607min 5.903 ppb m

response 13297822

Manual Integration:

After

Baseline/Shoulder

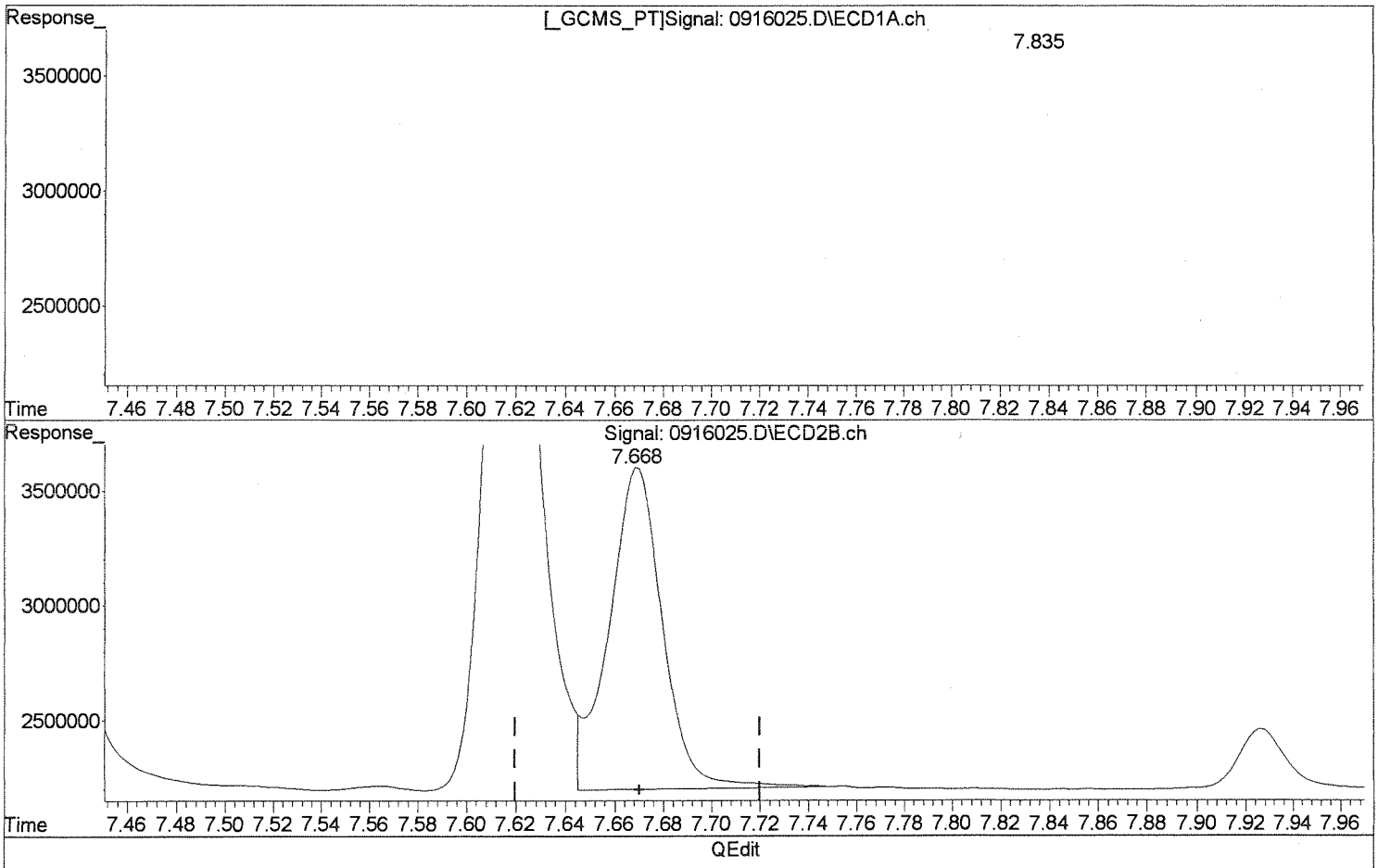
09/17/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)

7.835min 5.188 ppb

response 10741173

Manual Integration:

Before

(2) 1,2,3-Trichloropropane #2 (M)

7.668min 6.846 ppb

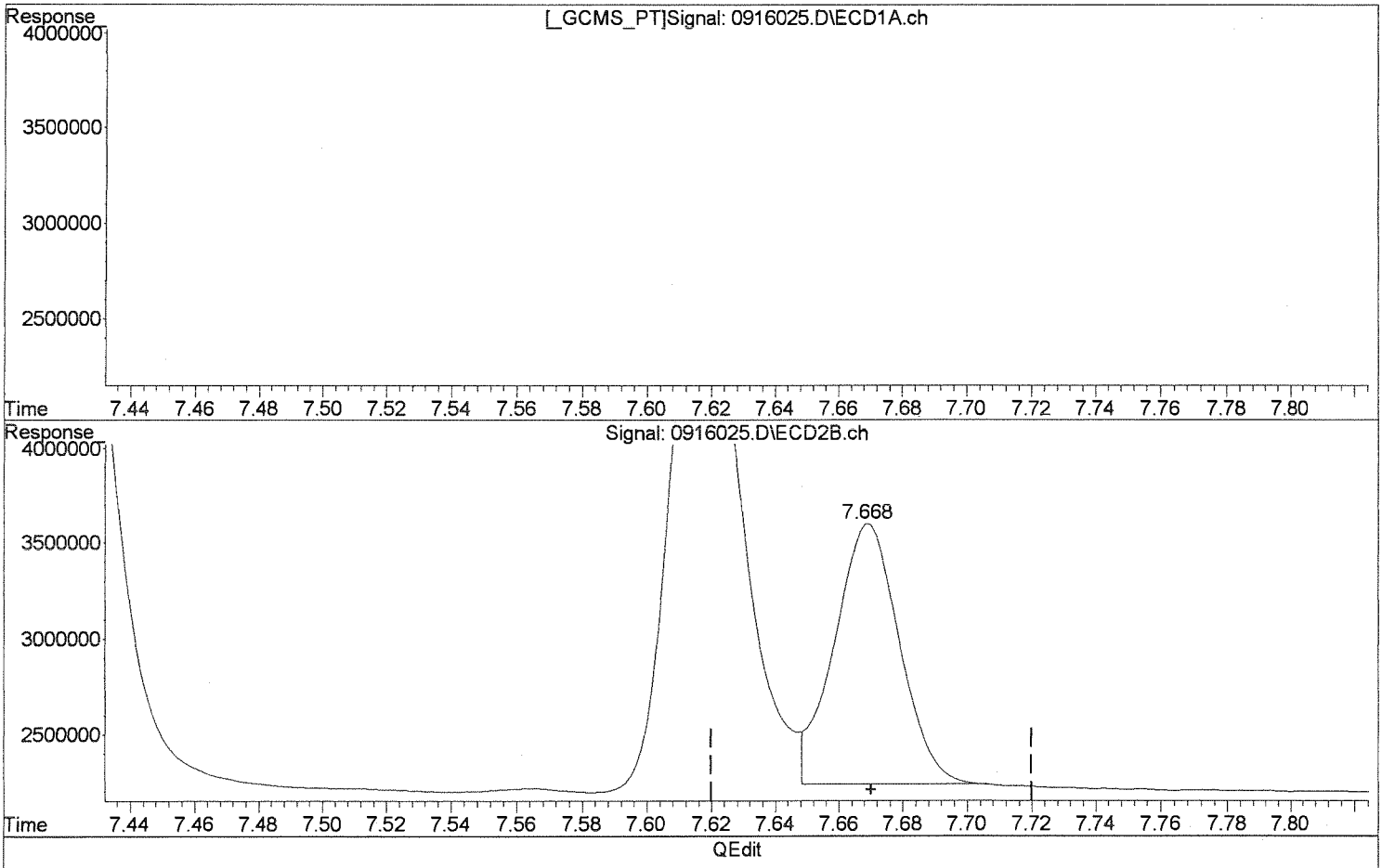
response 2136983

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916025.D
Acq On : 17-Sep-2013, 03:29:04 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV7 CCV Vial : 7
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:41:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(2) 1,2,3-Trichloropropane (M)
7.835min 5.188 ppb
response 10741173

(2) 1,2,3-Trichloropropane #2 (M)
7.668min 6.085 ppb m
response 1913815

Manual Integration:
After
Baseline/Shoulder
09/17/13

(+) = Expected Retention Time

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916035.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.3	14400000	14700000	1	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.3	2070000	2160000	4	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.2	29300000	27200000	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
EPA Method 504.1

Calibration Type: External Standard
Analysis Method: 504.1

Calibration Date: 09/12/2013
Calibration ID: CAL12774
Analysis Lot: KWG1310084
Units: ppb

File ID: J:\GC33\DATA\091613-504\0916035.D\0916035C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,2-Dibromoethane (EDB)	1.3	1.4	2250000	2560000	14	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	1.3	1.5	371000	449000	NA	17	± 30 %	Linear
1,2-Dibromo-3-chloropropane (DBCP	1.3	1.4	4830000	5240000	8	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\091613-504\0916035.D
Lab ID: KWG1310084-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/17/2013 07:40
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\091613-504\0916035.D\0916035C.D
Lab ID: KWG1310084-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/17/2013 07:40
Date Quantitated: 09/17/2013 09:53
Batch ID: KWG1310084
Analysis Method: 504.1
MethodJoinID: MJ1388

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 9/17/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\091613-504\0916035.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\091613-504\0916035.D\0916035c.d			**Vial:**	5
Acqu Date:	09/17/2013 07:40	**Quant Date:**	09/17/2013 09:53	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310084-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	504.1 EDB DBCP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310084	**Prep Lot:**		**Report Group:**	
Analysis Method:	504.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\091213_504.M	**Calibration ID:**	CAL12774
Title:			
MB Ref:		**Method ID:**	MJ1388
		Quant based on Method	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1,2-Dibromoethane (EDB)	4.79	4.61	18314029m	3204523	1.27	1.42			
1,2,3-Trichloropropane	7.84	7.67	2704337	560802	1.31	1.47			
1,2-Dibromo-3-chloropropa	9.43	9.46	33976206	6546002	1.16	1.36			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916035.D
Acq On : 17-Sep-2013, 07:40:34 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:49 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

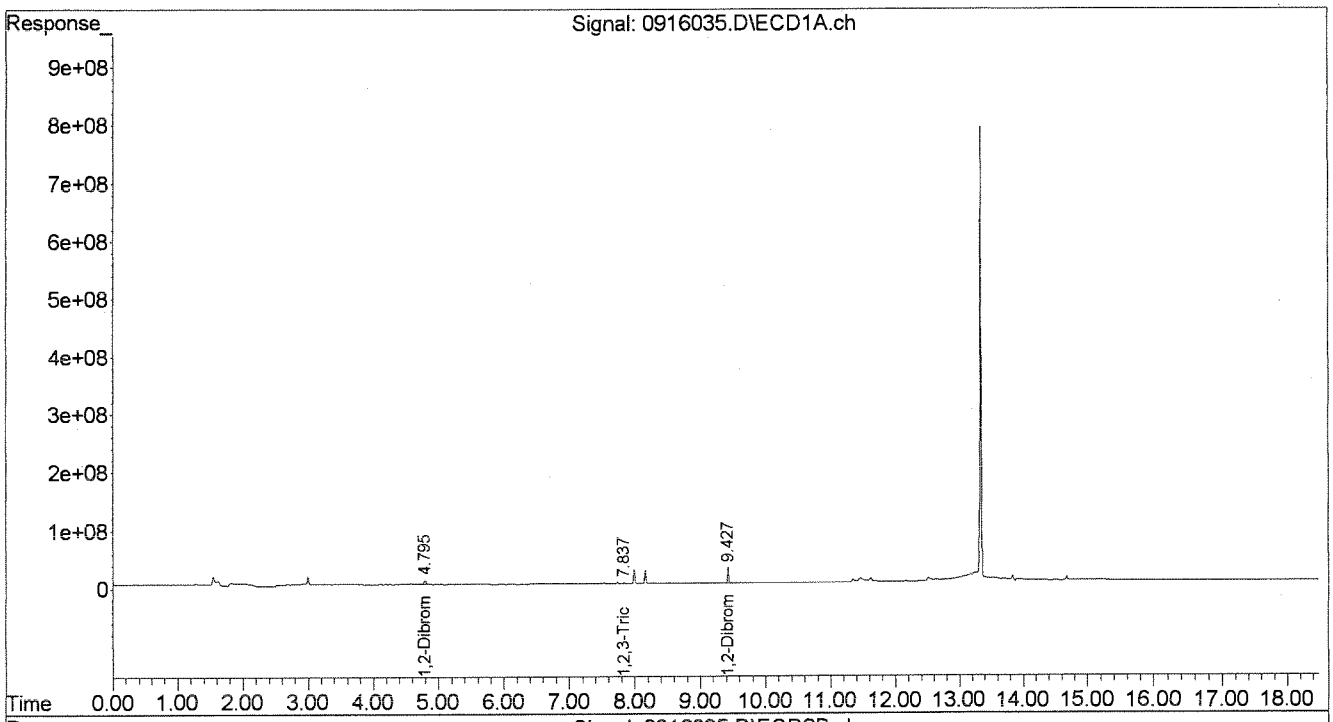
Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
Target Compounds						
1) 1,2-Dibromoethane...	4.79	4.61	18314029	3204523	1.268m	1.422
2) 1,2,3-Trichloropr...	7.84	7.67	2704337	560802	1.306	1.467
3) 1,2-Dibromo-3-chl...	9.43	9.46	33976206	6546002	1.160	1.356

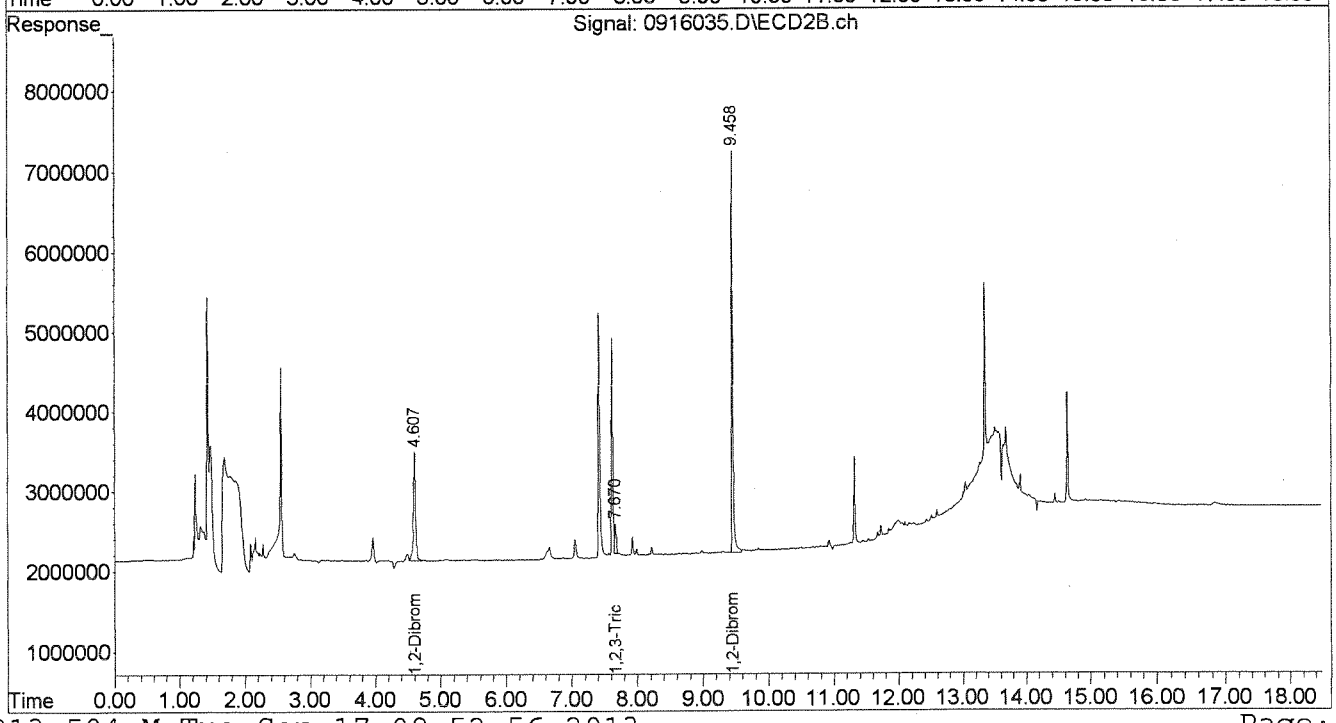
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\091613-504\0916035.D
Acq On : 17-Sep-2013, 07:40:34 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:53:49 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

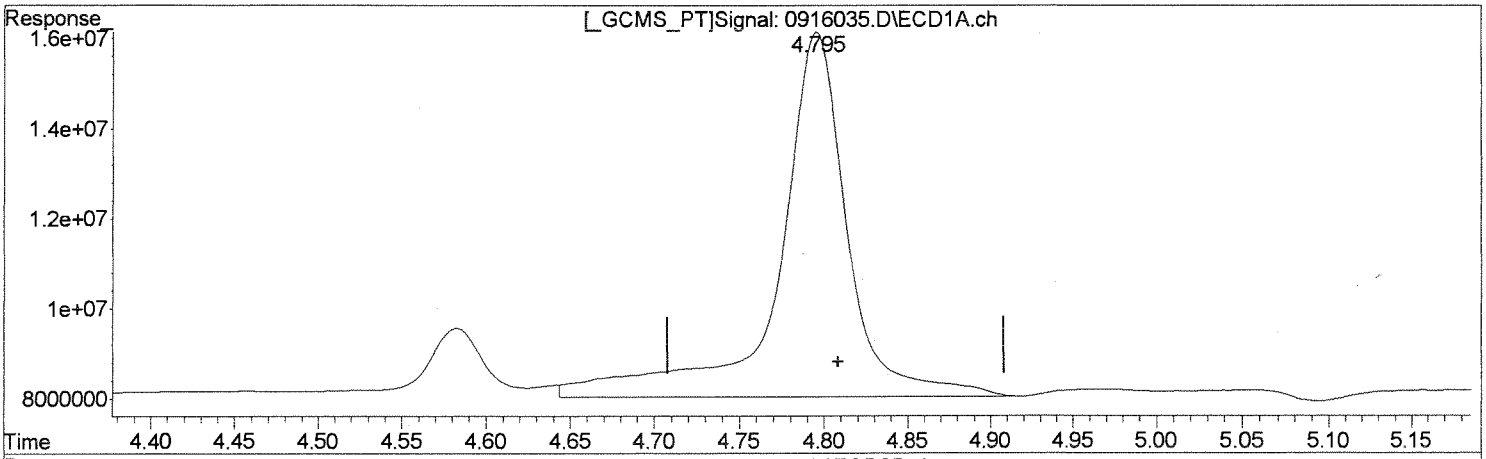


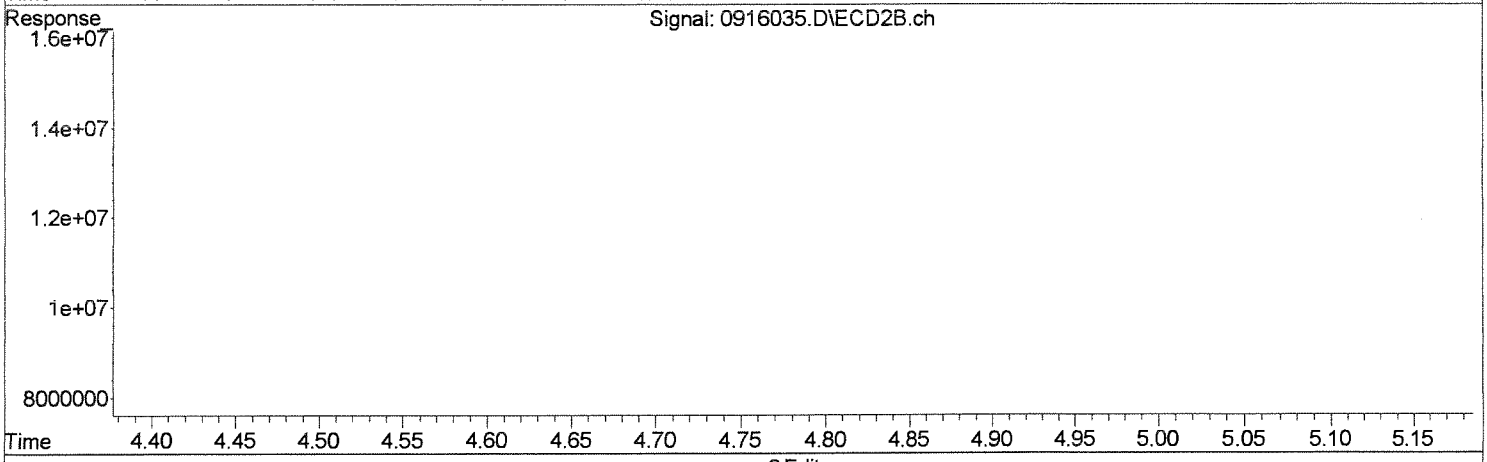


Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916035.D
Acq On : 17-Sep-2013, 07:40:34 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)

4.795min 1.617 ppb

response 23361099

Manual Integration:

Before

(1) 1,2-Dibromoethane (EDB) #2 (M)

4.607min 1.422 ppb

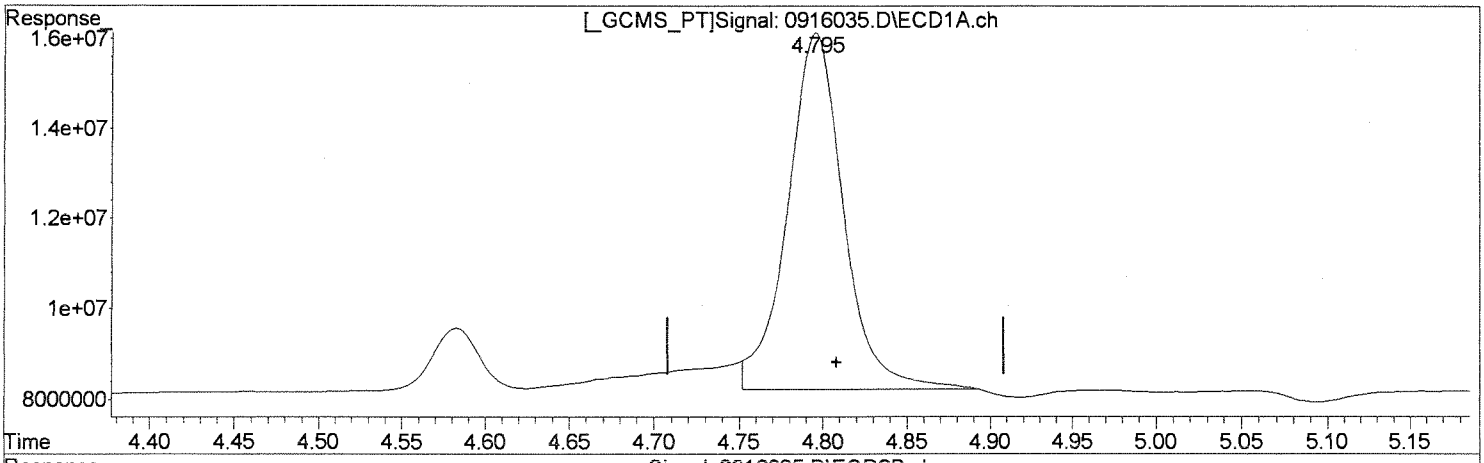
response 3204523

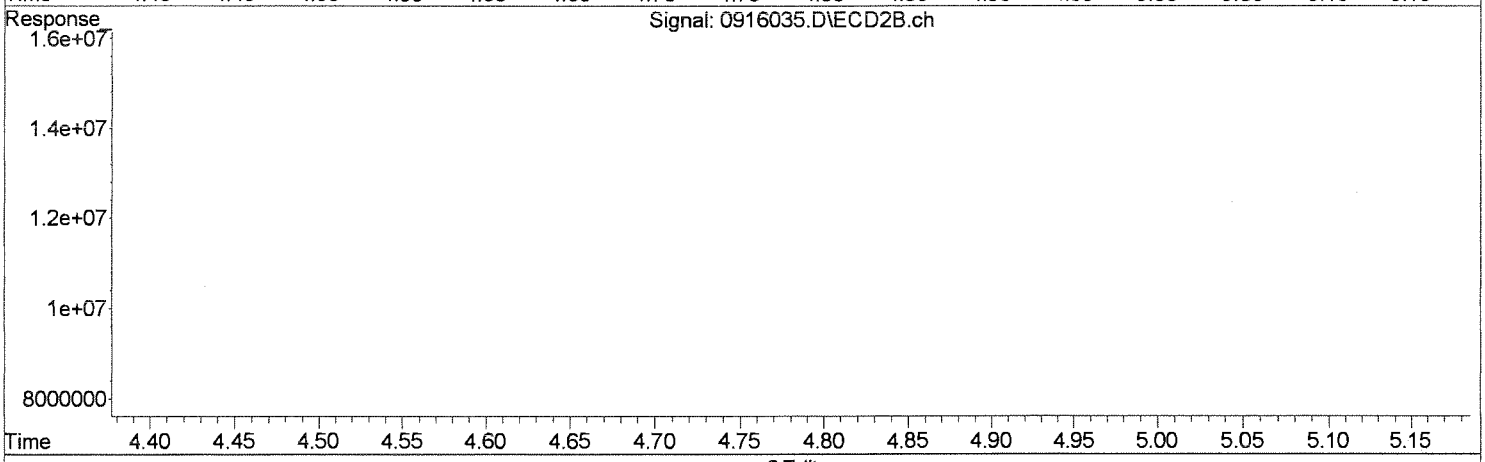
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\091613-504\0916035.D
Acq On : 17-Sep-2013, 07:40:34 Operator : SSullivan
Acq Meth : 504-1.M
Sample : 091013-LEV5 CCV Vial : 5
Misc : Multiplier : 1.00
Quant Time : Sep 17 09:42:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\091213_504.M
Quant Title : 091213_504.M MJ480 CAL12774
QLast Update : Fri Sep 13 15:46:36 2013

Volume Inj. : 5 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(1) 1,2-Dibromoethane (EDB) (M)
4.795min 1.268 ppb m
response 18314029

(1) 1,2-Dibromoethane (EDB) #2 (M)
4.607min 1.422 ppb
response 3204523

Manual Integration:
After
Baseline/Shoulder
09/17/13

(+) = Expected Retention Time

Organic Analysis:
EPA Method 504.1

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1310054	**Prep Method:**	METHOD	**Prep Date:**	09/16/13 02:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1309458-001	Entry Point A	504.1 EDB DBCP 123TCP	DRINKING	36.15ml	2ml
K1309537-001	13E-26MWI01-GW	504.1 EDB DBCP	WATER	36.30ml	2ml
K1309537-002	13E-37MWI02-GW	504.1 EDB DBCP	WATER	37 ~~36~~.01ml	2ml
K1309537-003	13E-81B232-GS	504.1 EDB DBCP	WATER	36.32ml	2ml
K1309537-004	13E-81B234-GS	504.1 EDB DBCP	WATER	36.15ml	2ml
K1309537-005	13E-CentralTB14-GS	504.1 EDB DBCP	WATER	36.12ml	2ml
K1309638-001	13254-BW-4	504.1 EDB DBCP 123TCP	WATER	36.53ml	2ml
K1309638-002	13254-BW-2	504.1 EDB DBCP 123TCP	WATER	36.16ml	2ml
K1309638-004	13253-BW-3	504.1 EDB DBCP 123TCP	WATER	36.56ml	2ml
K1309638-005	13253-Well D	504.1 EDB DBCP 123TCP	WATER	36.34ml	2ml
K1309638-007	13255-BW-5	504.1 EDB DBCP 123TCP	WATER	36.35ml	2ml
K1309638-008	13255-BW-1	504.1 EDB DBCP 123TCP	WATER	35.88ml	2ml
K1309638-010	13255-DUP	504.1 EDB DBCP 123TCP	WATER	36.23ml	2ml
K1309638-011	13255-Rinse	504.1 EDB DBCP 123TCP	WATER	36.08ml	2ml
K1309668-001	13254-STEWART	504.1 EDB DBCP 123TCP	WATER	36.17ml	2ml
KWG1310054-1	Matrix Spike	504.1 EDB DBCP 123TCP	WATER	36.18ml	2ml
KWG1310054-2	Duplicate Matrix Spike	504.1 EDB DBCP 123TCP	WATER	35.70ml	2ml
KWG1310054-3	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.00ml	2ml
KWG1310054-4	Lab Control Sample	504.1 EDB DBCP 123TCP	WATER	35.00ml	2ml
KWG1310054-5	Method Blank	504.1 EDB DBCP 123TCP	WATER	35.00ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1310054-1	K1309638-001	
KWG1310054-2	K1309638-001	
KWG1310054-3		1
KWG1310054-4		2

Comments:

Started By: RHayes Assisted By:

Completed By: RHayes Assisted By:

Reviewed By: Sullivan Date: 9/17/13 Storage: Lab

Training: Yes / No Yes / No

Chain of Custody

Relinquished By: Sullivan Date: 9/16/13

Received By: Sullivan Date: 9/16/13

Extracts Examined: Yes / No

Group ID:	KWG1310054	**Prep Method:**	METHOD	**Prep Date:**	09/16/13 02:00
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1309458-001	1282341					
K1309537-001	1282336					
K1309537-002	1282337					
K1309537-003	1282338					
K1309537-004	1282339					
K1309537-005	1282335					
K1309638-001	1282342					
K1309638-002	1282343					
K1309638-004	1282344					
K1309638-005	1282345					
K1309638-007	1282346					
K1309638-008	1282347					
K1309638-010	1282348					
K1309638-011	1282349					
K1309668-001	1282340					
KWG1310054-1	1282350			DWSTD06-65 B	175uL	
KWG1310054-2	1282351			DWSTD06-65 B	175uL	
KWG1310054-3	1282352			DWSTD06-65 B	175uL	
KWG1310054-4	1282353			DWSTD06-65 B	175uL	
KWG1310054-5	1282354					

Comments:

Started By: RHayes Assisted By:

Completed By: RHayes Assisted By:

Training: Yes / No (No) — Yes / No

Reviewed By: [signature] Date: 9/17/13 Storage: [illegible]

Chain of Custody

Relinquished By: [signature] Date: 9/16/13

Received By: [signature] Date: 9/16/13

Extracts Examined: Yes / No

Sample Preparation Log | CAS - Kelso, WA | Drinking Water Lab

EDB/TCP/DBCP in Water

Serv. Req. IDs: As listed **Method:** EPA 504.1

Lab Code	Client ID	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol.	(g) NaCl added	Final Volume (ml)
K1309458-001		58.90	22.75	36.15		7	2
K1309537-001		59.19	22.89	36.30		7	2
-002		63.63	26.62	37.01		7	2
-003		59.22	22.90	36.32		7	2
-004		59.02	22.87	36.15		7	2
-005		58.87	22.75	36.12		7	2
K1309638-001		59.37	22.84	36.53		7	2
-002		59.22	23.06	36.16		7	2
-004		59.51	22.95	36.56		7	2
-005		59.35	23.01	36.34		7	2
-007		59.30	22.95	36.35		7	2
-008		58.77	22.89	35.88		7	2
-010		59.11	22.88	36.23		7	2
-011		58.90	22.82	36.08		7	2

BATCH ID:

Comments: K1309638-013 Changed to K1309638-001. Insufficient Sample for DOD QC Requirement K1305537

Spike Information

		XP
Matrix Spike ID/Conc:	DW5TD06-MSB 50 ppb	9-27-13
ICV Spike ID/Conc:	DW5TD06-S6A 50ppb	12-20-13

Start / Stop Time: 2:00 / 5:30

Extract Information

Start Date: 9/16/13
End Date: 9/16/13
Hexane Lot # DH772
NaCl Lot # 7/25/13 40954
Balance ID# K-Balance-08

Personnel and Bench Sheet Review

Started By: [signature]
Completed By: [signature]
Assisted By:
Assisted By:
Bench Sheet Reviewed By/Date Reviewed: Sullivan 9/17/13
Extracts Examined: (Yes) No

Sample Preparation Log | CAS - Kelso, WA | Drinking Water Lab

EDB/TCP/DBCP in Water

Serv. Req. IDs: As Listed | Method: EPA 504.1

LCJ 9-16-13 EE Lab Code	Client ID	Wt. of sample and vial(g)	Wt. of vial (g)	Sample Amount (mL)	Spike Vol. (ul)	NaCl added (g)	Final Volume (ml)
~~K1309638-013~~		59.11				7	2
MB				35.00		7	2
LCS 1				35.00	175	7	2
LCS 2				35.00	175	7	2
K1309638-001	MS	58.97	22.79	36.18	175	7	2
K1309638-001	DMS	58.46	22.76	35.70	175	7	2
K1309608-001		59.11	22.94	36.17		7	2

BATCH ID:

Comments:

Personnel and Bench Sheet Review

Started By: LCJ | Assisted By:

Completed By: | Assisted By:

Bench Sheet Reviewed By/Date Reviewed: SSullivan 9/17/13 | Extracts Examined: Yes / No

Preparation Information Benchsheet

Prep Run#: 191822 **Prep WorkFlow:** OrgMicroExtAq14 **Status:** Draft

Team: Semivoa GC **Prep Method:** Method **Prep Date/Time:** 9/16/13 01:24 PM

Number of Copies to make: 4

#	Lab Code	Client ID	B#	√	Test	Matrix	Amt Ext.	pH	Int Vol	Final Vol	Surr Added	Spike Added
1	K1309458-001	Entry Point A	.03		504.1/EDB DBCP 123TCP	Drinking Water						
2	K1309668-001	13254-STEWART	.02		504.1/EDB DBCP 123TCP	Water						
3	K1309537-001	13E-26MWI01-GW	.08		504.1/EDB DBCP	Water						
4	K1309537-002	13E-37MWI02-GW	.08		504.1/EDB DBCP	Water						
5	K1309537-003	13E-81B232-GS	.07		504.1/EDB DBCP	Water						
6	K1309537-004	13E-81B234-GS	.07		504.1/EDB DBCP	Water						
7	K1309537-005	13E-CentralTB14-GS	.07		504.1/EDB DBCP	Water						
8	K1309638-001	13254-BW-4	.16		504.1/EDB DBCP 123TCP	Water						
9	K1309638-002	13254-BW-2	.18		504.1/EDB DBCP 123TCP	Water						
10	K1309638-004	13253-BW-3	.18		504.1/EDB DBCP 123TCP	Water						
11	K1309638-005	13253-Well D	.16		504.1/EDB DBCP 123TCP	Water						
12	K1309638-007	13255-BW-5	.17		504.1/EDB DBCP 123TCP	Water						
13	K1309638-008	13255-BW-1	.18		504.1/EDB DBCP 123TCP	Water						
14	K1309638-010	13255-DUP	.16		504.1/EDB DBCP 123TCP	Water						
15	K1309638-011	13255-Rinse	.16		504.1/EDB DBCP 123TCP	Water						

Comments: used for ID only

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Due 9/23

Sel	Run	Location	Method Sample Name	Datafile	SeqTable Calib:RF:RT
No	1	Vial 100	504-1 HEXANE PRIMER	0916001	F:01:01
No	2	Vial 1	504-1 091613-LEV1	0916002	F:02:01
No	3	Vial 2	504-1 091613-LEV2	0916003	F:03:01
No	4	Vial 3	504-1 091613-LEV3	0916004	F:04:01
No	5	Vial 4	504-1 091613-LEV4	0916005	F:05:01
No	6	Vial 5	504-1 091613-LEV5	0916006	F:06:01
No	7	Vial 6	504-1 091213-LEV6	0916007	F:07:01
No	8	Vial 7	504-1 091613-LEV7	0916008	F:08:01
No	9	Vial 8	504-1 091613-LEV8	0916009	F:09:01
No	10	Vial 9	504-1 091613-ICV	0916010	F:10:01
No	11	Vial 5	504-1 091613-LEV5 CCV	0916011	F:11:01
No	12	Vial 100	504-1 IB	0916012	F:12:01
No	13	Vial 11	504-1 091613-LCS 1	0916013	F:13:01
No	14	Vial 12	504-1 091613-LCS 2	0916014	F:14:01
No	15	Vial 13	504-1 091613-MB	0916015	F:15:01
No	16	Vial 14	504-1 K1309458-001	0916016	F:16:01
No	17	Vial 15	504-1 K1309537-001	0916017	F:17:01
No	18	Vial 16	504-1 K1309537-002	0916018	F:18:01
No	19	Vial 17	504-1 K1309537-003	0916019	F:19:01
No	20	Vial 18	504-1 K1309537-004	0916020	F:20:01
No	21	Vial 19	504-1 K1309537-005	0916021	F:21:01
No	22	Vial 20	504-1 K1309638-001	0916022	F:22:01
No	23	Vial 21	504-1 K1309638-001 MS	0916023	F:23:01
No	24	Vial 22	504-1 K1309638-001 DMS	0916024	F:24:01

Analysis: KWG1310084
CAL12774
Run #358725

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	25	Vial 7	504-1 091013-LEV7 CCV	0916025	F:25:01	
No	26	Vial 100	504-1 IB	0916026	F:26:01	
No	27	Vial 23	504-1 K1309638-002	0916027	F:27:01	
No	28	Vial 24	504-1 K1309638-004	0916028	F:28:01	
No	29	Vial 25	504-1 K1309638-005	0916029	F:29:01	
No	30	Vial 26	504-1 K1309638-007	0916030	F:30:01	
No	31	Vial 27	504-1 K1309638-008	0916031	F:31:01	
No	32	Vial 28	504-1 K1309638-010	0916032	F:32:01	
No	33	Vial 29	504-1 K1309638-011	0916033	F:33:01	
No	34	Vial 30	504-1 K1309668-001	0916034	F:34:01	
No	35	Vial 5	504-1 091013-LEV5 CCV	0916035	F:35:01	
No	36	Vial 100	504-1 IB	0916036	F:36:01	
No	37	none	PARK SLEEP	0916037	F:37:01	

Pesticides/PCBs

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Validation Package

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Validation Package

QC Reports

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Pesticides/PCBs by EPA method 508.1

Extraction Method: METHOD
Analysis Method: 508.1

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
13254-BW-4	K1309638-001	101
13254-BW-2	K1309638-002	101
13253-BW-3	K1309638-004	96
13253-Well D	K1309638-005	99
13255-BW-1	K1309638-008	100
13255-DUP	K1309638-010	98
13255-Rinse	K1309638-011	92
Method Blank	KWG1310289-5	99
13254-BW-4MS	KWG1310289-1	93
Lab Control Sample	KWG1310289-3	89

Surrogate Recovery Control Limits (%)

Sur1 =	4,4'-Dibromooctafluorobiphenyl	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013

Matrix Spike Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310289

13254-BW-4MS
KWG1310289-1
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
gamma-BHC (Lindane)	ND	0.0893	0.0971	92	65-135
Heptachlor	ND	0.0923	0.0971	95	65-135
Heptachlor Epoxide	ND	0.102	0.0971	105 #	65-135
gamma-Chlordane	ND	0.0948	0.0971	98	65-135
alpha-Chlordane	ND	0.0947	0.0971	98	65-135
Endrin	ND	0.102	0.0971	105	65-135
Methoxychlor	ND	0.120	0.0971	124	65-135
Aroclor 1248	ND	0.433	0.485	89	65-135

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013

Lab Control Spike Summary
Pesticides/PCBs by EPA method 508.1

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310289

Lab Control Sample
KWG1310289-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
gamma-BHC (Lindane)	0.0917	0.100	92	70-130
Heptachlor	0.0982	0.100	98	70-130
Heptachlor Epoxide	0.0996	0.100	100	70-130
gamma-Chlordane	0.0979	0.100	98	70-130
alpha-Chlordane	0.0982	0.100	98	70-130
Endrin	0.107	0.100	107	70-130
Methoxychlor	0.116	0.100	116	70-130
Aroclor 1248	0.449	0.500	90	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013
Time Analyzed: 20:42

Method Blank Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: Method Blank
Lab Code: KWG1310289-5

Instrument ID: GC33
File ID: J:\GC33\DATA\092613-508\0926012.D

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low
Extraction Lot: KWG1310289

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310289-3	J:\GC33\DATA\092613-508\0926010.D	09/26/13	19:48
Lab Control Sample	KWG1310289-3	J:\GC33\DATA\092613-508\0926011.D	09/26/13	20:15
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/26/2013
Time Analyzed: 19:48

Lab Control Sample Summary
Pesticides/PCBs by EPA method 508.1

Sample Name: Lab Control Sample
Lab Code: KWG1310289-3

Extraction Method: METHOD
Analysis Method: 508.1

Instrument ID: GC33
File ID: J:\GC33\DATA\092613-508\0926010.D

Level: Low
Extraction Lot: KWG1310289

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310289-5	J:\GC33\DATA\092613-508\0926012.D	09/26/13	20:42
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/20/2013
Sample Matrix:	Water	**Date Analyzed:**	09/26/2013
		Time Analyzed:	20:15

Lab Control Sample Summary
Pesticides/PCBs by EPA method 508.1

Sample Name:	Lab Control Sample	**Instrument ID:**	GC33
Lab Code:	KWG1310289-3	**File ID:**	J:\GC33\DATA\092613-508\0926011.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	508.1	**Extraction Lot:**	KWG1310289

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310289-5	J:\GC33\DATA\092613-508\0926012.D	09/26/13	20:42
13254-BW-4	K1309638-001	J:\GC33\DATA\092613-508\0926014.D	09/26/13	21:35
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926015.D	09/26/13	22:01
13254-BW-4MS	KWG1310289-1	J:\GC33\DATA\092613-508\0926016.D	09/26/13	22:28
13254-BW-2	K1309638-002	J:\GC33\DATA\092613-508\0926017.D	09/26/13	22:55
13253-BW-3	K1309638-004	J:\GC33\DATA\092613-508\0926018.D	09/26/13	23:22
13253-Well D	K1309638-005	J:\GC33\DATA\092613-508\0926019.D	09/26/13	23:49
13255-BW-1	K1309638-008	J:\GC33\DATA\092613-508\0926020.D	09/27/13	00:16
13255-DUP	K1309638-010	J:\GC33\DATA\092613-508\0926021.D	09/27/13	00:43
13255-Rinse	K1309638-011	J:\GC33\DATA\092613-508\0926022.D	09/27/13	01:10
13254-BW-2	K1309638-002	J:\GC33\DATA\100813-508\1008010.D	10/08/13	18:28

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Validation Package

Raw Data

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.029	0.029	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	101	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926014.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 21:35
Date Quantitated: 09/30/2013 15:20
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	5A
	Pentachloronitrobenzene {2}	11.9	NA	NA	1
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926014.D\0926014C.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 21:35
Date Quantitated: 09/30/2013 15:20
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SD
	Pentachloronitrobenzene {2}	11.9	NA	NA	I
	Pentachloronitrobenzene {3}	11.9	NA	NA	I
	Pentachloronitrobenzene{4}	11.9	NA	NA	I
	Pentachloronitrobenzene{5}	11.9	NA	NA	I

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926014.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926014.D\0926014c.d			**Vial:**	7
Acqu Date:	09/26/2013 21:35	**Quant Date:**	09/30/2013 15:20	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-001				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284677	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1231088877	327153356	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1231088877	327153356	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1231088877	327153356	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1231088877	327153356	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1231088877	327153356	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38		10.42	+0.01	400958187	88389532	50.35	42.99			101OK
							%Recovery =	101 OK	86 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)					0	0	0.0000	0.0000	0.00041U	0.00041U	0.00041U
1	Heptachlor			12.92	+0.06	0	360596	0.0000	0.1640	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.46	+0.03	14.45	+0.01	123833885	30467577	19.29	14.52	0.037	0.028	**0.028** i
1	gamma-Chlordane	14.64	+0.01			10677855	0	1.67	0.0000	0.0032J	0.00083U	0.00083U
1	alpha-Chlordane	14.83	-0.01	14.94		2534634m	205474m	0.4160	0.0990	0.00081J	0.00065U	0.00065U
1	Endrin					0	0	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor					0d	0	0.0000	0.0000	0.0013U	0.0013U	0.0013U
3	Aroclor 1016					0d	0d	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0d	0d	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0d	0d	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926014.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926014.D\0926014c.d			**Vial:**	7
Acqu Date:	09/26/2013 21:35	**Quant Date:**	09/30/2013 15:20	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-001				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 15:20:18 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.896	11.900	1231.1E6	327.2E6	50.000	50.000	
26)	I	Pentachlo...	11.896	11.900	1231.1E6	327.2E6	50.000	50.000	
36)	I	Pentachlo...	11.896	11.900	1231.1E6	327.2E6	50.000	50.000	
57)	I	Pentachlo...	11.896	11.900	1231.1E6	327.2E6	50.000	50.000	
68)	I	Pentachlo...	11.896	11.900	1231.1E6	327.2E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.417	401.0E6	88389532	50.353	42.993	
		Target Compounds							
3)	m	alpha-BHC	0.000	11.124	0	172493	N.D.	0.955	#
7)	m	delta-BHC	12.346	12.803	2793520	630810	1.305	1.347	
8)	m	Heptachlor	0.000	12.916f	0	360596	N.D.	0.164	#
9)	m	Aldrin	13.369	0.000	1631702	0	0.223	N.D.	#
10)	m	Heptachlo...	14.303	14.453f	3346804	30467577	0.486m	13.830	#
11)	m	Heptachlo...	14.464	14.453	123.8E6	30467577	19.292	14.515	
12)	m	gamma-Chl...	14.641	0.000	10677855	0	1.669	N.D.	#
13)	m	alpha-Chl...	14.826f	14.943	2534634	205474	0.416m	0.099m	#
14)	m	4,4'-DDE	0.000	15.266f	0	283847	N.D.	0.765	#
15)	m	Endosulfan I	0.000	14.994f	0	1348001	N.D.	0.699	#
18)	m	4,4'-DDD	0.000	15.933	0	411789	N.D.	0.303	#
19)	m	Endosulfa...	15.978f	0.000	2330144	0	0.524	N.D.	#
21)	m	Endrin Al...	0.000	16.429	0	488021	N.D.	0.346	#
23)	m	Endosulfa...	16.922	16.708	4449198	2468776	1.193	1.779	#
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

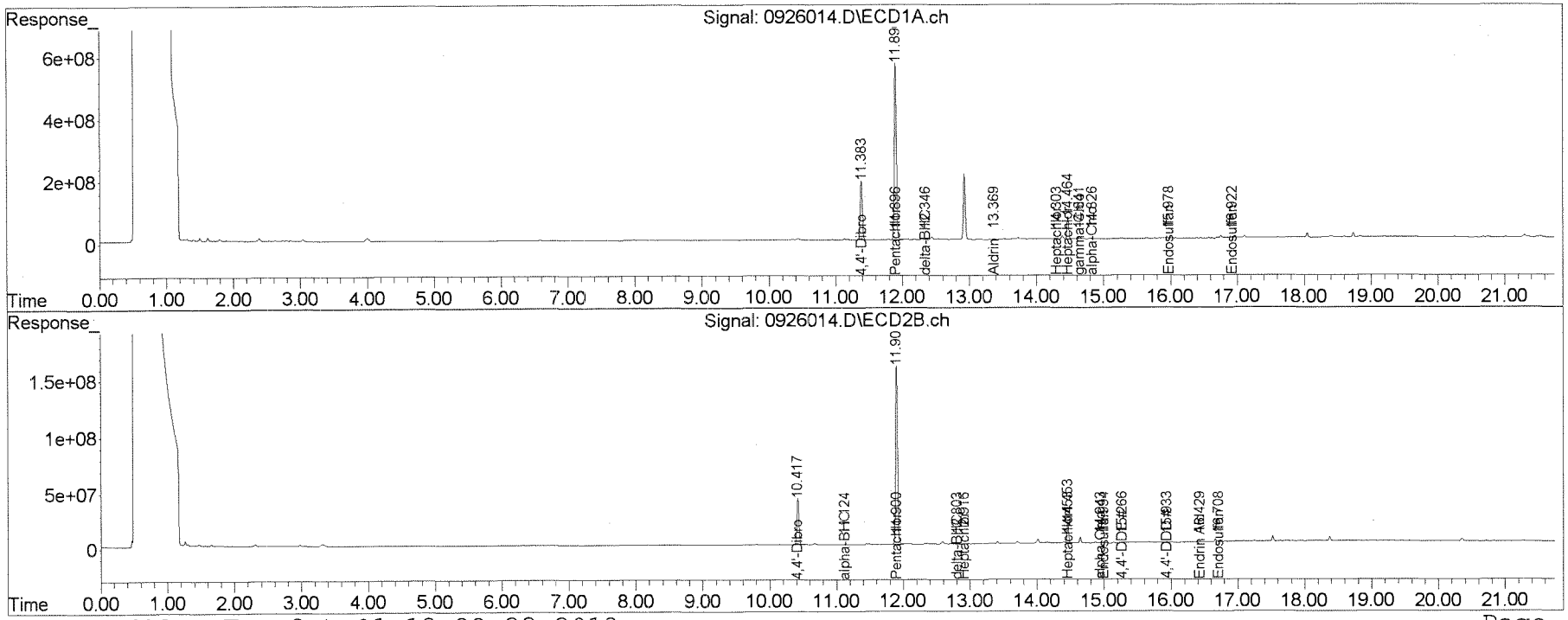
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 15:20:18 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

749

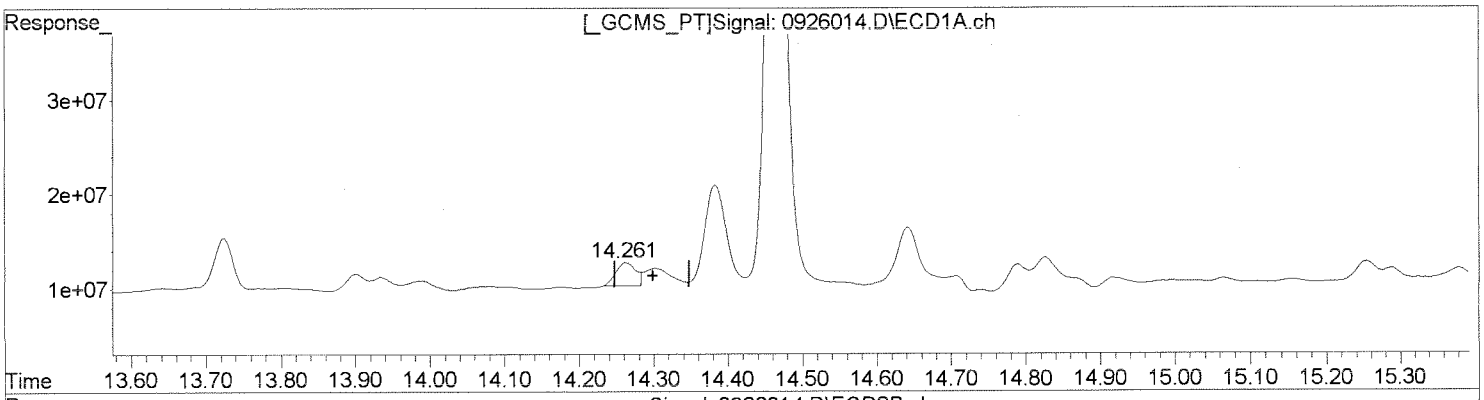


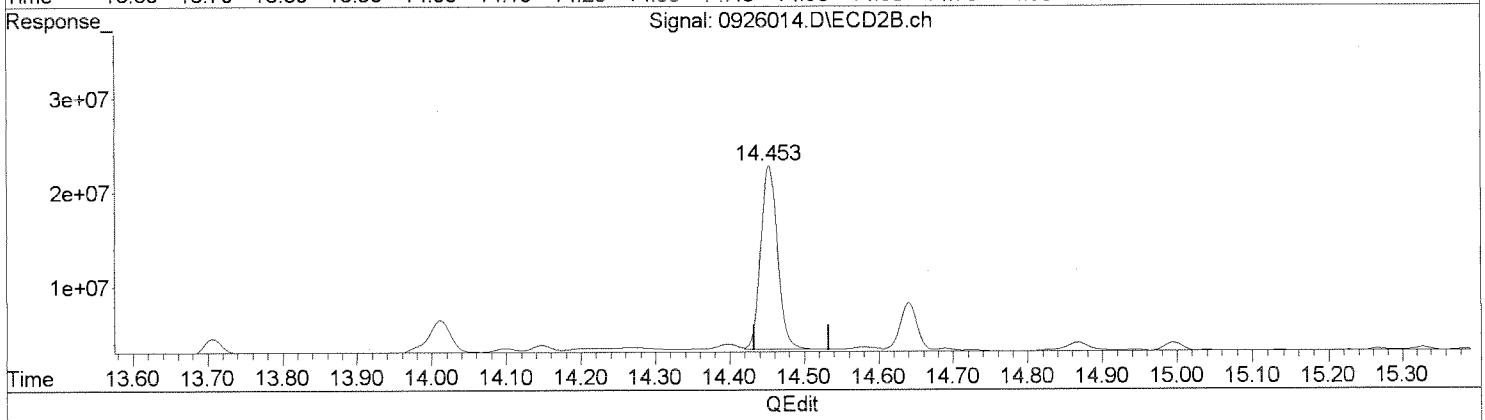
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:48:09 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.261min 0.658 ug/L
response 4533203

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 13.830 ug/L
response 30467577

Manual Integration:
Before

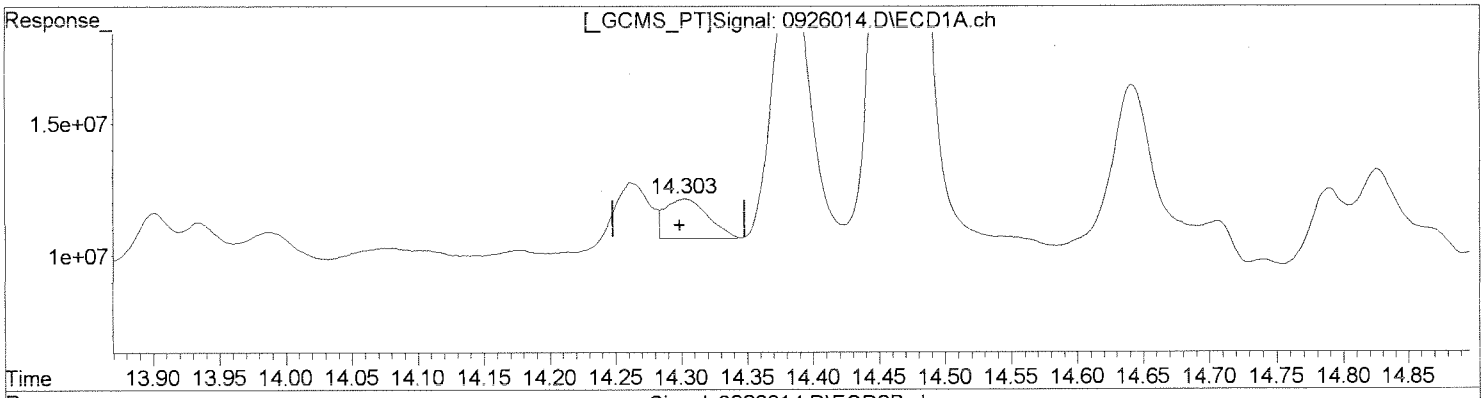
(+) = Expected Retention Time

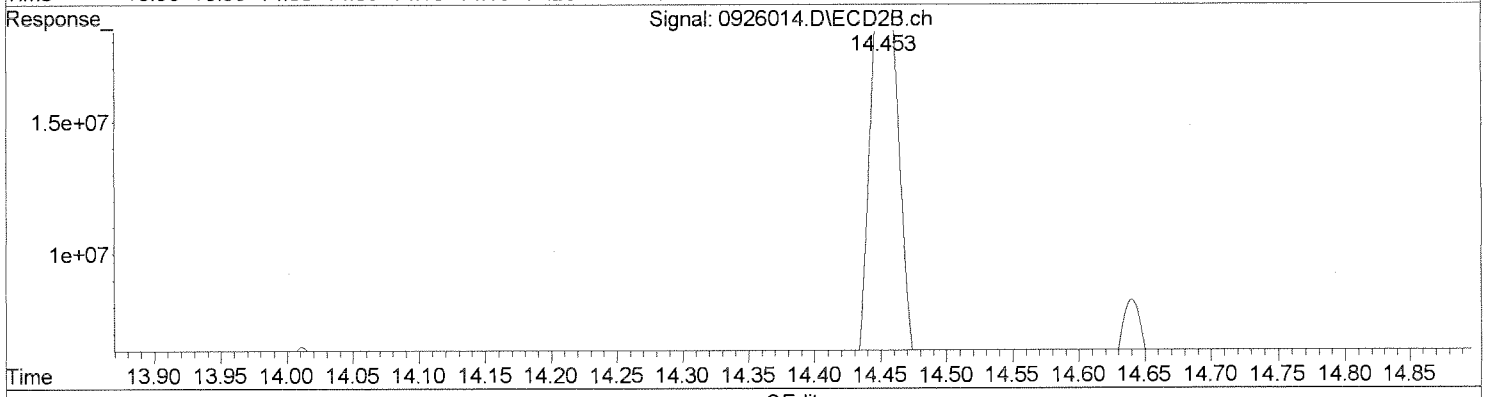
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:48:09 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.303min 0.486 ug/L m
response 3346804

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 13.830 ug/L
response 30467577

Manual Integration:
After
Wrong Peak
09/30/13

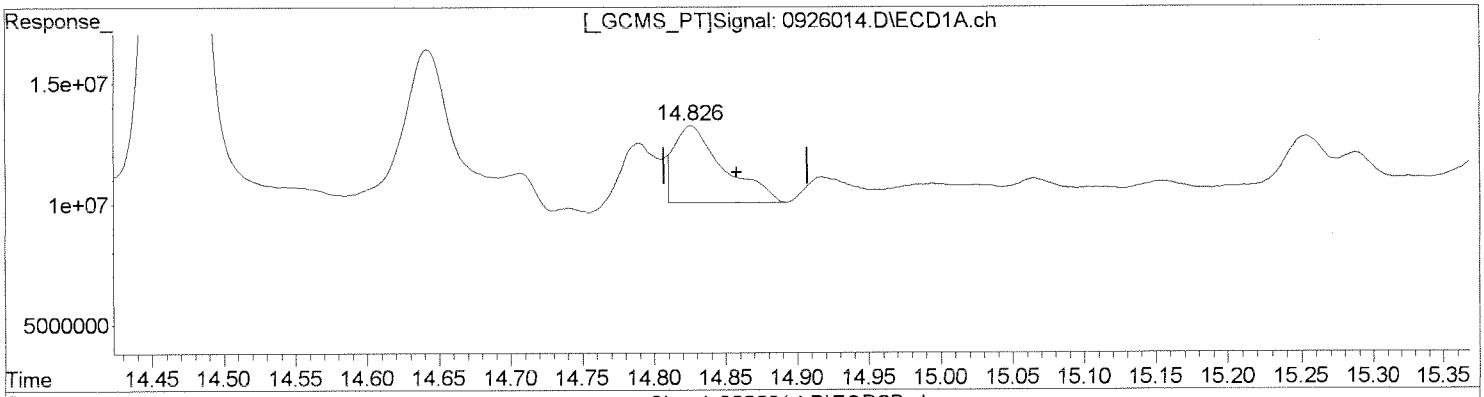
(+) = Expected Retention Time

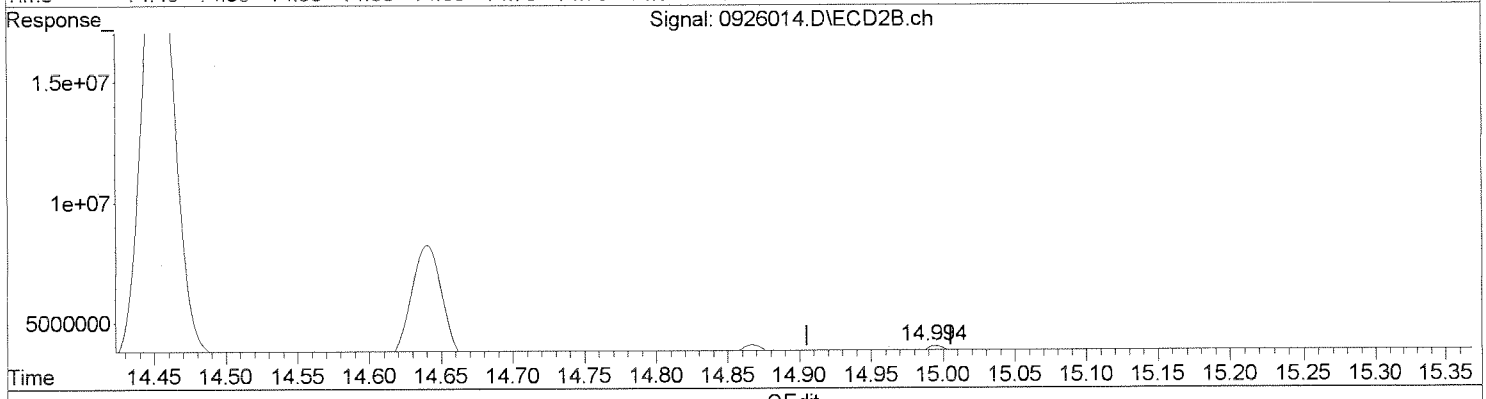
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:56:56 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(13) alpha-Chlordane (m)
14.826min 1.240 ug/L
response 7563172

(13) alpha-Chlordane #2 (m)
14.994min 0.646 ug/L
response 1348001

Manual Integration:
Before

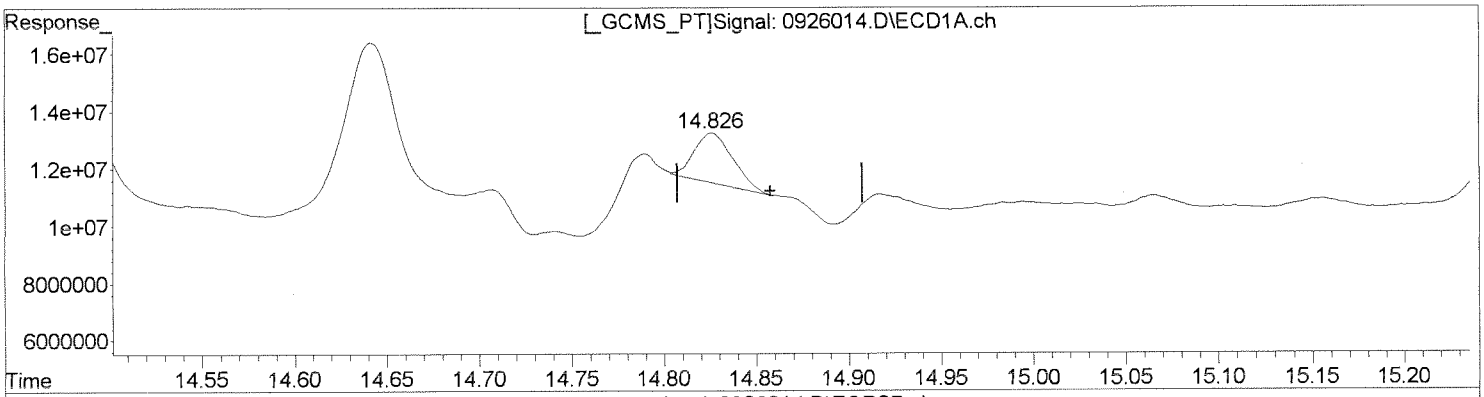
(+) = Expected Retention Time

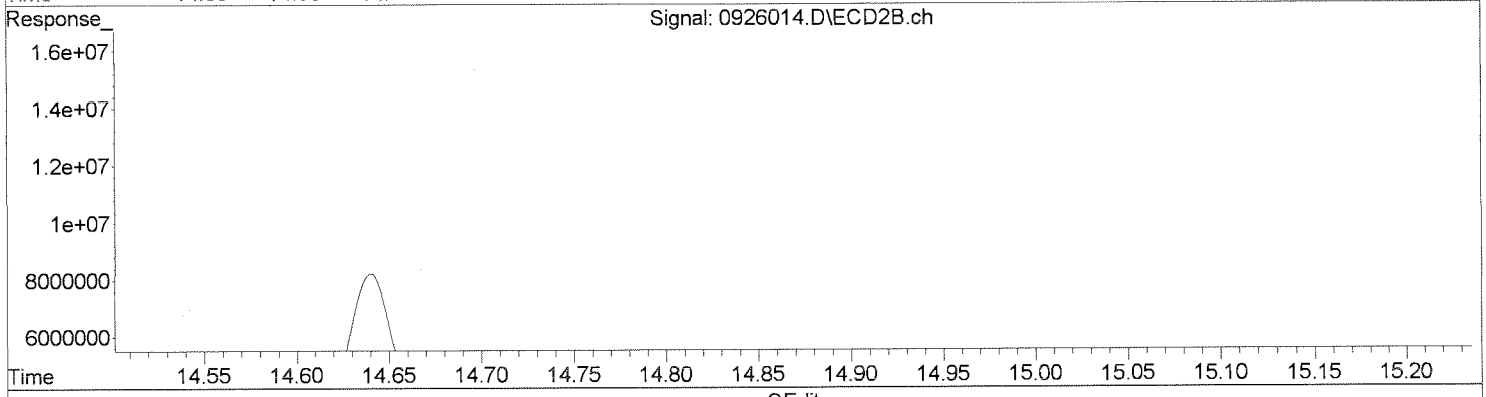
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:56:56 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(13) alpha-Chlordane (m)
14.826min 0.416 ug/L m
response 2534634

(13) alpha-Chlordane #2 (m)
14.994min 0.646 ug/L
response 1348001

Manual Integration:
After
Baseline/Shoulder
09/30/13

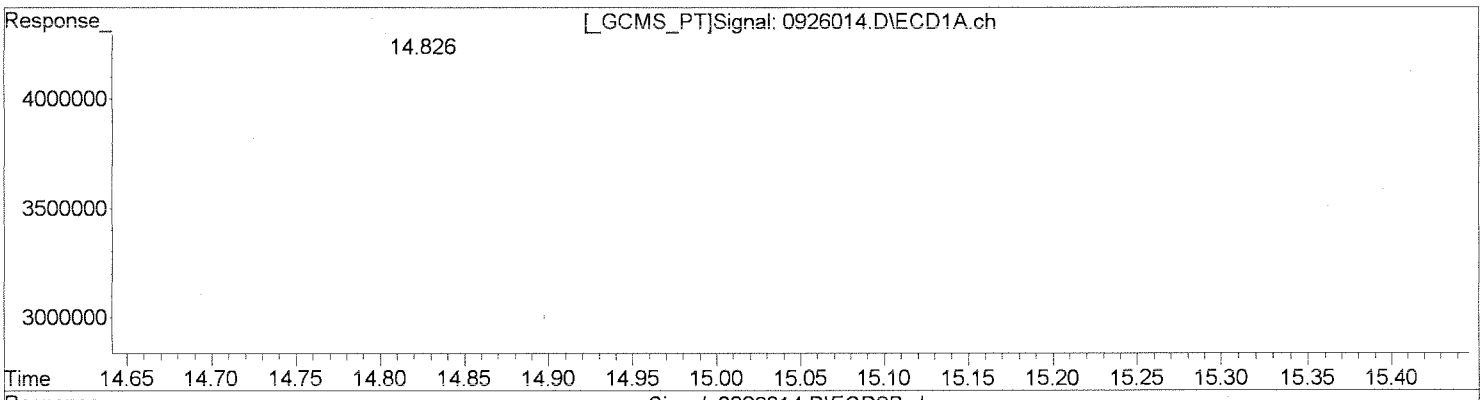
(+) = Expected Retention Time

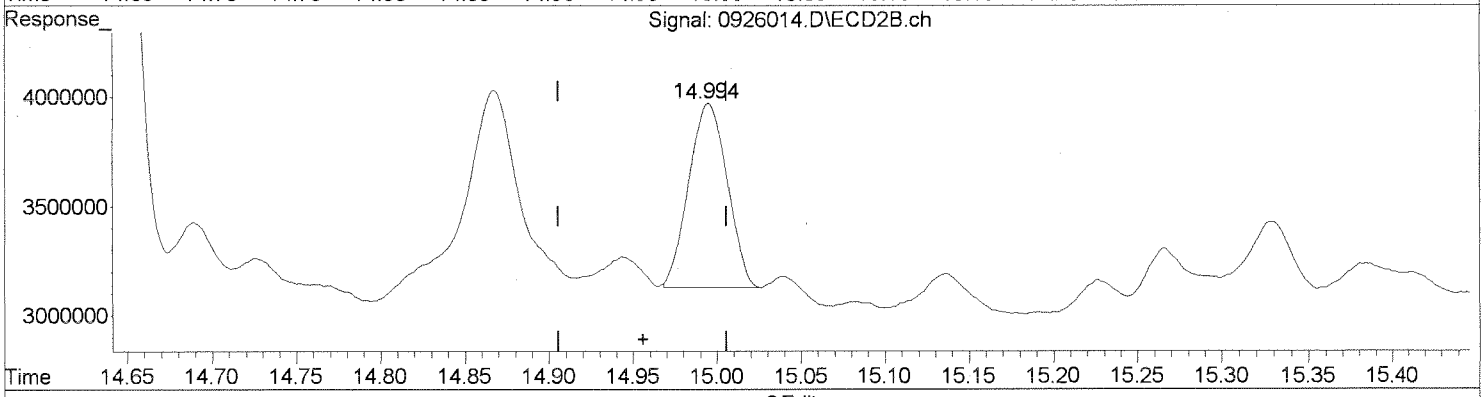
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:56:56 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(13) alpha-Chlordane (m)
14.826min 0.416 ug/L m
response 2534634

(13) alpha-Chlordane #2 (m)
14.994min 0.646 ug/L
response 1348001

Manual Integration:
Before

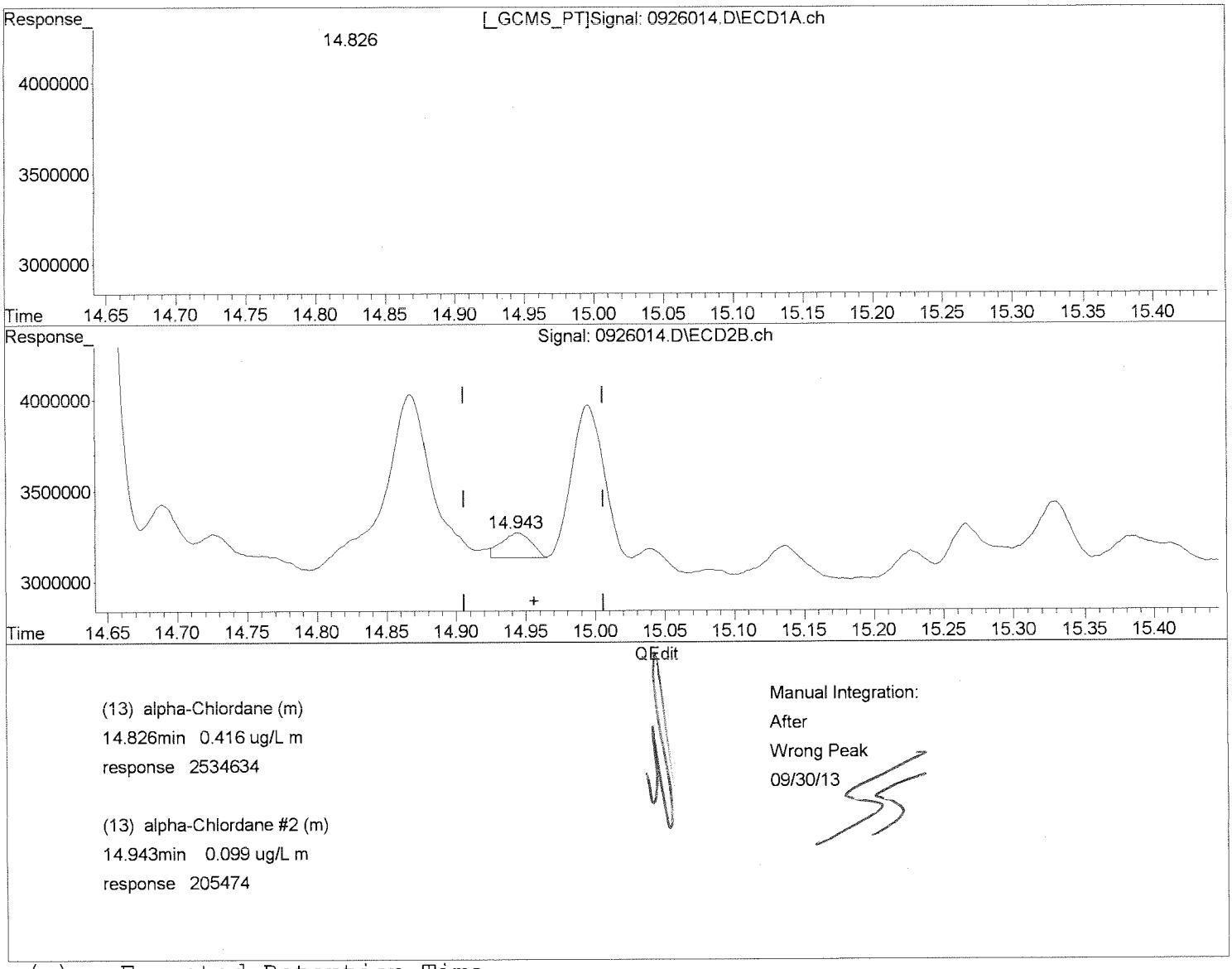
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926014.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 21:35:07
Operator : JSCHWAB
Sample : K1309638-001
Misc :
ALS Vial : 7 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:56:56 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.13	0.13	5	09/20/13	10/08/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	**0.0046**	J	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	**0.0079**	J	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	101	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926017.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 22:55
Date Quantitated: 09/30/2013 15:18
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	
Above Highest ICAL Level	Heptachlor Epoxide	331.32	NA	200	INTE

Primary Review: 5 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926017.D\0926017C.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 22:55
Date Quantitated: 09/30/2013 15:18
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA		x
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	I
	Pentachloronitrobenzene {3}	11.9	NA	NA	I
	Pentachloronitrobenzene{4}	11.9	NA	NA	I
	Pentachloronitrobenzene{5}	11.9	NA	NA	I
Above Highest ICAL Level	Heptachlor Epoxide	439.90	NA	200	INTE
Enviroquant/Stealth Calibration Check	gamma-BHC (Lindane)	Calc	S-2227.809	I-0	QUANTERR

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926017.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926017.D\0926017c.d			**Vial:**	10
Acqu Date:	09/26/2013 22:55	**Quant Date:**	09/30/2013 15:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284678	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1243142444	321628802	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1243142444	321628802	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1243142444	321628802	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1243142444	321628802	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1243142444	321628802	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	407500174	88444936	50.68	43.76				101OK
					%Recovery =	101	OK	88	OK	Limits =	70-130

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)	11.71				10002233	950205m	1.83	0.0000	0.0036J	0.00041U	0.00041U
1	Heptachlor					0	0	0.0000	0.0000	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47	+0.04 LWT	14.45	+0.01	147483647	907748626	331.32	439.90	0.64E	0.85E	**0.64E** ?
1	gamma-Chlordane	14.64	+0.01			19959921	0	3.09	0.0000	0.0060J	0.00083U	0.00083U
1	alpha-Chlordane					0	0d	0.0000	0.0000	0.00065U	0.00065U	0.00065U
1	Endrin	15.70	-0.02	15.82	+0.01	10760559m	2680906m	2.55	2.38	0.0049J	0.0046J	**0.0046**J
1	Methoxychlor	16.64		16.98	+0.02	9786322m	2462897	5.60	4.05	0.011	0.0079J	**0.0079**J
3	Aroclor 1016					0d	0d	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0d	0d	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0d	0d	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926017.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926017.D\0926017c.d			**Vial:**	10
Acqu Date:	09/26/2013 22:55	**Quant Date:**	09/30/2013 15:18	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 15:18:36 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.896	11.898	1243.1E6	321.6E6	50.000	50.000	
26)	I	Pentachlo...	11.896	11.898	1243.1E6	321.6E6	50.000	50.000	
36)	I	Pentachlo...	11.896	11.898	1243.1E6	321.6E6	50.000	50.000	
57)	I	Pentachlo...	11.896	11.898	1243.1E6	321.6E6	50.000	50.000	
68)	I	Pentachlo...	11.896	11.898	1243.1E6	321.6E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.415	407.5E6	88444936	50.678	43.759	
		Target Compounds							
3)	m	alpha-BHC	10.948f	0.000	3059212	0	0.869	N.D.	#
5)	m	gamma-BHC...	11.709	11.972	10002233	950205	1.832	BelowCalm	#
7)	m	delta-BHC	0.000	12.804	0	799375	N.D.	1.418	#
10)	m	Heptachlo...	14.262f	14.453f	64520536	907.7E6	9.280	419.117	#
11)	m	Heptachlo...	14.470	14.453	2147.5E6	907.7E6	331.316	439.896	#
12)	m	gamma-Chl...	14.641	0.000	19959921	0	3.090	N.D.	#
14)	m	4,4'-DDE	15.022	15.226	1109.8E6	3483626	222.535	2.468	#
15)	m	Endosulfan I	15.022f	14.998f	1109.8E6	1160.7E6	191.811	612.594	#
16)	m	Dieldrin	0.000	15.388f	0	38115074	N.D.	18.897	#
17)	m	Endrin	15.703f	15.822	10760559	2680906	2.545m	2.379m	
18)	m	4,4'-DDD	0.000	15.944	0	2634458	N.D.	1.972	#
19)	m	Endosulfa...	16.009	16.052	39868267	12939145	8.872	7.958	
20)	m	4,4'-DDT	16.103f	16.265f	39632370	11140078	10.137	8.075	
21)	m	Endrin Al...	16.446f	16.417	66451196	2509383	17.785	1.809	#
22)	m	Methoxychlor	16.636	16.982	9786322	2462897	5.597m	4.054	#
23)	m	Endosulfa...	16.921	16.707	28103820	3815244	7.463	2.796	#
24)	m	Endrin Ke...	17.218	17.253	35712445	8778727	7.650	5.066	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

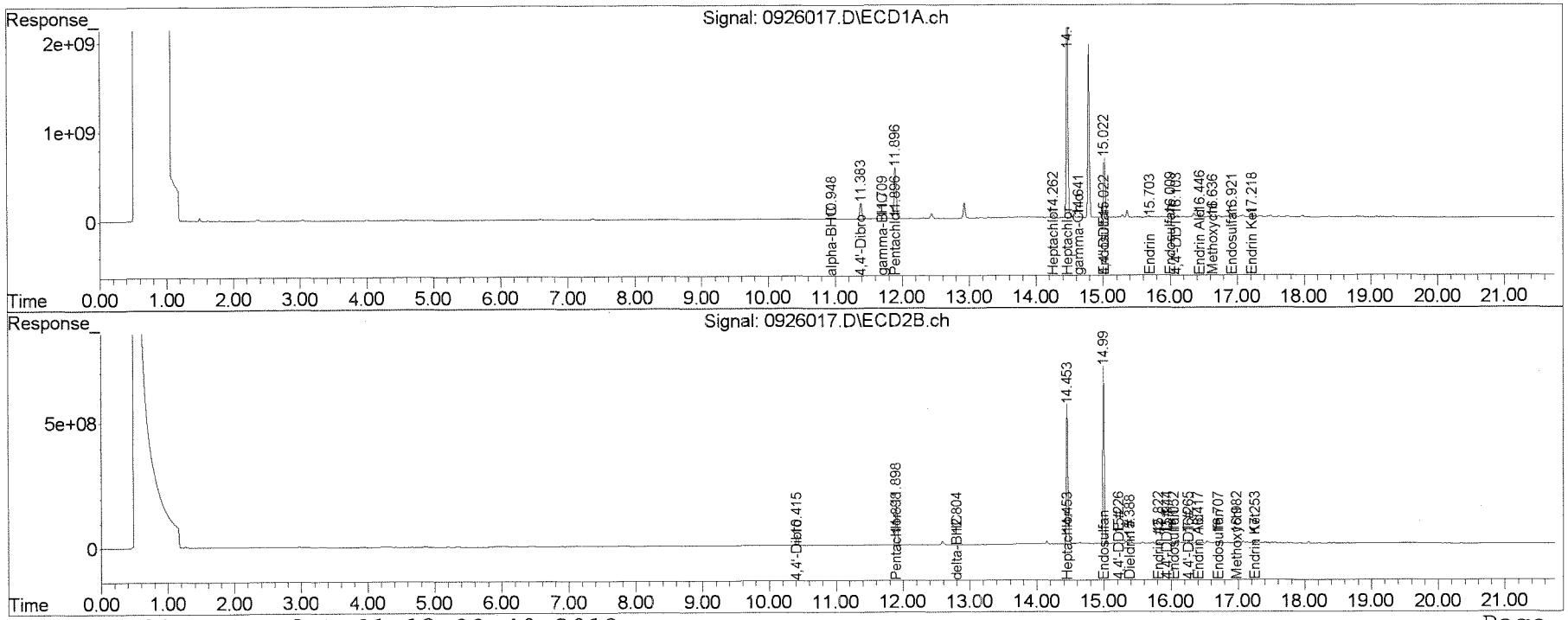
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 15:18:36 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

762

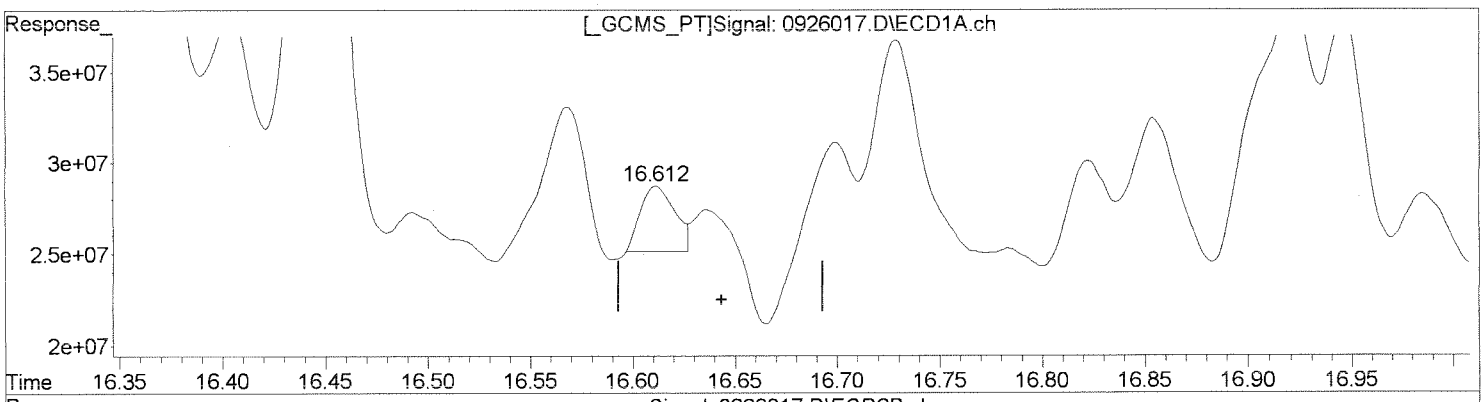


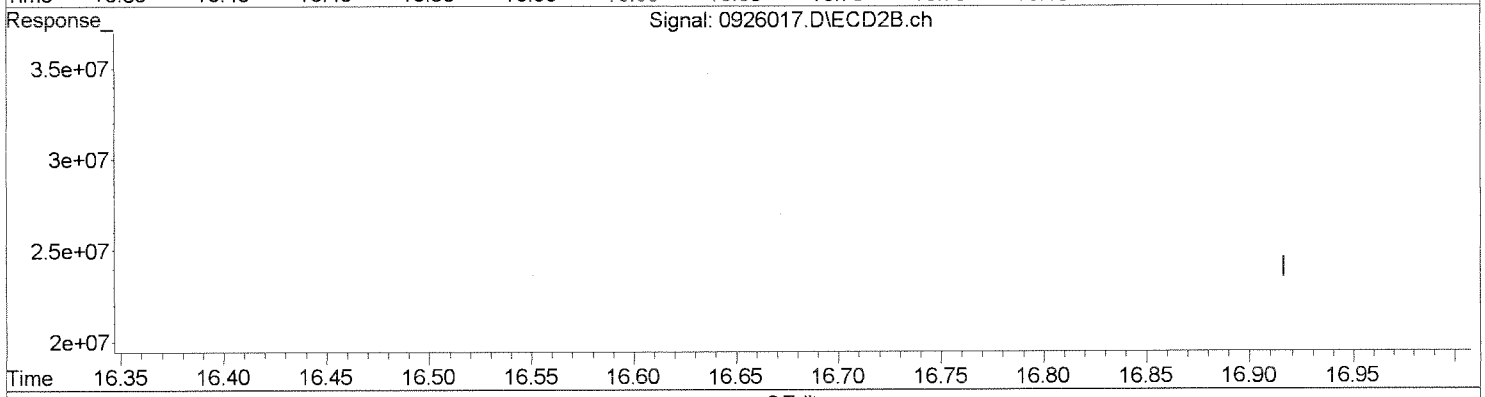
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(22) Methoxychlor (m)
16.612min 2.430 ug/L
response 4248964

(22) Methoxychlor #2 (m)
16.982min 4.054 ug/L
response 2462897

Manual Integration:
Before

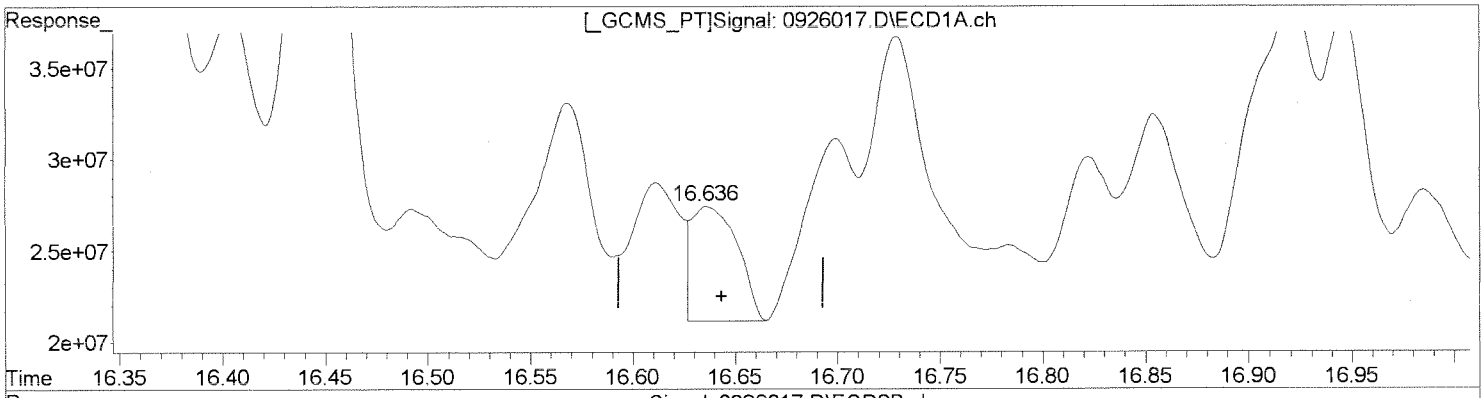
(+) = Expected Retention Time

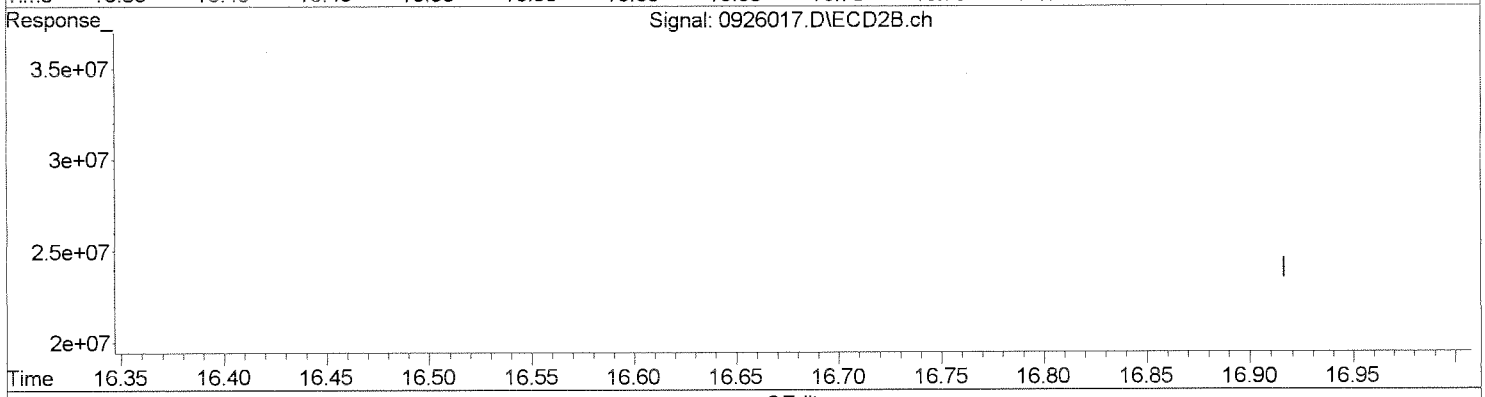
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(22) Methoxychlor (m)
16.636min 5.597 ug/L m
response 9786322

(22) Methoxychlor #2 (m)
16.982min 4.054 ug/L
response 2462897

Manual Integration:
After
Wrong Peak
09/30/13

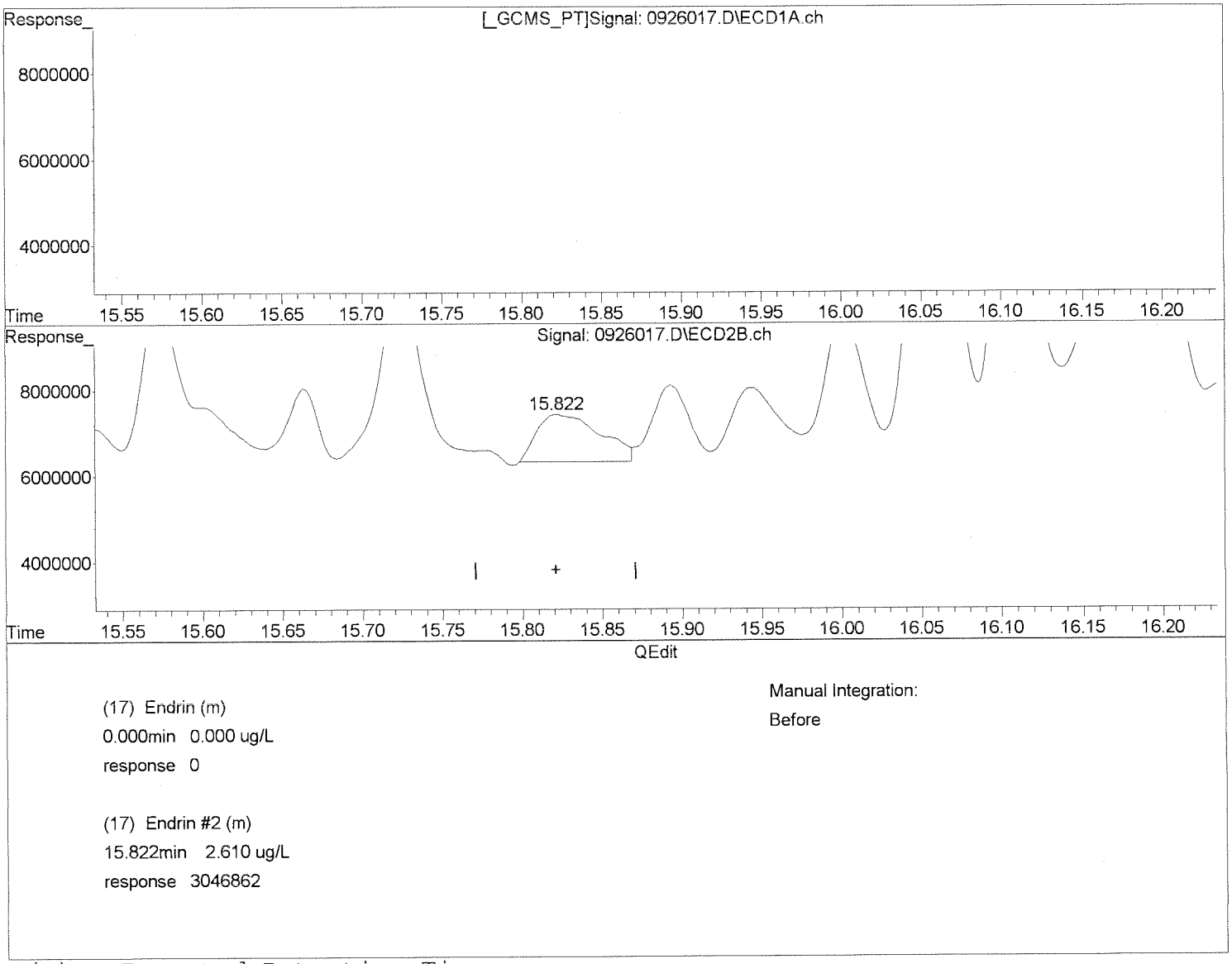
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



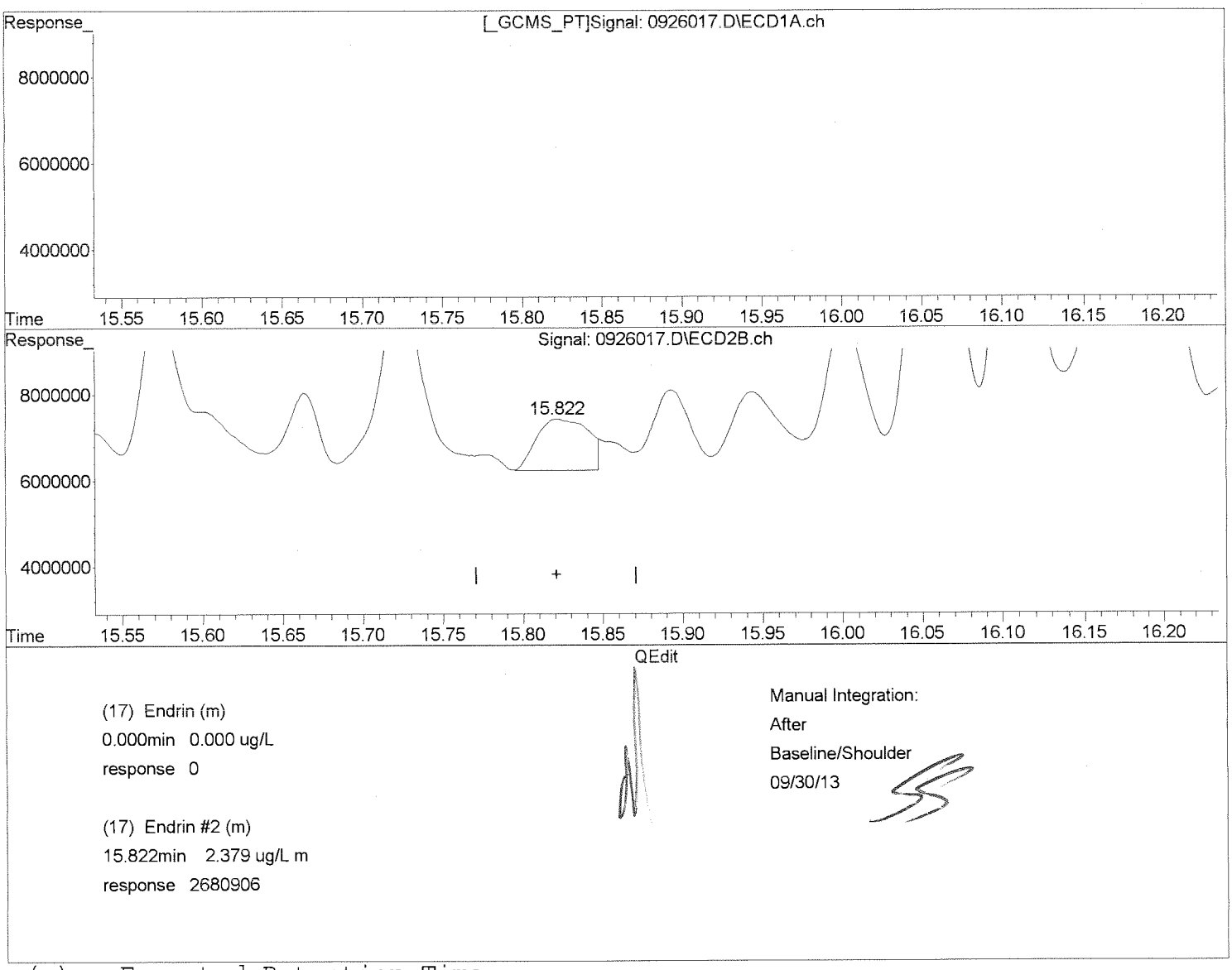
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



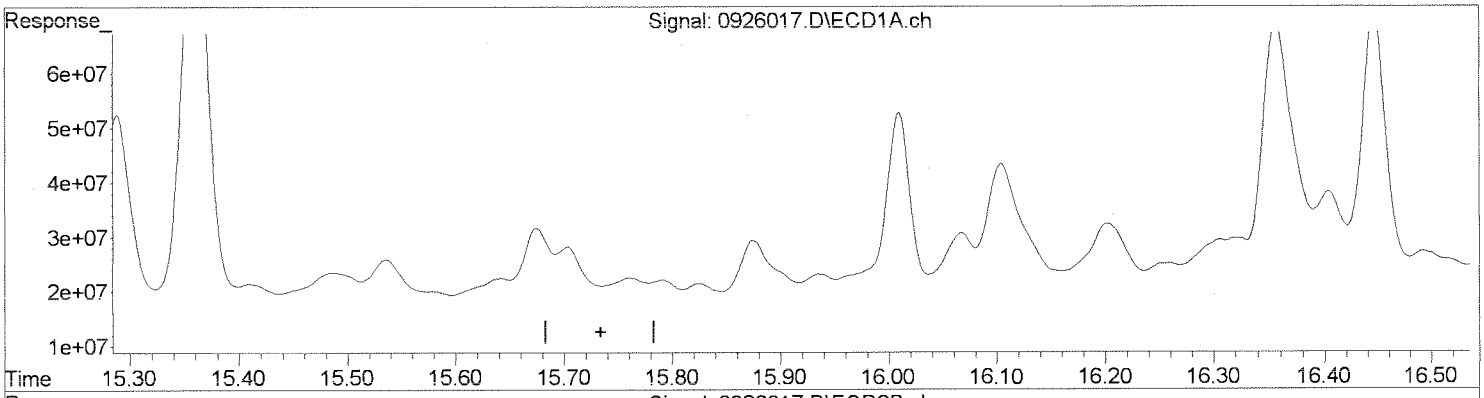
(+) = Expected Retention Time

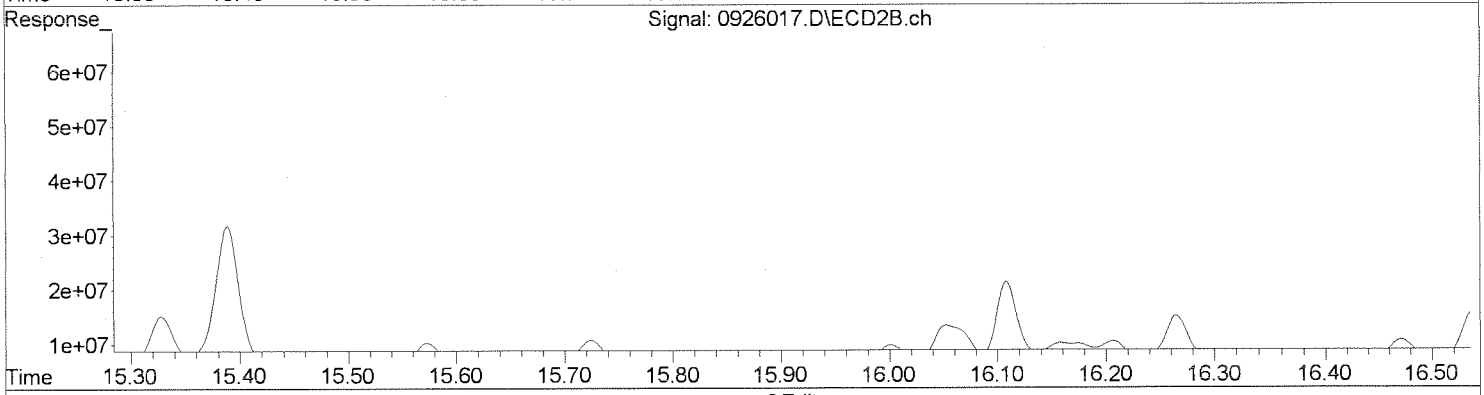
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(17) Endrin (m)
0.000min 0.000 ug/L
response 0

(17) Endrin #2 (m)
15.822min 2.379 ug/L m
response 2680906

Manual Integration:
Before
Baseline/Shoulder
09/30/13

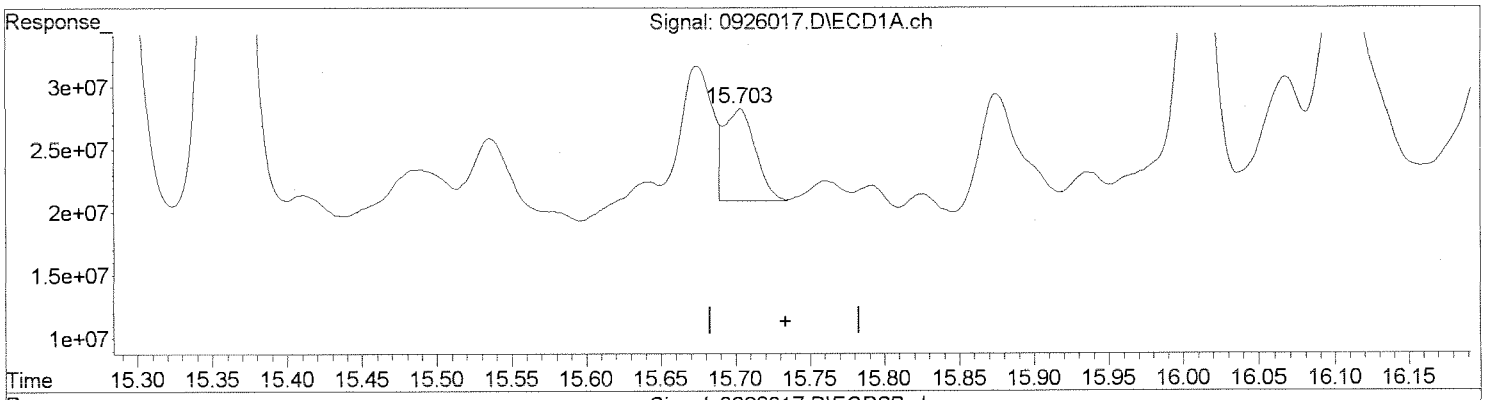
(+) = Expected Retention Time

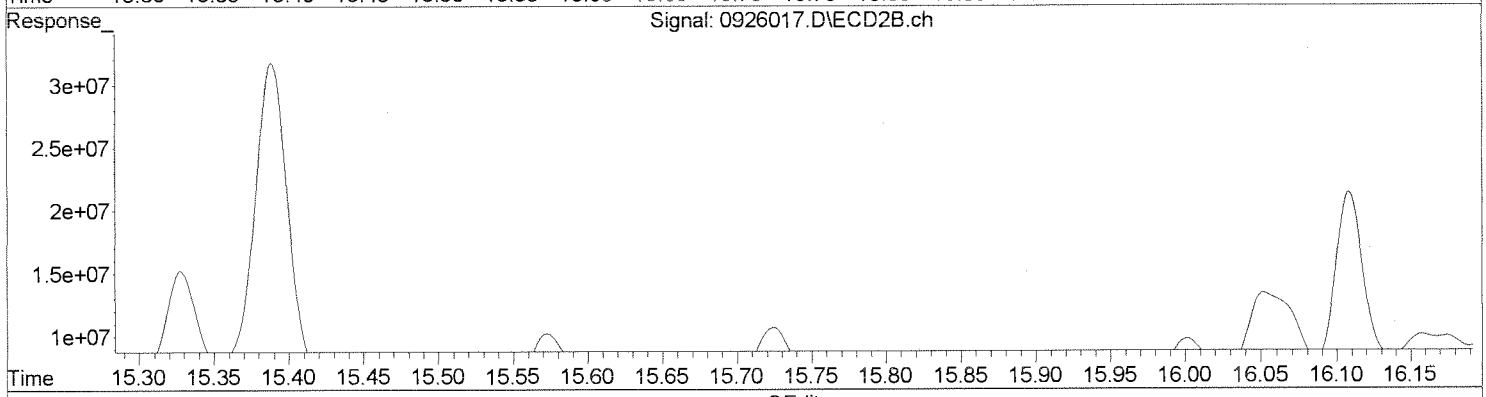
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(17) Endrin (m)
15.703min 2.545 ug/L m
response 10760559

(17) Endrin #2 (m)
15.822min 2.379 ug/L m
response 2680906

Manual Integration:
After
Missed Peak
09/30/13

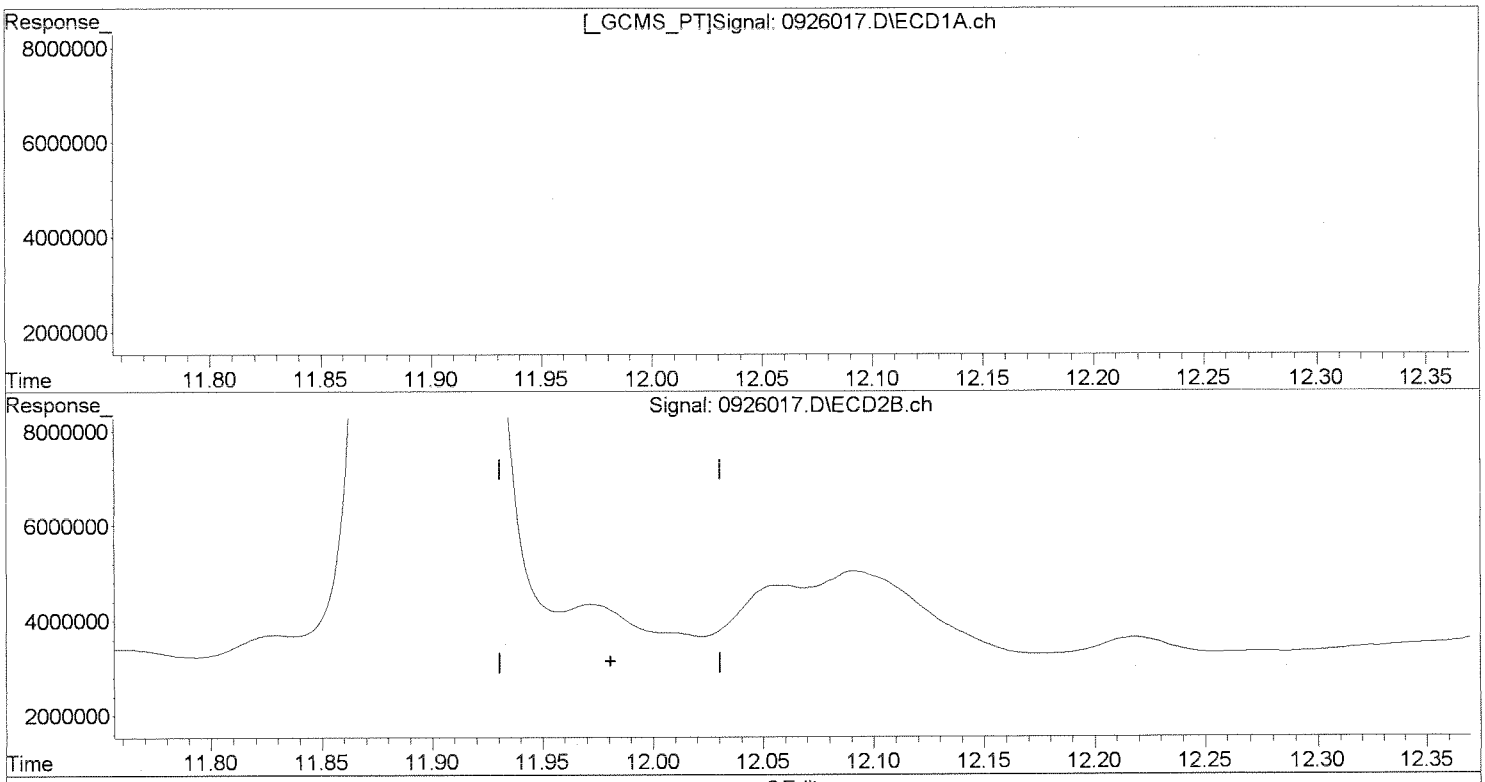
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(5) gamma-BHC (Lindane) (m)
11.709min 1.832 ug/L
response 10002233

Manual Integration:
Before

(5) gamma-BHC (Lindane) #2 (m)
0.000min 0.000 ug/L
response 0

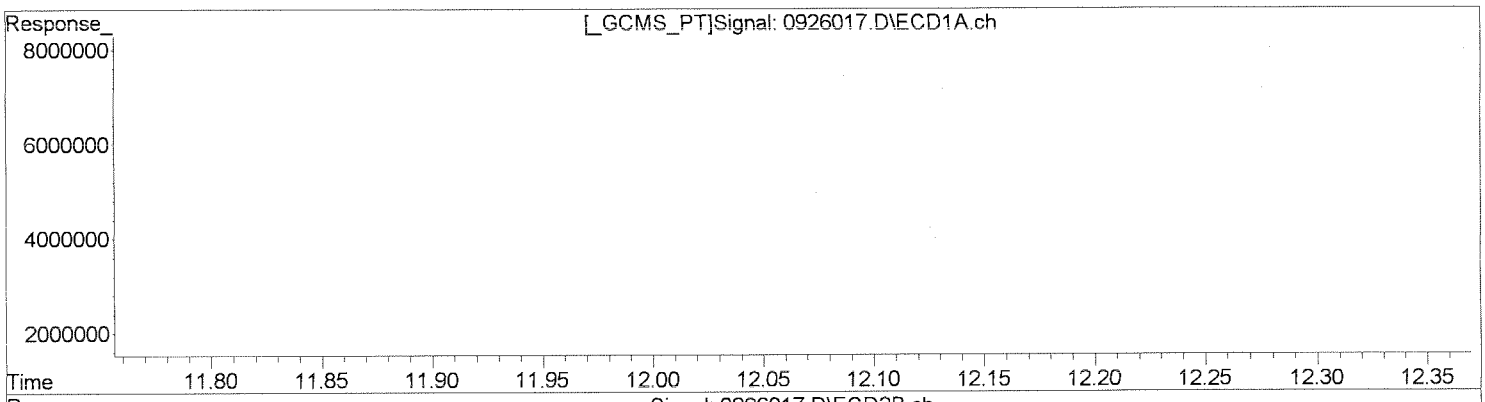
(+) = Expected Retention Time

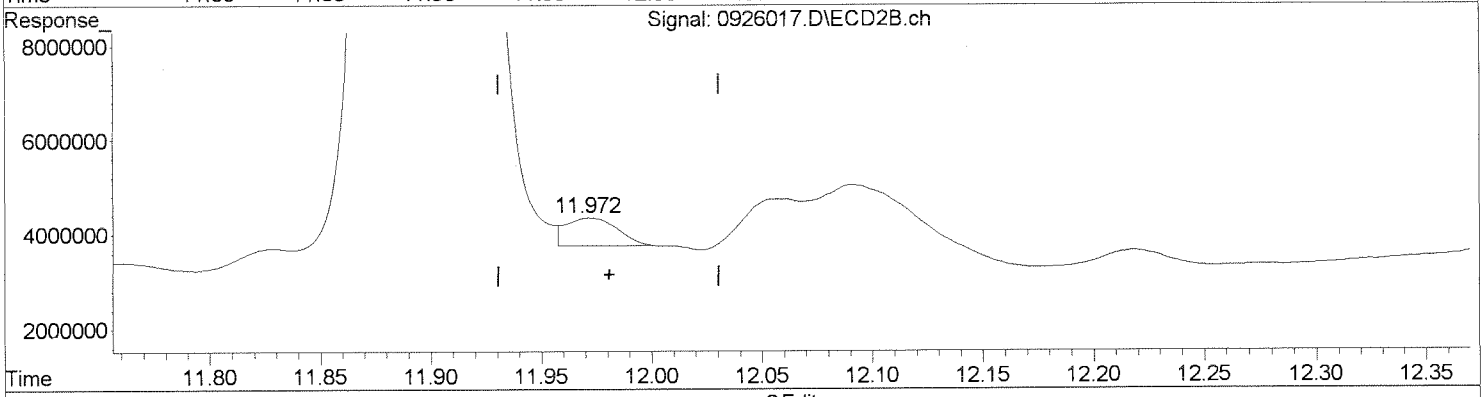
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926017.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:55:17
Operator : JSCHWAB
Sample : K1309638-002
Misc :
ALS Vial : 10 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(5) gamma-BHC (Lindane) (m)
11.709min 1.832 ug/L
response 10002233

(5) gamma-BHC (Lindane) #2 (m)
11.972min -1.000 ug/L m
response 950205

Manual Integration:
After
Missed Peak
09/30/13

(+) = Expected Retention Time

Exception Report

Data File: J:\GC33\DATA\100813-508\1008010.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/08/2013 18:28
Date Quantitated: 10/09/2013 08:50
Batch ID: KWG1311188
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.89	NA	NA	SA
	Pentachloronitrobenzene {2}	11.89	NA	NA	
	Pentachloronitrobenzene {3}	11.89	NA	NA	
	Pentachloronitrobenzene{4}	11.89	NA	NA	
	Pentachloronitrobenzene{5}	11.89	NA	NA	

Primary Review: SS 10/9/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\100813-508\1008010.D\1008010C.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/08/2013 18:28
Date Quantitated: 10/09/2013 08:50
Batch ID: KWG1311188
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	A
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/9/13

Secondary Review: _____ M

Quantitation Report

Data File #1:	J:\GC33\DATA\100813-508\1008010.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008010.D\1008010c.d			**Vial:**	1
Acqu Date:	10/08/2013 18:28	**Quant Date:**	10/09/2013 08:50	**Dilution:**	5.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311188	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284678	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.89?	-0.01 c	11.90?	c	1259596200	305772775	50.00	50.00
2	Pentachloronitrobenzene {2}	11.89?	c	11.90?	c	1259596200	305772775	50.00	50.00
3	Pentachloronitrobenzene {3}	11.89?	c	11.90?	c	1259596200	305772775	50.00	50.00
4	Pentachloronitrobenzene{4}	11.89?	c	11.90?	c	1259596200	305772775	50.00	50.00
5	Pentachloronitrobenzene{5}	11.89?	c	11.90?	c	1259596200	305772775	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	-0.01	79881633	15735824	9.81	8.19			NR
					%Recovery =		98	OK 82	OK	Limits = 70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)	11.71				1236934	0	0.9420	0.0000	0.0091JD	0.0021U	NR
1	Heptachlor					0	0	0.0000	0.0000	0.0025U	0.0025U	NR
1	Heptachlor Epoxide	14.46	+0.02	14.45	+0.01	85701480	25840424	13.05	13.17	0.13D	0.13D	0.13D
1	gamma-Chlordane	14.64		14.77	+0.05	7371820	371193	1.13	0.1810	0.011JD	0.0042U	NR
1	alpha-Chlordane			14.99	+0.04	0	233035154	0.0000	119.53	0.0033U	1.2D	NR
1	Endrin			15.82	+0.01	0	408635	0.0000	0.9580	0.0039U	0.0093JD	NR
1	Methoxychlor			16.98	+0.02	0	1102271	0.0000	1.91	0.0065U	0.019JD	NR
3	Aroclor 1016					0d	0d	0.0000	0.0000	0.12U	0.12U	NR
3	Aroclor 1260					0d	0d	0.0000	0.0000	0.085U	0.085U	NR
3	Aroclor 1221					0d	0d	0.0000	0.0000	0.11U	0.11U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\100813-508\1008010.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008010.D\1008010c.d			**Vial:**	1
Acqu Date:	10/08/2013 18:28	**Quant Date:**	10/09/2013 08:50	**Dilution:**	5.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
3	Aroclor 1254			0d	0d	0.0000	0.0000	0.075U	0.075U	NR
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.060U	0.060U	NR
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.060U	0.060U	NR
5	Aroclor 1248			0d	0d	0.0000	0.0000	0.075U	0.075U	NR

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	5.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 18:28:34
Operator : SSullivan
Sample : K1309638-002 5X
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:50:34 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.893	11.895	1259.6E6	305.8E6	50.000	50.000	
26)	I	Pentachlo...	11.893	11.895	1259.6E6	305.8E6	50.000	50.000	
36)	I	Pentachlo...	11.893	11.895	1259.6E6	305.8E6	50.000	50.000	
57)	I	Pentachlo...	11.893	11.895	1259.6E6	305.8E6	50.000	50.000	
68)	I	Pentachlo...	11.893	11.895	1259.6E6	305.8E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.380	10.413	79881633	15735824	9.805	8.189	
		Target Compounds							
5)	m	gamma-BHC...	11.707	0.000	1236934	0	0.942	N.D.	#
6)	m	beta-BHC	0.000	12.213	0	238460	N.D.	0.218	#
7)	m	delta-BHC	12.358	0.000	1597475	0	1.166	N.D.	#
10)	m	Heptachlo...	14.264f	14.449f	1867568	25840424	0.265	12.549	#
11)	m	Heptachlo...	14.463	14.449	85701480	25840424	13.049	13.172	
12)	m	gamma-Chl...	14.638	14.770f	7371820	371193	1.126	0.181	#
13)	m	alpha-Chl...	0.000	14.993f	0	233.0E6	N.D.	119.529	#
14)	m	4,4'-DDE	15.020	15.226	203.9E6	1295723	40.351	1.341	#
15)	m	Endosulfan I	15.020f	14.993f	203.9E6	233.0E6	34.780	129.367	#
16)	m	Dieldrin	0.000	15.386f	0	8076814	N.D.	4.212	#
17)	m	Endrin	0.000	15.819	0	408635	N.D.	0.958	#
18)	m	4,4'-DDD	0.000	15.936	0	299899	N.D.	0.236	#
19)	m	Endosulfa...	16.012	16.047	2174286	2699515	0.478	1.746	#
20)	m	4,4'-DDT	16.101f	16.270f	6869483	722134	1.734	1.179	#
21)	m	Endrin Al...	16.443f	16.419	11769344	614615	3.109	0.466	#
22)	m	Methoxychlor	0.000	16.979	0	1102271	N.D.	1.908	#
23)	m	Endosulfa...	16.918	16.688f	5999339	432041	1.572	0.333	#
24)	m	Endrin Ke...	17.215	17.250	6513325	1334410	1.377	0.810	#

SemiQuant Compounds - Not Calibrated on this Instrument

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 18:28:34
Operator : SSullivan
Sample : K1309638-002 5X
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:50:34 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

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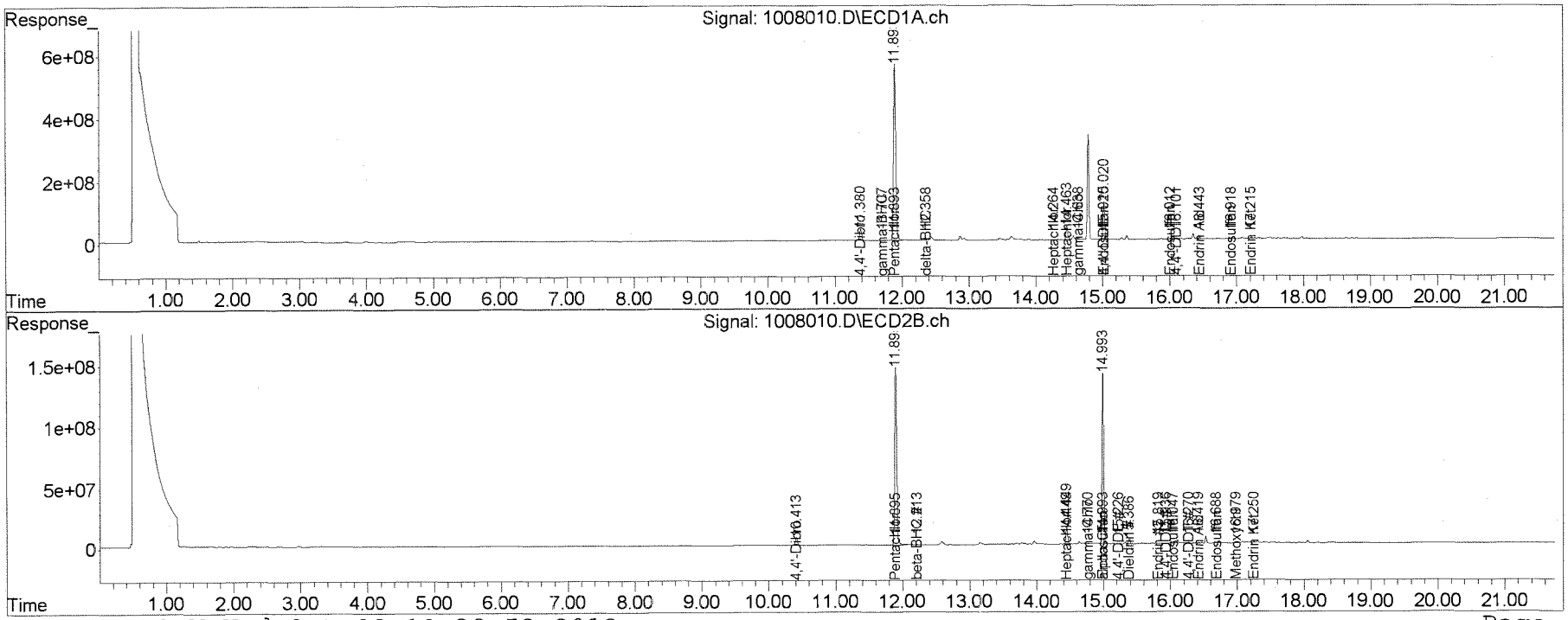


Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.092	0.092	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	96	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926018.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 23:22
Date Quantitated: 10/01/2013 13:21
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926018.D\0926018C.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 23:22
Date Quantitated: 10/01/2013 13:21
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926018.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926018.D\0926018c.d			**Vial:**	11
Acqu Date:	09/26/2013 23:22	**Quant Date:**	10/01/2013 13:21	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-004				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284679	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1284473277	346322299	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1284473277	346322299	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1284473277	346322299	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1284473277	346322299	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1284473277	346322299	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	400860455	89582415	48.25	41.16			96OK
					%Recovery =	96 OK	82 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)	11.73	+0.02			1430338m	0	0.9590	0.0000	0.0019J	0.00041U	0.00041U
1	Heptachlor			12.90	+0.04	0	490296	0.0000	0.2110	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47	+0.04	14.45	+0.01	399161234	104840879	59.60	47.18	0.12	0.092	**0.092** c
1	gamma-Chlordane	14.64	+0.01	14.69	-0.03	10633950m	321655m	1.59	0.1380	0.0031J	0.00083U	0.00083U
1	alpha-Chlordane			15.00	+0.06	0	1991062	0.0000	0.9020	0.00065U	0.0018J	0.00065U
1	Endrin					0d	0d	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor			16.98	+0.02	0d	442202m	0.0000	0.6760	0.0013U	0.0013J	0.0013U
3	Aroclor 1016					0m	0m	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0m	0m	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0m	0m	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926018.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926018.D\0926018c.d			**Vial:**	11
Acqu Date:	09/26/2013 23:22	**Quant Date:**	10/01/2013 13:21	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-004				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:21:06 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.895	11.898	1284.5E6	346.3E6	50.000	50.000	
26)	I	Pentachlo...	11.895	11.898	1284.5E6	346.3E6	50.000	50.000	
36)	I	Pentachlo...	11.895	11.898	1284.5E6	346.3E6	50.000	50.000	
57)	I	Pentachlo...	11.895	11.898	1284.5E6	346.3E6	50.000	50.000	
68)	I	Pentachlo...	11.895	11.898	1284.5E6	346.3E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.415	400.9E6	89582415	48.248	41.162	
		Target Compounds							
5)	m	gamma-BHC...	11.733	0.000	1430338	0	0.959m	N.D.	#
8)	m	Heptachlor	0.000	12.905f	0	490296	N.D.	0.211	#
10)	m	Heptachlo...	14.263f	14.453f	4432438	103.7E6	0.617	44.461m	#
11)	m	Heptachlo...	14.466	14.453	399.2E6	104.8E6	59.601	47.183	
12)	m	gamma-Chl...	14.641	14.688f	10633950	321655	1.594m	0.138m	#
13)	m	alpha-Chl...	0.000	15.001f	0	1991062	N.D.	0.902	#
22)	m	Methoxychlor	0.000	16.982	0	442202	N.D. d	0.676m	
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

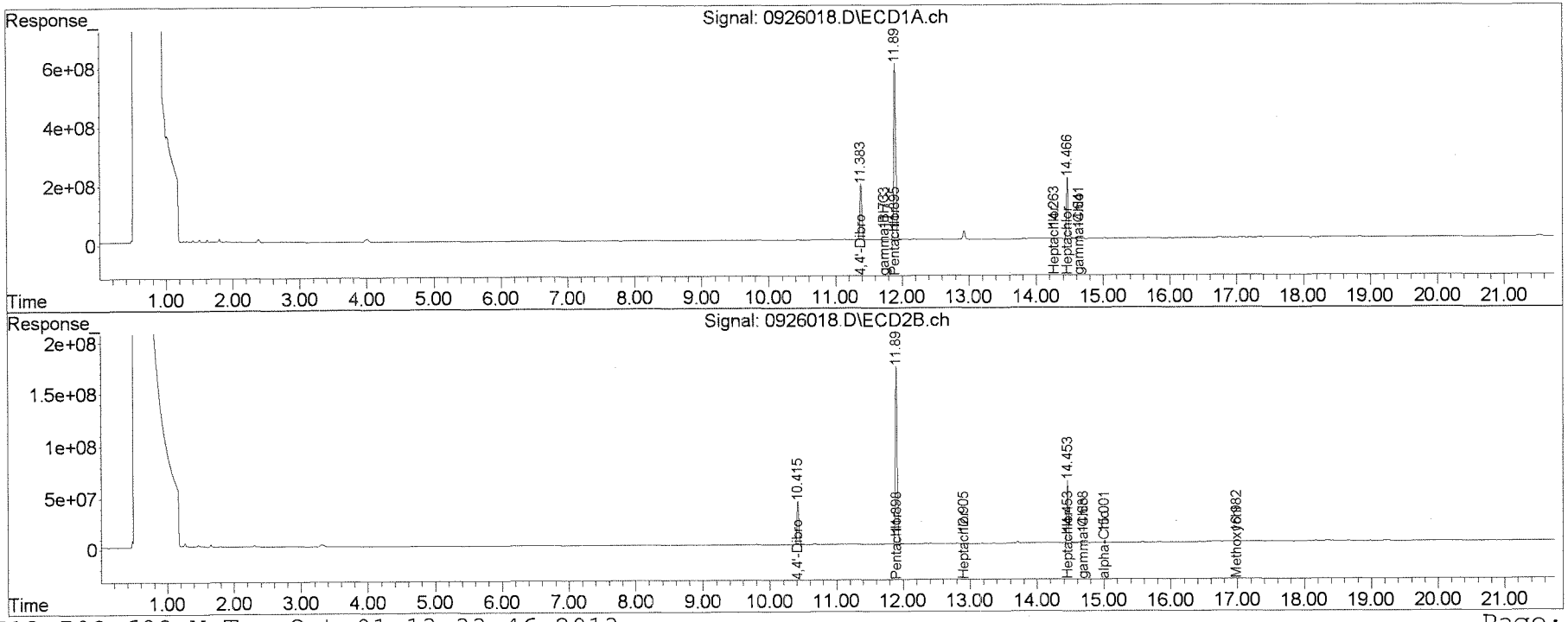
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:21:06 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

783

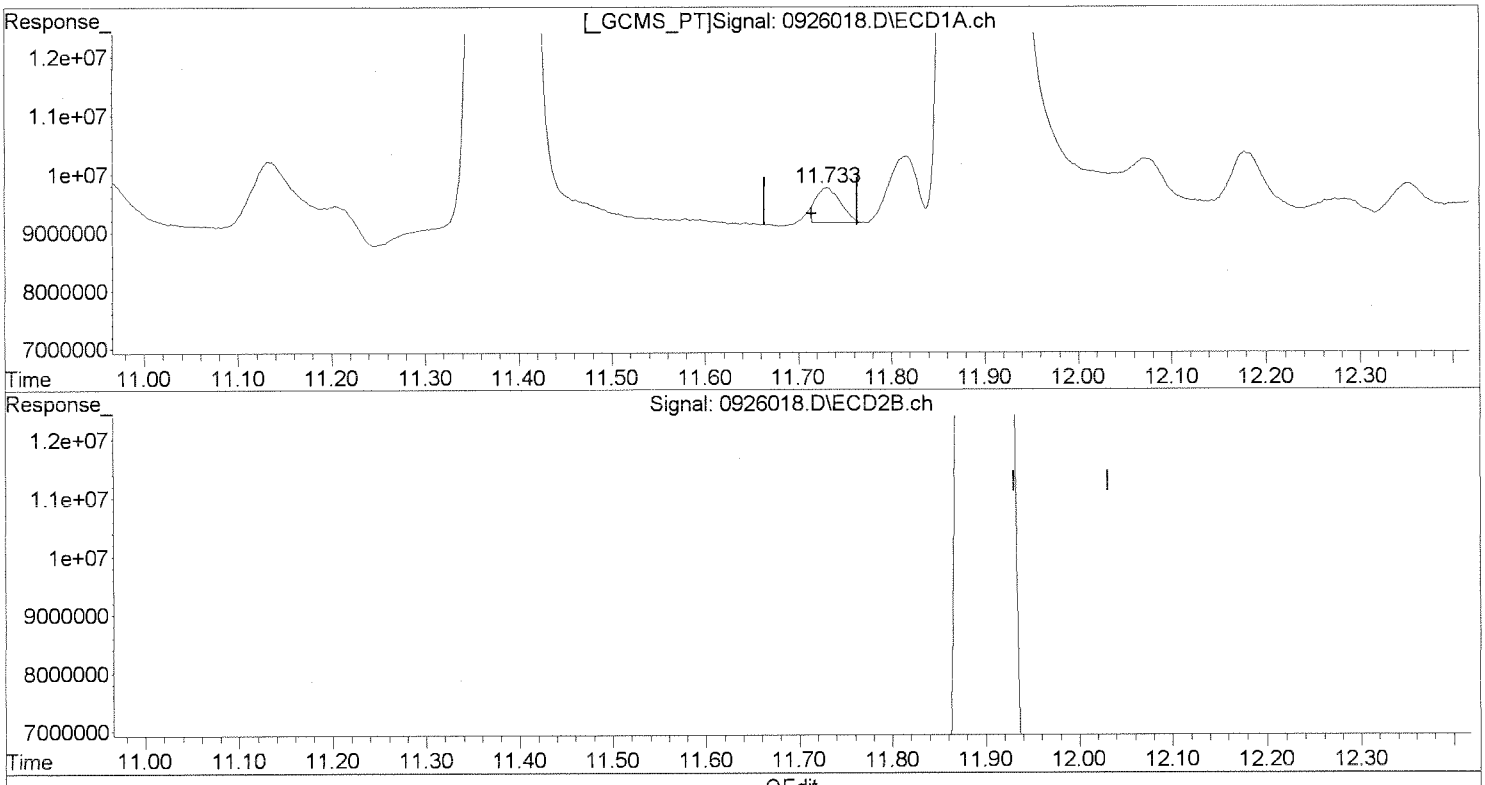


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(5) gamma-BHC (Lindane) (m)
11.733min 0.926 ug/L
response 1095796

(5) gamma-BHC (Lindane) #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
Before

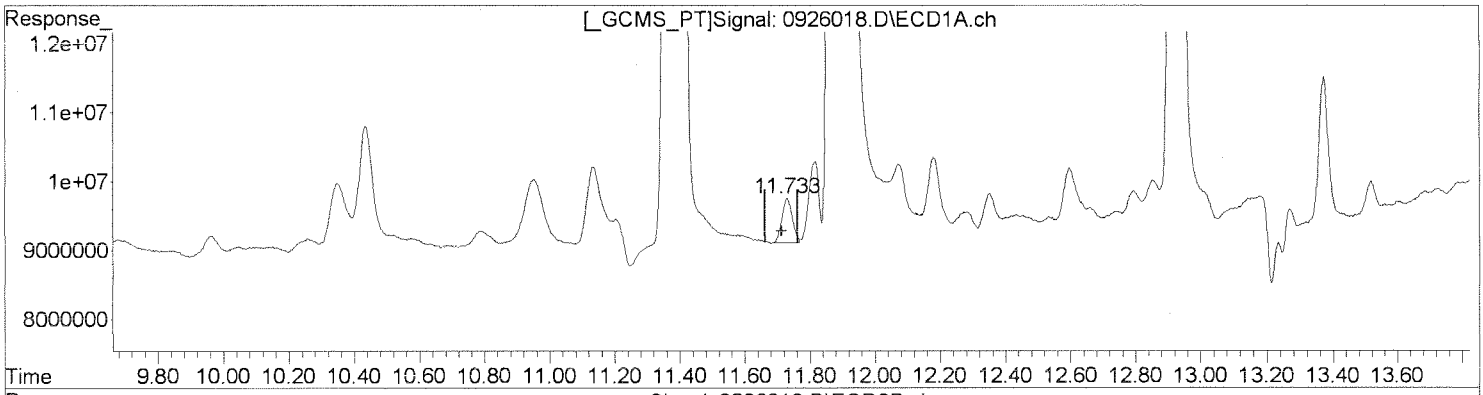
(+) = Expected Retention Time

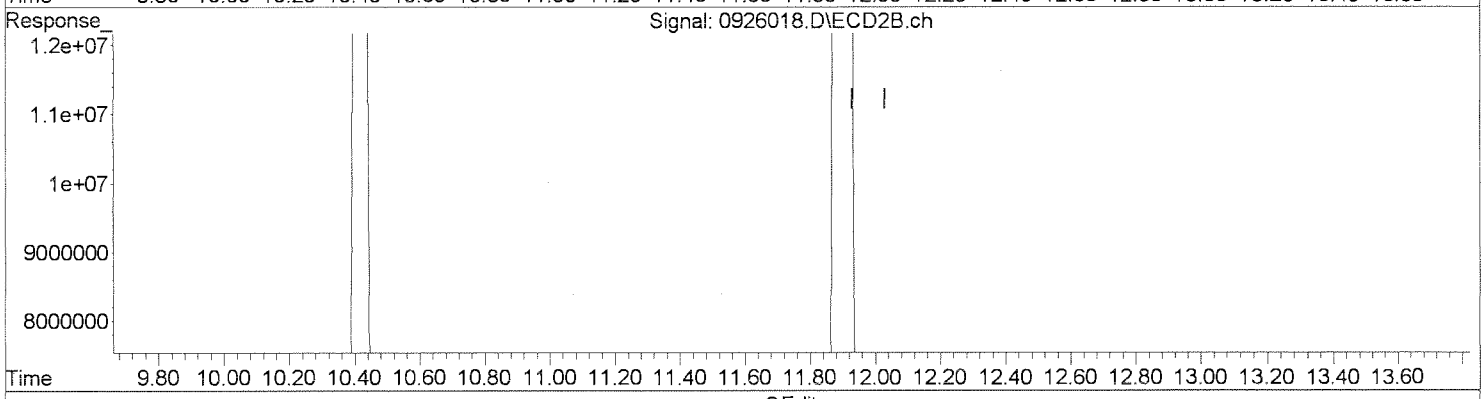
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(5) gamma-BHC (Lindane) (m)
11.733min 0.959 ug/L m
response 1430338

(5) gamma-BHC (Lindane) #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
After
Baseline/Shoulder
09/30/13

10/4/13

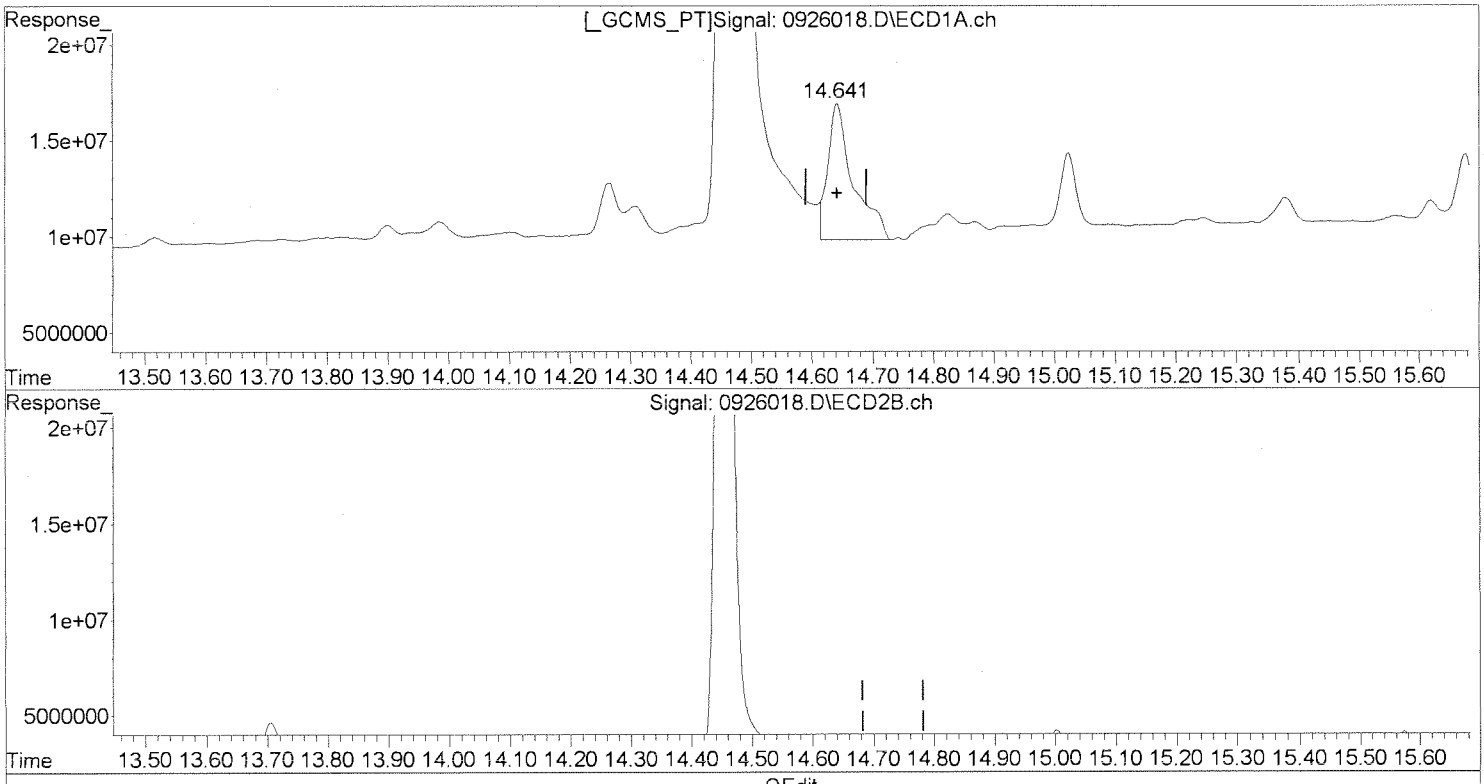
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(12) gamma-Chlordane (m)
14.641min 3.090 ug/L
response 20621217

(12) gamma-Chlordane #2 (m)
14.688min 0.248 ug/L
response 577263

Manual Integration:
Before

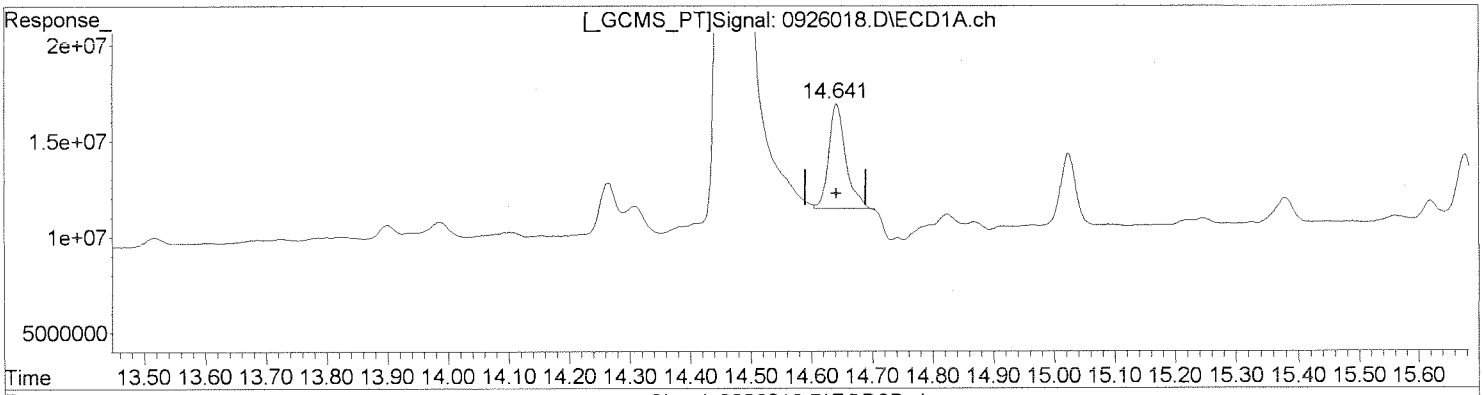
(+) = Expected Retention Time

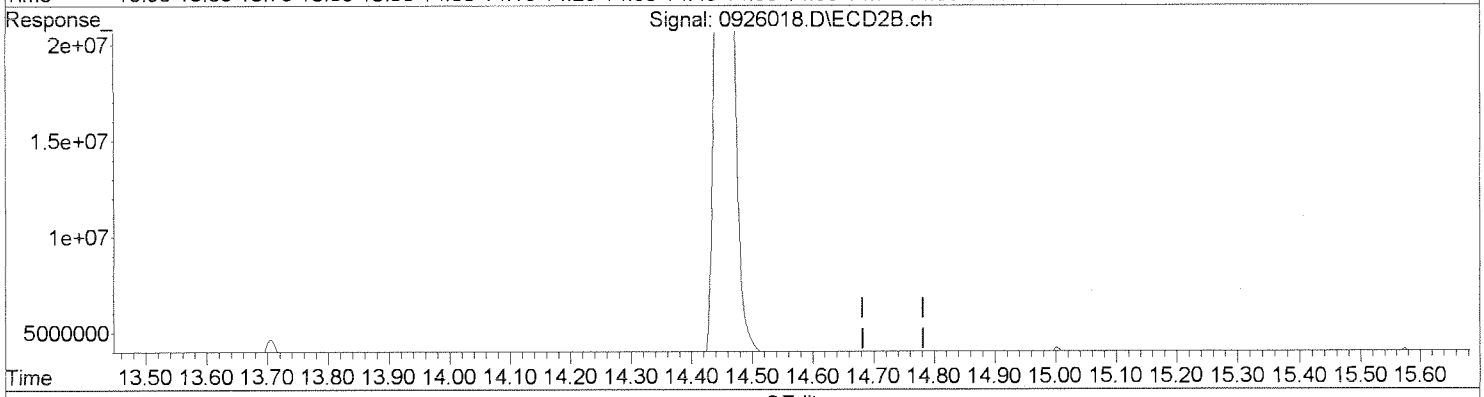
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(12) gamma-Chlordane (m)
14.641min 1.594 ug/L m
response 10633950

(12) gamma-Chlordane #2 (m)
14.688min 0.248 ug/L
response 577263

Manual Integration:
After
Baseline/Shoulder
09/30/13

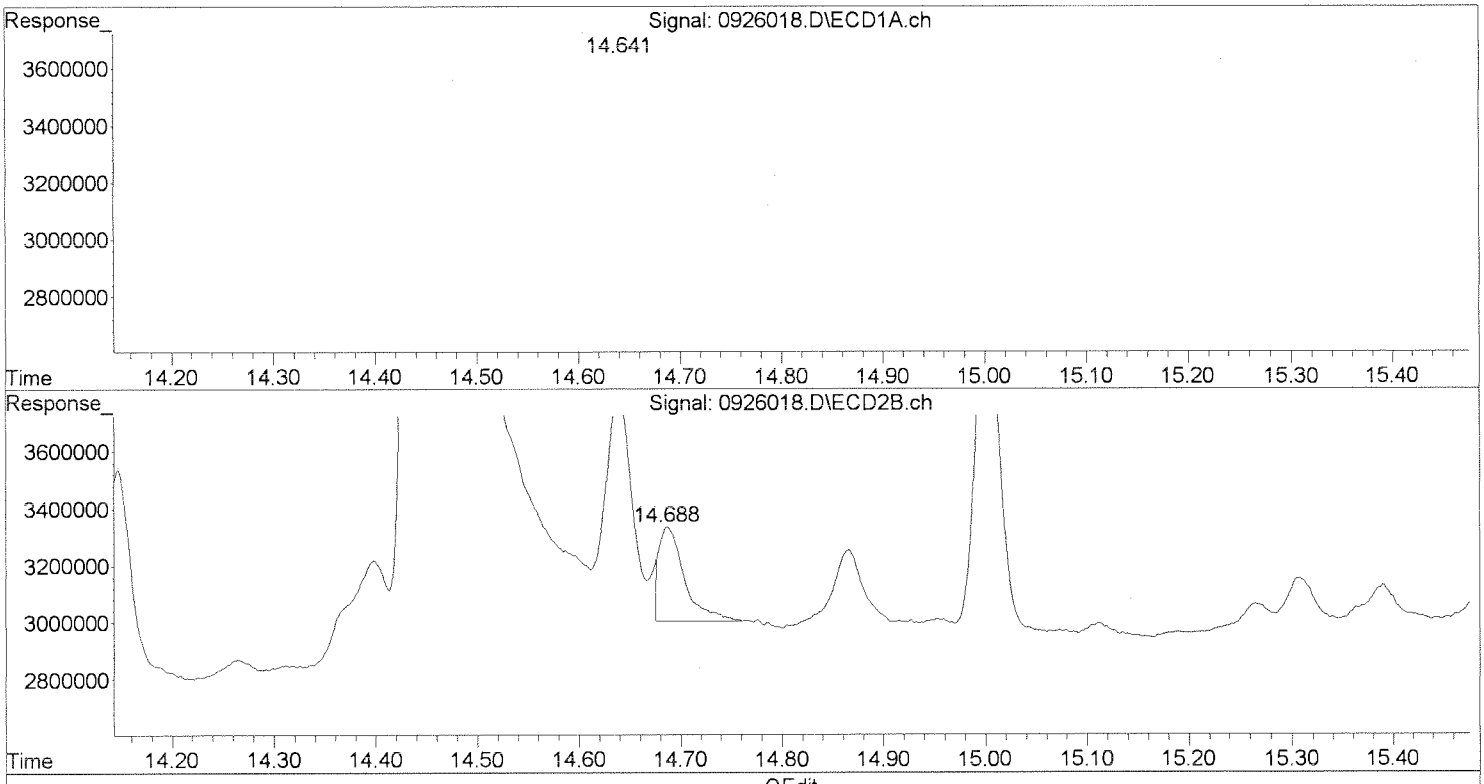
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(12) gamma-Chlordane (m)
14.641min 1.594 ug/L m
response 10633950

(12) gamma-Chlordane #2 (m)
14.688min 0.248 ug/L
response 577263

Manual Integration:
~~Before~~ After
Baseline/Shoulder
09/30/13

Reviewed JDS 09-30-13

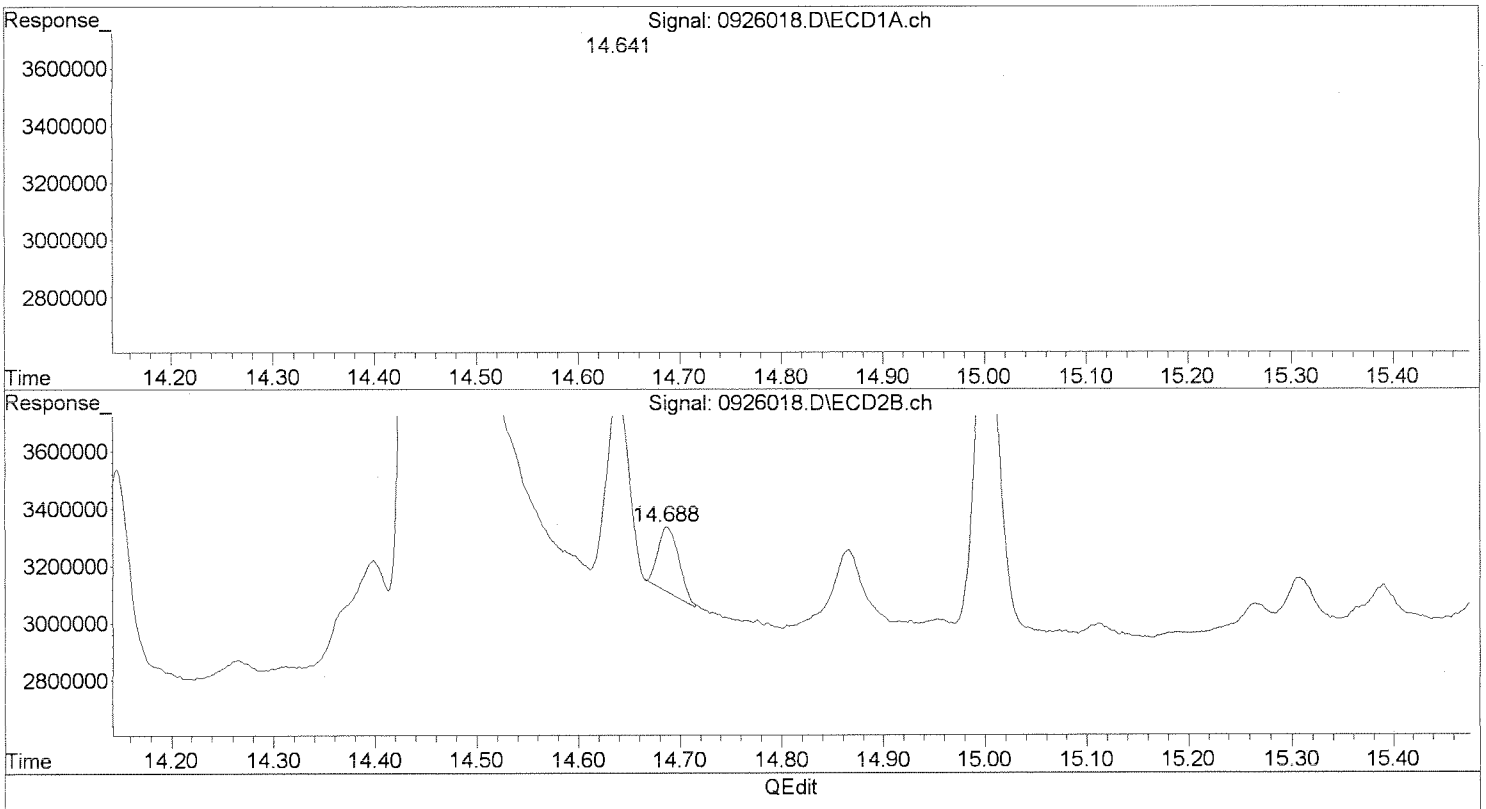
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(12) gamma-Chlordane (m)
14.641min 1.594 ug/L m
response 10633950

(12) gamma-Chlordane #2 (m)
14.688min 0.138 ug/L m
response 321655

Manual Integration:
After
Baseline/Shoulder
09/30/13

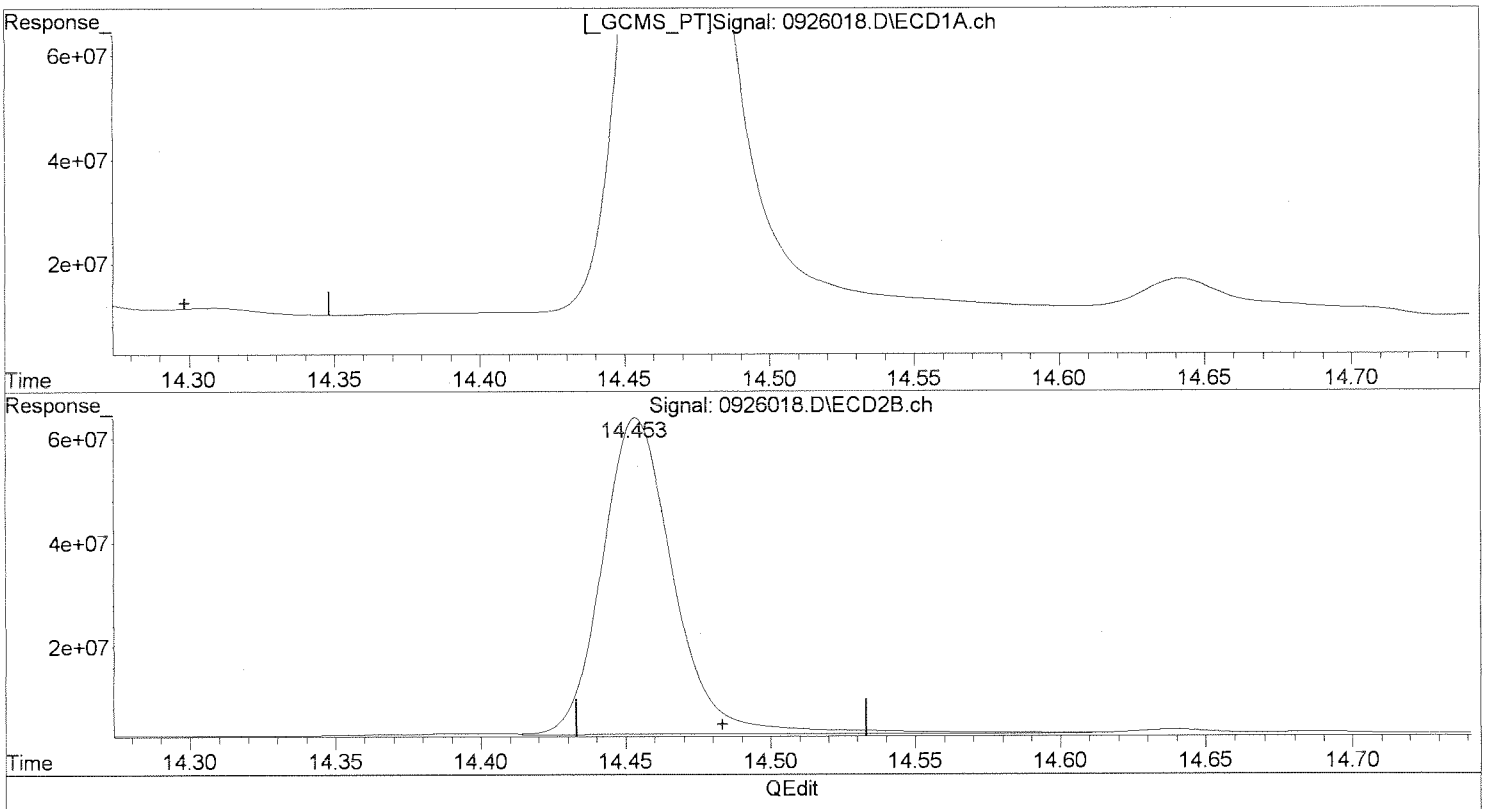
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(10) Heptachlor Epoxide (A) (m)
14.263min 0.617 ug/L
response 4432438

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 44.955 ug/L
response 104840879

Manual Integration:
Before

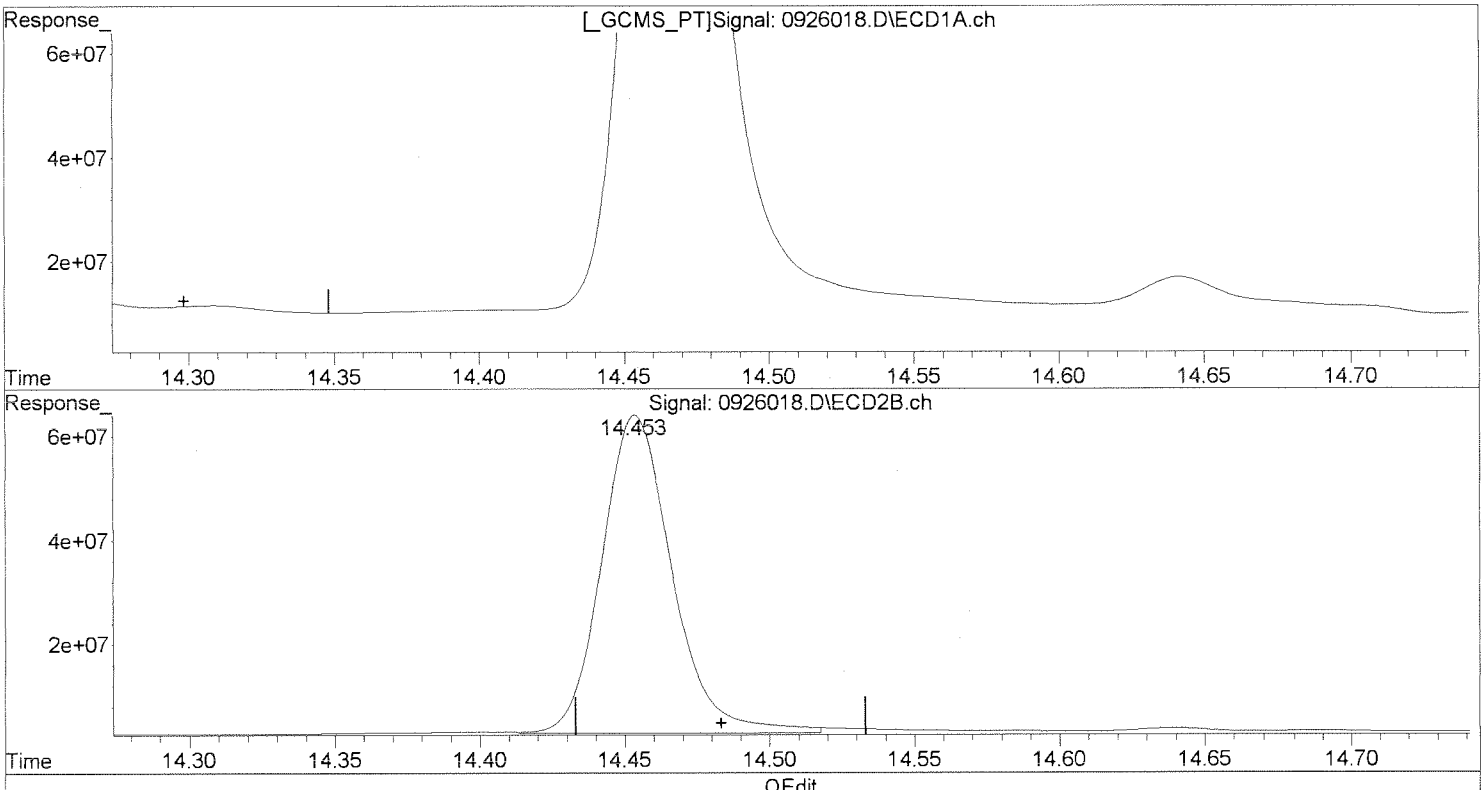
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926018.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:22:07
Operator : JSCHWAB
Sample : K1309638-004
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:05 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(10) Heptachlor Epoxide (A) (m)
14.263min 0.617 ug/L
response 4432438

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 44.461 ug/L m
response 103688514

Manual Integration:
After
Baseline/Shoulder
09/30/13

(+) = Expected Retention Time

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.041	0.041	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	99	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926019.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 23:49
Date Quantitated: 10/01/2013 13:23
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926019.D\0926019C.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/26/2013 23:49
Date Quantitated: 10/01/2013 13:23
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/7/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926019.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926019.D\0926019c.d			**Vial:**	12
Acqu Date:	09/26/2013 23:49	**Quant Date:**	10/01/2013 13:23	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-005				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284680	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90? +0.01 c	11.90? c	1289964762	346929053	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90? c	11.90? c	1289964762	346929053	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90? c	11.90? c	1289964762	346929053	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90? c	11.90? c	1289964762	346929053	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90? +0.01 c	11.90? c	1289964762	346929053	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	413172327	93208294	49.52	42.75			99OK
					%Recovery =	99 OK	86 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)			0	0	0.0000	0.0000	0.00041U	0.00041U	0.00041U
1	Heptachlor		12.91 +0.05	0	548550	0.0000	0.2360	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47 +0.04	14.45 +0.01	176965231	45878998	26.31	20.61	0.051	0.040	**0.040** e
1	gamma-Chlordane	14.64 +0.01	14.69 -0.03	11567417m	503295	1.73	0.2160	0.0034J	0.00083U	0.00083U
1	alpha-Chlordane		15.00 +0.06	0	263688	0.0000	0.1190	0.00065U	0.00065U	0.00065U
1	Endrin			0d	0d	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor		16.95 -0.01	0d	750507m	0.0000	1.15	0.0013U	0.0022J	0.0013U
3	Aroclor 1016			0m	0m	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260			0m	0m	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221			0m	0m	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926019.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926019.D\0926019c.d			**Vial:**	12
Acqu Date:	09/26/2013 23:49	**Quant Date:**	10/01/2013 13:23	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-005				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:23:07 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.895	11.897	1290.0E6	346.9E6	50.000	50.000
26)	I	Pentachlo...	11.895	11.897	1290.0E6	346.9E6	50.000	50.000
36)	I	Pentachlo...	11.895	11.897	1290.0E6	346.9E6	50.000	50.000
57)	I	Pentachlo...	11.895	11.897	1290.0E6	346.9E6	50.000	50.000
68)	I	Pentachlo...	11.895	11.897	1290.0E6	346.9E6	50.000	50.000
		System Monitoring Compounds						
4)	S	4,4'-Dibr...	11.383	10.414	413.2E6	93208294	49.518	42.753
		Target Compounds						
8)	m	Heptachlor	0.000	12.915f	0	548550	N.D.	0.236 #
10)	m	Heptachlo...	14.310	14.453f	1979812	44576132	0.274m	19.080m#
11)	m	Heptachlo...	14.467	14.453	177.0E6	45878998	26.311	20.612
12)	m	gamma-Chl...	14.642	14.687f	11567417	503295	1.726m	0.216 #
13)	m	alpha-Chl...	0.000	15.004f	0	263688	N.D.	0.119 #
22)	m	Methoxychlor	0.000	16.953	0	750507	N.D. d	1.145m
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

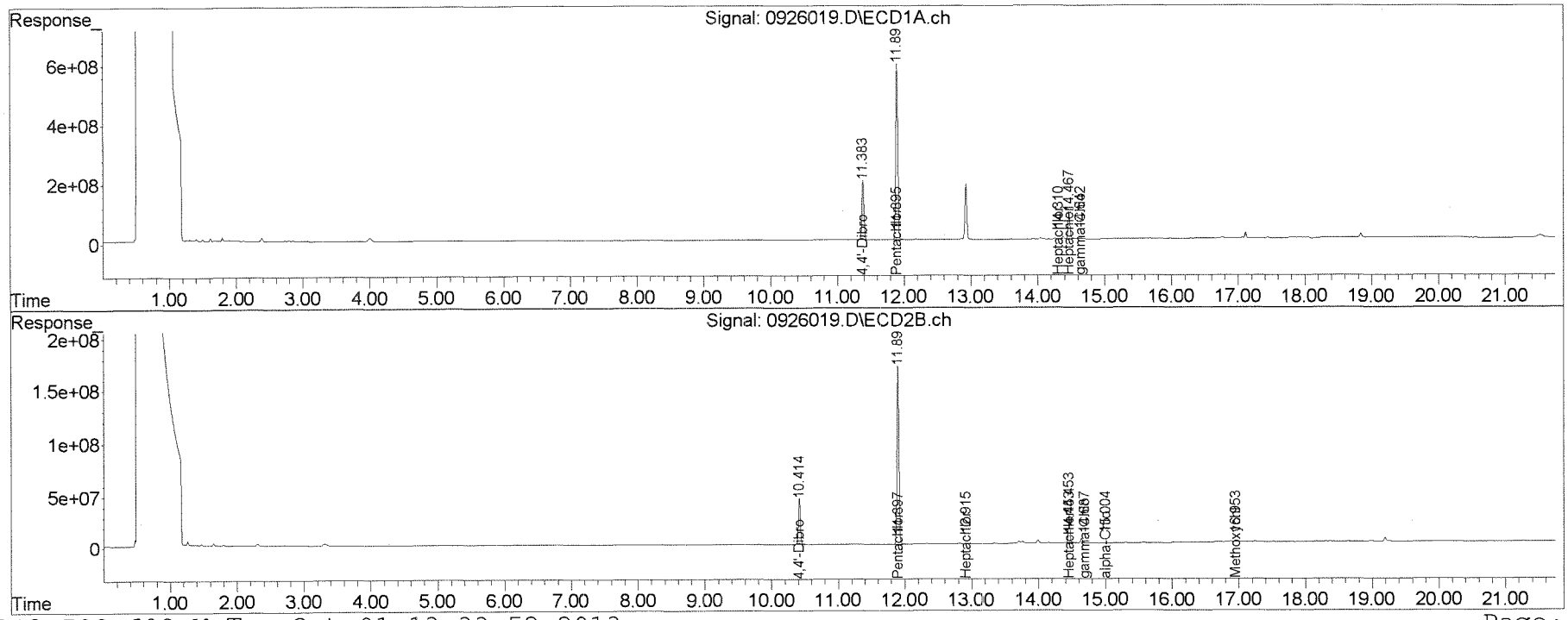
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:23:07 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

798

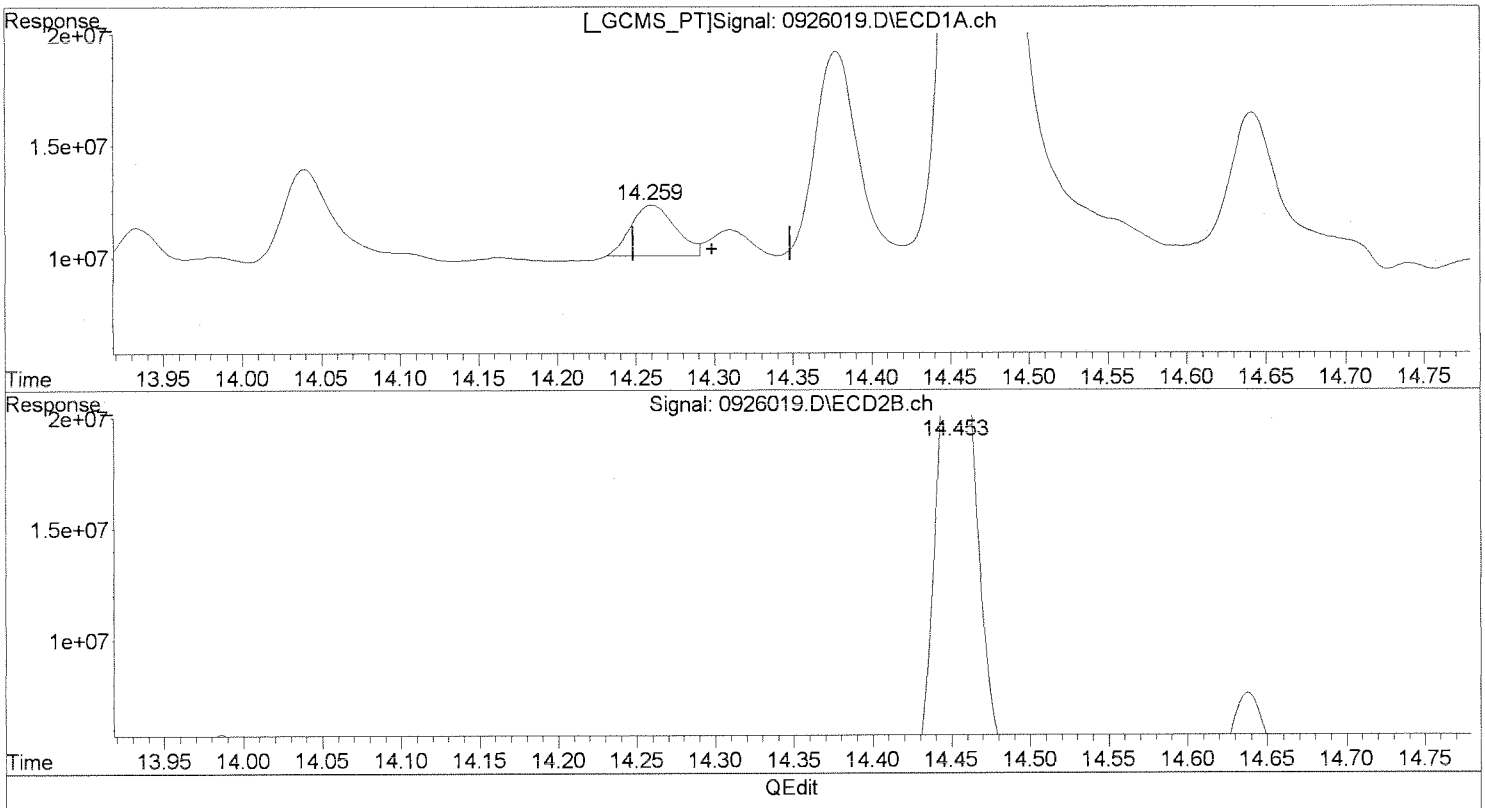


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(10) Heptachlor Epoxide (A) (m)
14.259min 0.629 ug/L
response 4539209

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 19.638 ug/L
response 45878998

Manual Integration:
Before

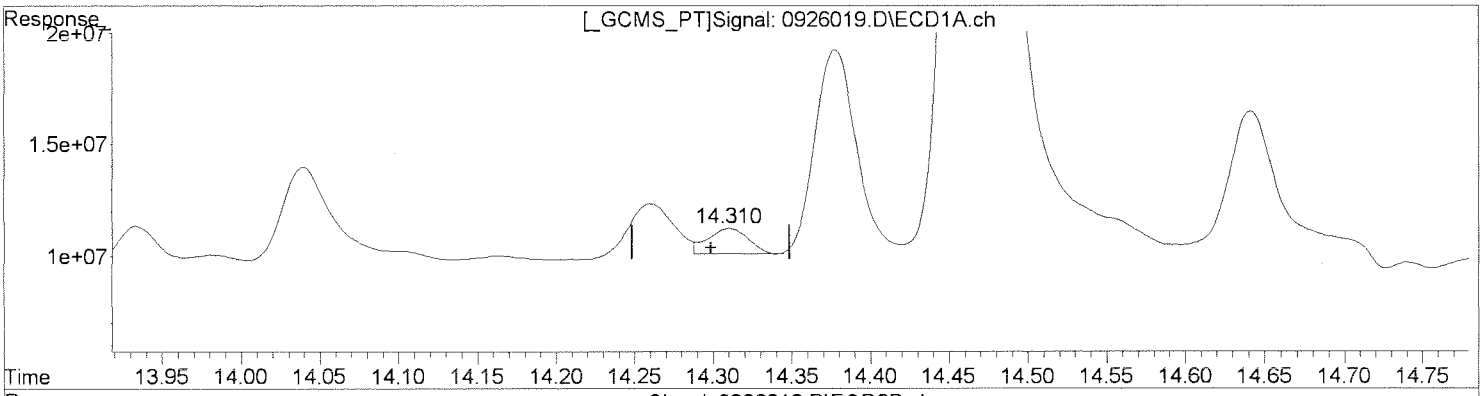
(+) = Expected Retention Time

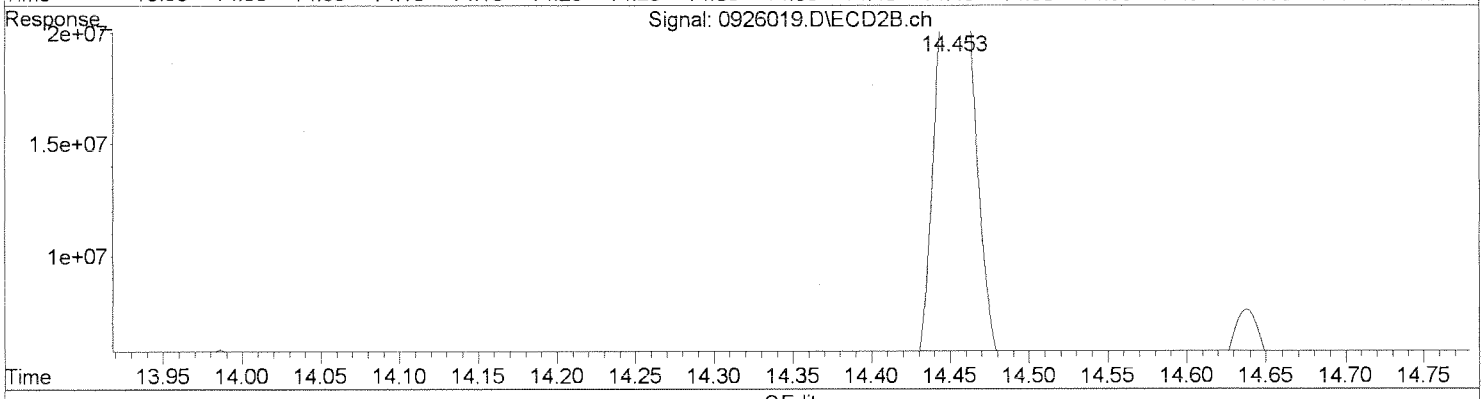
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.310min 0.274 ug/L m
response 1979812

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 19.638 ug/L
response 45878998

Manual Integration:
After
Wrong Peak
09/30/13

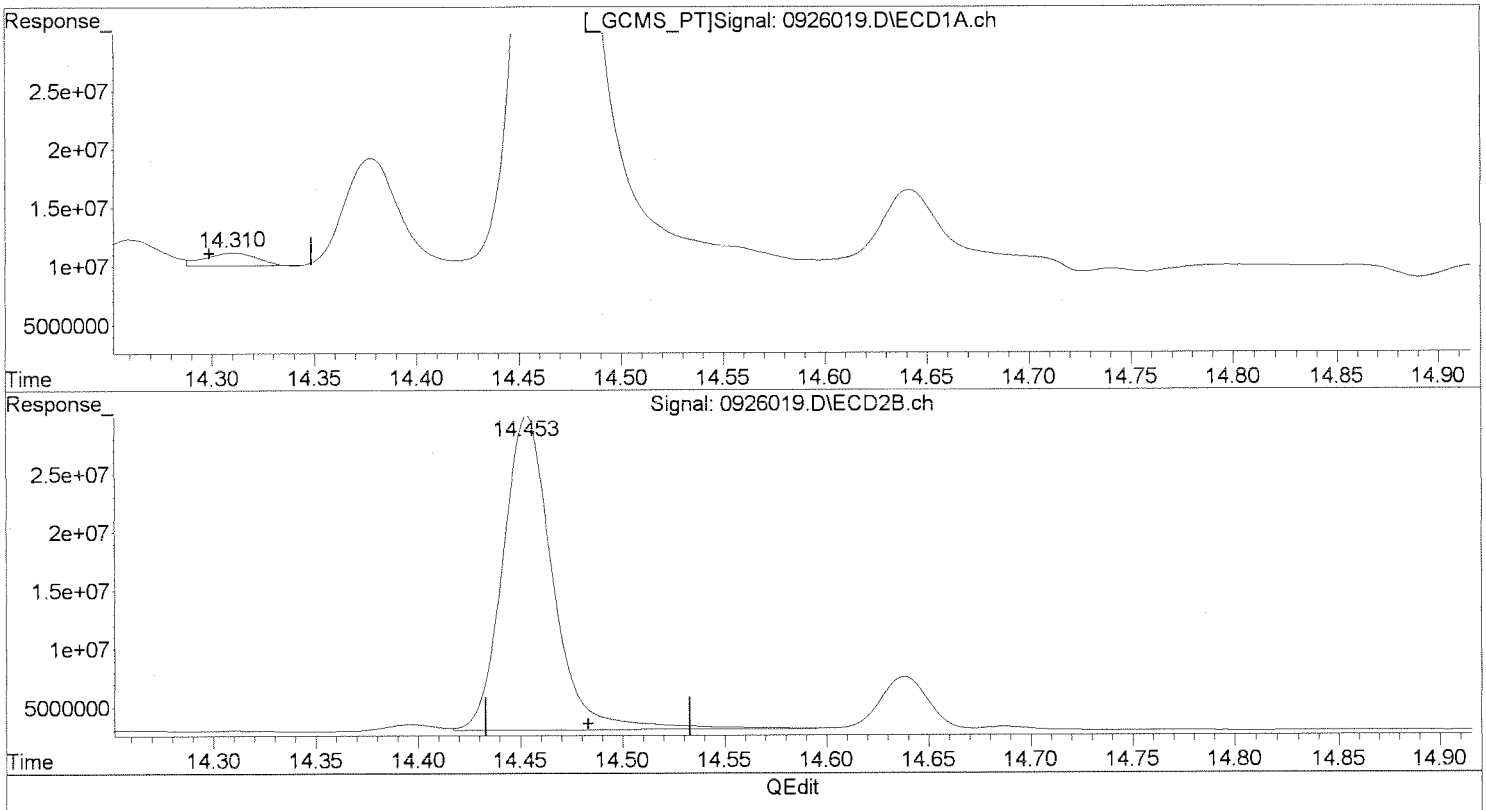
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(10) Heptachlor Epoxide (A) (m)
14.310min 0.274 ug/L m
response 1979812

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 19.638 ug/L
response 45878998

Manual Integration:
Before

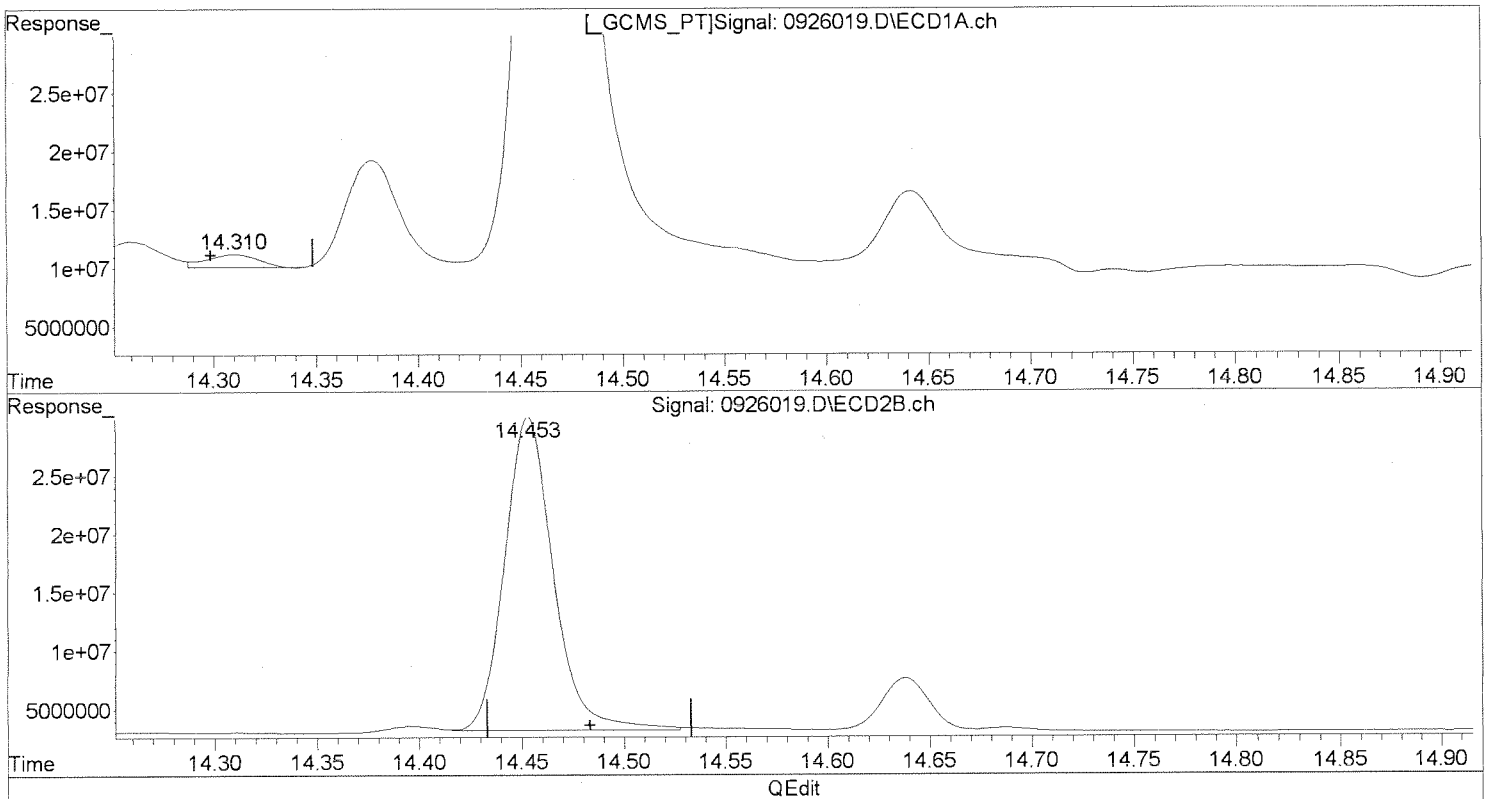
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(10) Heptachlor Epoxide (A) (m)
14.310min 0.274 ug/L m
response 1979812

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 19.080 ug/L m
response 44576132

Manual Integration:
After
Baseline/Shoulder
09/30/13

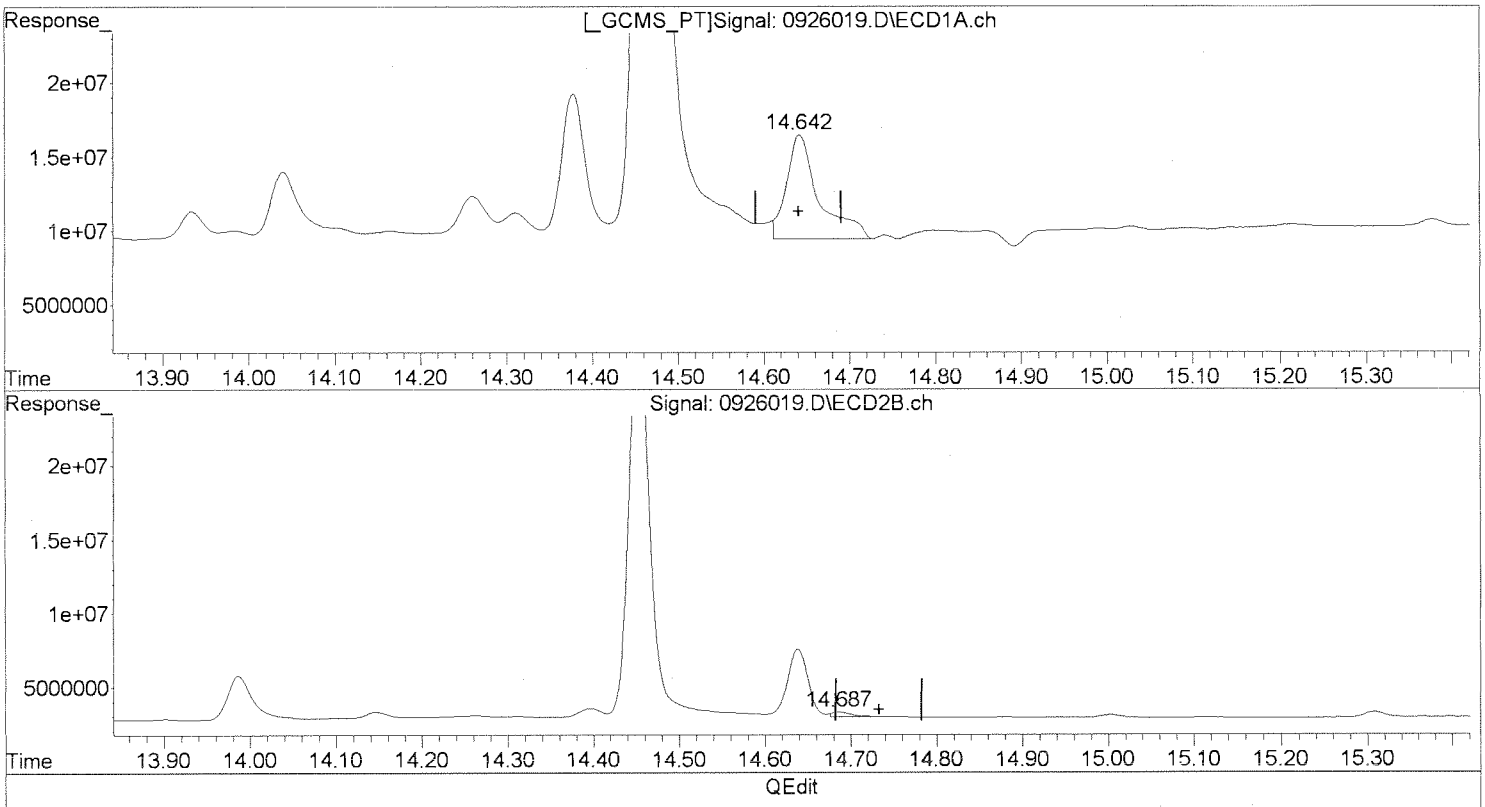
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(12) gamma-Chlordane (m)
14.642min 2.776 ug/L
response 18602796

(12) gamma-Chlordane #2 (m)
14.687min 0.216 ug/L
response 503295

Manual Integration:
Before

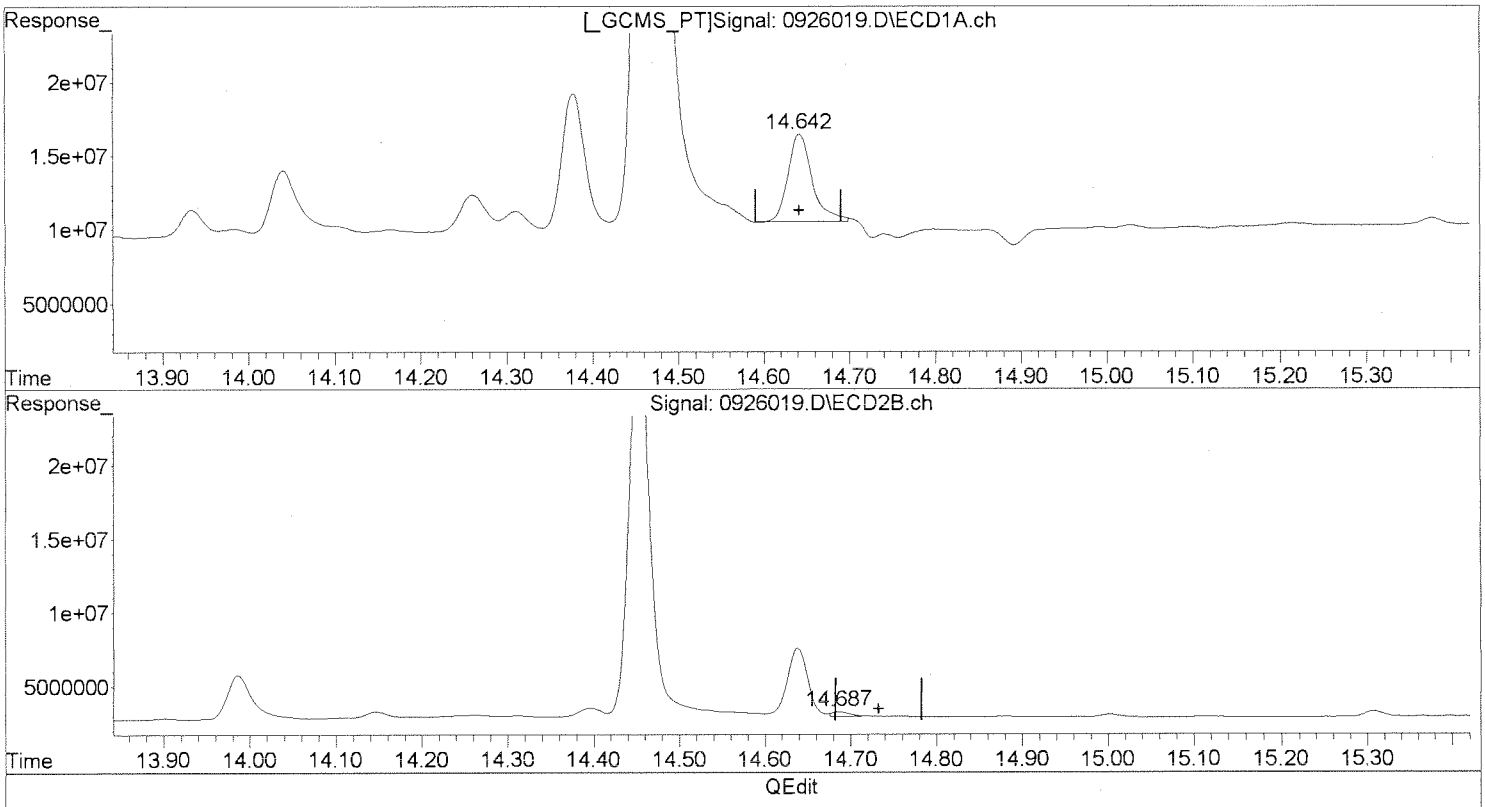
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926019.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 23:49:16
Operator : JSCHWAB
Sample : K1309638-005
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:10 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(12) gamma-Chlordane (m)
14.642min 1.726 ug/L m
response 11567417

(12) gamma-Chlordane #2 (m)
14.687min 0.216 ug/L
response 503295

Manual Integration:
After
Baseline/Shoulder
09/30/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.025	0.025	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	**0.0012**	JP	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	100	70-130	09/27/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926020.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 00:16
Date Quantitated: 10/01/2013 13:24
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 10/2/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926020.D\0926020C.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 00:16
Date Quantitated: 10/01/2013 13:24
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926020.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926020.D\0926020c.d			**Vial:**	13
Acqu Date:	09/27/2013 00:16	**Quant Date:**	10/01/2013 13:24	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-008				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284681	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1273155488	343230273	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1273155488	343230273	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1273155488	343230273	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1273155488	343230273	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1273155488	343230273	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	412150849	92027061	50.05	42.67			100OK
					%Recovery =	100 OK	85 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)					0	0	0.0000	0.0000	0.00041U	0.00041U	0.00041U
1	Heptachlor			12.90	+0.04	0	338278	0.0000	0.1470	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47	+0.04	14.45	+0.01	118367497	28168153	17.83	12.79	0.035	0.025	**0.025** i
1	gamma-Chlordane	14.64	+0.01	14.73	+0.01	11539891	1434062	1.75	0.6220	0.0034J	0.0012J	**0.0012**JP
1	alpha-Chlordane			14.94		0d	1030165	0.0000	0.4710	0.00065U	0.00091J	0.00065U
1	Endrin					0d	0d	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor			16.95	-0.01	0d	608679m	0.0000	0.9390	0.0013U	0.0018J	0.0013U
3	Aroclor 1016					0m	0m	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0m	0m	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0m	0m	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926020.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926020.D\0926020c.d			**Vial:**	13
Acqu Date:	09/27/2013 00:16	**Quant Date:**	10/01/2013 13:24	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-008				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:24:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.896	11.898	1273.2E6	343.2E6	50.000	50.000	
26)	I	Pentachlo...	11.896	11.898	1273.2E6	343.2E6	50.000	50.000	
36)	I	Pentachlo...	11.896	11.898	1273.2E6	343.2E6	50.000	50.000	
57)	I	Pentachlo...	11.896	11.898	1273.2E6	343.2E6	50.000	50.000	
68)	I	Pentachlo...	11.896	11.898	1273.2E6	343.2E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.381	10.415	412.2E6	92027061	50.048	42.666	
		Target Compounds							
8)	m	Heptachlor	0.000	12.902f	0	338278	N.D.	0.147	#
10)	m	Heptachlo...	14.313	14.453f	872024	28168153	0.122m	12.187	#
11)	m	Heptachlo...	14.468	14.453	118.4E6	28168153	17.831	12.791	#
12)	m	gamma-Chl...	14.641	14.726	11539891	1434062	1.745	0.622	#
13)	m	alpha-Chl...	0.000	14.944	0	1030165	N.D. d	0.471	
22)	m	Methoxychlor	0.000	16.952	0	608679	N.D. d	0.939m	
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

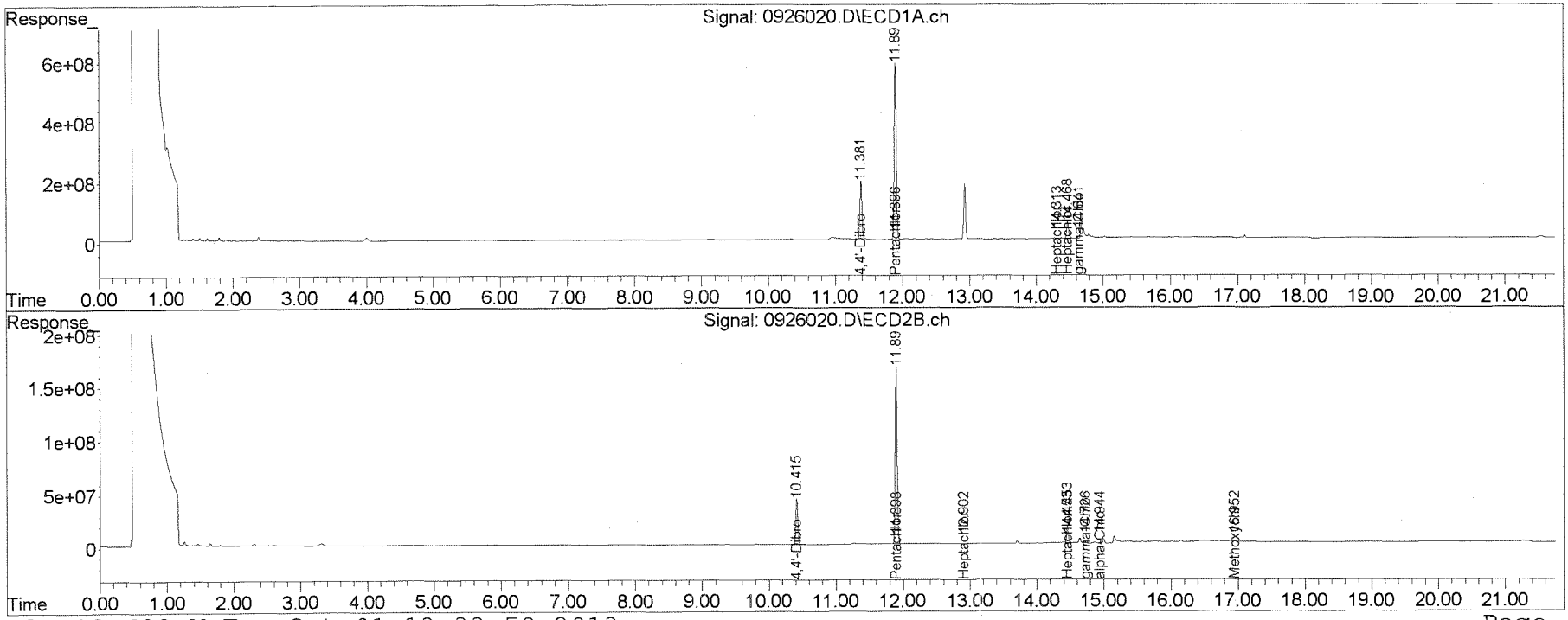
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:24:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

811

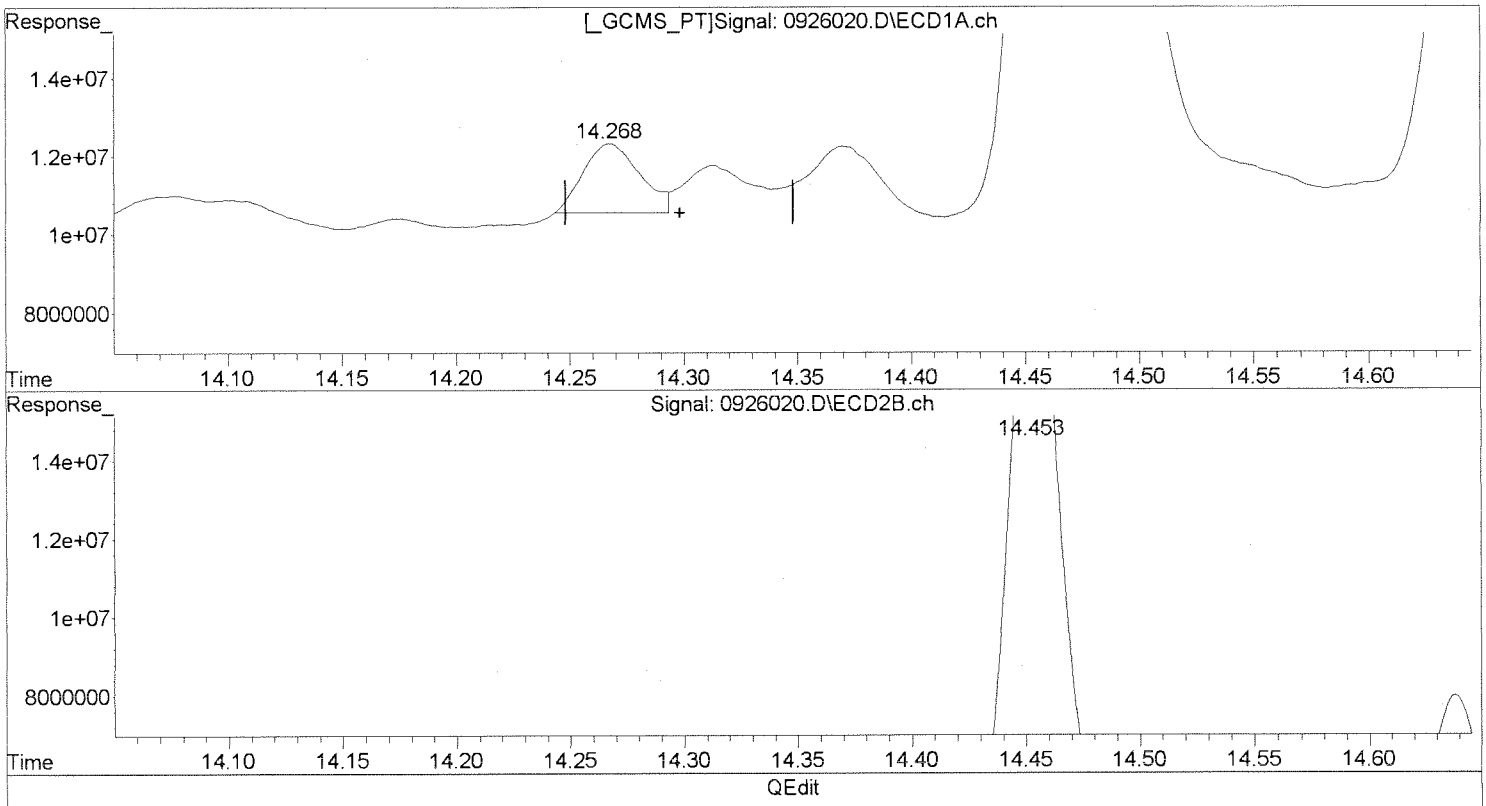


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(10) Heptachlor Epoxide (A) (m)
14.268min 0.428 ug/L
response 3050276

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 12.187 ug/L
response 28168153

Manual Integration:
Before

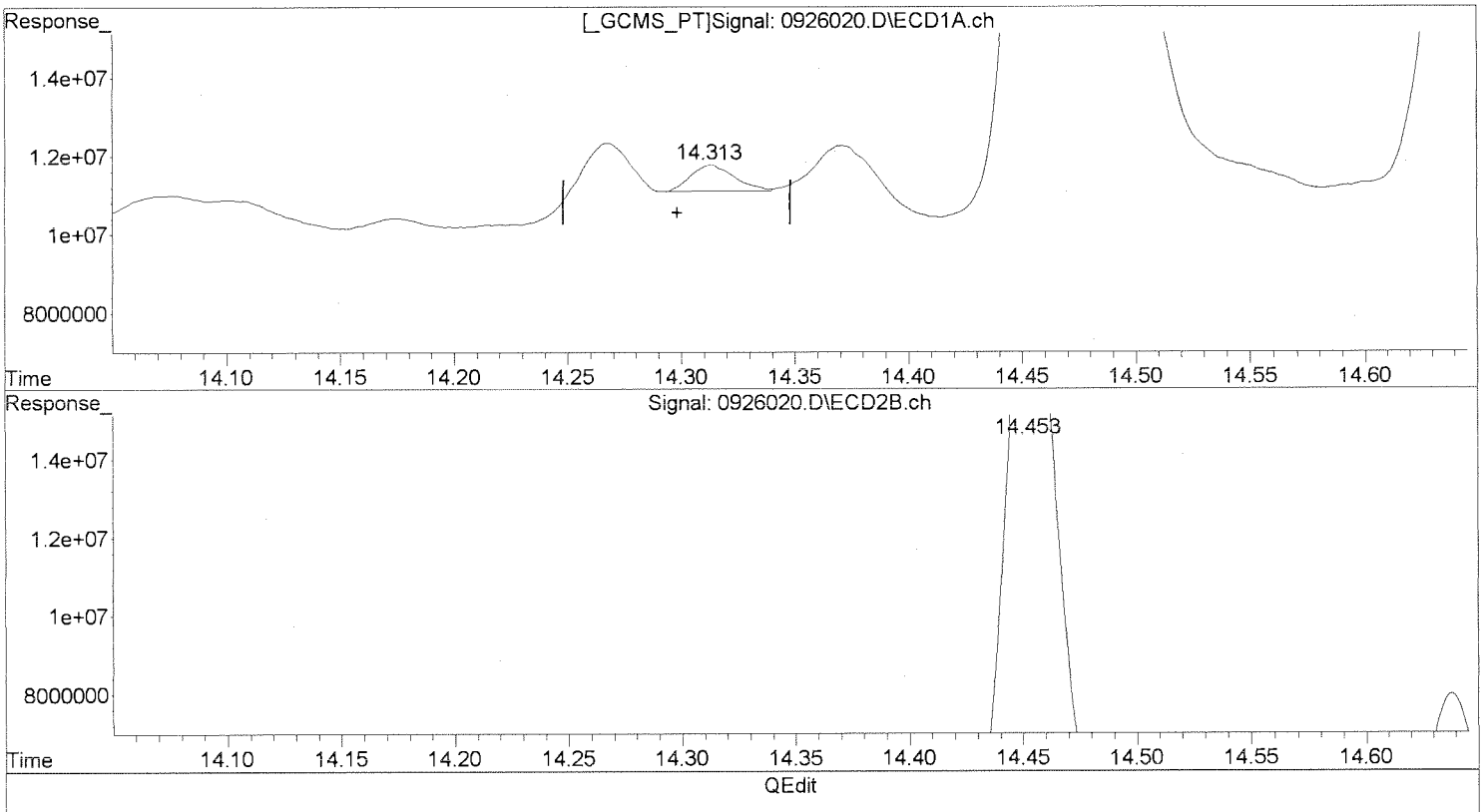
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(10) Heptachlor Epoxide (A) (m)
14.313min 0.122 ug/L m
response 872024

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 12.187 ug/L
response 28168153

Manual Integration:
After
Wrong Peak
09/30/13

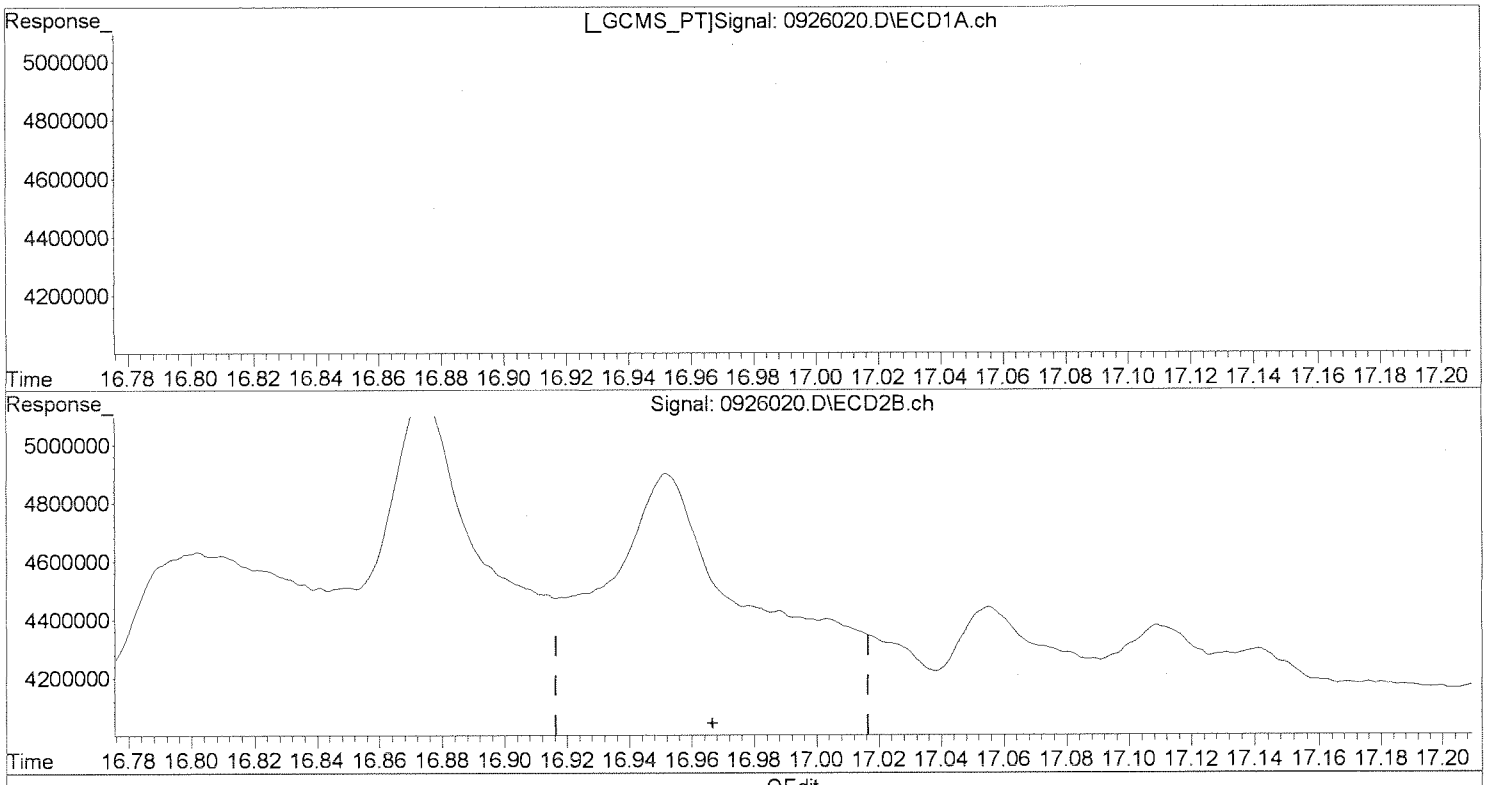
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(22) Methoxychlor (m)
16.691min 2.116 ug/L
response 3789929

(22) Methoxychlor #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
Before

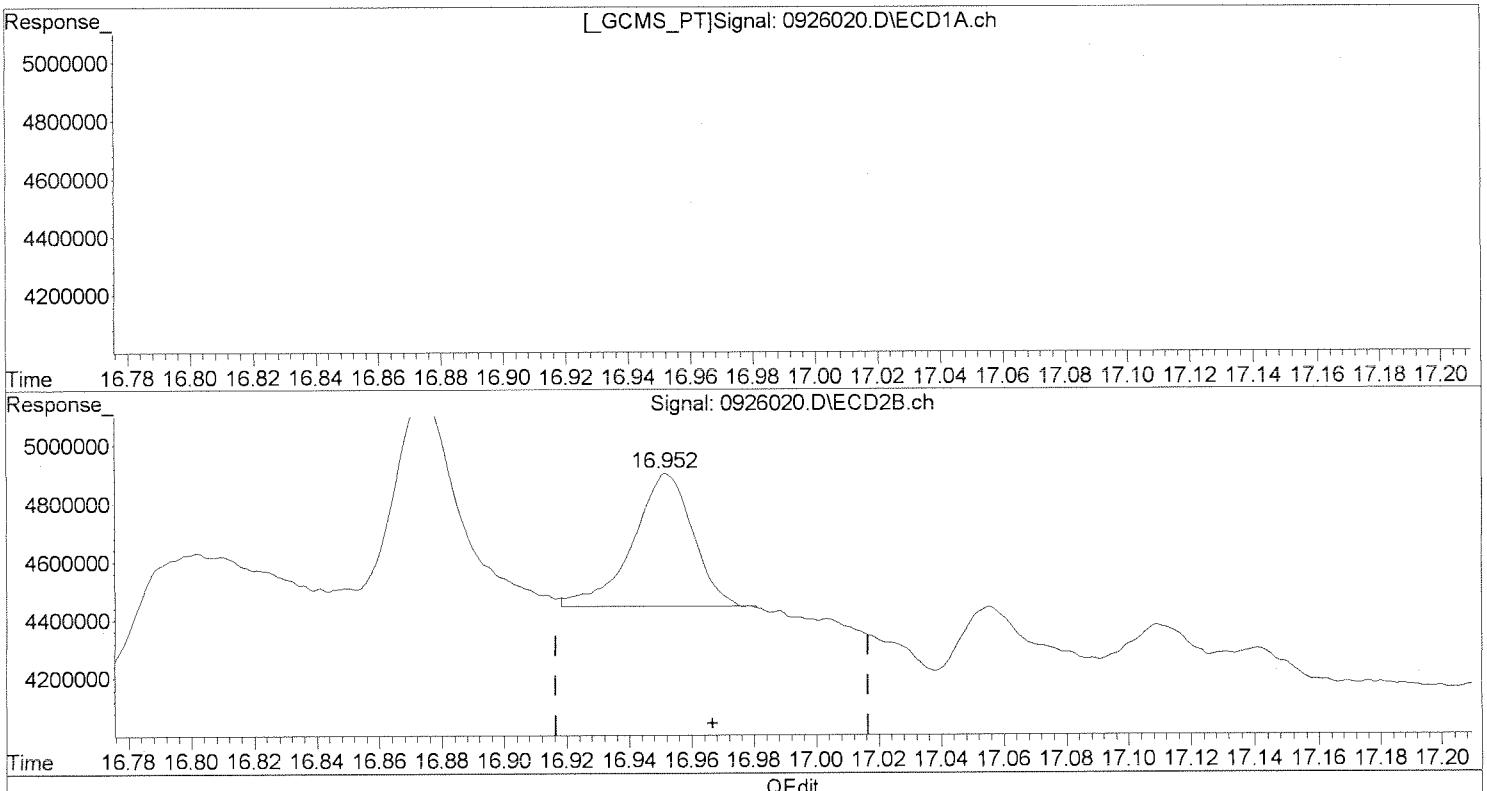
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926020.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:16:32
Operator : JSCHWAB
Sample : K1309638-008
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:15 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(22) Methoxychlor (m)
16.691min 2.116 ug/L
response 3789929

(22) Methoxychlor #2 (m)
16.952min 0.939 ug/L m
response 608679

Manual Integration:
After
Missed Peak
09/30/13

(+) = Expected Retention Time

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-DUP
Lab Code: K1309638-010

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.016	0.016	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	**0.0011**	JP	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	98	70-130	09/27/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926021.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 00:43
Date Quantitated: 10/01/2013 13:25
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	I
	Pentachloronitrobenzene {3}	11.9	NA	NA	I
	Pentachloronitrobenzene{4}	11.9	NA	NA	I
	Pentachloronitrobenzene{5}	11.9	NA	NA	I

Primary Review: 55 10/3/13

Secondary Review: NN

Exception Report

Data File: J:\GC33\DATA\092613-508\0926021.D\0926021C.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 00:43
Date Quantitated: 10/01/2013 13:25
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926021.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926021.D\0926021c.d			**Vial:**	14
Acqu Date:	09/27/2013 00:43	**Quant Date:**	10/01/2013 13:25	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-010				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284682	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1258555262	341930377	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1258555262	341930377	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1258555262	341930377	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1258555262	341930377	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1258555262	341930377	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	397999948	89322302	48.89	41.57			98OK
					%Recovery =	98 OK	83 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)					0	0	0.0000	0.0000	0.00041U	0.00041U	0.00041U
1	Heptachlor		WRT +0.04	12.90	+0.04	0	368320	0.0000	0.1610	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47	+0.04	14.45	+0.01	75242125	17513828	11.47	7.98	0.022	0.016	**0.016** ?
1	gamma-Chlordane	14.64	+0.01	14.73	+0.01	9740716	1261527	1.49	0.5490	0.0029J	0.0011J	**0.0011**JP
1	alpha-Chlordane			14.95	+0.01	0d	962825	0.0000	0.4420	0.00065U	0.00086J	0.00065U
1	Endrin					0d	0d	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor			16.95	-0.01	0d	1294106	0.0000	2.00	0.0013U	0.0039J	0.0013U
3	Aroclor 1016					0m	0m	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0m	0m	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0m	0m	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926021.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926021.D\0926021c.d			**Vial:**	14
Acqu Date:	09/27/2013 00:43	**Quant Date:**	10/01/2013 13:25	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-010				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:43:40
Operator : JSCHWAB
Sample : K1309638-010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:25:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.895	11.898	1258.6E6	341.9E6	50.000	50.000	
26)	I	Pentachlo...	11.895	11.898	1258.6E6	341.9E6	50.000	50.000	
36)	I	Pentachlo...	11.895	11.898	1258.6E6	341.9E6	50.000	50.000	
57)	I	Pentachlo...	11.895	11.898	1258.6E6	341.9E6	50.000	50.000	
68)	I	Pentachlo...	11.895	11.898	1258.6E6	341.9E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.414	398.0E6	89322302	48.890	41.569	
		Target Compounds							
8)	m	Heptachlor	0.000	12.896	0	368320	N.D.	0.161	#
10)	m	Heptachlo...	14.313	14.454f	1069910	17513828	0.152m	7.606	#
11)	m	Heptachlo...	14.467	14.454	75242125	17513828	11.466	7.983	#
12)	m	gamma-Chl...	14.640	14.726	9740716	1261527	1.490	0.549	#
13)	m	alpha-Chl...	0.000	14.947	0	962825	N.D. d	0.442	
22)	m	Methoxychlor	0.000	16.953	0	1294106	N.D. d	2.004	
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

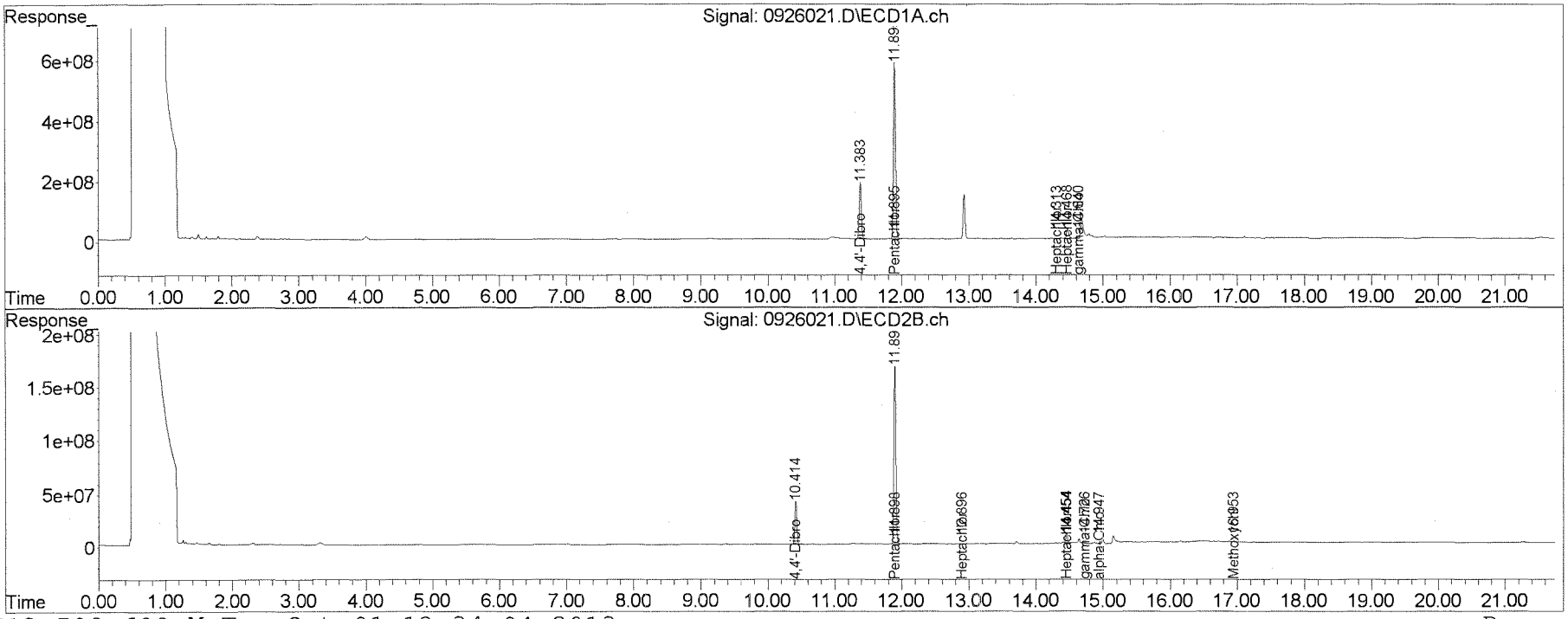
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:43:40
Operator : JSCHWAB
Sample : K1309638-010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 01 13:25:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

822

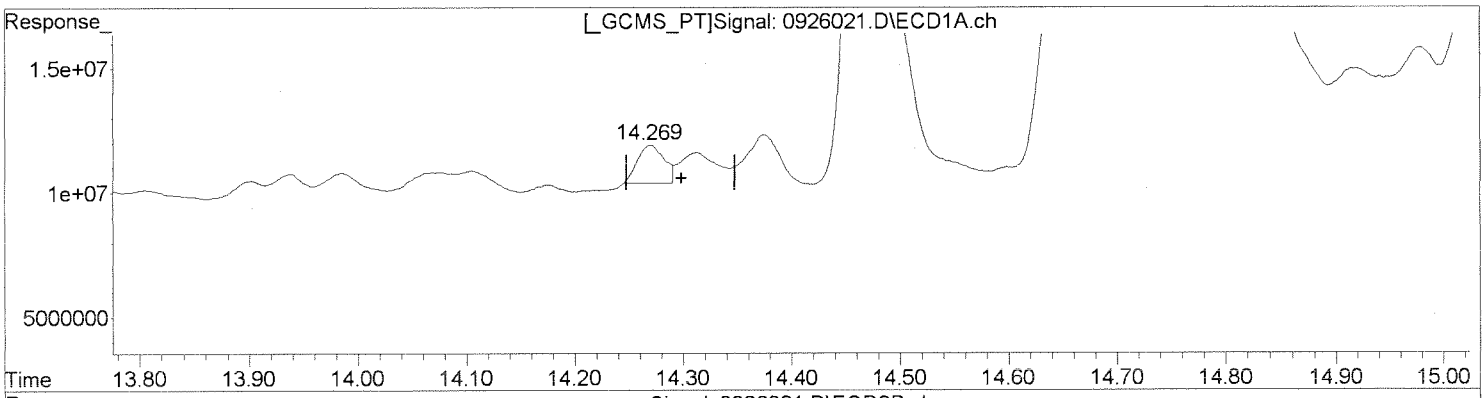


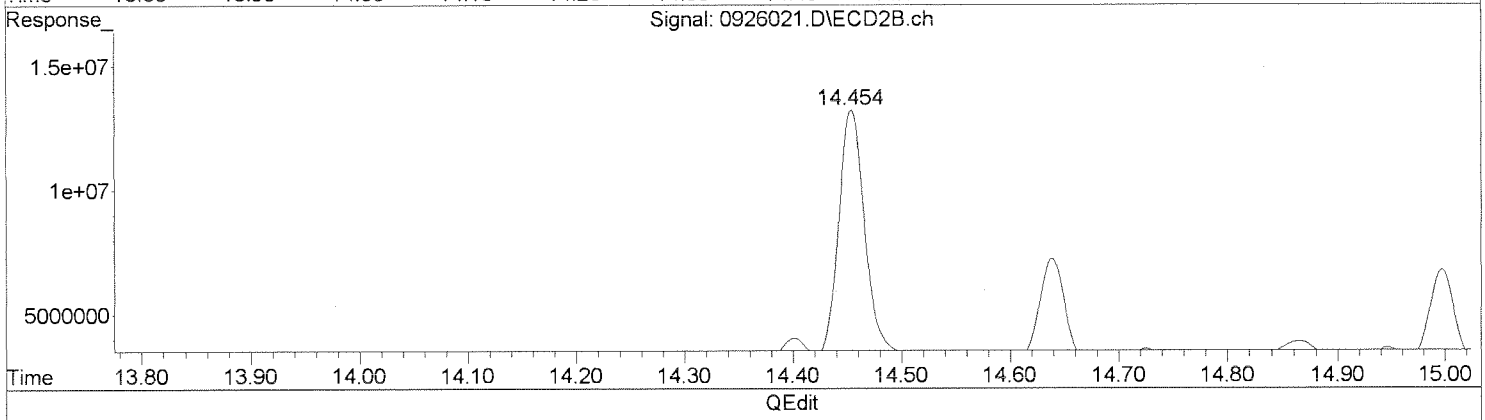
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:43:40
Operator : JSCHWAB
Sample : K1309638-010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:20 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.269min 0.377 ug/L
response 2652277

(10) Heptachlor Epoxide (A) #2 (m)
14.454min 7.606 ug/L
response 17513828

Manual Integration:
Before

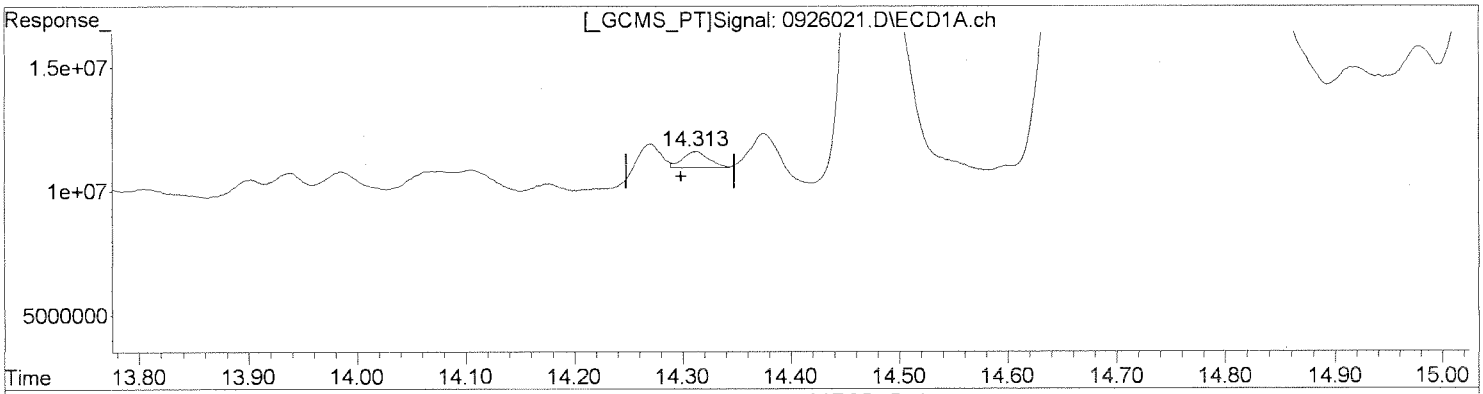
(+) = Expected Retention Time

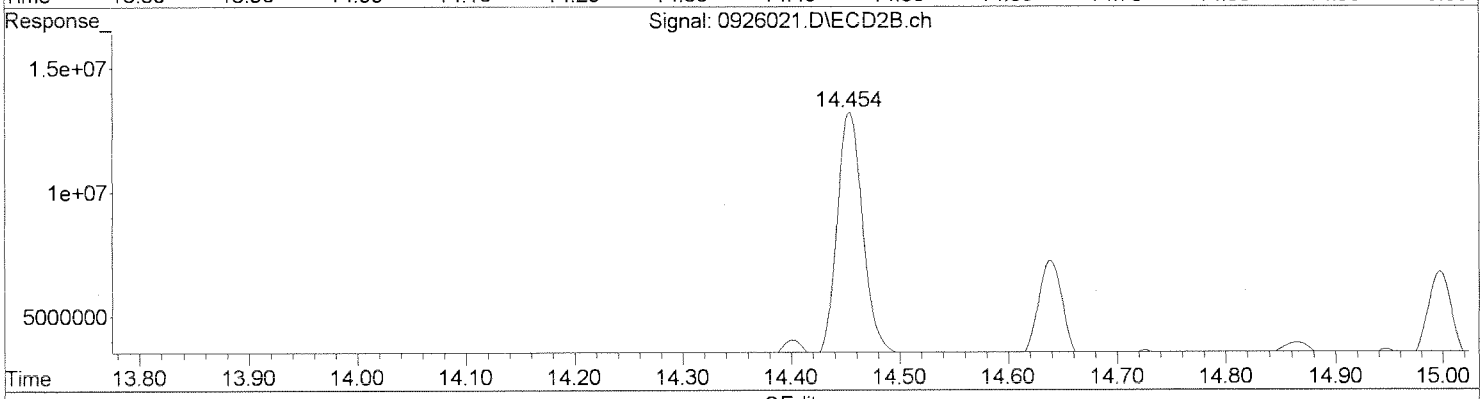
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 00:43:40
Operator : JSCHWAB
Sample : K1309638-010
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:20 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.313min 0.152 ug/L m
response 1069910

(10) Heptachlor Epoxide (A) #2 (m)
14.454min 7.606 ug/L
response 17513828

Manual Integration:
After
~~Baseline/Shoulder~~
09/30/13

JE> 09-30-13
wrong peak

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.0098	0.00041	1	09/20/13	09/27/13	KWG1310289	
Heptachlor	ND	U	0.0098	0.00049	1	09/20/13	09/27/13	KWG1310289	
Heptachlor Epoxide	ND	Ui	0.013	0.013	1	09/20/13	09/27/13	KWG1310289	
gamma-Chlordane	ND	U	0.0098	0.00083	1	09/20/13	09/27/13	KWG1310289	
alpha-Chlordane	ND	U	0.0098	0.00065	1	09/20/13	09/27/13	KWG1310289	
Endrin	ND	U	0.0098	0.00077	1	09/20/13	09/27/13	KWG1310289	
Methoxychlor	ND	U	0.0098	0.0013	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1242	**0.19**	P	0.098	0.012	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1248	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/27/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/27/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	92	70-130	09/27/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926022.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 01:10
Date Quantitated: 09/30/2013 17:01
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926022.D\0926022C.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/27/2013 01:10
Date Quantitated: 09/30/2013 17:01
Batch ID: KWG1310845
Analysis Method: 508.1
ListJoinID: LJ13506

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926022.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926022.D\0926022c.d			**Vial:**	15
Acqu Date:	09/27/2013 01:10	**Quant Date:**	09/30/2013 17:01	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-011				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	K1309638
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284675	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:	Pesticides/PCBs by EPA method 508.1	**Report List ID:**	LJ13506
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01c	11.90?	c	1265545744	334585637	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1265545744	334585637	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1265545744	334585637	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1265545744	334585637	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01c	11.90?	c	1265545744	334585637	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38		10.42	+0.01	376810527	87551453	46.03	41.64			92OK
						%Recovery =		92 OK	83 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-BHC (Lindane)	11.73	+0.02			1381671m	0	0.9560	0.0000	0.0019J	0.00041U	0.00041U
1	Heptachlor	12.78	WRT	12.90	+0.04	1987628	168115	0.2520	0.0750	0.00049U	0.00049U	0.00049U
1	Heptachlor Epoxide	14.47	+0.04	14.45	+0.01	53325025	14252219	8.08	6.64	0.016	0.013	0.013
1	gamma-Chlordane	14.64	+0.01	14.69	-0.03	12490628m	406535	1.90	0.1810	0.0037J	0.00083U	0.00083U
1	alpha-Chlordane			14.95	+0.01	0	210465m	0.0000	0.0990	0.00065U	0.00065U	0.00065U
1	Endrin					0d	0d	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	Methoxychlor	16.69	+0.05	16.95	-0.01	262555m	752890m	0.1470	1.19	0.0013U	0.0023J	0.0013U
3	Aroclor 1016					0m	0m	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260					0m	0m	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221					0m	0m	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254					0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926022.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926022.D\0926022c.d			**Vial:**	15
Acqu Date:	09/27/2013 01:10	**Quant Date:**	09/30/2013 17:01	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ug/L
Lab ID:	K1309638-011				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
4	Aroclor 1232			0m	0m	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			54412847m	14252219m	151.44	96.26	0.29	0.19	**0.19**P
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 17:01:03 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.897	11.898	1265.5E6	334.6E6	50.000	50.000	
26)	I	Pentachlo...	11.897	11.898	1265.5E6	334.6E6	50.000	50.000	
36)	I	Pentachlo...	11.897	11.898	1265.5E6	334.6E6	50.000	50.000	
57)	I	Pentachlo...	11.897	11.898	1265.5E6	334.6E6	50.000	50.000	
68)	I	Pentachlo...	11.897	11.898	1265.5E6	334.6E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.416	376.8E6	87551453	46.032	41.640	
		Target Compounds							
5)	m	gamma-BHC...	11.732	0.000	1381671	0	0.956m	N.D.	#
8)	m	Heptachlor	12.780	12.905f	1987628	168115	0.252	0.075	#
10)	m	Heptachlo...	14.303	14.453f	2953618	14252219	0.417m	6.326	#
11)	m	Heptachlo...	14.468	14.453	53325025	14252219	8.081	6.639	
12)	m	gamma-Chl...	14.643	14.688f	12490628	406535	1.900m	0.181	#
13)	m	alpha-Chl...	0.000	14.945	0	210465	N.D.	0.099m	#
22)	m	Methoxychlor	16.691f	16.954	262555	752890	0.147m	1.191m	#
64)	L8	Aroclor 1...	13.494	0.000	1087822	0	8.604	N.D.	#
65)	L8	Aroclor 1...	0.000	14.453	0	14252219	N.D.	351.999	#
66)	L8	Aroclor 1...	14.468f	0.000	53325025	0	774.100	N.D.	#
67)	L8	Aroclor 1...	0.000	0.000	54412847	14252219	151.443m	96.261m	#
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

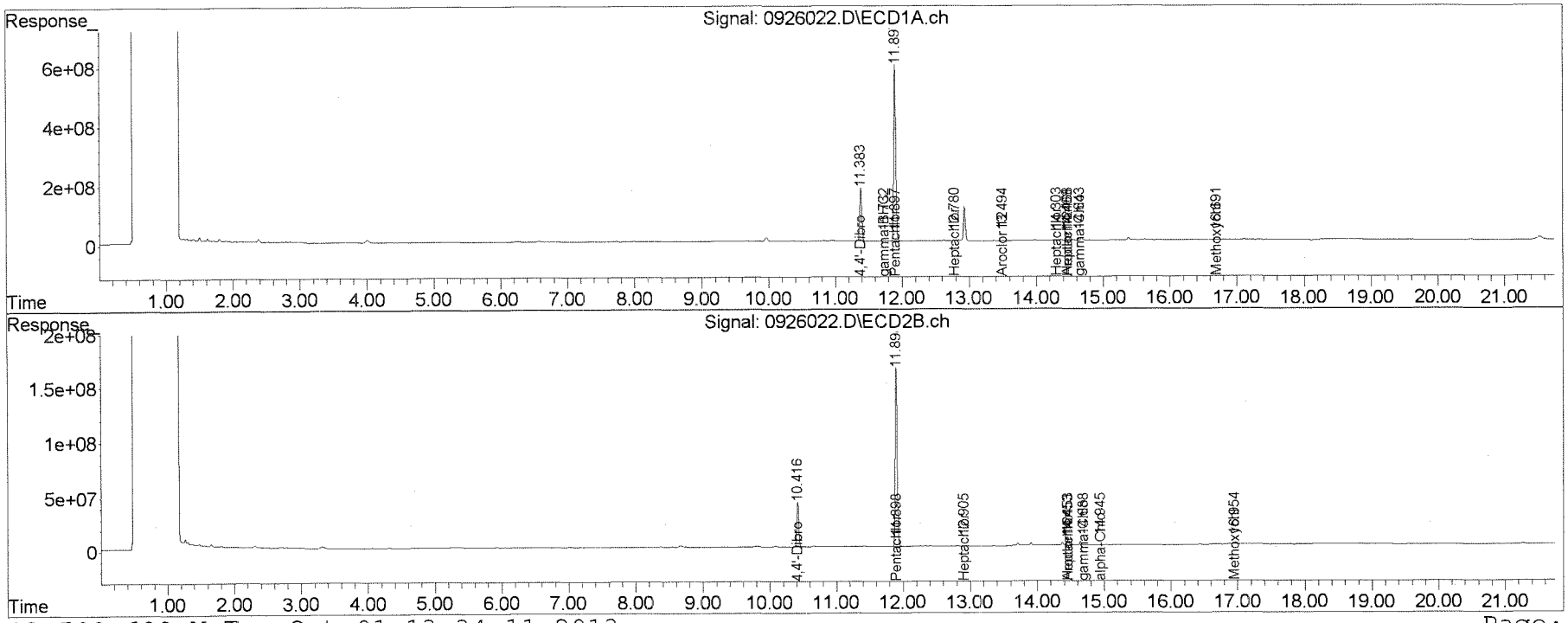
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 17:01:03 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

831

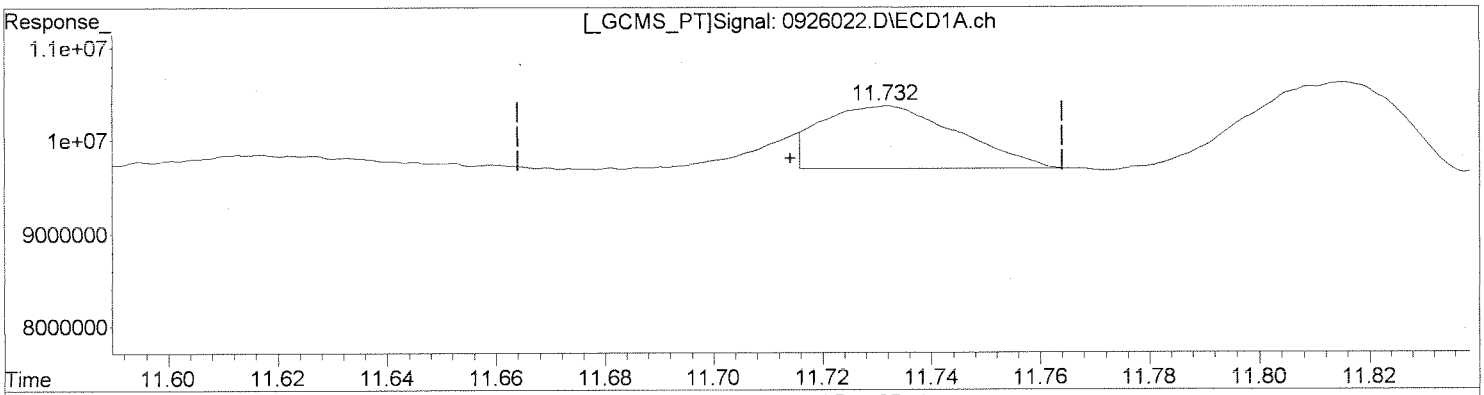


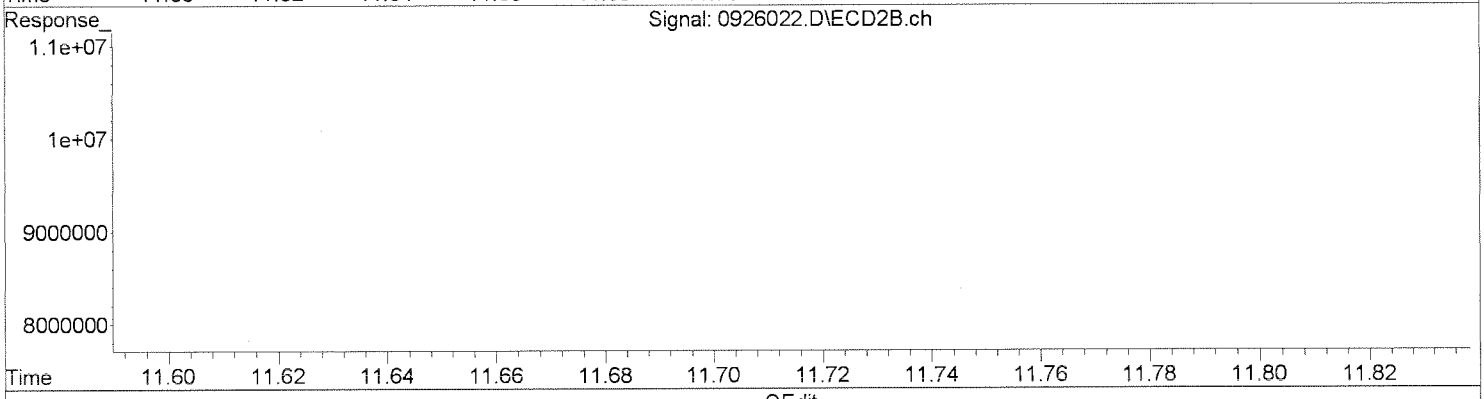
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(5) gamma-BHC (Lindane) (m)
11.732min 0.936 ug/L
response 1174801

(5) gamma-BHC (Lindane) #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
Before

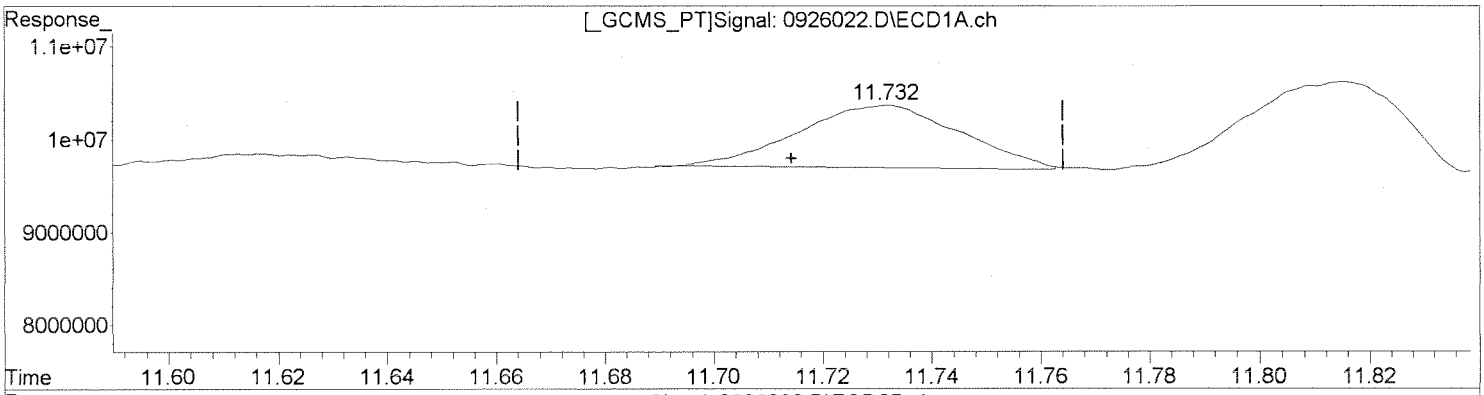
(+) = Expected Retention Time

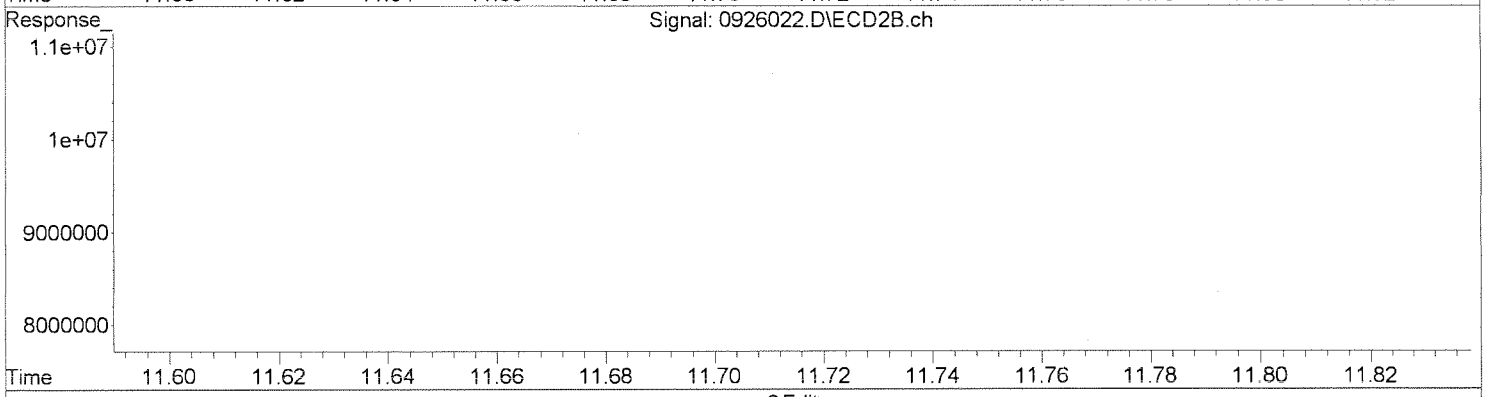
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(5) gamma-BHC (Lindane) (m)
11.732min 0.956 ug/L m
response 1381671

(5) gamma-BHC (Lindane) #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
After
Baseline/Shoulder
09/30/13

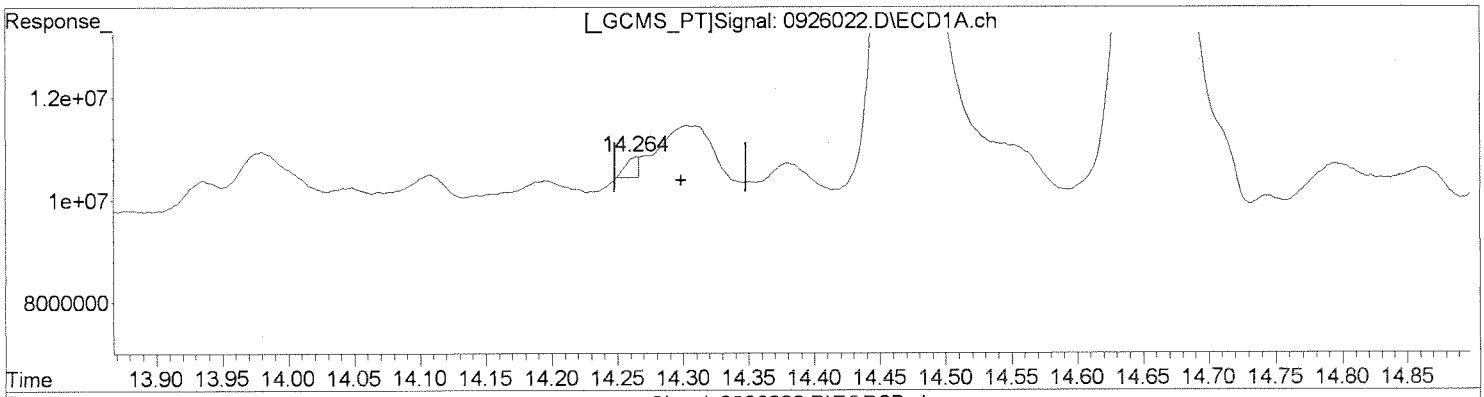
(+) = Expected Retention Time

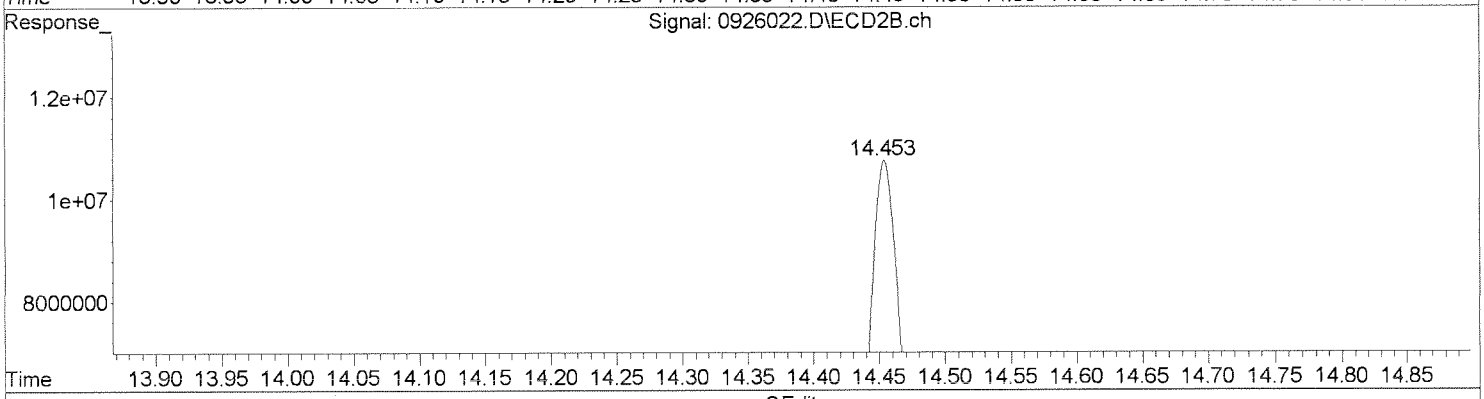
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.264min 0.038 ug/L
response 266631

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 6.326 ug/L
response 14252219

Manual Integration:
Before

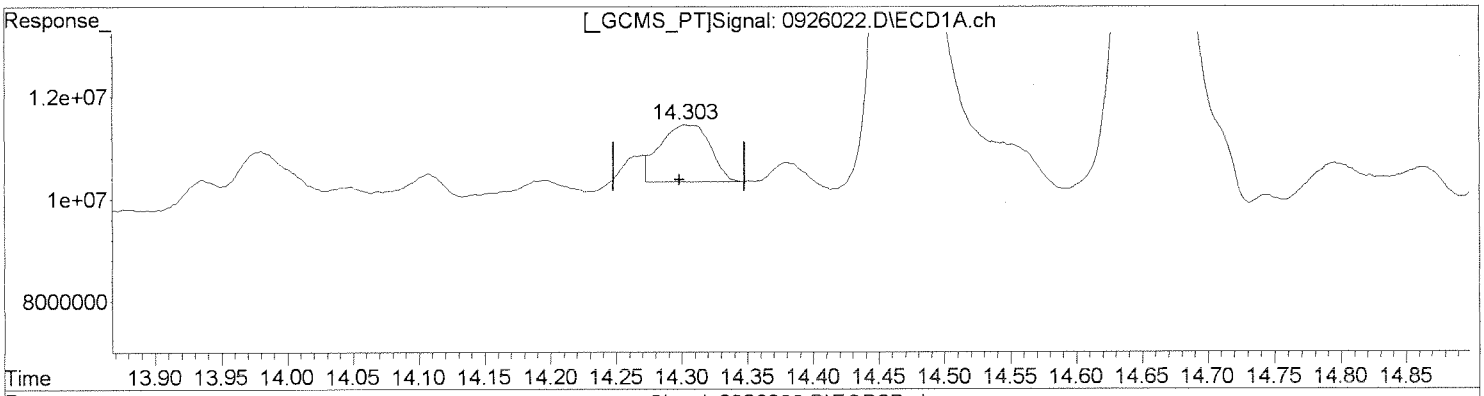
(+) = Expected Retention Time

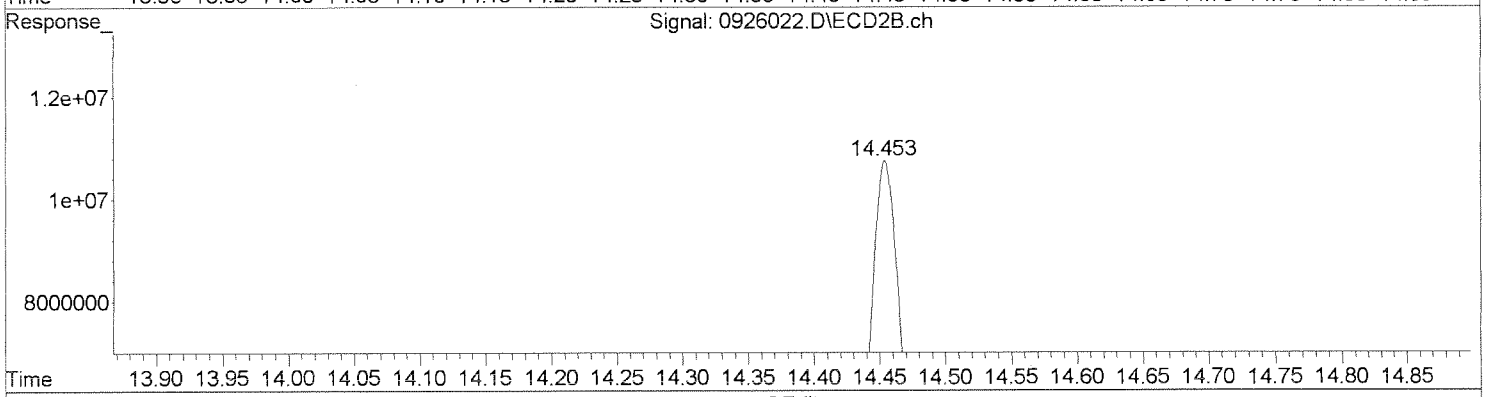
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(10) Heptachlor Epoxide (A) (m)
14.303min 0.417 ug/L m
response 2953618

(10) Heptachlor Epoxide (A) #2 (m)
14.453min 6.326 ug/L
response 14252219

Manual Integration:
After
Wrong Peak
09/30/13

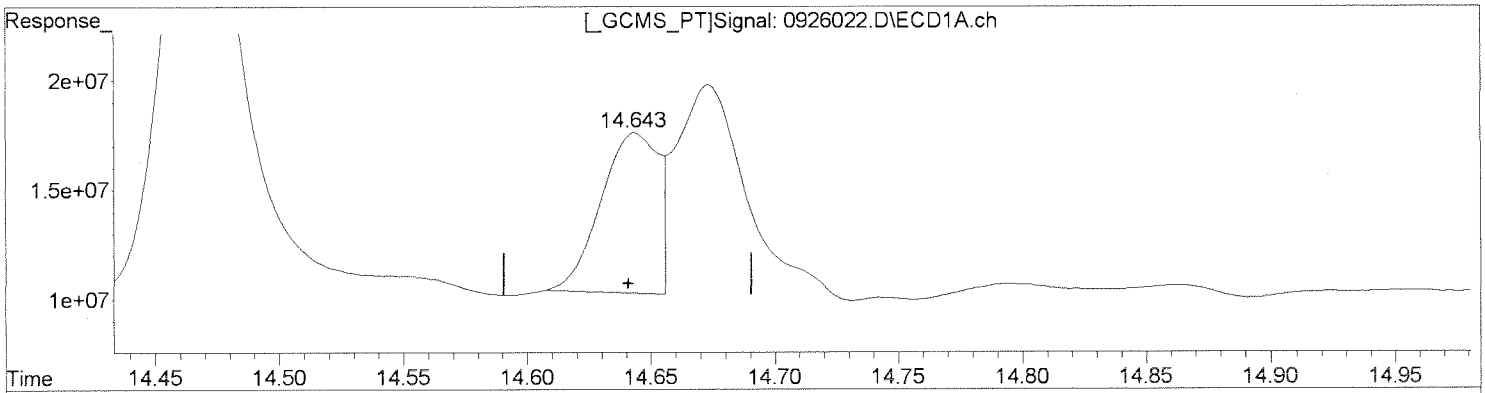
(+) = Expected Retention Time

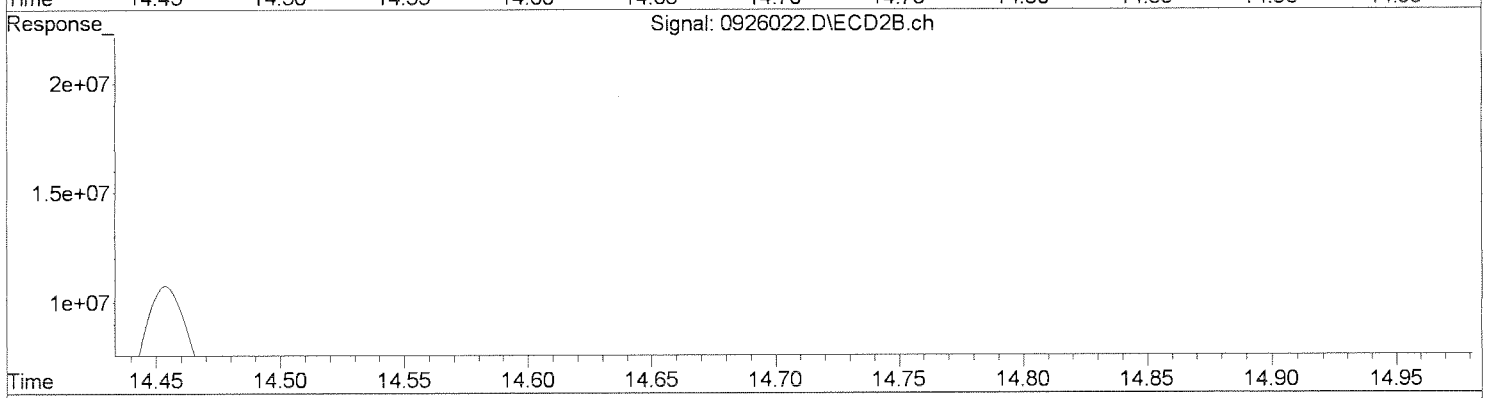
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(12) gamma-Chlordane (m)
14.643min 1.840 ug/L
response 12097989

(12) gamma-Chlordane #2 (m)
14.688min 0.181 ug/L
response 406535

Manual Integration:
Before

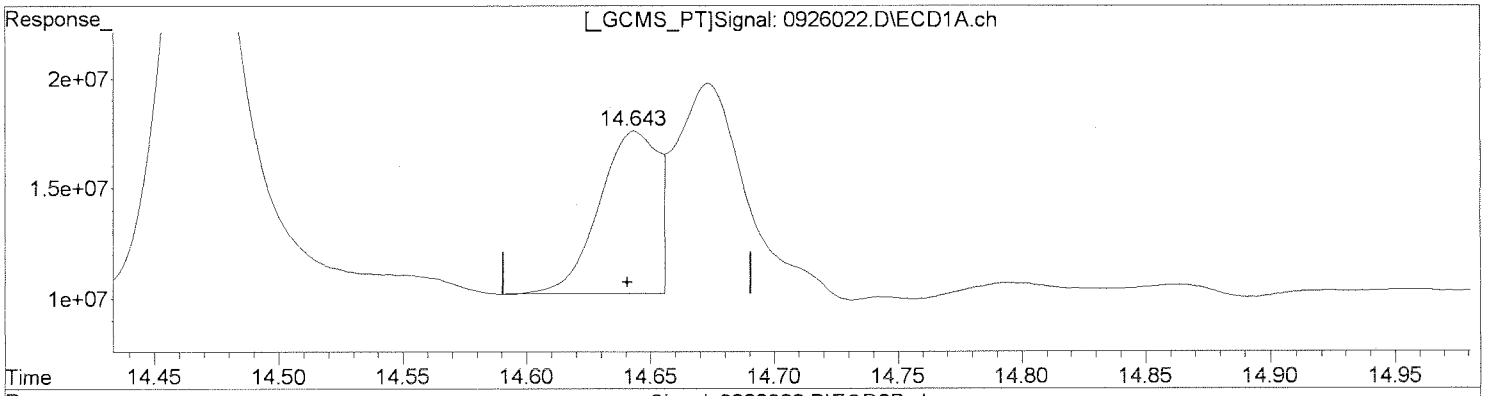
(+) = Expected Retention Time

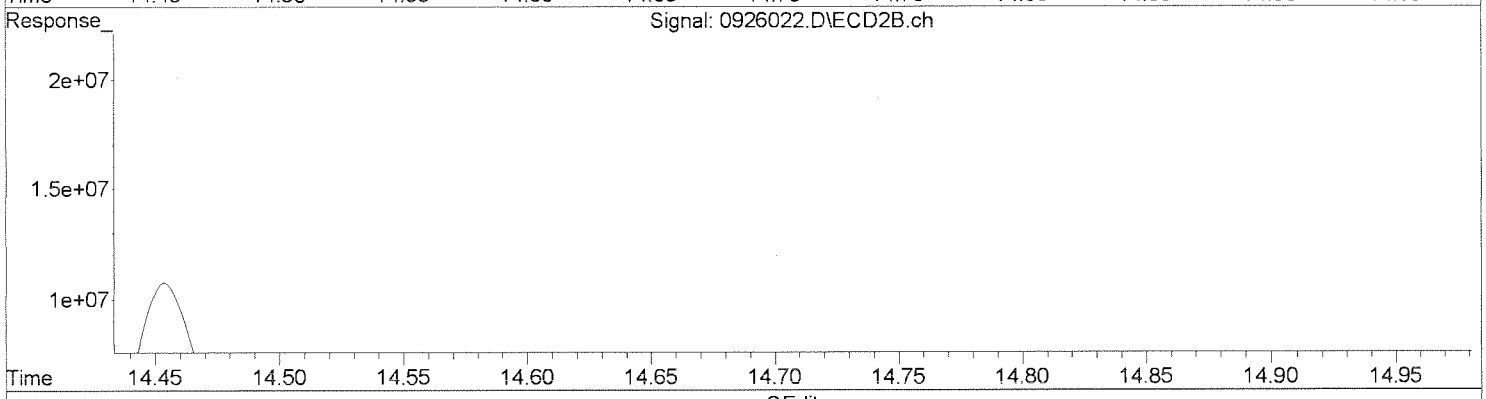
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(12) gamma-Chlordane (m)
14.643min 1.900 ug/L m
response 12490628

(12) gamma-Chlordane #2 (m)
14.688min 0.181 ug/L
response 406535

Manual Integration:
After
Baseline/Shoulder
09/30/13

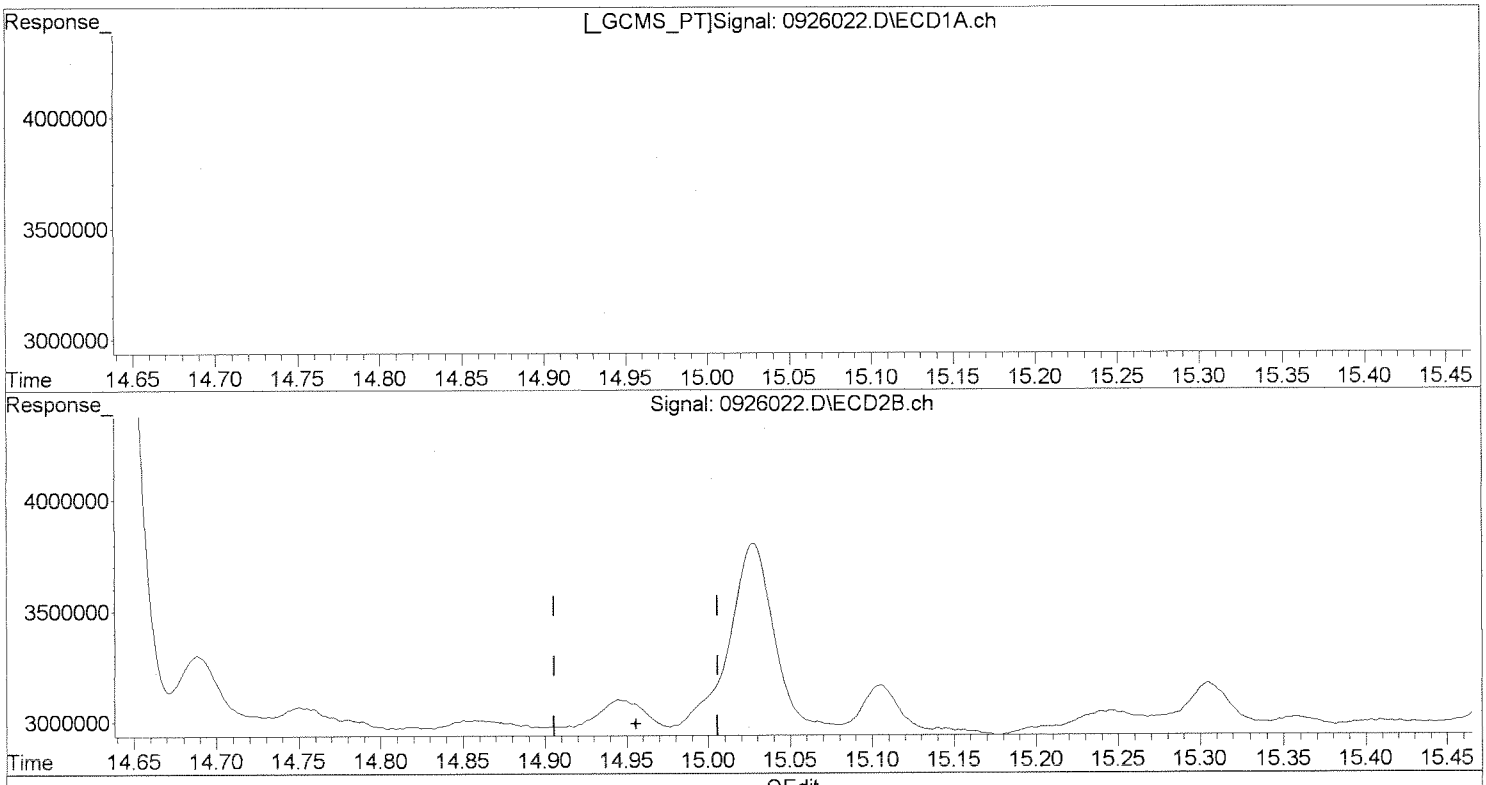
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(13) alpha-Chlordane (m)
0.000min 0.000 ug/L
response 0

(13) alpha-Chlordane #2 (m)
0.000min 0.000 ug/L
response 0

Manual Integration:
Before

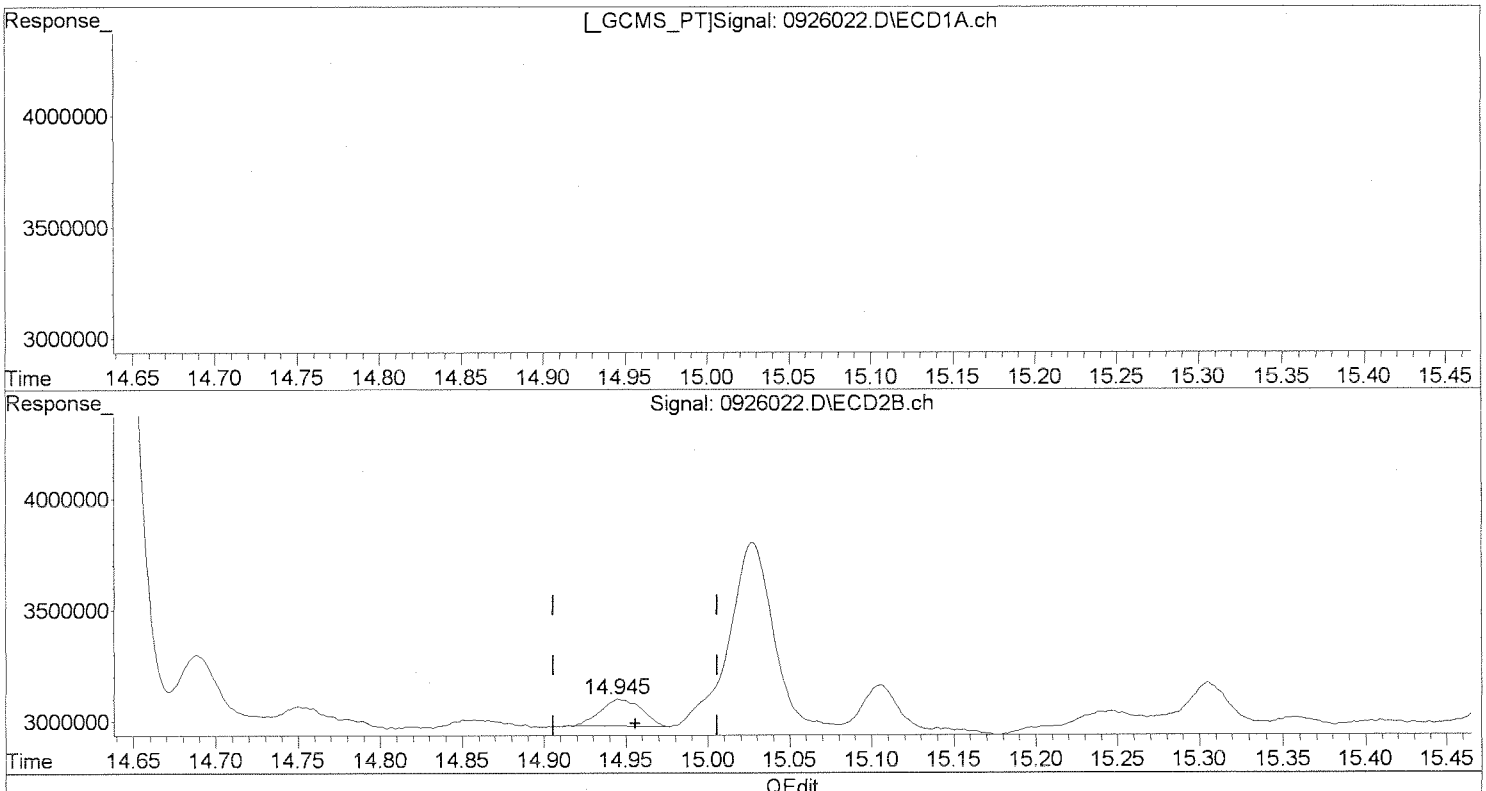
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(13) alpha-Chlordane (m)
0.000min 0.000 ug/L
response 0

(13) alpha-Chlordane #2 (m)
14.945min 0.099 ug/L m
response 210465

Manual Integration:
After
Missed Peak
09/30/13

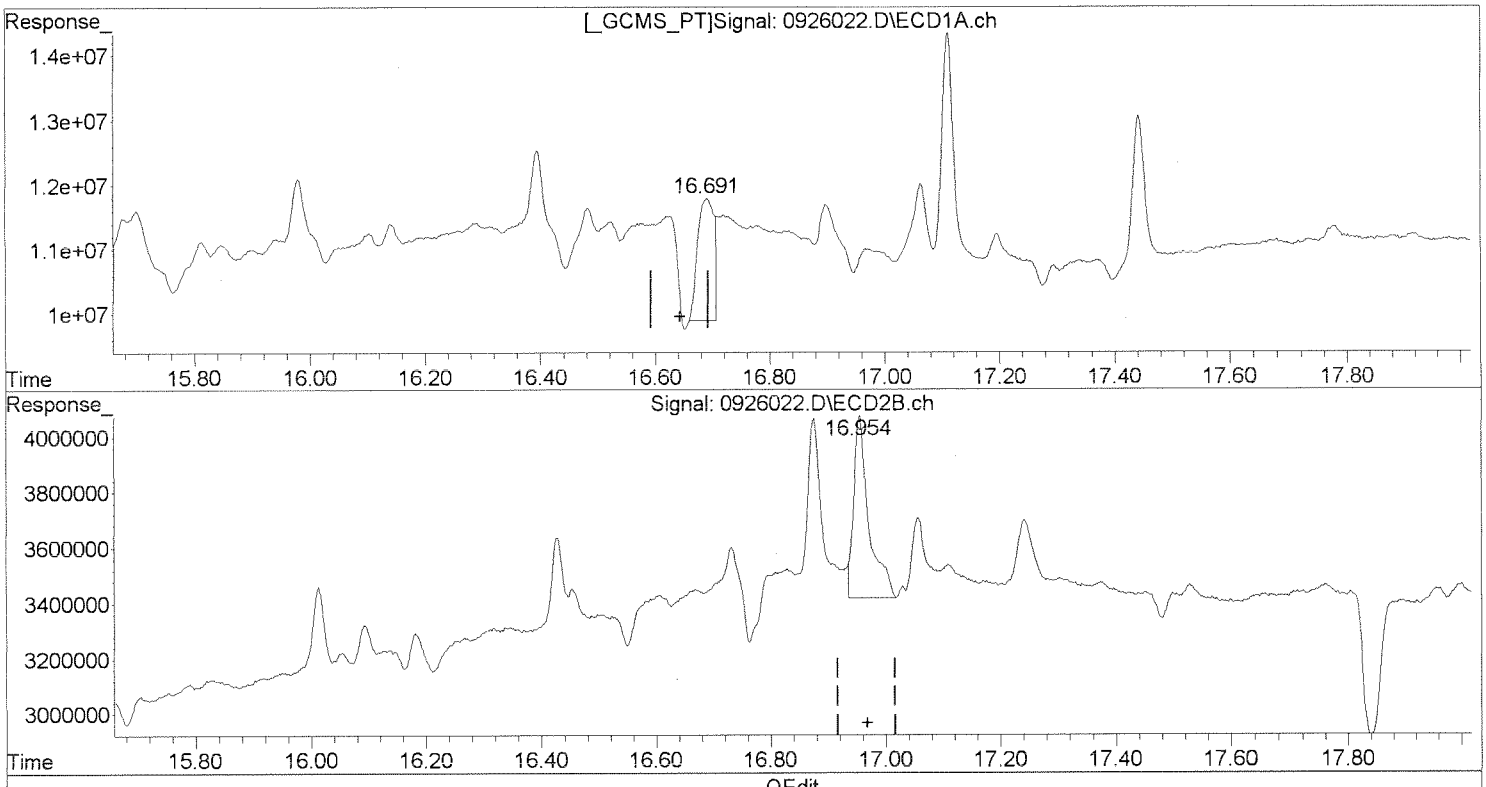
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(22) Methoxychlor (m)
16.691min 2.136 ug/L
response 3801579

(22) Methoxychlor #2 (m)
16.954min 1.894 ug/L
response 1197033

Manual Integration:
Before

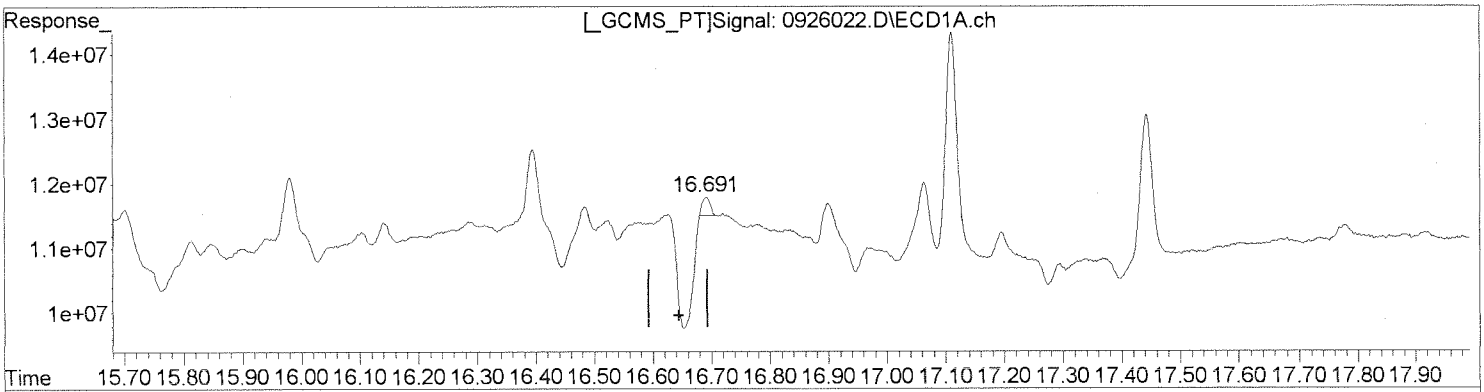
(+) = Expected Retention Time

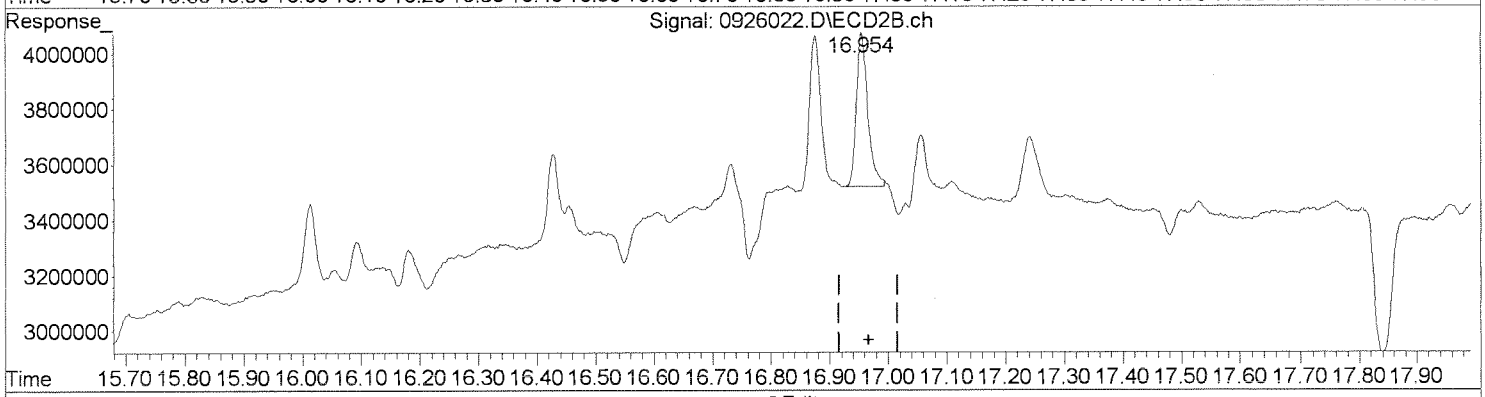
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 01:10:50
Operator : JSCHWAB
Sample : K1309638-011
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 17:01:03 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(22) Methoxychlor (m)
16.691min 0.147 ug/L m
response 262555

(22) Methoxychlor #2 (m)
16.954min 1.191 ug/L m
response 752890

Manual Integration:
~~Before~~
Baseline/Shoulder
09/30/13

(+) = Expected Retention Time

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Pesticides/PCBs by EPA method 508.1

Sample Name: Method Blank
Lab Code: KWG1310289-5

Extraction Method: METHOD
Analysis Method: 508.1

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.010	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	ND	U	0.010	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	ND	U	0.010	0.00060	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	**0.0029**	JP	0.010	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	ND	U	0.010	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	ND	U	0.010	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	ND	U	0.010	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.050	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.10	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	ND	U	0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.10	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	99	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926012.D
Lab ID: KWG1310289-5
RunType: MB
Matrix: WATER

Date Acquired: 09/26/2013 20:42
Date Quantitated: 09/30/2013 14:41
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 10/2/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926012.D\0926012C.D
Lab ID: KWG1310289-5
RunType: MB
Matrix: WATER

Date Acquired: 09/26/2013 20:42
Date Quantitated: 09/30/2013 14:41
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926012.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926012.D\0926012c.d			**Vial:**	5
Acqu Date:	09/26/2013 20:42	**Quant Date:**	09/30/2013 14:41	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-5				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	09/20/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284687	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1259257671	330016025	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1259257671	330016025	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1259257671	330016025	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1259257671	330016025	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1259257671	330016025	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2		Resp #1	Respe #2	ug/L #1		ug/L #2				Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.42	+0.01	403357118	86756890	49.52		41.83				99OK
					%Recovery =		99	OK	84	OK	Limits =	70-130	
1	Decachlorobiphenyl	0.00			0	0			0.0000				
					%Recovery =						Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC					0	0	0.0000	0.0000	0.00024U	0.00024U	0.00024U
1	gamma-BHC (Lindane)					0	0	0.0000	0.0000	0.00041U	0.00041U	0.00041U
1	beta-BHC					0	0	0.0000	0.0000	0.00080U	0.00080U	0.00080U
1	delta-BHC	12.35	+0.01			1095409	0	1.11	0.0000	0.00222J	0.00084U	0.00084U
1	Heptachlor					0	0d	0.0000	0.0000	0.00049U	0.00049U	0.00049U
1	Aldrin	13.38	+0.02			1550111	0	0.2070	0.0000	0.000414J	0.00021U	0.00021U
1	Heptachlor Epoxide (Isomer	14.31	+0.02			2294759	0	0.3260	0.0000	0.000652J	0.00053U	0.00053U
1	Heptachlor Epoxide			14.40	-0.04	0	152802	0.0000	0.0720	0.00060U	0.00060U	0.00060U
1	gamma-Chlordane	14.64	+0.01	14.69	-0.03	9548464	436151	1.46	0.1970	0.00292J	0.00083U	0.00083U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926012.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926012.D\0926012c.d			**Vial:**	5
Acqu Date:	09/26/2013 20:42	**Quant Date:**	09/30/2013 14:41	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-5				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane			0	0	0.0000	0.0000	0.00065U	0.00065U	0.00065U
1	4,4'-DDE			0	0	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Endosulfan I			0	0	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Dieldrin			0	0	0.0000	0.0000	0.00063U	0.00063U	0.00063U
1	Endrin			0	0	0.0000	0.0000	0.00077U	0.00077U	0.00077U
1	4,4'-DDD			0	0	0.0000	0.0000	0.0011U	0.0011U	0.0011U
1	Endosulfan II	15.98 -0.02		1662875	0	0.3650	0.0000	0.0010U	0.0010U	0.0010U
1	4,4'-DDT			0	0	0.0000	0.0000	0.0012U	0.0012U	0.0012U
1	Endrin Aldehyde		16.43	0	1912048	0.0000	1.34	0.0010U	0.00269J	0.0010U
1	Methoxychlor			0d	0	0.0000	0.0000	0.0013U	0.0013U	0.0013U
1	Endosulfan Sulfate	16.90 -0.02	16.73 +0.03	814752	62510m	0.2140	0.0450	0.0014U	0.0014U	0.0014U
1	Endrin Ketone			0	0	0.0000	0.0000	0.0014U	0.0014U	0.0014U
2	Toxaphene			0d	0d	0.0000	0.0000	0.034U	0.034U	0.034U
2	Chlordane			0d	0d	0.0000	0.0000	0.0088U	0.0088U	0.0088U
3	Aroclor 1016			0d	0d	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260			0d	0d	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221			0d	0d	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			0m	0m	0.0000	0.0000	0.015U	0.015U	0.015U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:42:00
Operator : JSCHWAB
Sample : KWG1310289-5 MB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:41:32 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.897	11.899	1259.3E6	330.0E6	50.000	50.000	
26)	I	Pentachlo...	11.897	11.899	1259.3E6	330.0E6	50.000	50.000	
36)	I	Pentachlo...	11.897	11.899	1259.3E6	330.0E6	50.000	50.000	
57)	I	Pentachlo...	11.897	11.899	1259.3E6	330.0E6	50.000	50.000	
68)	I	Pentachlo...	11.897	11.899	1259.3E6	330.0E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.384	10.417	403.4E6	86756890	49.521	41.833	
		Target Compounds							
7)	m	delta-BHC	12.354	0.000	1095409	0	1.111	N.D.	#
9)	m	Aldrin	13.378	0.000	1550111	0	0.207	N.D.	#
10)	m	Heptachlo...	14.314	0.000	2294759	0	0.326	N.D.	#
11)	m	Heptachlo...	0.000	14.400f	0	152802	N.D.	0.072	#
12)	m	gamma-Chl...	14.643	14.690f	9548464	436151	1.459	0.197	#
19)	m	Endosulfa...	15.982f	0.000	1662875	0	0.365	N.D.	#
21)	m	Endrin Al...	0.000	16.428	0	1912048	N.D.	1.343	#
23)	m	Endosulfa...	16.898f	16.732	814752	62510	0.214	0.045	m#
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

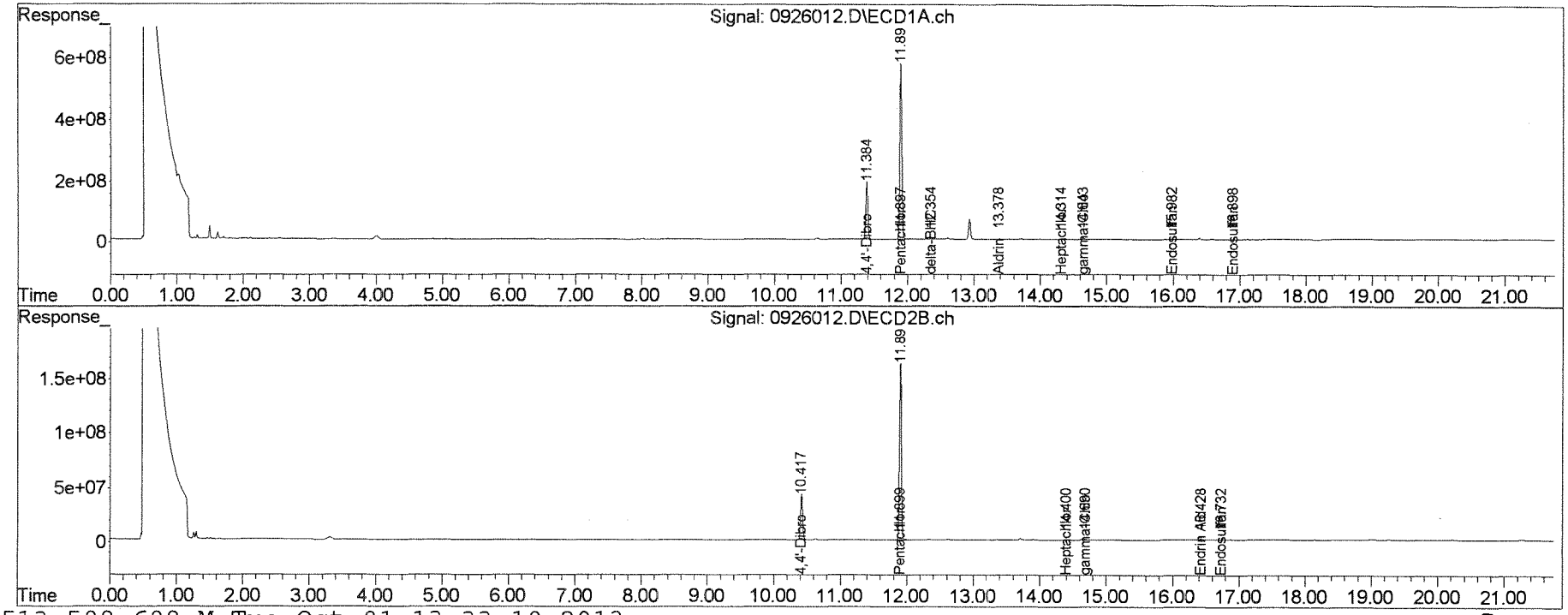
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:42:00
Operator : JSCHWAB
Sample : KWG1310289-5 MB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:41:32 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

848

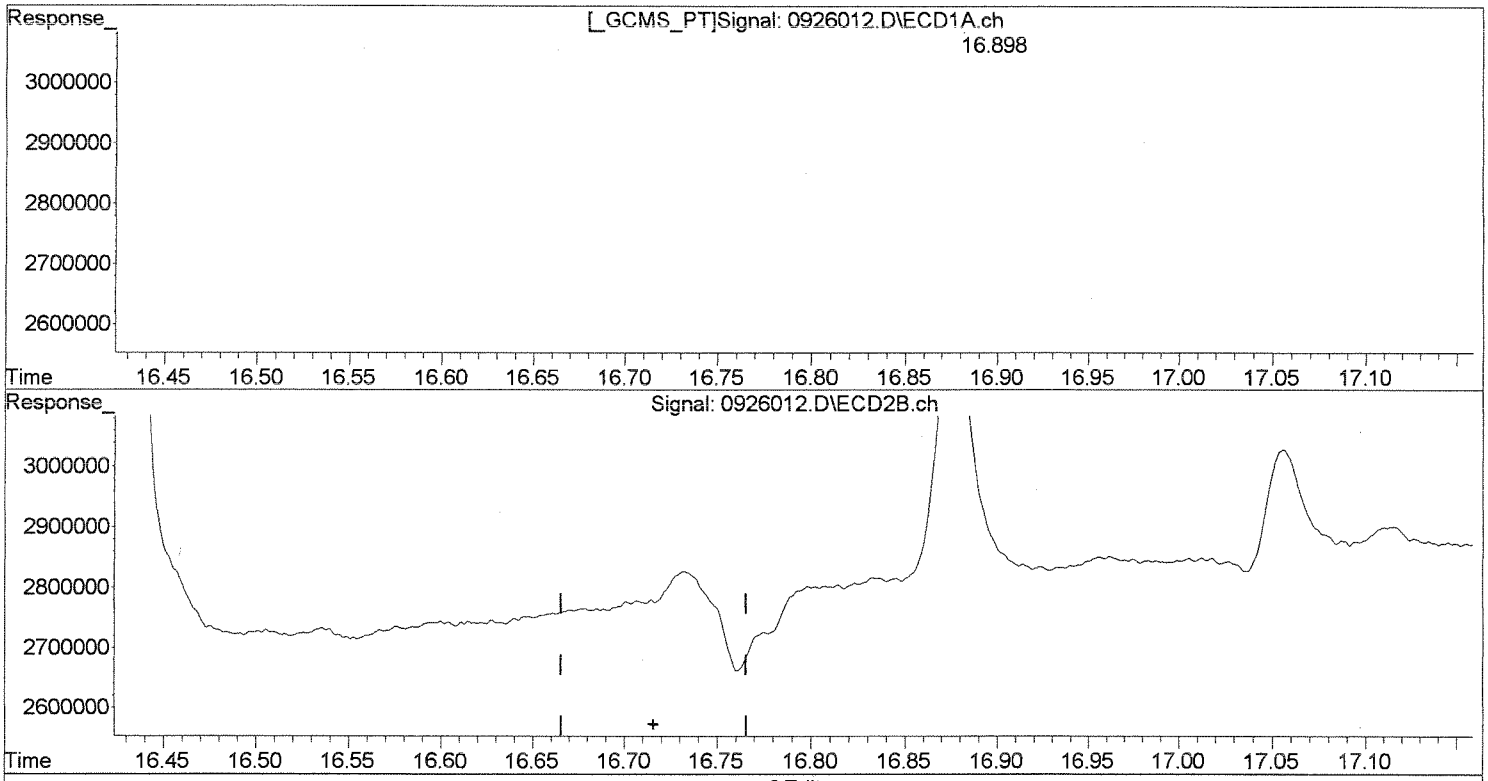


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:42:00
Operator : JSCHWAB
Sample : KWG1310289-5 MB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:26:35 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(23) Endosulfan Sulfate (m)
16.898min 0.214 ug/L
response 814752

Manual Integration:
Before

(23) Endosulfan Sulfate #2 (m)
0.000min 0.000 ug/L
response 0

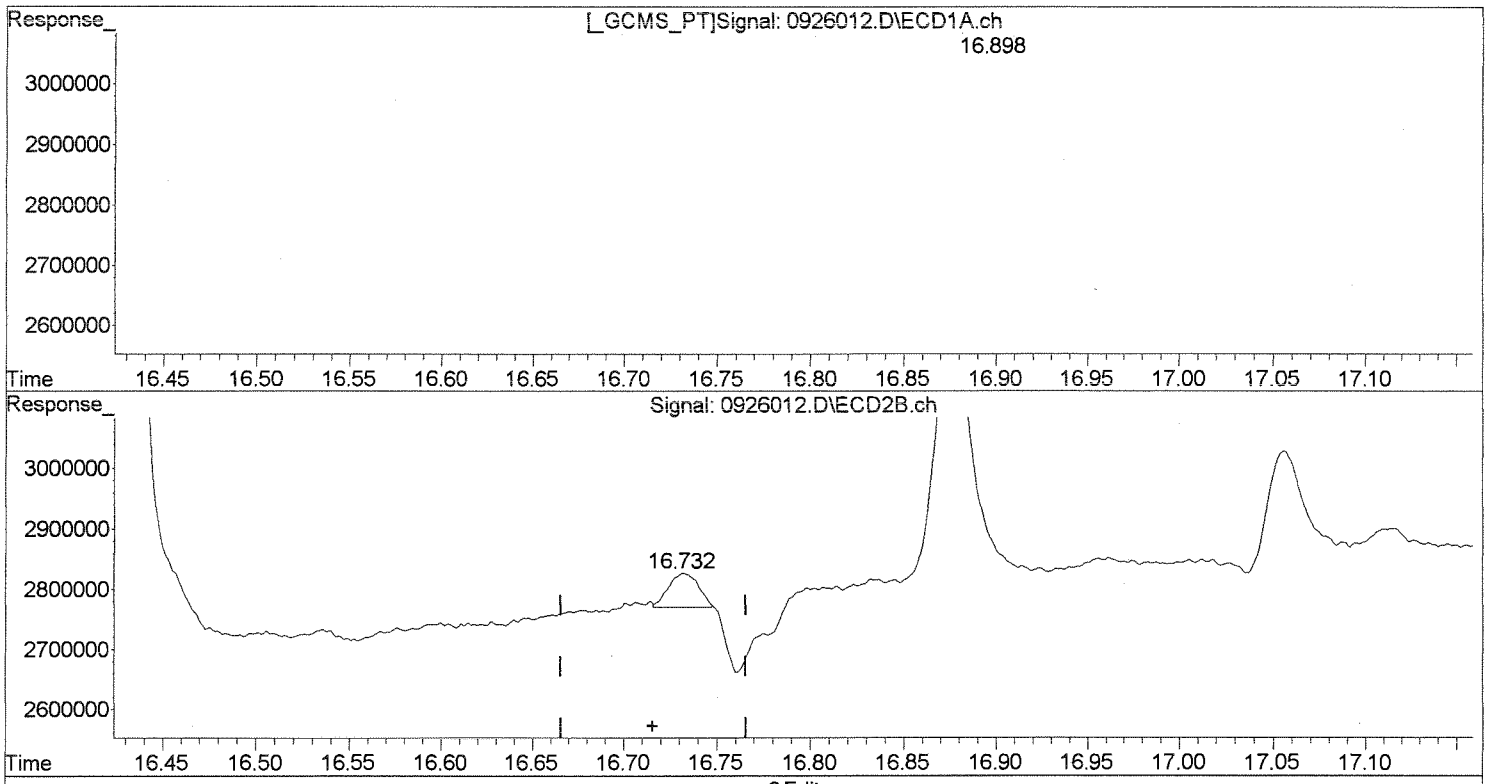
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926012.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:42:00
Operator : JSCHWAB
Sample : KWG1310289-5 MB
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:26:35 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(23) Endosulfan Sulfate (m)
16.898min 0.214 ug/L
response 814752

(23) Endosulfan Sulfate #2 (m)
16.732min 0.045 ug/L m
response 62510

Manual Integration:
After
Missed Peak
09/30/13

(+) = Expected Retention Time

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Pesticides/PCBs by EPA method 508.1

Sample Name: 13254-BW-4MS
Lab Code: KWG1310289-1

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	**0.0893**		0.0098	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	**0.0923**		0.0098	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	**0.102**		0.0098	0.00060	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	**0.0948**		0.0098	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	**0.0947**		0.0098	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	**0.102**		0.0098	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	**0.120**		0.0098	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.049	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.098	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.098	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	**0.433**		0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.098	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.098	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	93	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926015.D
Lab ID: KWG1310289-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/26/2013 22:01
Date Quantitated: 09/30/2013 14:58
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.89	NA	NA	SA
	Pentachloronitrobenzene {2}	11.89	NA	NA	
	Pentachloronitrobenzene {3}	11.89	NA	NA	
	Pentachloronitrobenzene{4}	11.89	NA	NA	
	Pentachloronitrobenzene{5}	11.89	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926015.D\0926015C.D
Lab ID: KWG1310289-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/26/2013 22:01
Date Quantitated: 09/30/2013 14:58
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 55 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926015.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926015.D\0926015c.d			**Vial:**	8
Acqu Date:	09/26/2013 22:01	**Quant Date:**	10/02/2013 13:26	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-1 -- K1309638-001MS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	09/20/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284683	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.89?	c	11.90?	c	1406096122	319692440	50.00	50.00
2	Pentachloronitrobenzene {2}	11.89?	c	11.90?	c	1406096122	319692440	50.00	50.00
3	Pentachloronitrobenzene {3}	11.89?	c	11.90?	c	1406096122	319692440	50.00	50.00
4	Pentachloronitrobenzene{4}	11.89?	c	11.90?	c	1406096122	319692440	50.00	50.00
5	Pentachloronitrobenzene{5}	11.89?	c	11.90?	c	1406096122	319692440	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38		10.42	+0.01	423751638	89720230	46.59	44.66			93OK
						%Recovery =		93	OK 89	OK	Limits = 70-130	
1	Decachlorobiphenyl	0.00				0	0		0.0000			
						%Recovery =					Limits = 10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91		11.10		621516297	148792453	51.78	48.44	0.101	0.0940	**0.0940**
1	gamma-BHC (Lindane)	11.71		11.98	+0.01	524127195	139856459	47.78	45.99	0.0928	0.0893	**0.0893**
1	beta-BHC	11.96		12.22		238027518	56456697	48.75	49.37	0.0947	0.0959	**0.0947**
1	delta-BHC	12.35	+0.01	12.82		493054830	107345186	49.52	43.89	0.0961	0.0852	**0.0852**
1	Heptachlor	12.78		12.87	+0.01	440298079	101852479	50.25	47.54	0.0976	0.0923	**0.0923**
1	Aldrin	13.36		13.46	+0.01	376736108	110126980	45.14	44.97	0.0877	0.0873	**0.0873**
1	Heptachlor Epoxide (Isomer	14.29		14.48	+0.01	392515099	106916807	49.91	49.66	0.0969	0.0964	**0.0964**
1	Heptachlor Epoxide	14.44	+0.01	14.44		385685374	m125153027	52.61	61.02	0.102	0.118	**0.102**
1	gamma-Chlordane	14.64	+0.01	14.73	+0.01	356747828	107952661	48.84	50.27	0.0948	0.0976	**0.0948**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926015.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926015.D\0926015c.d			**Vial:**	8
Acqu Date:	09/26/2013 22:01	**Quant Date:**	10/02/2013 13:26	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-1 -- K1309638-001MS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane	14.85 +0.01	14.95 +0.01	339776786	104701531	48.77	51.37	0.0947	0.0997	**0.0947**
1	4,4'-DDE	14.99	15.21	314622613	94355147	55.78	51.06	0.108	0.0991	**0.0991**
1	Endosulfan I	15.05	15.02	323692279	97433224	49.46	51.73	0.0960	0.100	**0.0960**
1	Dieldrin	15.41 +0.01	15.42 +0.01	345558258	104852142	51.72	52.30	0.100	0.102	**0.100**
1	Endrin	15.72	15.82 +0.01	274071594	81630706	57.31	52.54	0.111	0.102	**0.102**
1	4,4'-DDD	15.81	15.95	249161929	77131030	58.88	58.08	0.114	0.113	**0.113**
1	Endosulfan II	16.00	16.06	273845055	84061147	53.88	52.02	0.105	0.101	**0.101**
1	4,4'-DDT	16.14	16.29	262581922	79886861	59.38	54.07	0.115	0.105	**0.105**
1	Endrin Aldehyde	16.48 +0.01	16.43	172984845	55816600	40.93	40.48	0.0795	0.0786	**0.0786**
1	Methoxychlor	16.64	16.96	123680301	37436289	62.53	61.99	0.121	0.120	**0.120**
1	Endosulfan Sulfate	16.92	16.71 +0.01	235138650	74726645	55.21	55.10	0.107	0.107	**0.107**
1	Endrin Ketone	17.22	17.25	272468133	86840920	51.60	50.41	0.100	0.0979	**0.0979**
2	Toxaphene			0d	0d	0.0000	0.0000	0.034U	0.034U	0.034U
2	Chlordane			0d	0d	0.0000	0.0000	0.0088U	0.0088U	0.0088U
3	Aroclor 1016			0d	0d	0.0000	0.0000	0.023U	0.023U	NR
3	Aroclor 1260			0d	0d	0.0000	0.0000	0.017U	0.017U	NR
3	Aroclor 1221			0d	0d	0.0000	0.0000	0.021U	0.021U	NR
3	Aroclor 1254			0d	0d	0.0000	0.0000	0.015U	0.015U	NR
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	NR
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	NR
5	Aroclor 1248			0d	0d	0.0000	0.0000	0.015U	0.015U	NR

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:01:32
Operator : JSCHWAB
Sample : K1309638-001 MS PEST
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 02 13:26:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.894	11.900	1406.1E6	319.7E6	50.000	50.000
26)	I	Pentachlo...	11.894	11.900	1406.1E6	319.7E6	50.000	50.000
36)	I	Pentachlo...	11.894	11.900	1406.1E6	319.7E6	50.000	50.000
57)	I	Pentachlo...	11.894	11.900	1406.1E6	319.7E6	50.000	50.000
68)	I	Pentachlo...	11.894	11.900	1406.1E6	319.7E6	50.000	50.000
		System Monitoring Compounds						
4)	S	4,4'-Dibr...	11.383	10.416	423.8E6	89720230	46.592	44.659
		Target Compounds						
3)	m	alpha-BHC	10.909	11.104	621.5E6	148.8E6	51.778	48.435
5)	m	gamma-BHC...	11.710	11.977	524.1E6	139.9E6	47.776	45.993
6)	m	beta-BHC	11.964	12.223	238.0E6	56456697	48.746	49.372
7)	m	delta-BHC	12.347	12.820	493.1E6	107.3E6	49.516	43.889
8)	m	Heptachlor	12.780	12.869	440.3E6	101.9E6	50.249	47.542
9)	m	Aldrin	13.359	13.456	376.7E6	110.1E6	45.140	44.965
10)	m	Heptachlo...	14.294	14.477	392.5E6	106.9E6	49.914	49.664
11)	m	Heptachlo...	14.436	14.441	385.7E6	125.2E6	52.608m	61.017
12)	m	gamma-Chl...	14.637	14.727	356.7E6	108.0E6	48.835	50.272
13)	m	alpha-Chl...	14.848	14.949	339.8E6	104.7E6	48.772	51.365
14)	m	4,4'-DDE	14.989	15.213	314.6E6	94355147	55.777	51.062
15)	m	Endosulfan I	15.048	15.023	323.7E6	97433224	49.462	51.734
16)	m	Dieldrin	15.408	15.418	345.6E6	104.9E6	51.717	52.298
17)	m	Endrin	15.723	15.815	274.1E6	81630706	57.313	52.537
18)	m	4,4'-DDD	15.811	15.948	249.2E6	77131030	58.880	58.079
19)	m	Endosulfa...	16.003	16.064	273.8E6	84061147	53.878	52.016
20)	m	4,4'-DDT	16.140	16.289	262.6E6	79886861	59.378	54.065
21)	m	Endrin Al...	16.477	16.433	173.0E6	55816600	40.933	40.479
22)	m	Methoxychlor	16.638	16.960	123.7E6	37436289	62.533	61.990
23)	m	Endosulfa...	16.922	16.708	235.1E6	74726645	55.206	55.099
24)	m	Endrin Ke...	17.218	17.254	272.5E6	86840920	51.604	50.413

SemiQuant Compounds - Not Calibrated on this Instrument

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:01:32
Operator : JSCHWAB
Sample : K1309638-001 MS PEST
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 02 13:26:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

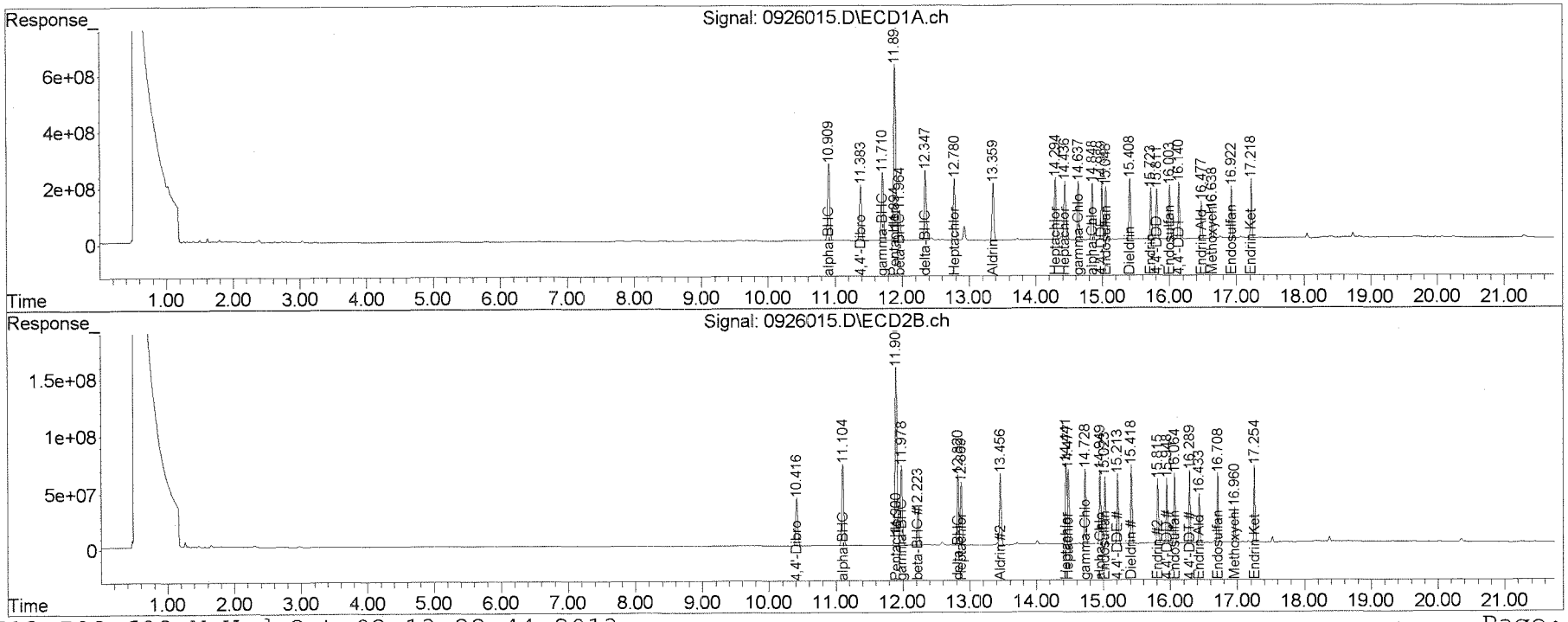
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:01:32
Operator : JSCHWAB
Sample : K1309638-001 MS PEST
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 02 13:26:00 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

858

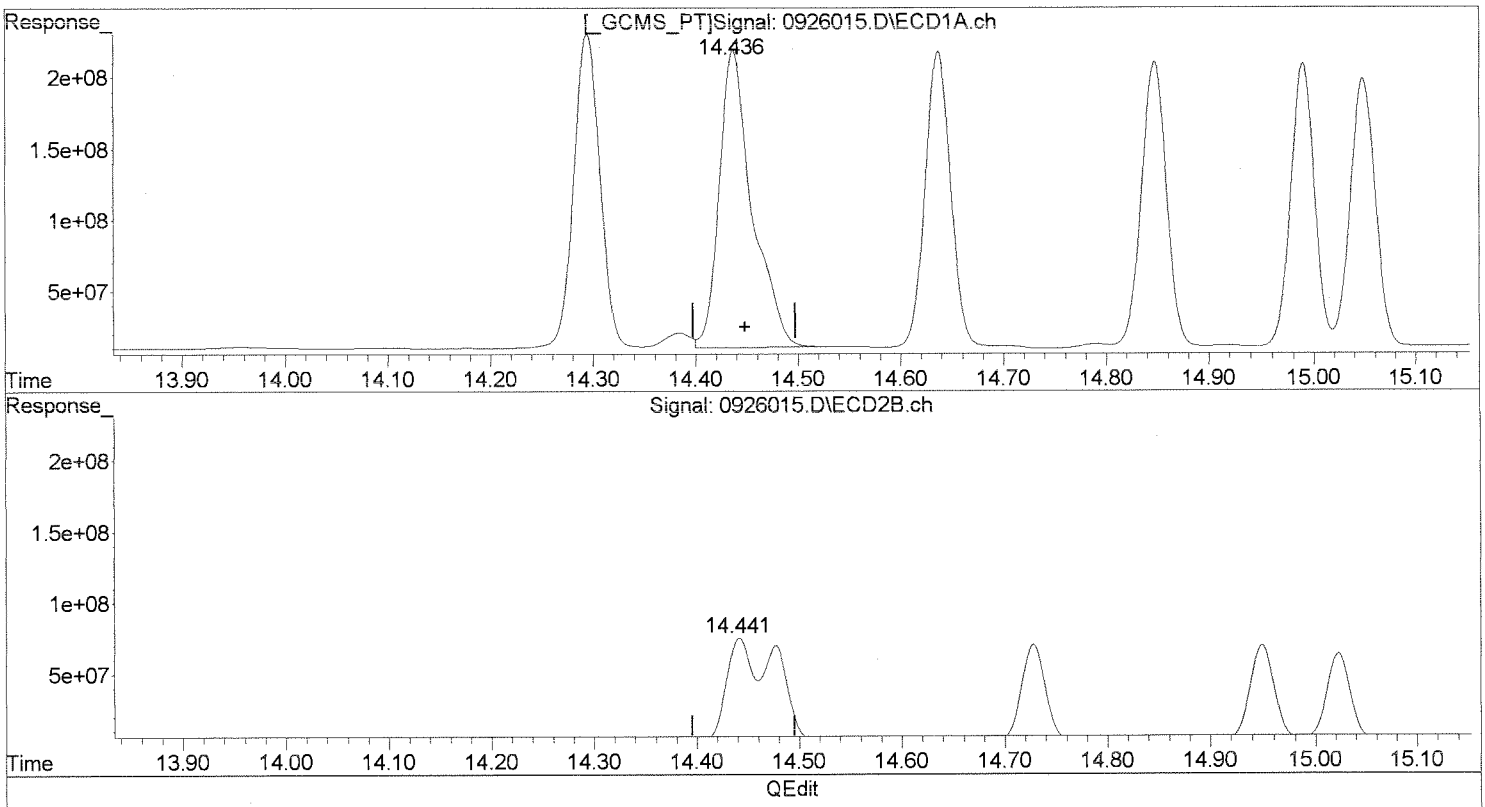


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:01:32
Operator : JSCHWAB
Sample : K1309638-001 MS PEST
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:58:41 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(11) Heptachlor Epoxide (B) (m)
14.436min 63.522 ug/L
response 465697062

Manual Integration:
Before

(11) Heptachlor Epoxide (B) #2 (m)
14.441min 61.017 ug/L
response 125153027

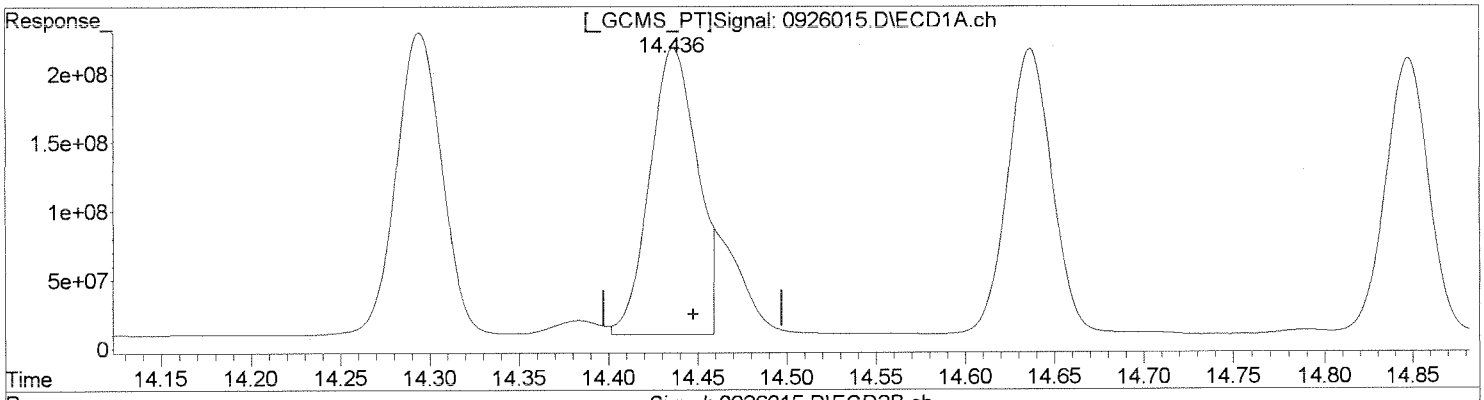
(+) = Expected Retention Time

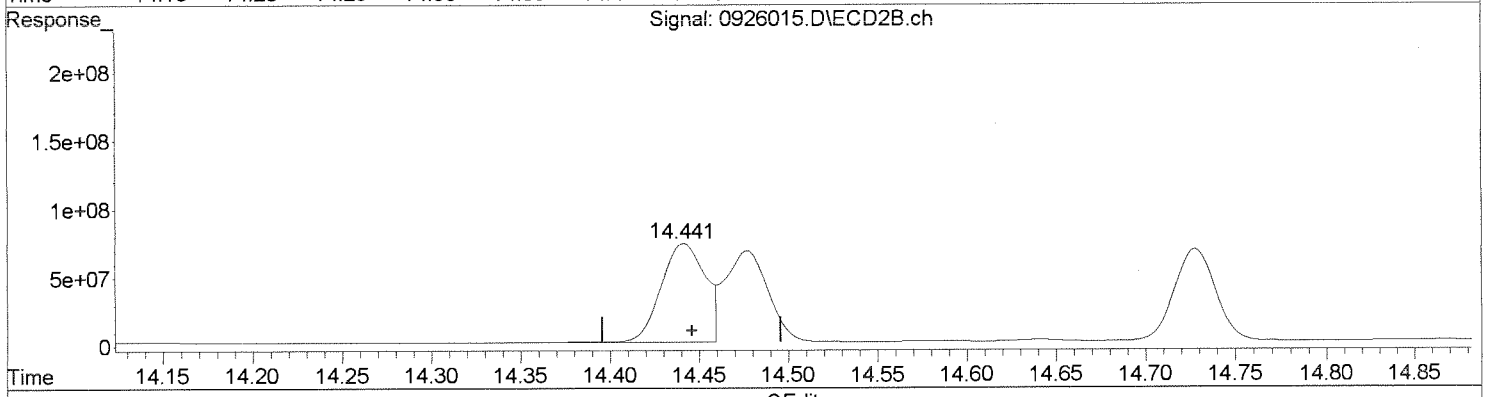
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926015.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:01:32
Operator : JSCHWAB
Sample : K1309638-001 MS PEST
Misc :
ALS Vial : 8 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:58:41 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(11) Heptachlor Epoxide (B) (m)
14.436min 52.608 ug/L m
response 385685374

(11) Heptachlor Epoxide (B) #2 (m)
14.441min 61.017 ug/L
response 125153027

Manual Integration:
After
Baseline/Shoulder
10/02/13

(+) = Expected Retention Time

Exception Report

Data File: J:\GC33\DATA\092613-508\0926016.D
Lab ID: KWG1310289-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/26/2013 22:28
Date Quantitated: 09/30/2013 14:59
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926016.D\0926016C.D
Lab ID: KWG1310289-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/26/2013 22:28
Date Quantitated: 09/30/2013 14:59
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	A
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 10/2/13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926016.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926016.D\0926016c.d			**Vial:**	9
Acqu Date:	09/26/2013 22:28	**Quant Date:**	09/30/2013 14:59	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-1 -- K1309638-001MS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	09/20/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284683	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90? $^{+0.01}$c	11.90? c	1381829102	318767356	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90? c	11.90? c	1381829102	318767356	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90? c	11.90? c	1381829102	318767356	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90? c	11.90? c	1381829102	318767356	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90? $^{+0.01}$c	11.90? c	1381829102	318767356	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.42 $^{+0.01}$	443571322	89860802	49.63	44.86			NR
				%Recovery =		99 OK	90 OK	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			
				%Recovery =				Limits =	10-133	

Final Conc. Units: ug/L

Target Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00024U	0.00024U	0.00024U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00041U	0.00041U	NR
1	beta-BHC			0d	0d	0.0000	0.0000	0.00080U	0.00080U	0.00080U
1	delta-BHC			0d	0d	0.0000	0.0000	0.00084U	0.00084U	0.00084U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00049U	0.00049U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00021U	0.00021U	0.00021U
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000	0.00053U	0.00053U	0.00053U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00060U	0.00060U	NR
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00083U	0.00083U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926016.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926016.D\0926016c.d			**Vial:**	9
Acqu Date:	09/26/2013 22:28	**Quant Date:**	09/30/2013 14:59	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-1 -- K1309638-001MS				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00065U	0.00065U	NR
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00063U	0.00063U	0.00063U
1	Endrin			0d	0d	0.0000	0.0000	0.00077U	0.00077U	NR
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.0011U	0.0011U	0.0011U
1	Endosulfan II			0d	0d	0.0000	0.0000	0.0010U	0.0010U	0.0010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.0012U	0.0012U	0.0012U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.0010U	0.0010U	0.0010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.0013U	0.0013U	NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.0014U	0.0014U	0.0014U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.0014U	0.0014U	0.0014U
2	Toxaphene			0d	0d	0.0000	0.0000	0.034U	0.034U	NR
2	Chlordane			0d	0d	0.0000	0.0000	0.0088U	0.0088U	NR
3	Aroclor 1016			0d	0d	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260			0d	0d	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221			0d	0d	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254			0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			148198533m	53278402m	222.79	252.20	0.433	0.490	**0.433**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:28:23
Operator : JSCHWAB
Sample : K1309638-001 MS PCB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:59:51 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Internal Standards							
1)	I	Pentachlo...	11.896	11.899	1381.8E6	318.8E6	50.000	50.000	
26)	I	Pentachlo...	11.896	11.899	1381.8E6	318.8E6	50.000	50.000	
36)	I	Pentachlo...	11.896	11.899	1381.8E6	318.8E6	50.000	50.000	
57)	I	Pentachlo...	11.896	11.899	1381.8E6	318.8E6	50.000	50.000	
68)	I	Pentachlo...	11.896	11.899	1381.8E6	318.8E6	50.000	50.000	
		System Monitoring Compounds							
4)	S	4,4'-Dibr...	11.383	10.416	443.6E6	89860802	49.627	44.859	
		Target Compounds							
69)	L9	Aroclor 1248	13.479	13.803	48927079	13046013	221.538	231.709	
70)	L9	Aroclor 1...	13.630	14.001	31059315	19254400	232.469	328.046	#
71)	L9	Aroclor 1...	14.554	14.808	42721498	13956525	220.339	214.878	
72)	L9	Aroclor 1...	15.148	15.396	25490641	7021464	218.169	224.262	
73)	L9	Aroclor 1...	0.000	0.000	148.2E6	53278402	222.792m	252.196m	
		SemiQuant Compounds - Not Calibrated on this Instrument							

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

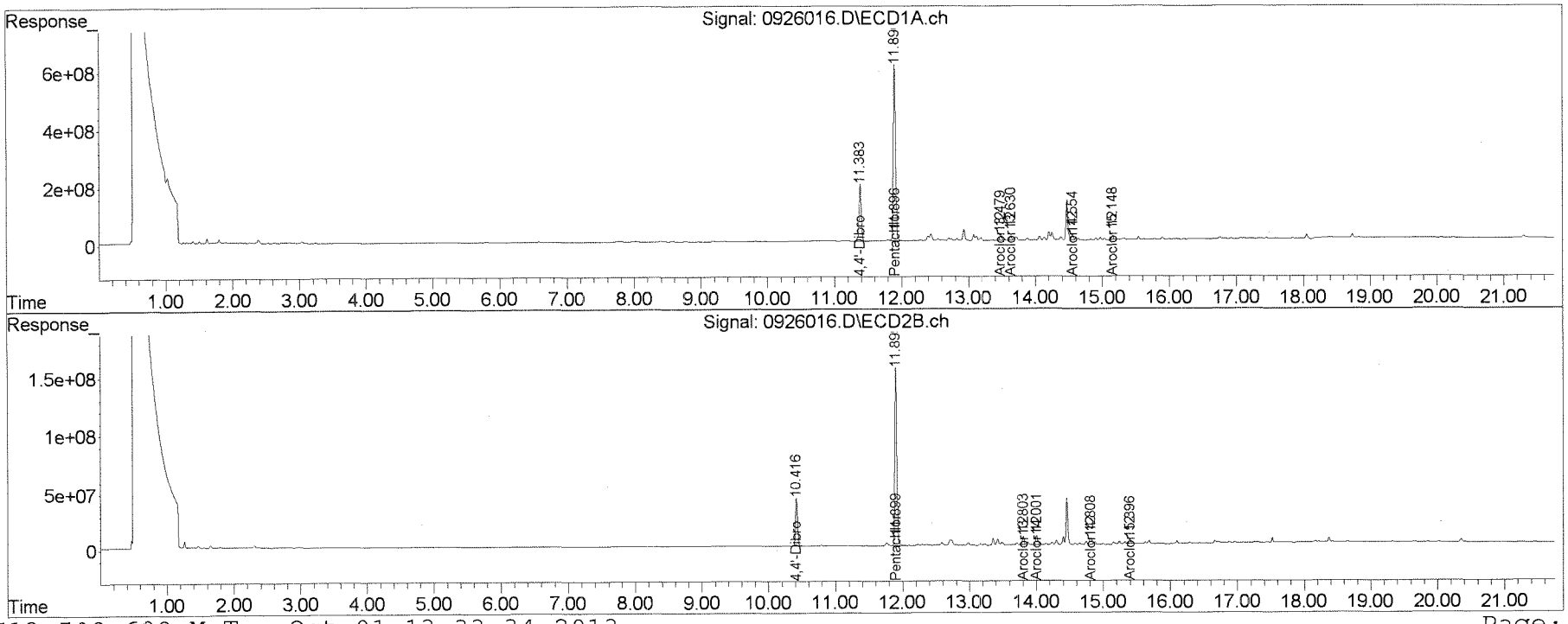
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926016.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 22:28:23
Operator : JSCHWAB
Sample : K1309638-001 MS PCB
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:59:51 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

998



Exception Report

Data File: J:\GC33\DATA\092613-508\0926010.D
Lab ID: KWG1310289-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/26/2013 19:48
Date Quantitated: 09/30/2013 14:34
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	I
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 55 10/2/13

Secondary Review: MM

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Pesticides/PCBs by EPA method 508.1

Sample Name: Lab Control Sample
Lab Code: KWG1310289-3

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 508.1

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	**0.0917**		0.010	0.00041	1	09/20/13	09/26/13	KWG1310289	
Heptachlor	**0.0982**		0.010	0.00049	1	09/20/13	09/26/13	KWG1310289	
Heptachlor Epoxide	**0.0996**		0.010	0.00060	1	09/20/13	09/26/13	KWG1310289	
gamma-Chlordane	**0.0979**		0.010	0.00083	1	09/20/13	09/26/13	KWG1310289	
alpha-Chlordane	**0.0982**		0.010	0.00065	1	09/20/13	09/26/13	KWG1310289	
Endrin	**0.107**		0.010	0.00077	1	09/20/13	09/26/13	KWG1310289	
Methoxychlor	**0.116**		0.010	0.0013	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1016	ND	U	0.050	0.023	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1221	ND	U	0.10	0.021	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1232	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1242	ND	U	0.10	0.012	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1248	**0.449**		0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1254	ND	U	0.10	0.015	1	09/20/13	09/26/13	KWG1310289	
Aroclor 1260	ND	U	0.10	0.017	1	09/20/13	09/26/13	KWG1310289	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4,4'-Dibromooctafluorobiphenyl	89	70-130	09/26/13	Acceptable

Comments:

Exception Report

Data File: J:\GC33\DATA\092613-508\0926010.D\0926010C.D
Lab ID: KWG1310289-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/26/2013 19:48
Date Quantitated: 09/30/2013 14:34
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	5A
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 55 10/2/13

Secondary Review: MJ

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926010.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926010.D\0926010c.d			**Vial:**	3
Acqu Date:	09/26/2013 19:48	**Quant Date:**	09/30/2013 14:34	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	09/20/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284685				

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1432650763	319851855	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1432650763	319851855	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1432650763	319851855	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1432650763	319851855	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1432650763	319851855	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38		10.42	+0.01	410396458	87454562	44.29	43.51			89OK
						%Recovery =		89	OK 87	OK	Limits = 70-130	
1	Decachlorobiphenyl	0.00				0d	0		0.0000			
						%Recovery =					Limits = 10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91		11.10		632431809	148033662	51.71	48.17	0.103	0.0963	**0.0963**
1	gamma-BHC (Lindane)	11.71		11.98	+0.01	546104716	139436172	48.84	45.83	0.0977	0.0917	**0.0917**
1	beta-BHC	11.97	+0.01	12.22		241518169	55194040	48.54	48.24	0.0971	0.0965	**0.0965**
1	delta-BHC	12.35	+0.01	12.82		503795772	120476742	49.65	49.10	0.0993	0.0982	**0.0982**
1	Heptachlor	12.78		12.87	+0.01	448343726	105247406	50.22	49.10	0.100	0.0982	**0.0982**
1	Aldrin	13.36		13.46	+0.01	420846529	117100643	49.49	47.75	0.0990	0.0955	**0.0955**
1	Heptachlor Epoxide (Isomer	14.29		14.48	+0.01	388775208	104772297	48.52	48.64	0.0970	0.0973	**0.0970**
1	Heptachlor Epoxide	14.44	+0.01	14.44		371847608	106103638	49.78	51.70	0.0996	0.103	**0.0996**
1	gamma-Chlordane	14.64	+0.01	14.73	+0.01	364368310	107139810	48.95	49.87	0.0979	0.0997	**0.0979**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926010.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926010.D\0926010c.d			**Vial:**	3
Acqu Date:	09/26/2013 19:48	**Quant Date:**	09/30/2013 14:34	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane	14.85 +0.01	14.95 +0.01	348609594	103425635	49.11	50.71	0.0982	0.101	**0.0982**
1	4,4'-DDE	14.99	15.21	319645954	93354911	55.62	50.50	0.111	0.101	**0.101**
1	Endosulfan I	15.05	15.02	327871261	95305988	49.17	50.58	0.0983	0.101	**0.0983**
1	Dieldrin	15.41 +0.01	15.42 +0.01	344863384	103289389	50.66	51.49	0.101	0.103	**0.101**
1	Endrin	15.72	15.81	282569101	82863393	58.00	53.29	0.116	0.107	**0.107**
1	4,4'-DDD	15.81	15.95	246441405	74054775	57.16	55.74	0.114	0.111	**0.111**
1	Endosulfan II	16.00	16.06	269216976	82812469	51.99	51.22	0.104	0.102	**0.102**
1	4,4'-DDT	16.14	16.29	258941058	77907654	57.47	52.72	0.115	0.105	**0.105**
1	Endrin Aldehyde	16.48 +0.01	16.43	204244688	65836257	47.43	47.72	0.0949	0.0954	**0.0949**
1	Methoxychlor	16.64	16.96	117252638	35668506	58.18	59.03	0.116	0.118	**0.116**
1	Endosulfan Sulfate	16.92	16.71 +0.01	221780428	71562858	51.11	52.74	0.102	0.105	**0.102**
1	Endrin Ketone	17.22	17.25	253968903	83023894	47.21	48.17	0.0944	0.0963	**0.0944**
2	Toxaphene			0d	0d	0.0000	0.0000	0.034U	0.034U	0.034U
2	Chlordane			0d	0d	0.0000	0.0000	0.0088U	0.0088U	0.0088U
3	Aroclor 1016			0d	0d	0.0000	0.0000	0.023U	0.023U	NR
3	Aroclor 1260			0d	0d	0.0000	0.0000	0.017U	0.017U	NR
3	Aroclor 1221			0d	0d	0.0000	0.0000	0.021U	0.021U	NR
3	Aroclor 1254			0d	0d	0.0000	0.0000	0.015U	0.015U	NR
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	NR
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	NR
5	Aroclor 1248			0d	0d	0.0000	0.0000	0.015U	0.015U	NR

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 19:48:11
Operator : JSCHWAB
Sample : KWG1310289-3 LCS PEST
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:34:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.895	11.899	1432.7E6	319.9E6	50.000	50.000
26)	I	Pentachlo...	11.895	11.899	1432.7E6	319.9E6	50.000	50.000
36)	I	Pentachlo...	11.895	11.899	1432.7E6	319.9E6	50.000	50.000
57)	I	Pentachlo...	11.895	11.899	1432.7E6	319.9E6	50.000	50.000
68)	I	Pentachlo...	11.895	11.899	1432.7E6	319.9E6	50.000	50.000
		System Monitoring Compounds						
4)	S	4,4'-Dibr...	11.383	10.416	410.4E6	87454562	44.287	43.510
		Target Compounds						
3)	m	alpha-BHC	10.910	11.102	632.4E6	148.0E6	51.712	48.169
5)	m	gamma-BHC...	11.711	11.977	546.1E6	139.4E6	48.839	45.826
6)	m	beta-BHC	11.965	12.223	241.5E6	55194040	48.542	48.243
7)	m	delta-BHC	12.348	12.819	503.8E6	120.5E6	49.654	49.099
8)	m	Heptachlor	12.781	12.868	448.3E6	105.2E6	50.218	49.102
9)	m	Aldrin	13.359	13.457	420.8E6	117.1E6	49.491	47.753
10)	m	Heptachlo...	14.294	14.477	388.8E6	104.8E6	48.522	48.643
11)	m	Heptachlo...	14.436	14.439	371.8E6	106.1E6	49.780	51.704
12)	m	gamma-Chl...	14.637	14.727	364.4E6	107.1E6	48.954	49.869
13)	m	alpha-Chl...	14.847	14.949	348.6E6	103.4E6	49.112	50.714
14)	m	4,4'-DDE	14.990	15.213	319.6E6	93354911	55.617	50.503
15)	m	Endosulfan I	15.049	15.023	327.9E6	95305988	49.172	50.579
16)	m	Dieldrin	15.408	15.418	344.9E6	103.3E6	50.656	51.493
17)	m	Endrin	15.724	15.814	282.6E6	82863393	57.995	53.293
18)	m	4,4'-DDD	15.813	15.948	246.4E6	74054775	57.157	55.735
19)	m	Endosulfa...	16.004	16.064	269.2E6	82812469	51.986	51.218
20)	m	4,4'-DDT	16.141	16.289	258.9E6	77907654	57.469	52.717
21)	m	Endrin Al...	16.477	16.433	204.2E6	65836257	47.434	47.721
22)	m	Methoxychlor	16.639	16.960	117.3E6	35668506	58.184	59.033
23)	m	Endosulfa...	16.923	16.708	221.8E6	71562858	51.105	52.740
24)	m	Endrin Ke...	17.218	17.254	254.0E6	83023894	47.209	48.173

SemiQuant Compounds - Not Calibrated on this Instrument

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 19:48:11
Operator : JSCHWAB
Sample : KWG1310289-3 LCS PEST
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:34:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926010.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 19:48:11
Operator : JSCHWAB
Sample : KWG1310289-3 LCS PEST
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:34:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

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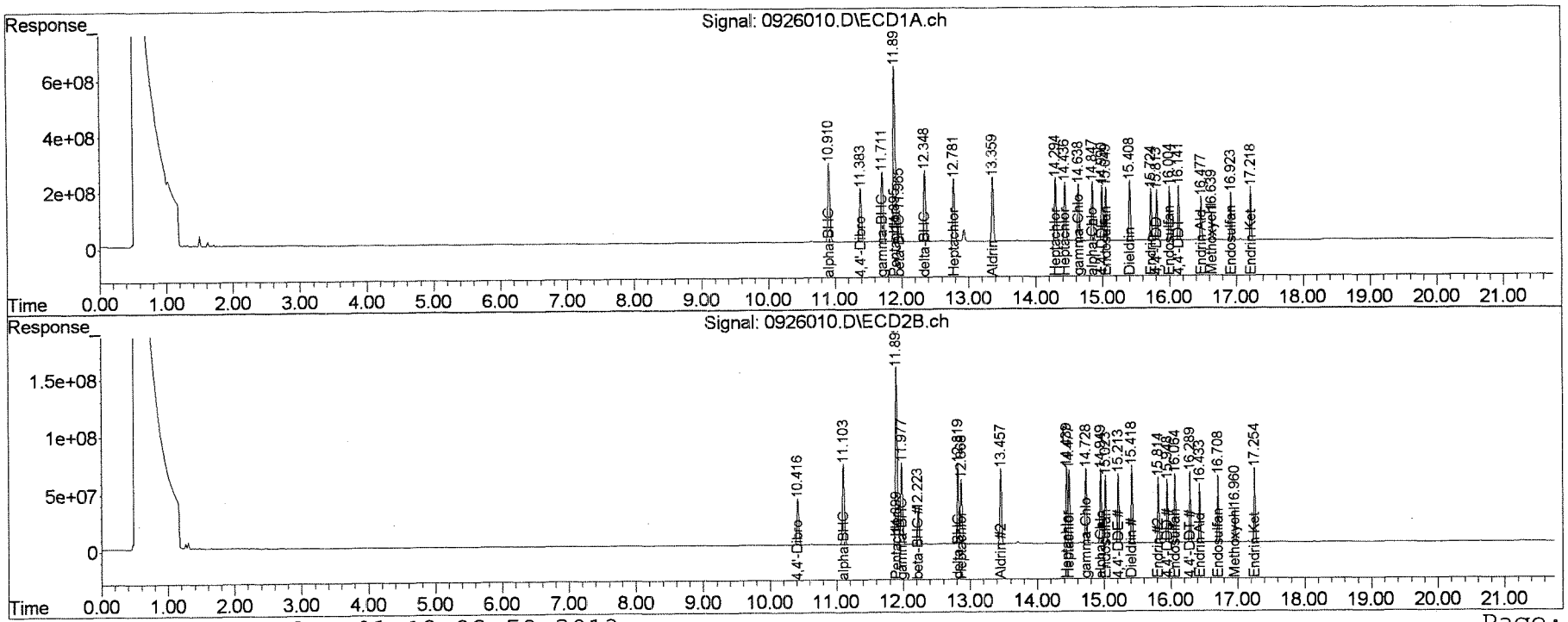


Exception Report

Data File: J:\GC33\DATA\092613-508\0926011.D
Lab ID: KWG1310289-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/26/2013 20:15
Date Quantitated: 09/30/2013 14:37
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 55 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926011.D\0926011C.D
Lab ID: KWG1310289-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/26/2013 20:15
Date Quantitated: 09/30/2013 14:37
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Pentachloronitrobenzene (PCNB)	11.9	NA	NA	SA
	Pentachloronitrobenzene {2}	11.9	NA	NA	
	Pentachloronitrobenzene {3}	11.9	NA	NA	
	Pentachloronitrobenzene{4}	11.9	NA	NA	
	Pentachloronitrobenzene{5}	11.9	NA	NA	

Primary Review: 10/2/13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926011.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926011.D\0926011c.d			**Vial:**	4
Acqu Date:	09/26/2013 20:15	**Quant Date:**	09/30/2013 14:37	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	09/20/2013

Analysis Lot:	KWG1310845	**Prep Lot:**	KWG1310289	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**	METHOD		
Prep Ref:	1284685	**Prep Date:**	09/20/2013		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:	J:\GC33\DATA\092613-508\0926012.D	**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90?	+0.01 c	11.90?	c	1415218344	319874034	50.00	50.00
2	Pentachloronitrobenzene {2}	11.90?	c	11.90?	c	1415218344	319874034	50.00	50.00
3	Pentachloronitrobenzene {3}	11.90?	c	11.90?	c	1415218344	319874034	50.00	50.00
4	Pentachloronitrobenzene{4}	11.90?	c	11.90?	c	1415218344	319874034	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90?	+0.01 c	11.90?	c	1415218344	319874034	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ug/L #1	ug/L #2				Rpt
1	4,4'-Dibromooctafluorobipheny	11.39	+0.01	10.42	+0.01	448361421	89813462	48.98	44.68				NR
						%Recovery =		98	OK	89	OK	Limits =	70-130
1	Decachlorobiphenyl	0.00				0d	0d		0.0000				
						%Recovery =						Limits =	10-133

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000	0.00024U	0.00024U	0.00024U
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000	0.00041U	0.00041U	NR
1	beta-BHC			0d	0d	0.0000	0.0000	0.00080U	0.00080U	0.00080U
1	delta-BHC			0d	0d	0.0000	0.0000	0.00084U	0.00084U	0.00084U
1	Heptachlor			0d	0d	0.0000	0.0000	0.00049U	0.00049U	NR
1	Aldrin			0d	0d	0.0000	0.0000	0.00021U	0.00021U	0.00021U
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000	0.00053U	0.00053U	0.00053U
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000	0.00060U	0.00060U	NR
1	gamma-Chlordane			0d	0d	0.0000	0.0000	0.00083U	0.00083U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926011.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926011.D\0926011c.d			**Vial:**	4
Acqu Date:	09/26/2013 20:15	**Quant Date:**	09/30/2013 14:37	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310289-3				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane			0d	0d	0.0000	0.0000	0.00065U	0.00065U	NR
1	4,4'-DDE			0d	0d	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Endosulfan I			0d	0d	0.0000	0.0000	0.00070U	0.00070U	0.00070U
1	Dieldrin			0d	0d	0.0000	0.0000	0.00063U	0.00063U	0.00063U
1	Endrin			0d	0d	0.0000	0.0000	0.00077U	0.00077U	NR
1	4,4'-DDD			0d	0d	0.0000	0.0000	0.0011U	0.0011U	0.0011U
1	Endosulfan II			0d	0d	0.0000	0.0000	0.0010U	0.0010U	0.0010U
1	4,4'-DDT			0d	0d	0.0000	0.0000	0.0012U	0.0012U	0.0012U
1	Endrin Aldehyde			0d	0d	0.0000	0.0000	0.0010U	0.0010U	0.0010U
1	Methoxychlor			0d	0d	0.0000	0.0000	0.0013U	0.0013U	NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000	0.0014U	0.0014U	0.0014U
1	Endrin Ketone			0d	0d	0.0000	0.0000	0.0014U	0.0014U	0.0014U
2	Toxaphene			0d	0d	0.0000	0.0000	0.034U	0.034U	NR
2	Chlordane			0d	0d	0.0000	0.0000	0.0088U	0.0088U	NR
3	Aroclor 1016			0d	0d	0.0000	0.0000	0.023U	0.023U	0.023U
3	Aroclor 1260			0d	0d	0.0000	0.0000	0.017U	0.017U	0.017U
3	Aroclor 1221			0d	0d	0.0000	0.0000	0.021U	0.021U	0.021U
3	Aroclor 1254			0d	0d	0.0000	0.0000	0.015U	0.015U	0.015U
4	Aroclor 1232			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
4	Aroclor 1242			0d	0d	0.0000	0.0000	0.012U	0.012U	0.012U
5	Aroclor 1248			152818581m	48294846m	224.32	227.82	0.449	0.456	**0.449**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:15:09
Operator : JSCHWAB
Sample : KWG1310289-4 LCS PCB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:37:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.897	11.900	1415.2E6	319.9E6	50.000	50.000
26)	I	Pentachlo...	11.897	11.900	1415.2E6	319.9E6	50.000	50.000
36)	I	Pentachlo...	11.897	11.900	1415.2E6	319.9E6	50.000	50.000
57)	I	Pentachlo...	11.897	11.900	1415.2E6	319.9E6	50.000	50.000
68)	I	Pentachlo...	11.897	11.900	1415.2E6	319.9E6	50.000	50.000
		System Monitoring Compounds						
4)	S	4,4'-Dibr...	11.386	10.417	448.4E6	89813462	48.980	44.680
		Target Compounds						
69)	L9	Aroclor 1248	13.482	13.803	52648156	13298021	232.762	235.368
70)	L9	Aroclor 1...	13.632	13.999	30866790	14195844	225.578	241.024
71)	L9	Aroclor 1...	14.555	14.810	42996548	13954335	216.525m	214.101
72)	L9	Aroclor 1...	15.149	15.398	26307087	6846646	219.845	217.922
73)	L9	Aroclor 1...	0.000	0.000	152.8E6	48294846	224.318m	227.815m
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

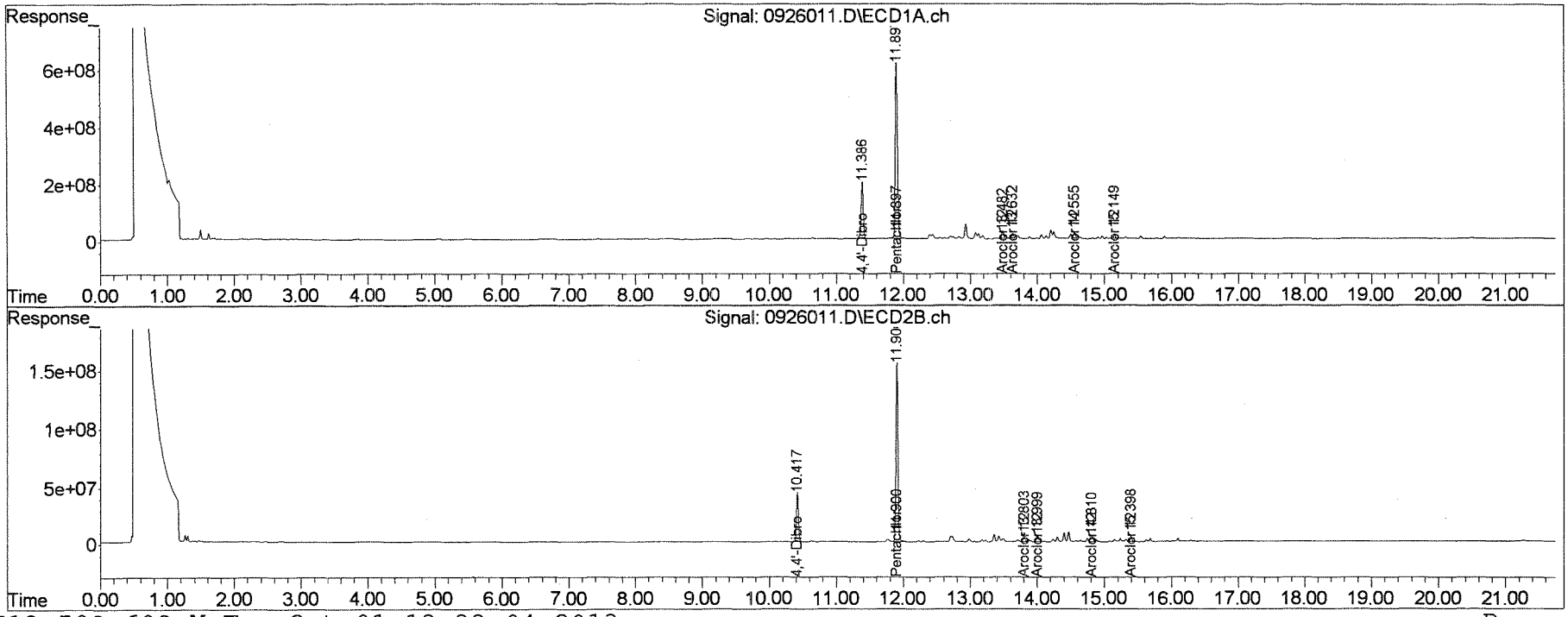
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:15:09
Operator : JSCHWAB
Sample : KWG1310289-4 LCS PCB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:37:25 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

088

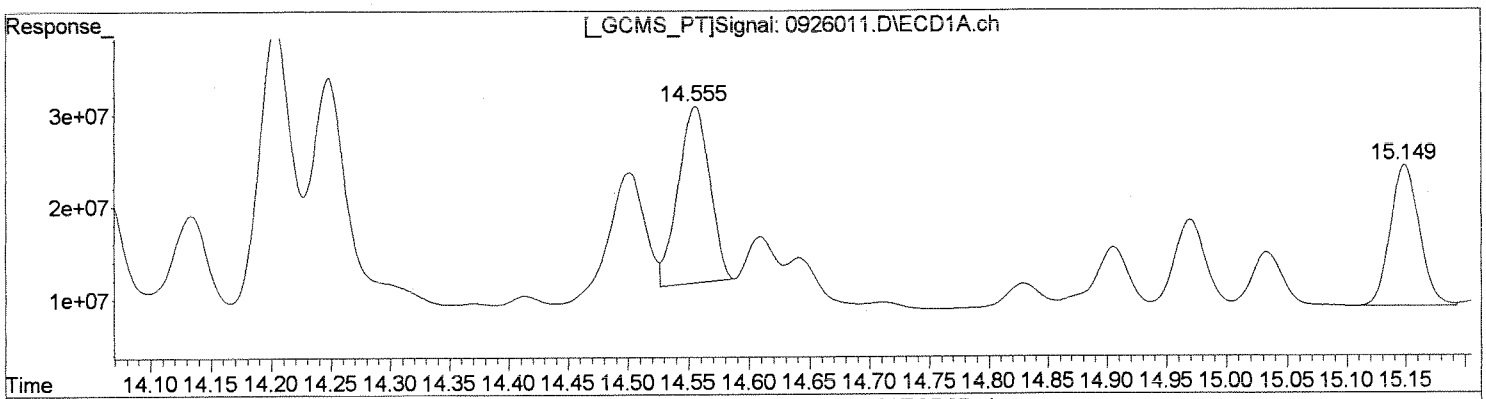


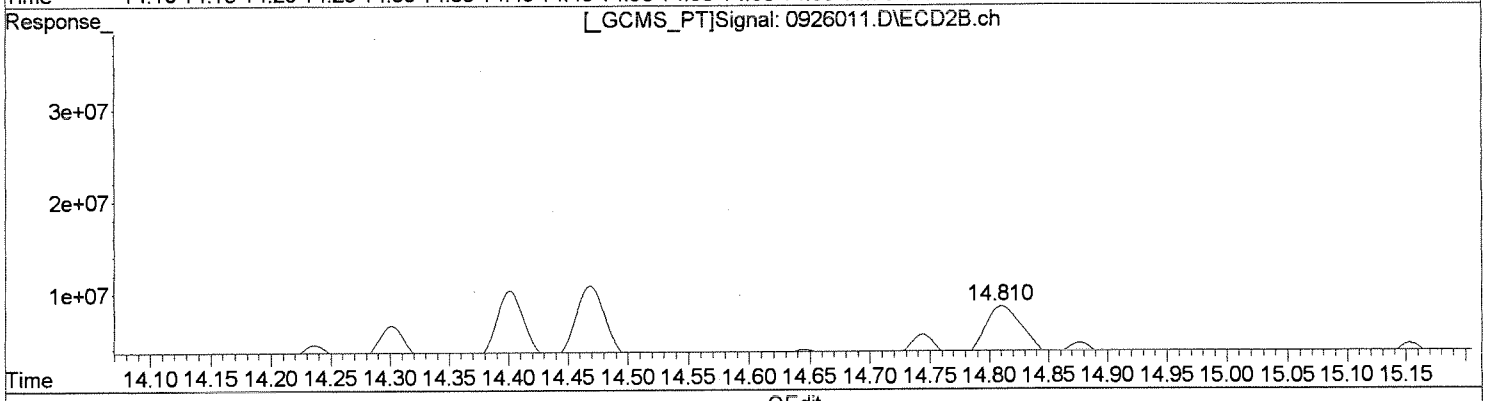
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:15:09
Operator : JSCHWAB
Sample : KWG1310289-4 LCS PCB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:26:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.48	52648156	232.76
13.63	30866790	225.58
14.56	34551779	174.00
15.15	26307087	219.85

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	13298021	235.37
14.00	14195844	241.02
14.81	13954335	214.10
15.40	6846646	217.92

Manual Integration:
Before

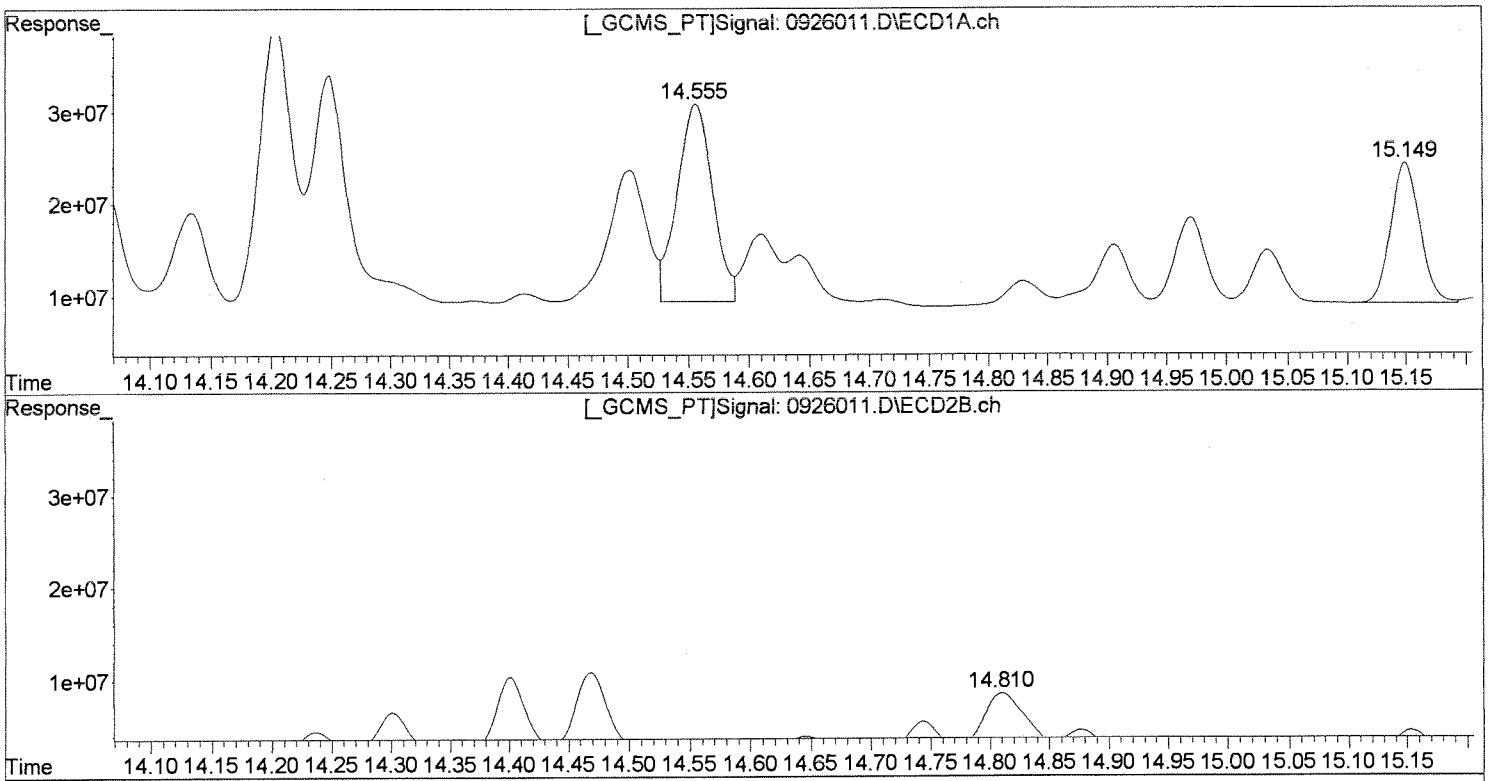
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926011.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 20:15:09
Operator : JSCHWAB
Sample : KWG1310289-4 LCS PCB
Misc :
ALS Vial : 4 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:26:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.48	52648156	232.76
13.63	30866790	225.58
14.56	42996548	216.53
15.15	26307087	219.85

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	13298021	235.37
14.00	14195844	241.02
14.81	13954335	214.10
15.40	6846646	217.92

Manual Integration:
After
Baseline/Shoulder
09/30/13

(+) = Expected Retention Time

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Validation Package

Standards Data

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Level ID	File ID
A	J:\GC33\Data\081513-ICAL2\0815104.D
B	J:\GC33\Data\081513-ICAL2\0815105.D
C	J:\GC33\Data\081513-ICAL2\0815106.D
D	J:\GC33\Data\081513-ICAL2\0815107.D
E	J:\GC33\Data\081513-ICAL2\0815108.D
F	J:\GC33\Data\081513-ICAL2\0815109.D
G	J:\GC33\Data\081513-ICAL2\0815111.D
H	J:\GC33\Data\081513-ICAL2\0815112.D
I	J:\GC33\Data\081513-ICAL2\0815113.D
J	J:\GC33\Data\081513-ICAL2\0815114.D
K	J:\GC33\Data\081513-ICAL2\0815115.D
L	J:\GC33\Data\081513-ICAL2\0815116.D
M	J:\GC33\Data\081513-ICAL2\0815118.D
N	J:\GC33\Data\081513-ICAL2\0815119.D
O	J:\GC33\Data\081513-ICAL2\0815120.D
P	J:\GC33\Data\081513-ICAL2\0815121.D
Q	J:\GC33\Data\081513-ICAL2\0815122.D
R	J:\GC33\Data\081513-ICAL2\0815123.D
S	J:\GC33\Data\081513-ICAL2\0815125.D
T	J:\GC33\Data\081513-ICAL2\0815126.D
U	J:\GC33\Data\081513-ICAL2\0815127.D
V	J:\GC33\Data\081513-ICAL2\0815128.D
W	J:\GC33\Data\081513-ICAL2\0815129.D
X	J:\GC33\Data\081513-ICAL2\0815130.D
Y	J:\GC33\Data\081513-ICAL2\0815132.D
Z	J:\GC33\Data\081513-ICAL2\0815133.D
AA	J:\GC33\Data\081513-ICAL2\0815134.D
AB	J:\GC33\Data\081513-ICAL2\0815135.D
AC	J:\GC33\Data\081513-ICAL2\0815136.D
AD	J:\GC33\Data\081513-ICAL2\0815137.D
AE	J:\GC33\Data\081513-ICAL2\0815139.D
AF	J:\GC33\Data\081513-ICAL2\0815140.D
AG	J:\GC33\Data\081513-ICAL2\0815141.D
AH	J:\GC33\Data\081513-ICAL2\0815142.D
AI	J:\GC33\Data\081513-ICAL2\0815143.D
AJ	J:\GC33\Data\081513-ICAL2\0815144.D
AK	J:\GC33\Data\081513-ICAL2\0815146.D
AL	J:\GC33\Data\081513-ICAL2\0815147.D
AM	J:\GC33\Data\081513-ICAL2\0815148.D
AN	J:\GC33\Data\081513-ICAL2\0815149.D
AO	J:\GC33\Data\081513-ICAL2\0815150.D
AP	J:\GC33\Data\081513-ICAL2\0815151.D
AQ	J:\GC33\Data\081513-ICAL2\0815153.D
AR	J:\GC33\Data\081513-ICAL2\0815154.D
AS	J:\GC33\Data\081513-ICAL2\0815155.D
AT	J:\GC33\Data\081513-ICAL2\0815156.D
AU	J:\GC33\Data\081513-ICAL2\0815157.D
AV	J:\GC33\Data\081513-ICAL2\0815158.D
AW	J:\GC33\Data\081513-ICAL2\0815159.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
4,4'-Dibromooctafluorobiphenyl															
							AQ	2.0	0.321	AR	5.0	0.328	AS	20	0.323
	AT	50	0.326	AU	75	0.328	AV	100	0.325	AW	200	0.313			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
gamma-BHC (Lindane)							AQ	2.0	0.288	AR	5.0	0.310	AS	20	0.351
	AT	50	0.380	AU	75	0.393	AV	100	0.398	AW	200	0.399			
Heptachlor							AQ	2.0	0.289	AR	5.0	0.292	AS	20	0.312
	AT	50	0.323	AU	75	0.329	AV	100	0.325	AW	200	0.310			
Heptachlor Epoxide							AQ	2.0	0.245	AR	5.0	0.258	AS	20	0.266
	AT	50	0.268	AU	75	0.270	AV	100	0.266	AW	200	0.252			
gamma-Chlordane							AQ	2.0	0.246	AR	5.0	0.251	AS	20	0.259
	AT	50	0.265	AU	75	0.271	AV	100	0.268	AW	200	0.258			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
alpha-Chlordane															
							AQ	2.0	0.240	AR	5.0	0.246	AS	20	0.247
	AT	50	0.251	AU	75	0.255	AV	100	0.252	AW	200	0.242			
Endrin															
							AQ	2.0	0.149	AR	5.0	0.156	AS	20	0.163
	AT	50	0.174	AU	75	0.179	AV	100	0.185	AW	200	0.185			
Methoxychlor															
							AQ	2.0	0.0668	AR	5.0	0.0721	AS	20	0.0704
	AT	50	0.0706	AU	75	0.0706	AV	100	0.0710	AW	200	0.0709			
Aroclor 1016															
							M	25	0.0306	N	50	0.0310	O	200	0.0322
	P	500	0.0293	Q	1000	0.0275	R	2000	0.0254						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1221										S	50	0.0141	T	100	0.0137
	U	200	0.0141	V	500	0.0133	W	1000	0.0128	X	2000	0.0118			
Aroclor 1232													Y	50	0.0193
	Z	100	0.0191	AA	200	0.0191	AB	500	0.0185	AC	1000	0.0180	AD	2000	0.0166
Aroclor 1242															
	AE	50	0.0145	AF	100	0.0146	AG	200	0.0144	AH	500	0.0142	AI	1000	0.0140
	AJ	2000	0.0134												
Aroclor 1248															
				AK	50	0.0259	AL	100	0.0252	AM	200	0.0244	AN	500	0.0239
	AO	1000	0.0229	AP	2000	0.0220									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1254															
										S	50	0.0336	T	100	0.0315
	U	200	0.0304	V	500	0.0289	W	1000	0.0280	X	2000	0.0270			
Aroclor 1260															
							M	25	0.0370	N	50	0.0353	O	200	0.0352
	P	500	0.0315	Q	1000	0.0308	R	2000	0.0300						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4,4'-Dibromooctafluorobiphenyl	SURR	AverageRF	% RSD	1.6		≤ 30	0.323		
gamma-BHC (Lindane)	MS	Linear	R2	0.999		≥ 0.990	0.360		
Heptachlor	MS	AverageRF	% RSD	5.0		≤ 30	0.312		
Heptachlor Epoxide	MS	AverageRF	% RSD	3.5		≤ 30	0.261		
gamma-Chlordane	MS	AverageRF	% RSD	3.4		≤ 30	0.260		
alpha-Chlordane	MS	AverageRF	% RSD	2.1		≤ 30	0.248		
Endrin	MS	AverageRF	% RSD	8.5		≤ 30	0.170		
Methoxychlor	MS	AverageRF	% RSD	2.3		≤ 30	0.0703		
Aroclor 1016	TRG	Linear	R2	0.995		≥ 0.990	0.0293		
Aroclor 1221	TRG	Linear	R2	0.997		≥ 0.990	0.0133		
Aroclor 1232	TRG	AverageRF	% RSD	5.4		≤ 30	0.0184		
Aroclor 1242	TRG	AverageRF	% RSD	3.3		≤ 30	0.0142		
Aroclor 1248	MS	AverageRF	% RSD	5.9		≤ 30	0.0241		
Aroclor 1254	TRG	Linear	R2	0.999		≥ 0.990	0.0299		
Aroclor 1260	TRG	Linear	R2	0.999		≥ 0.990	0.0333		

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/16/2013 - 08/17/2013

Second Source Calibration Verification
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration ID: CAL12714
Units: ug/L

File ID:
J:\GC33\Data\081513-ICAL2\0815110.D
J:\GC33\Data\081513-ICAL2\0815117.D
J:\GC33\Data\081513-ICAL2\0815124.D
J:\GC33\Data\081513-ICAL2\0815138.D
J:\GC33\Data\081513-ICAL2\0815160.D
J:\GC33\Data\081513-ICAL2\0815164.D
J:\GC33\Data\081513-ICAL2\0815165.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	50	51	0.360	0.396	NA	1	± 30 %	Linear
Heptachlor	50	53	0.312	0.327	5	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	53	0.261	0.274	5	NA	± 30 %	AverageRF
gamma-Chlordane	50	52	0.260	0.271	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52	0.248	0.257	4	NA	± 30 %	AverageRF
Endrin	50	53	0.170	0.180	6	NA	± 30 %	AverageRF
Methoxychlor	50	51	0.0703	0.0711	1	NA	± 30 %	AverageRF
Aroclor 1016	500	480	0.0293	0.0259	NA	-4	± 30 %	Linear
Aroclor 1232	500	510	0.0184	0.0187	1	NA	± 30 %	AverageRF
Aroclor 1242	500	480	0.0142	0.0135	-5	NA	± 30 %	AverageRF
Aroclor 1248	500	450	0.0241	0.0218	-9	NA	± 30 %	AverageRF
Aroclor 1260	500	610	0.0333	0.0376	NA	22	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Level ID	File ID
A	J:\GC33\Data\081513-ICAL2\0815104.D\0815104c.d
B	J:\GC33\Data\081513-ICAL2\0815105.D\0815105c.d
C	J:\GC33\Data\081513-ICAL2\0815106.D\0815106c.d
D	J:\GC33\Data\081513-ICAL2\0815107.D\0815107c.d
E	J:\GC33\Data\081513-ICAL2\0815108.D\0815108c.d
F	J:\GC33\Data\081513-ICAL2\0815109.D\0815109c.d
G	J:\GC33\Data\081513-ICAL2\0815111.D\0815111c.d
H	J:\GC33\Data\081513-ICAL2\0815112.D\0815112c.d
I	J:\GC33\Data\081513-ICAL2\0815113.D\0815113c.d
J	J:\GC33\Data\081513-ICAL2\0815114.D\0815114c.d
K	J:\GC33\Data\081513-ICAL2\0815115.D\0815115c.d
L	J:\GC33\Data\081513-ICAL2\0815116.D\0815116c.d
M	J:\GC33\Data\081513-ICAL2\0815118.D\0815118c.d
N	J:\GC33\Data\081513-ICAL2\0815119.D\0815119c.d
O	J:\GC33\Data\081513-ICAL2\0815120.D\0815120c.d
P	J:\GC33\Data\081513-ICAL2\0815121.D\0815121c.d
Q	J:\GC33\Data\081513-ICAL2\0815122.D\0815122c.d
R	J:\GC33\Data\081513-ICAL2\0815123.D\0815123c.d
S	J:\GC33\Data\081513-ICAL2\0815125.D\0815125c.d
T	J:\GC33\Data\081513-ICAL2\0815126.D\0815126c.d
U	J:\GC33\Data\081513-ICAL2\0815127.D\0815127c.d
V	J:\GC33\Data\081513-ICAL2\0815128.D\0815128c.d
W	J:\GC33\Data\081513-ICAL2\0815129.D\0815129c.d
X	J:\GC33\Data\081513-ICAL2\0815130.D\0815130c.d
Y	J:\GC33\Data\081513-ICAL2\0815132.D\0815132c.d
Z	J:\GC33\Data\081513-ICAL2\0815133.D\0815133c.d
AA	J:\GC33\Data\081513-ICAL2\0815134.D\0815134c.d
AB	J:\GC33\Data\081513-ICAL2\0815135.D\0815135c.d
AC	J:\GC33\Data\081513-ICAL2\0815136.D\0815136c.d
AD	J:\GC33\Data\081513-ICAL2\0815137.D\0815137c.d
AE	J:\GC33\Data\081513-ICAL2\0815139.D\0815139c.d
AF	J:\GC33\Data\081513-ICAL2\0815140.D\0815140c.d
AG	J:\GC33\Data\081513-ICAL2\0815141.D\0815141c.d
AH	J:\GC33\Data\081513-ICAL2\0815142.D\0815142c.d
AI	J:\GC33\Data\081513-ICAL2\0815143.D\0815143c.d
AJ	J:\GC33\Data\081513-ICAL2\0815144.D\0815144c.d
AK	J:\GC33\Data\081513-ICAL2\0815146.D\0815146c.d
AL	J:\GC33\Data\081513-ICAL2\0815147.D\0815147c.d
AM	J:\GC33\Data\081513-ICAL2\0815148.D\0815148c.d
AN	J:\GC33\Data\081513-ICAL2\0815149.D\0815149c.d
AO	J:\GC33\Data\081513-ICAL2\0815150.D\0815150c.d
AP	J:\GC33\Data\081513-ICAL2\0815151.D\0815151c.d
AQ	J:\GC33\Data\081513-ICAL2\0815153.D\0815153c.d
AR	J:\GC33\Data\081513-ICAL2\0815154.D\0815154c.d
AS	J:\GC33\Data\081513-ICAL2\0815155.D\0815155c.d
AT	J:\GC33\Data\081513-ICAL2\0815156.D\0815156c.d
AU	J:\GC33\Data\081513-ICAL2\0815157.D\0815157c.d
AV	J:\GC33\Data\081513-ICAL2\0815158.D\0815158c.d
AW	J:\GC33\Data\081513-ICAL2\0815159.D\0815159c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
4,4'-Dibromooctafluorobiphenyl															
							AQ	2.0	0.295	AR	5.0	0.304	AS	20	0.320
	AT	50	0.316	AU	75	0.322	AV	100	0.329	AW	200	0.314			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
gamma-BHC (Lindane)							AQ	2.0	0.480	AR	5.0	0.635	AS	20	0.511
	AT	50	0.463	AU	75	0.466	AV	100	0.456	AW	200	0.440			
Heptachlor							AQ	2.0	0.287	AR	5.0	0.311	AS	20	0.339
	AT	50	0.353	AU	75	0.359	AV	100	0.358	AW	200	0.339			
Heptachlor Epoxide							AQ	2.0	0.270	AR	5.0	0.303	AS	20	0.332
	AT	50	0.342	AU	75	0.346	AV	100	0.336	AW	200	0.316			
gamma-Chlordane							AQ	2.0	0.299	AR	5.0	0.318	AS	20	0.338
	AT	50	0.347	AU	75	0.356	AV	100	0.352	AW	200	0.341			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
alpha-Chlordane															
							AQ	2.0	0.280	AR	5.0	0.300	AS	20	0.323
	AT	50	0.331	AU	75	0.338	AV	100	0.335	AW	200	0.324			
Endrin															
							AQ	2.0	0.186	AR	5.0	0.204	AS	20	0.223
	AT	50	0.237	AU	75	0.244	AV	100	0.250	AW	200	0.246			
Methoxychlor															
							AQ	2.0	0.0862	AR	5.0	0.0921	AS	20	0.0950
	AT	50	0.0964	AU	75	0.0975	AV	100	0.0976	AW	200	0.0964			
Aroclor 1016															
							M	25	0.0253	N	50	0.0252	O	200	0.0273
	P	500	0.0256	Q	1000	0.0249	R	2000	0.0242						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1221															
										S	50	0.0137	T	100	0.0142
	U	200	0.0140	V	500	0.0138	W	1000	0.0134	X	2000	0.0126			
Aroclor 1232															
													Y	50	0.0149
	Z	100	0.0147	AA	200	0.0151	AB	500	0.0149	AC	1000	0.0145	AD	2000	0.0137
Aroclor 1242															
	AE	50	0.0215	AF	100	0.0222	AG	200	0.0219	AH	500	0.0226	AI	1000	0.0222
	AJ	2000	0.0222												
Aroclor 1248															
				AK	50	0.0339	AL	100	0.0337	AM	200	0.0328	AN	500	0.0330
	AO	1000	0.0332	AP	2000	0.0322									

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Aroclor 1254															
										S	50	0.0453	T	100	0.0428
	U	200	0.0422	V	500	0.0418	W	1000	0.0417	X	2000	0.0406			
Aroclor 1260															
							M	25	0.0477	N	50	0.0473	O	200	0.0498
	P	500	0.0464	Q	1000	0.0450	R	2000	0.0446						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Pesticides/PCBs by EPA method 508.1

Calibration ID: CAL12714
Instrument ID: GC33

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4,4'-Dibromooctafluorobiphenyl	SURR	AverageRF	% RSD	3.7		≤ 30	0.314		
gamma-BHC (Lindane)	MS	Quadratic	COD	1.000		≥ 0.990	0.493		
Heptachlor	MS	AverageRF	% RSD	8.0		≤ 30	0.335		
Heptachlor Epoxide	MS	AverageRF	% RSD	8.4		≤ 30	0.321		
gamma-Chlordane	MS	AverageRF	% RSD	6.1		≤ 30	0.336		
alpha-Chlordane	MS	AverageRF	% RSD	6.6		≤ 30	0.319		
Endrin	MS	Linear	R2	1.000		≥ 0.990	0.227		
Methoxychlor	MS	AverageRF	% RSD	4.3		≤ 30	0.0945		
Aroclor 1016	TRG	AverageRF	% RSD	4.2		≤ 30	0.0254		
Aroclor 1221	TRG	AverageRF	% RSD	4.2		≤ 30	0.0136		
Aroclor 1232	TRG	AverageRF	% RSD	3.3		≤ 30	0.0146		
Aroclor 1242	TRG	AverageRF	% RSD	1.8		≤ 30	0.0221		
Aroclor 1248	MS	AverageRF	% RSD	1.9		≤ 30	0.0331		
Aroclor 1254	TRG	AverageRF	% RSD	3.7		≤ 30	0.0424		
Aroclor 1260	TRG	AverageRF	% RSD	4.1		≤ 30	0.0468		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/16/2013 - 08/17/2013

Second Source Calibration Verification
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration ID: CAL12714
Units: ug/L

File ID: J:\GC33\Data\081513-ICAL2\0815110.D\0815110c.d
J:\GC33\Data\081513-ICAL2\0815117.D\0815117c.d
J:\GC33\Data\081513-ICAL2\0815124.D\0815124c.d
J:\GC33\Data\081513-ICAL2\0815138.D\0815138c.d
J:\GC33\Data\081513-ICAL2\0815160.D\0815160c.d
J:\GC33\Data\081513-ICAL2\0815164.D\0815164c.d
J:\GC33\Data\081513-ICAL2\0815165.D\0815165c.d

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
gamma-BHC (Lindane)	50	52	0.493	0.489	NA	3	± 30 %	Quadratic
Heptachlor	50	53	0.335	0.354	6	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54	0.321	0.349	9	NA	± 30 %	AverageRF
gamma-Chlordane	50	53	0.336	0.356	6	NA	± 30 %	AverageRF
alpha-Chlordane	50	53	0.319	0.339	6	NA	± 30 %	AverageRF
Endrin	50	51	0.227	0.247	NA	2	± 30 %	Linear
Methoxychlor	50	52	0.0945	0.0982	4	NA	± 30 %	AverageRF
Aroclor 1016	500	440	0.0254	0.0226	-11	NA	± 30 %	AverageRF
Aroclor 1232	500	520	0.0146	0.0151	3	NA	± 30 %	AverageRF
Aroclor 1242	500	480	0.0221	0.0214	-3	NA	± 30 %	AverageRF
Aroclor 1248	500	450	0.0331	0.0298	-10	NA	± 30 %	AverageRF
Aroclor 1260	500	570	0.0468	0.0535	14	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Sel	Run	Location	Method / Sample Name	Datafile	SeqTable Calib:RF:RT
No	1	Vial 100	508 PRIMER BLANK	0815101	F:01:01
No	2	Vial 96	508 IPC DWSTD06-62J	0815102	F:02:01
No	3	Vial 97	508 DEG 508/608 DWSTD06-6	0815103	F:03:01
No	4	Vial 1	508 TOX ICAL 50PPB DWSTD0	0815104	F:04:01
No	5	Vial 2	508 TOX ICAL 100PPB DWSTD	0815105	F:05:01
No	6	Vial 3	508 TOX ICAL 200PPB DWSTD	0815106	F:06:01
No	7	Vial 4	508 TOX ICAL 500PPB DWSTD	0815107	F:07:01
No	8	Vial 5	508 TOX ICAL 1000PPB DWST	0815108	F:08:01
No	9	Vial 6	508 TOX ICAL 2000PPB DWST	0815109	F:09:01
No	10	Vial 7	508 TOX ICV 500PPB DWSTD0	0815110	F:10:01
No	11	Vial 8	508 CHLOR ICAL 50PPB DWST	0815111	F:11:01
No	12	Vial 9	508 CHLOR ICAL 100PPB DWS	0815112	F:12:01
No	13	Vial 10	508 CHLOR ICAL 200PPB DWS	0815113	F:13:01
No	14	Vial 11	508 CHLOR ICAL 500PPB DWS	0815114	F:14:01
No	15	Vial 12	508 CHLOR ICAL 1000PPB DW	0815115	F:15:01
No	16	Vial 13	508 CHLOR ICAL 2000PPB DW	0815116	F:16:01
No	17	Vial 14	508 CHLOR ICV 500PPB DWST	0815117	F:17:01
No	18	Vial 15	508 1660 ICAL 25PPB DWSTD	0815118	F:18:01
No	19	Vial 16	508 1660 ICAL 50PPB DWSTD	0815119	F:19:01
No	20	Vial 17	508 1660 ICAL 200PPB DWST	0815120	F:20:01
No	21	Vial 18	508 1660 ICAL 500PPB DWST	0815121	F:21:01
No	22	Vial 19	508 1660 ICAL 1000PPB DWS	0815122	F:22:01
No	23	Vial 20	508 1660 ICAL 2000PPB DWS	0815123	F:23:01
No	24	Vial 21	508 1660 ICV 500PPB DWSTD	0815124	F:24:01

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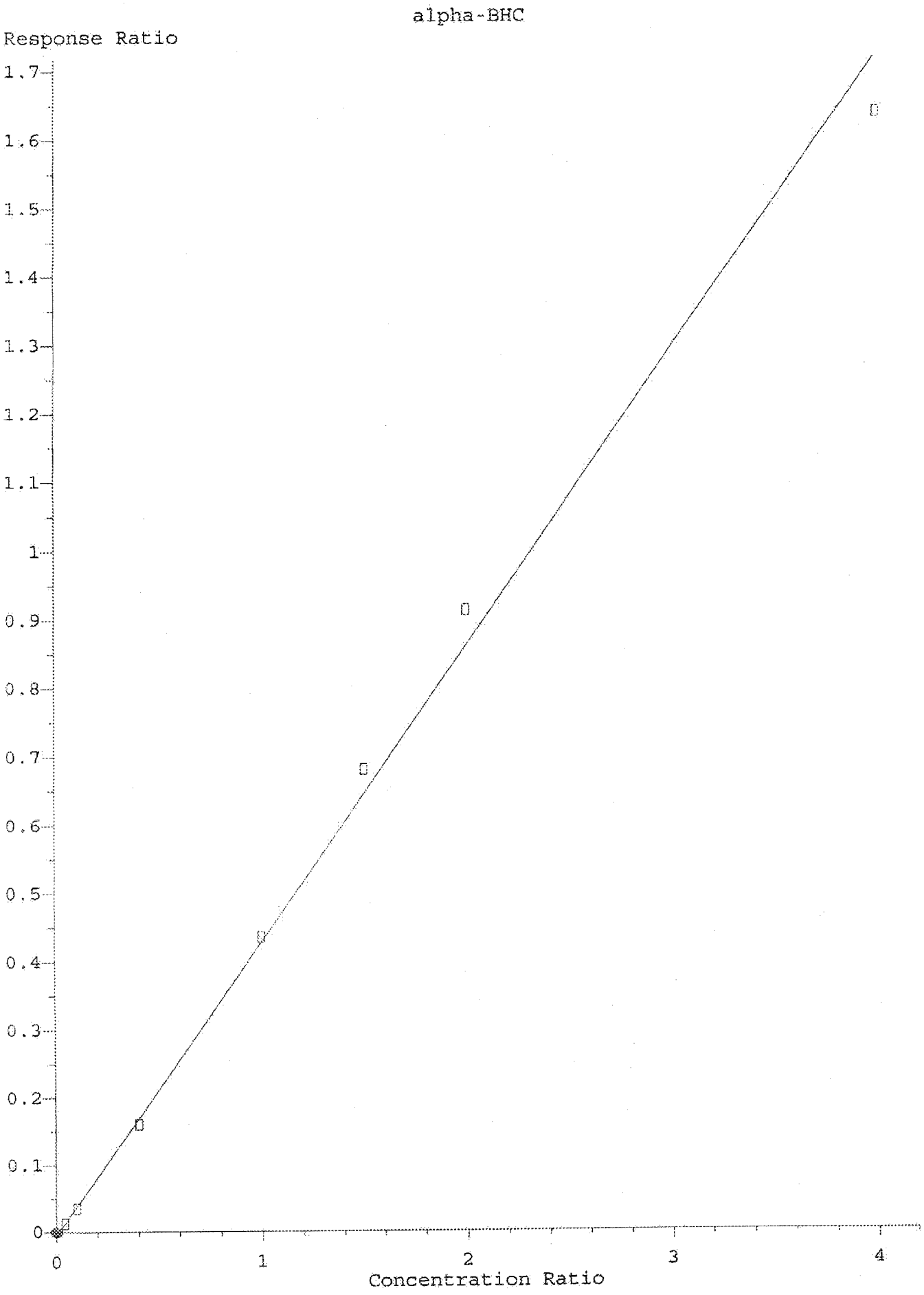
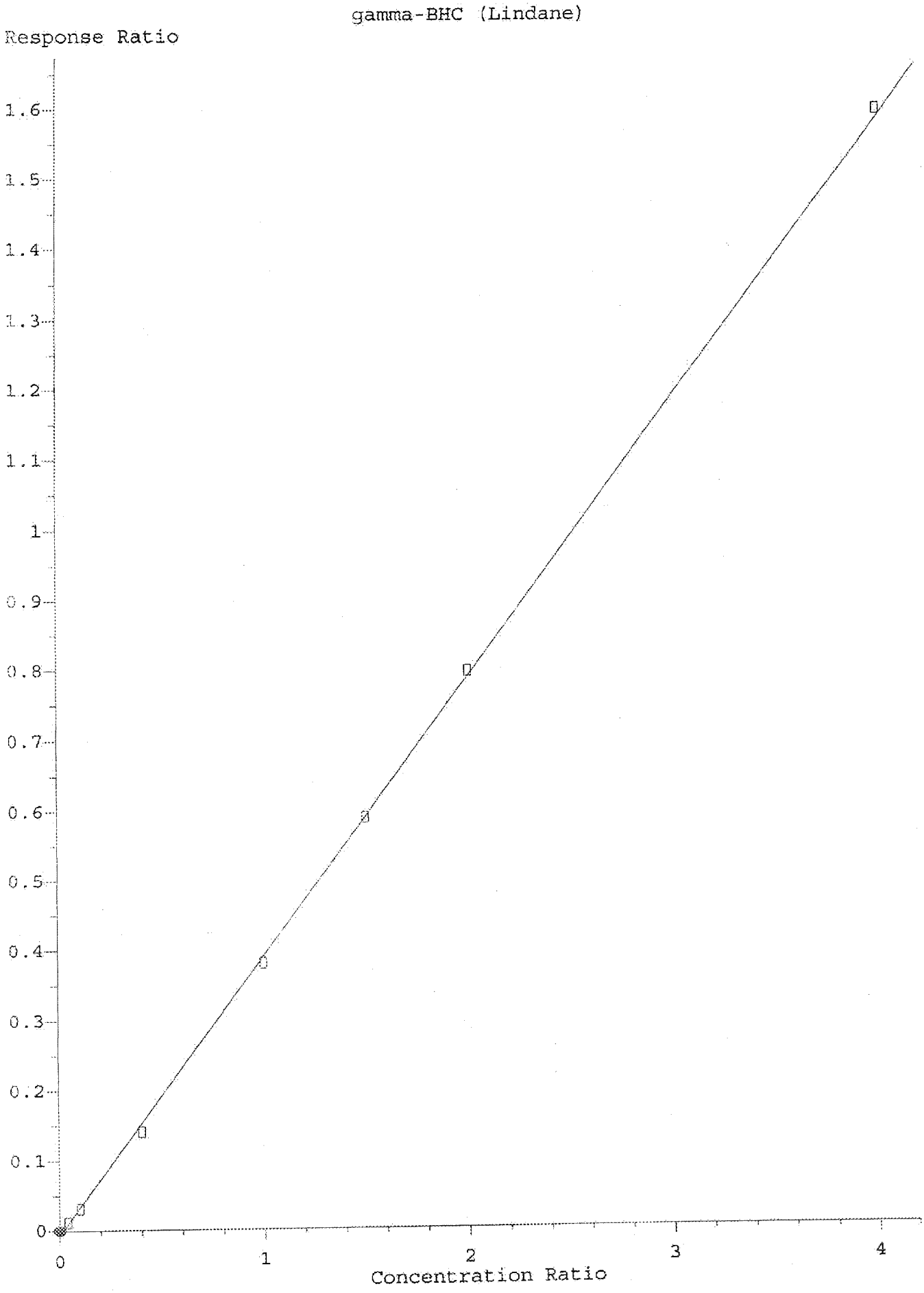
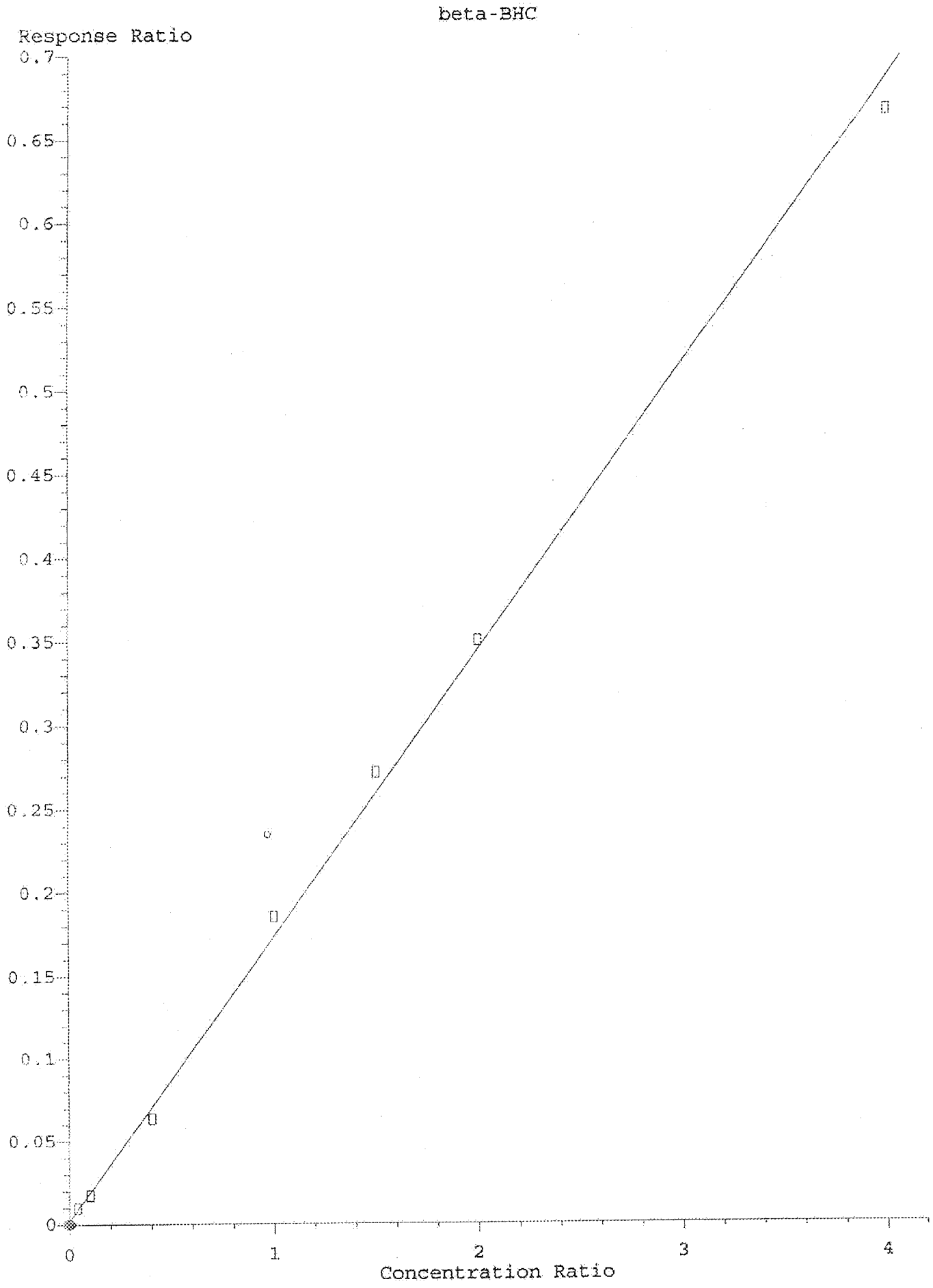
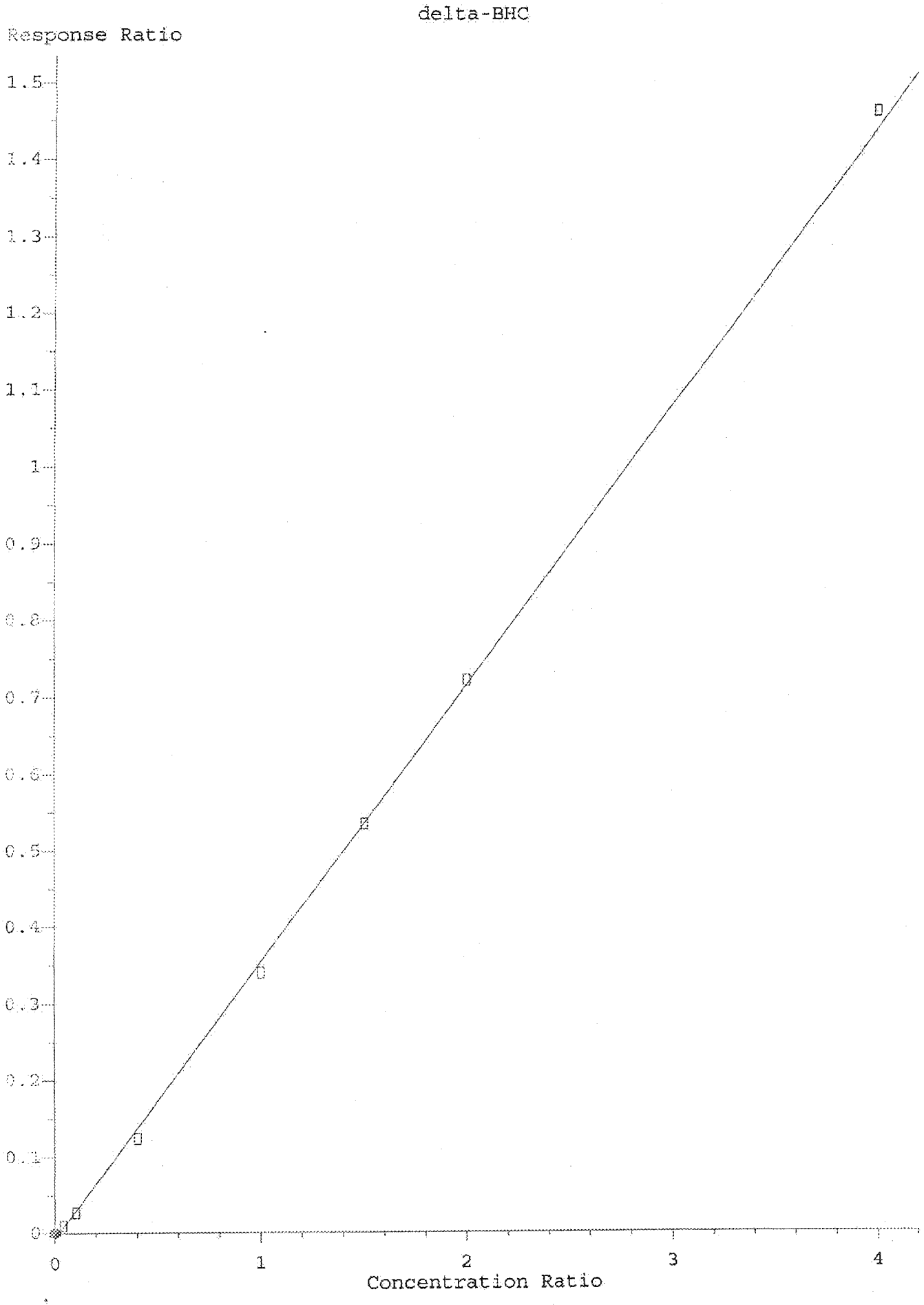
Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	25	Vial 22	508 2154 ICAL 50PPB DWSTD	0815125	F:25:01	
No	26	Vial 23	508 2154 ICAL 100PPB DWST	0815126	F:26:01	
No	27	Vial 24	508 2154 ICAL 200PPB DWST	0815127	F:27:01	
No	28	Vial 25	508 2154 ICAL 500PPB DWST	0815128	F:28:01	
No	29	Vial 26	508 2154 ICAL 1000PPB DWS	0815129	F:29:01	
No	30	Vial 27	508 2154 ICAL 2000PPB DWS	0815130	F:30:01	
No	31	Vial 28	508 2154 ICV 500PPB DWSTD – 120 ok. Make new ICV w/ new stock. See below.	0815131	F:31:01	
No	32	Vial 29	508 1232 ICAL 50PPB DWSTD	0815132	F:32:01	
No	33	Vial 30	508 1232 ICAL 100PPB DWST	0815133	F:33:01	
No	34	Vial 31	508 1232 ICAL 200PPB DWST	0815134	F:34:01	
No	35	Vial 32	508 1232 ICAL 500PPB DWST	0815135	F:35:01	
No	36	Vial 33	508 1232 ICAL 1000PPB DWS	0815136	F:36:01	
No	37	Vial 34	508 1232 ICAL 2000PPB DWS	0815137	F:37:01	
No	38	Vial 35	508 1232 ICV 500PPB DWSTD	0815138	F:38:01	
No	39	Vial 36	508 1242 ICAL 50PPB DWSTD	0815139	F:39:01	
No	40	Vial 37	508 1242 ICAL 100PPB DWST	0815140	F:40:01	
No	41	Vial 38	508 1242 ICAL 200PPB DWST	0815141	F:41:01	
No	42	Vial 39	508 1242 ICAL 500PPB DWST	0815142	F:42:01	
No	43	Vial 40	508 1242 ICAL 1000PPB DWS	0815143	F:43:01	
No	44	Vial 41	508 1242 ICAL 2000PPB DWS	0815144	F:44:01	
No	45	Vial 42	508 1242 ICV 500PPB DWSTD – ok. RSTD. RR	0815145	F:45:01	
No	46	Vial 43	508 1248 ICAL 50PPB DWSTD	0815146	F:46:01	
No	47	Vial 44	508 1248 ICAL 100PPB DWST	0815147	F:47:01	

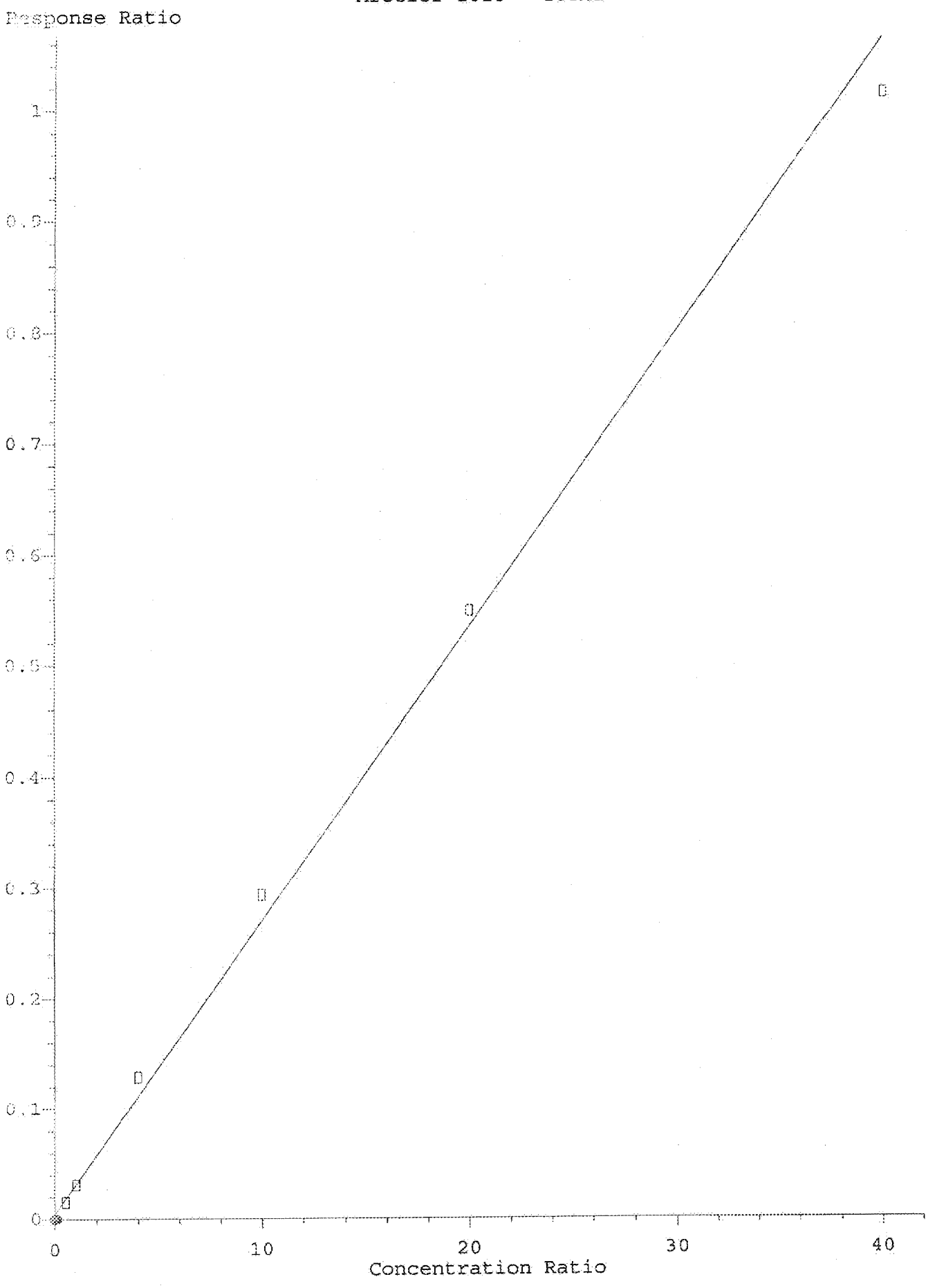
Sel	Run	Location	Method / Sample Name	Datafile	SeqTable	Calib:RF:RT
No	48	Vial 45	508 1248 ICAL 200PPB DWST	0815148		F:48:01
No	49	Vial 46	508 1248 ICAL 500PPB DWST	0815149		F:49:01
No	50	Vial 47	508 1248 ICAL 1000PPB DWS	0815150		F:50:01
No	51	Vial 48	508 1248 ICAL 2000PPB DWS	0815151		F:51:01
No	52	Vial 49	508 1248 ICV 500PPB DWSTD - Also STD. RS.	0815152		F:52:01
No	53	Vial 50	508 PEST ICAL 2PPB DWSTD0	0815153		F:53:01
No	54	Vial 51	508 PEST ICAL 5PPB DWSTD0	0815154		F:54:01
No	55	Vial 52	508 PEST ICAL 20PPB DWSTD	0815155		F:55:01
No	56	Vial 53	508 PEST ICAL 50PPB DWSTD	0815156		F:56:01
No	57	Vial 54	508 PEST ICAL 75PPB DWSTD	0815157		F:57:01
No	58	Vial 55	508 PEST ICAL 100PPB DWST	0815158		F:58:01
No	59	Vial 56	508 PEST ICAL 200PPB DWST	0815159		F:59:01
No	60	Vial 57	508 PEST ICV 50PPB DWSTD0	0815160		F:60:01
No	61	Vial 100	508 IB	0815161		F:61:01
No	62	none	PARK REST UP BUTTERCUP	0815162		F:62:01
No	63	Vial 100	508 PRIMER BLANK	0815163		F:63:01
No	64	Vial 1	508 1242 ICV 500PPB DWSTD	0815164		F:64:01
No	65	Vial 2	508 1248 ICV 500PPB DWSTD	0815165		F:65:01
No	66	Vial 100	508 IB	0815166		F:66:01
No	67	Vial 3	508 2154 ICV 500PPB DWSTD	0815167		F:67:01
No	68	Vial 4	508 PEST ICV 50PPB DWSTD0 - NR first grouped w/ new method.	0815168		F:68:01
No	69	Vial 100	508 IB	0815169		F:69:01
No	70	none	PARK REST AGAIN	0815170		F:70:01

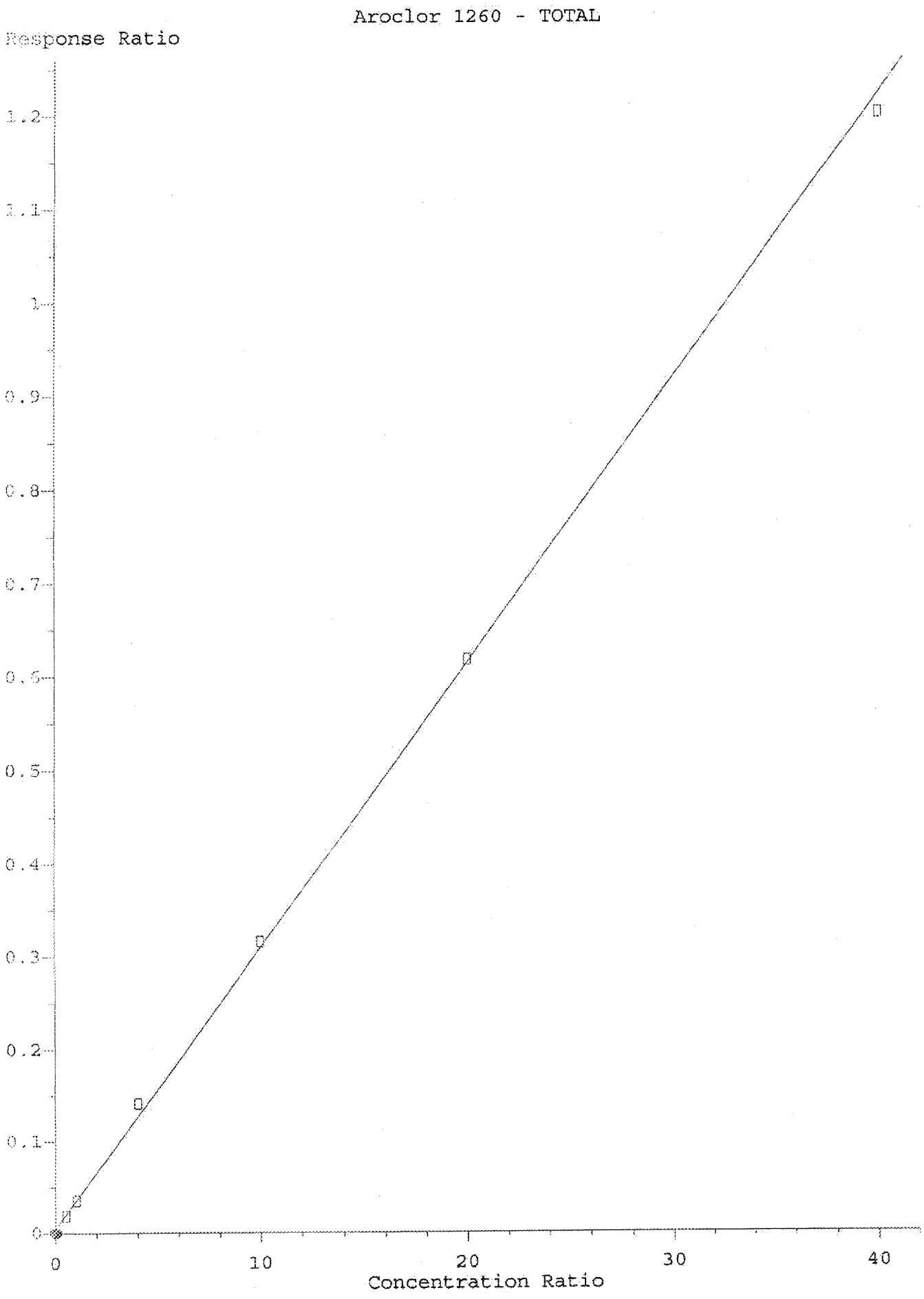

alpha-BHC
Response Ratio
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio

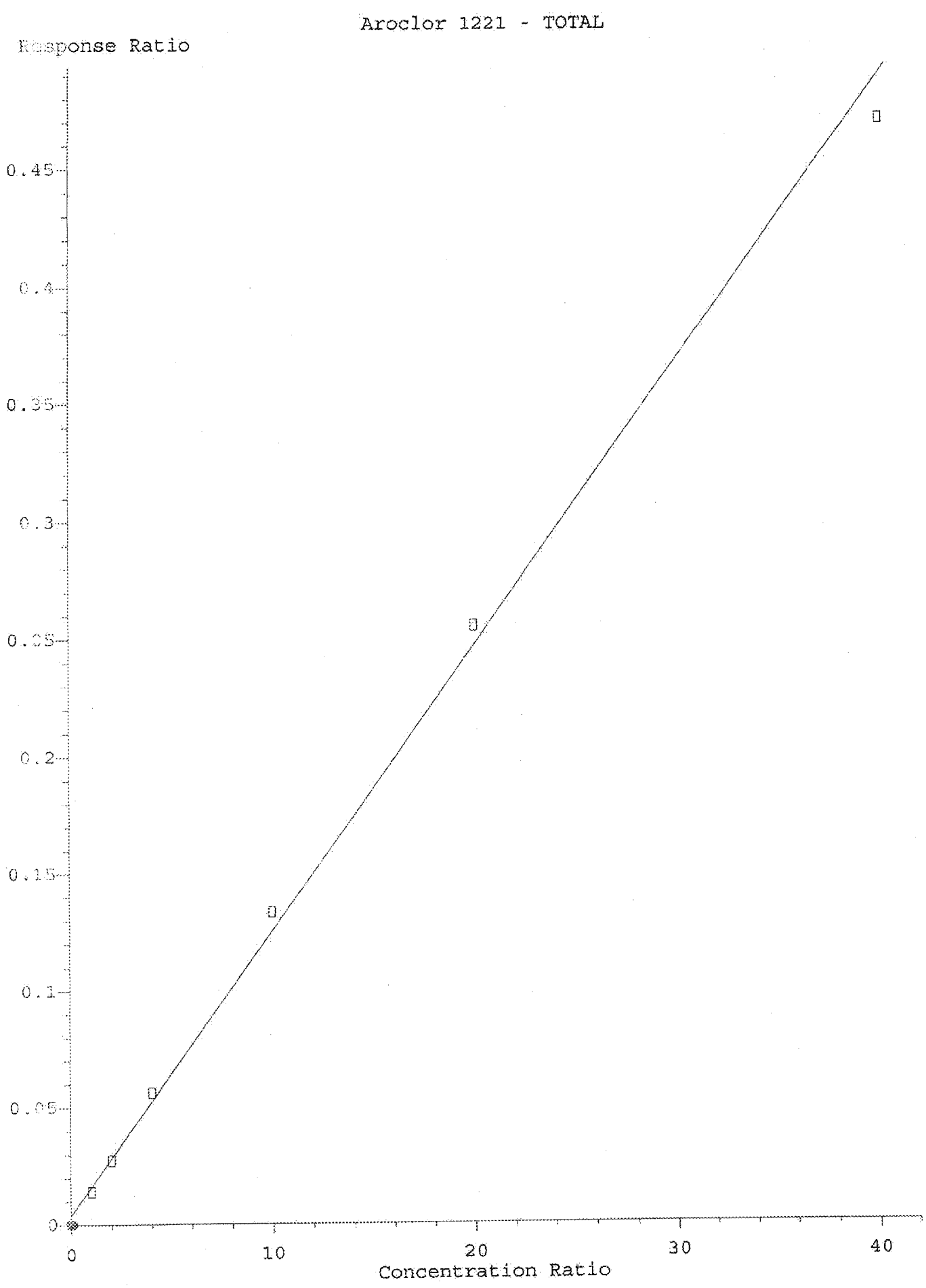

gamma-BHC (Lindane)
Response Ratio
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio

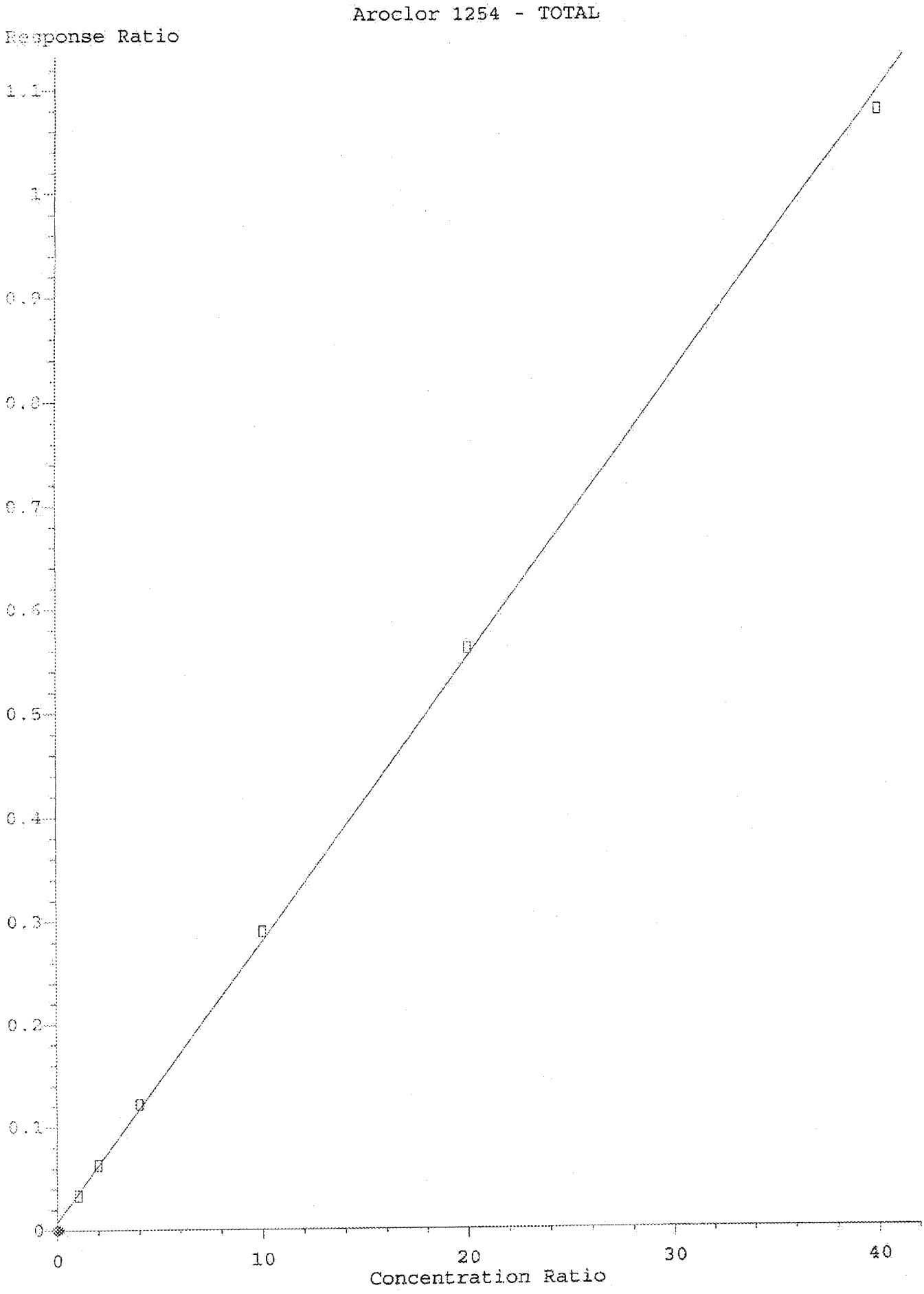

beta-BHC
Response Ratio
0.7
0.65
0.6
0.55
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
1
2
3
4
Concentration Ratio

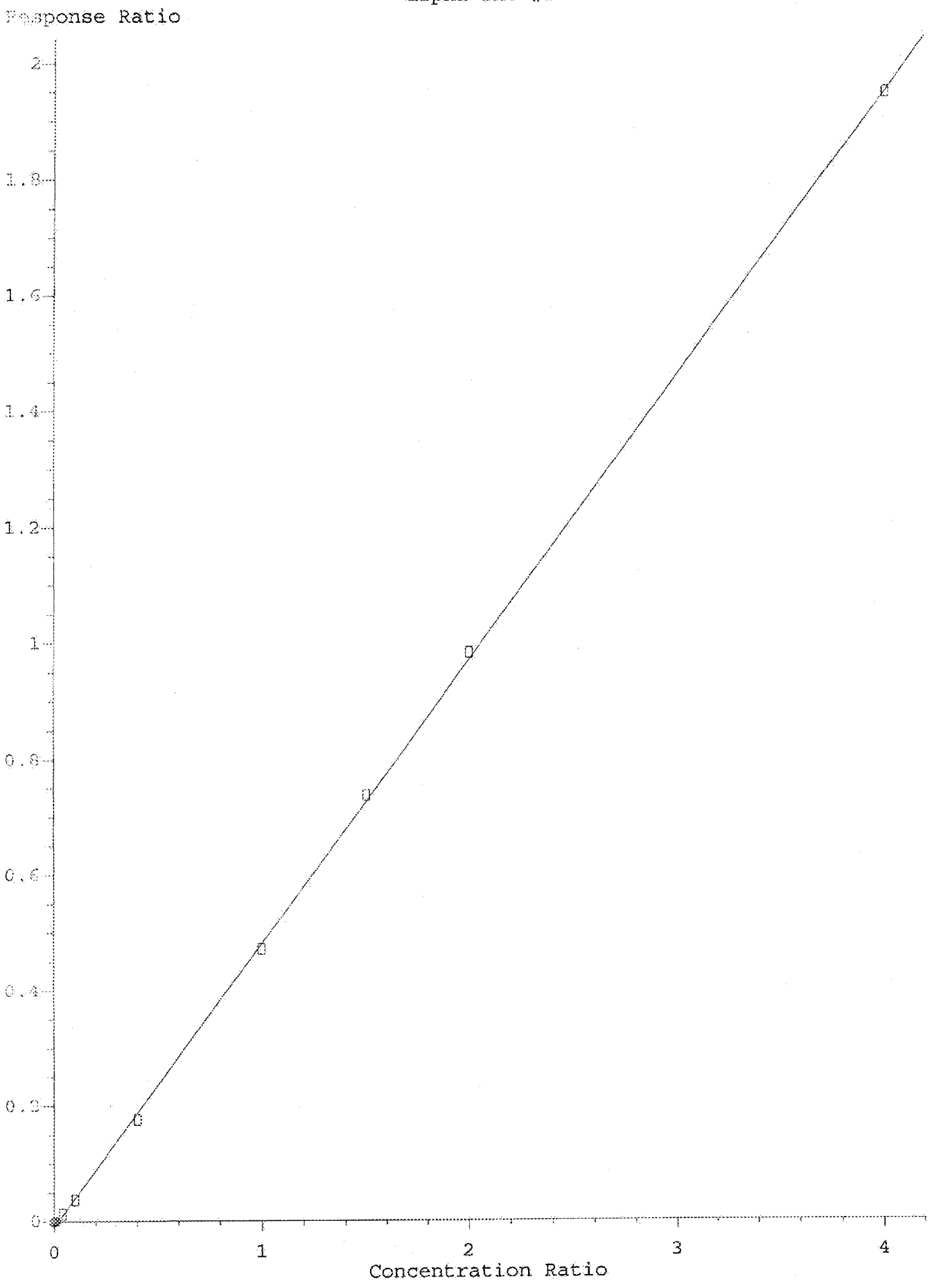

delta-BHC
Response Ratio
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio

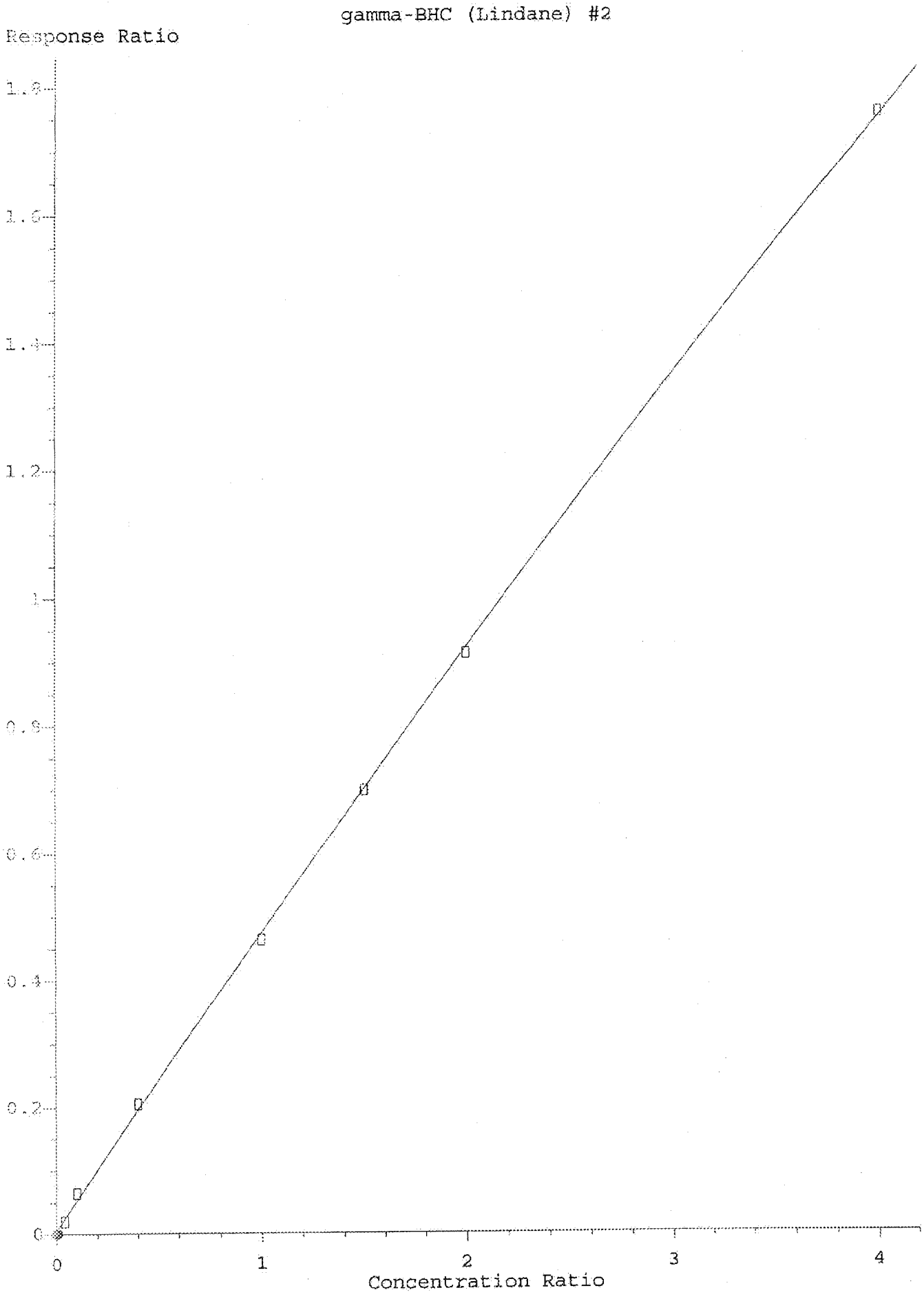

Aroclor 1016 - TOTAL
Response Ratio
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
Concentration Ratio

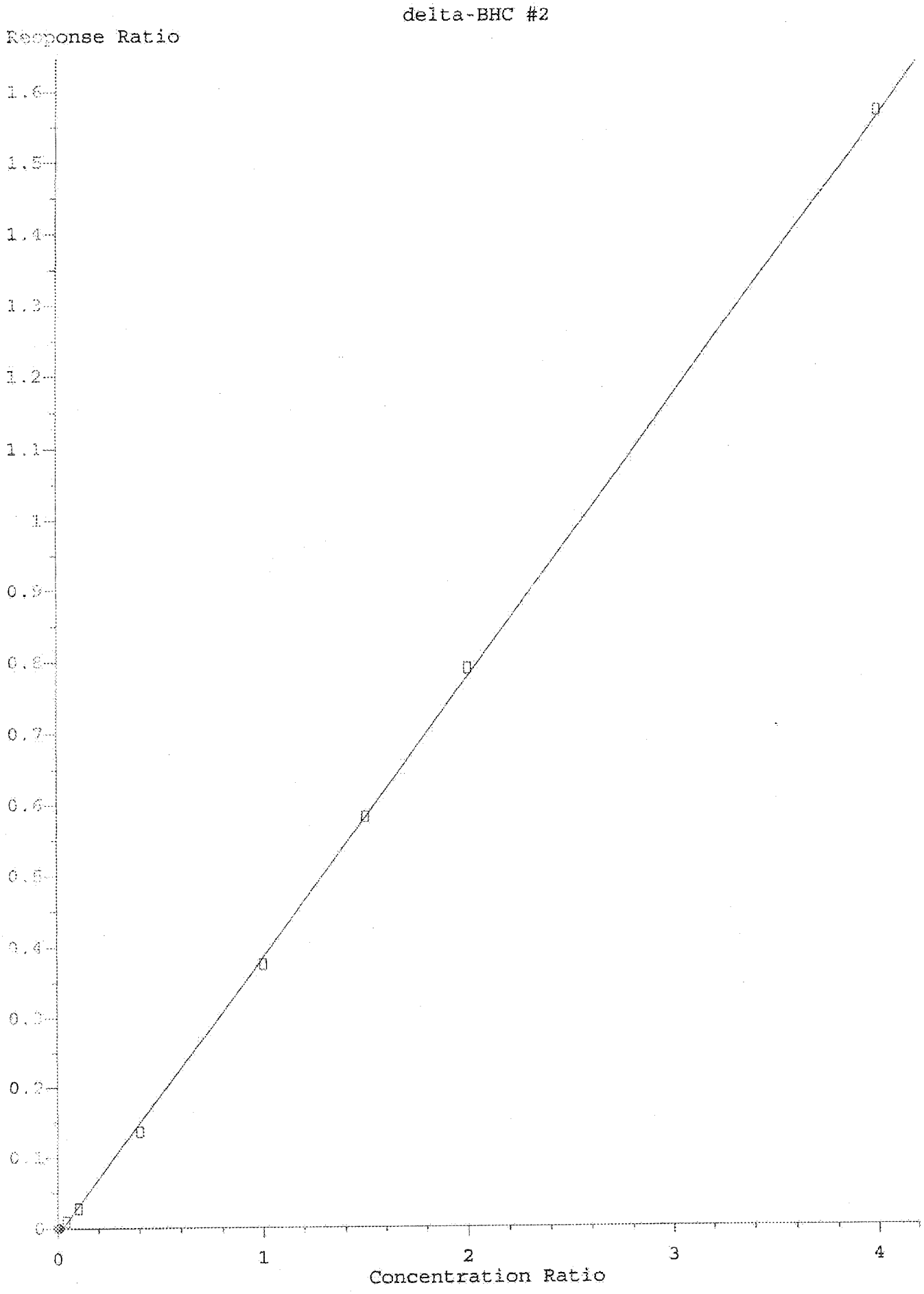

Aroclor 1260 - TOTAL
Response Ratio
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
Concentration Ratio

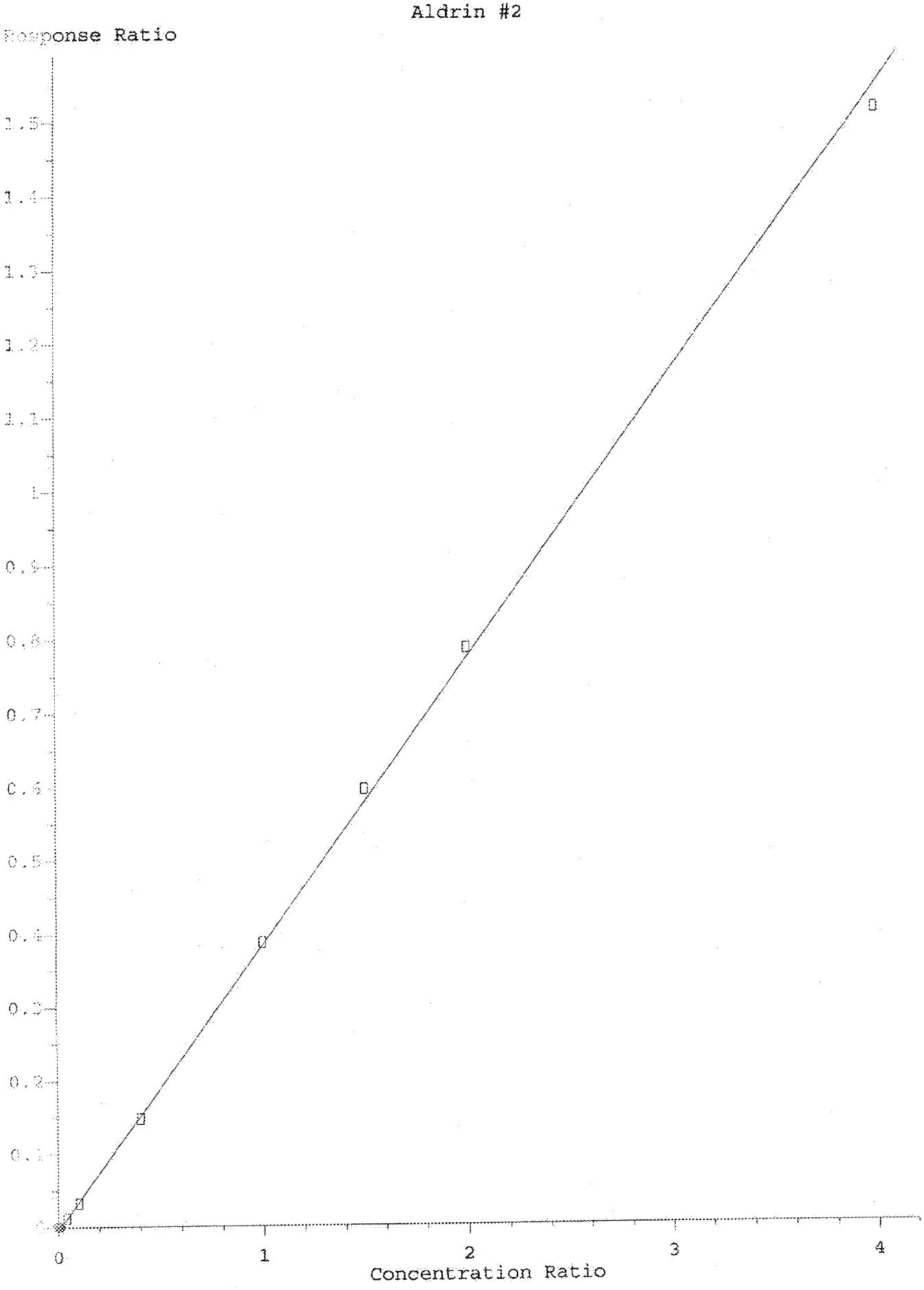

Aroclor 1221 - TOTAL
Response Ratio
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
10
20
30
40
Concentration Ratio

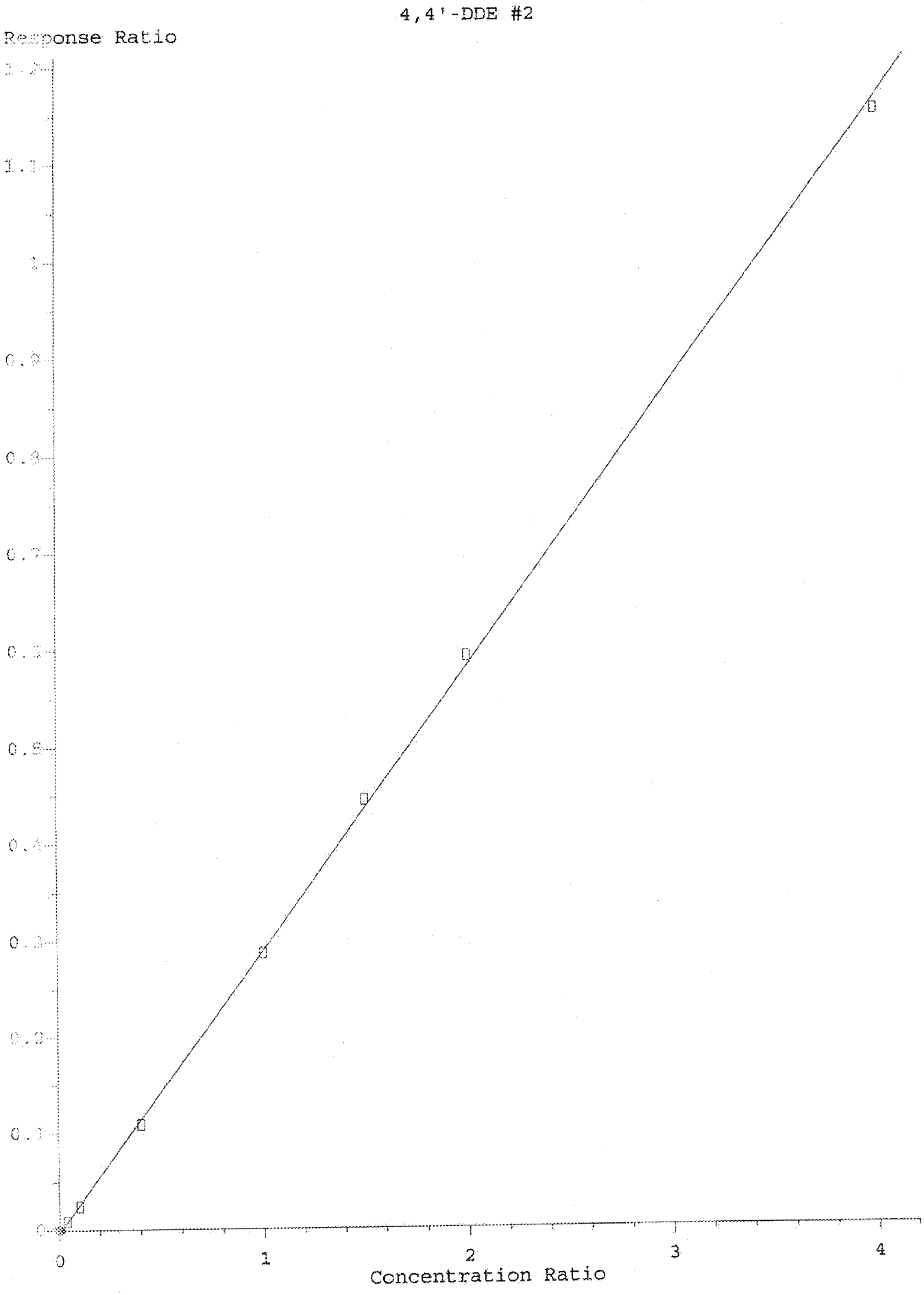

Aroclor 1254 - TOTAL
Response Ratio
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
Concentration Ratio

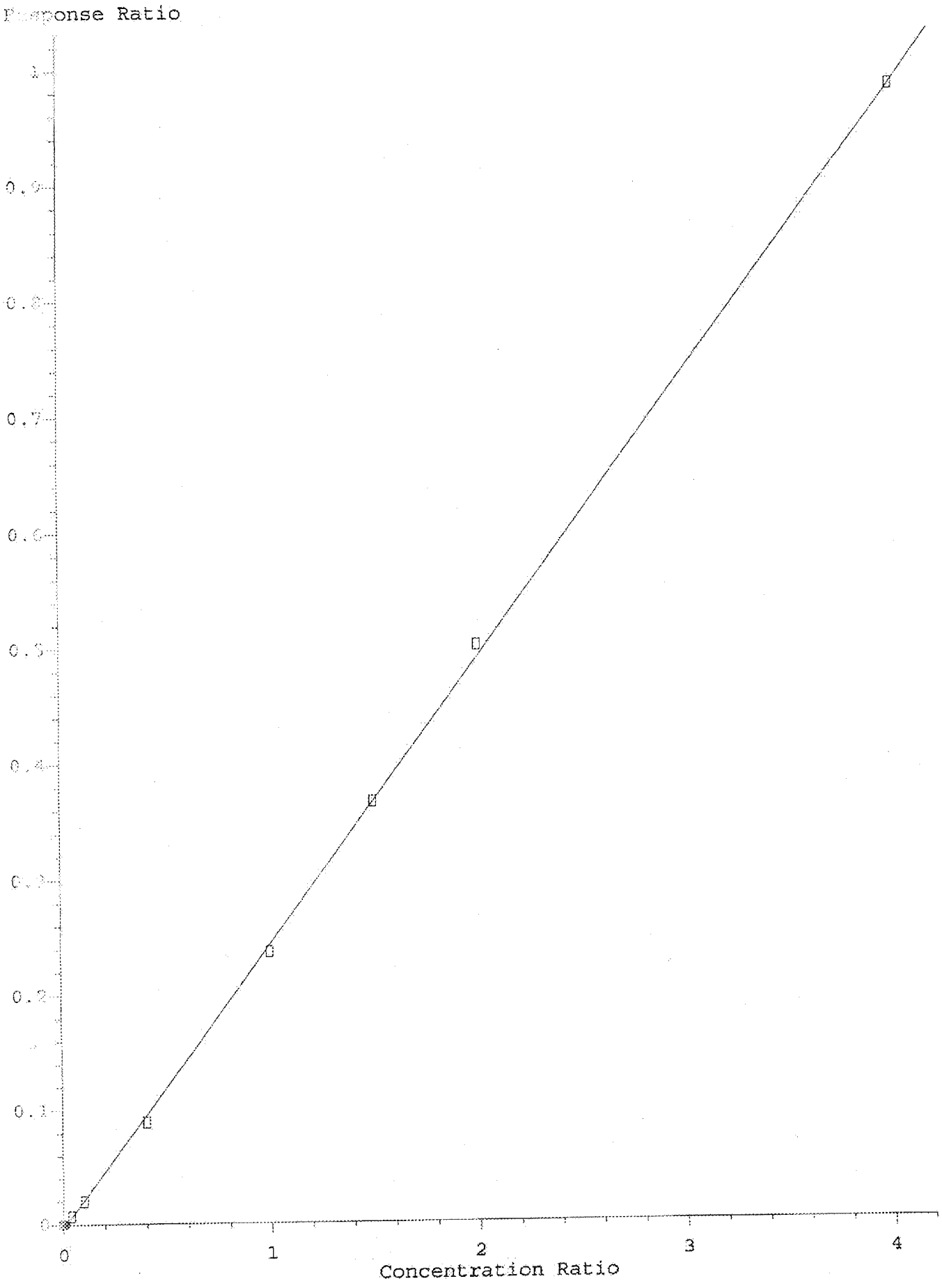

alpha-BHC #2
Response Ratio
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
1
2
3
4
Concentration Ratio

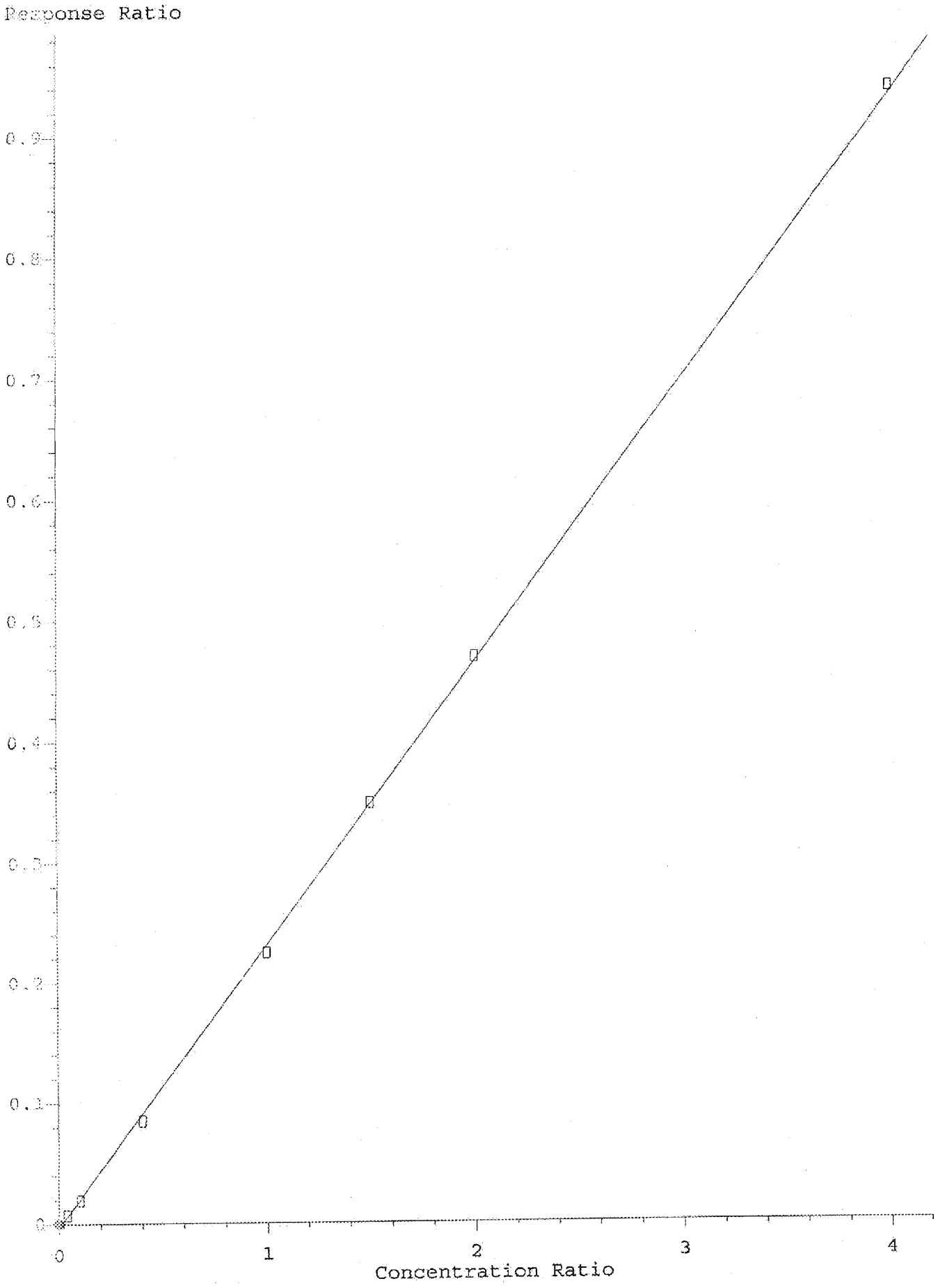

gamma-BHC (Lindane) #2
Response Ratio
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
1
2
3
4
Concentration Ratio


delta-BHC #2
Response Ratio
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio


Aldrin #2
Response Ratio
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio


4,4'-DDE #2
Response Ratio
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio


Endrin #2
Response Ratio
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio


4,4'-DDT #2
Response Ratio
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
Concentration Ratio

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815101.D
Acq On : 15-Aug-2013, 18:22:00 Operator : SSullivan
Acq Meth : 508.M
Sample : PRIMER BLANK Vial : 100
Misc : Multiplier : 1.00
Quant Time : Aug 19 15:39:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 09:44:48 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

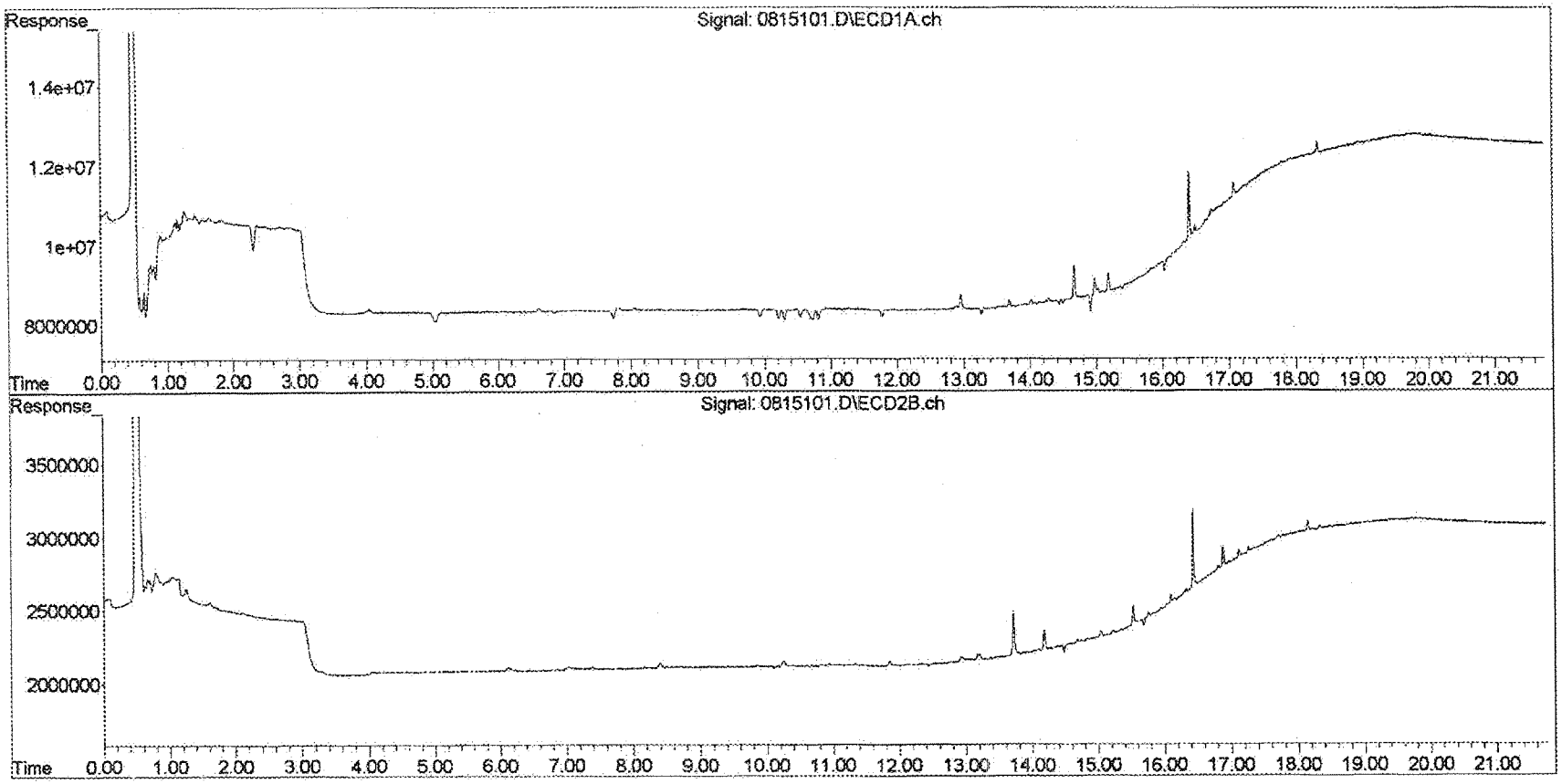
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
System Monitoring Compounds						
Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815101.D
Acq On : 15-Aug-2013, 18:22:00 Operator : SSullivan
Acq Meth : 508.M
Sample : PRIMER BLANK Vial : 100
Misc : Multiplier : 1.00
Quant Time : Aug 19 15:39:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 09:44:48 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



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Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815104.D
Acq On : 15-Aug-2013, 20:06:11 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 50PPB DWSTD06-59B Vial : 1
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:49:14 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1307.9E6	318.9E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	1772572	510536	19.918	25.399 #
28) Toxaphene {2}	16.40	16.05	4218358	1283025	21.732m	23.786m
29) Toxaphene {3}	16.64	16.44	2544313	1743584	27.781m	30.629
30) Toxaphene {4}	16.75	16.96	3590431	1755397	18.895	28.065 #
31) Toxaphene - TOTAL	0.00	0.00	12125674	5292542	21.472T	27.350T#

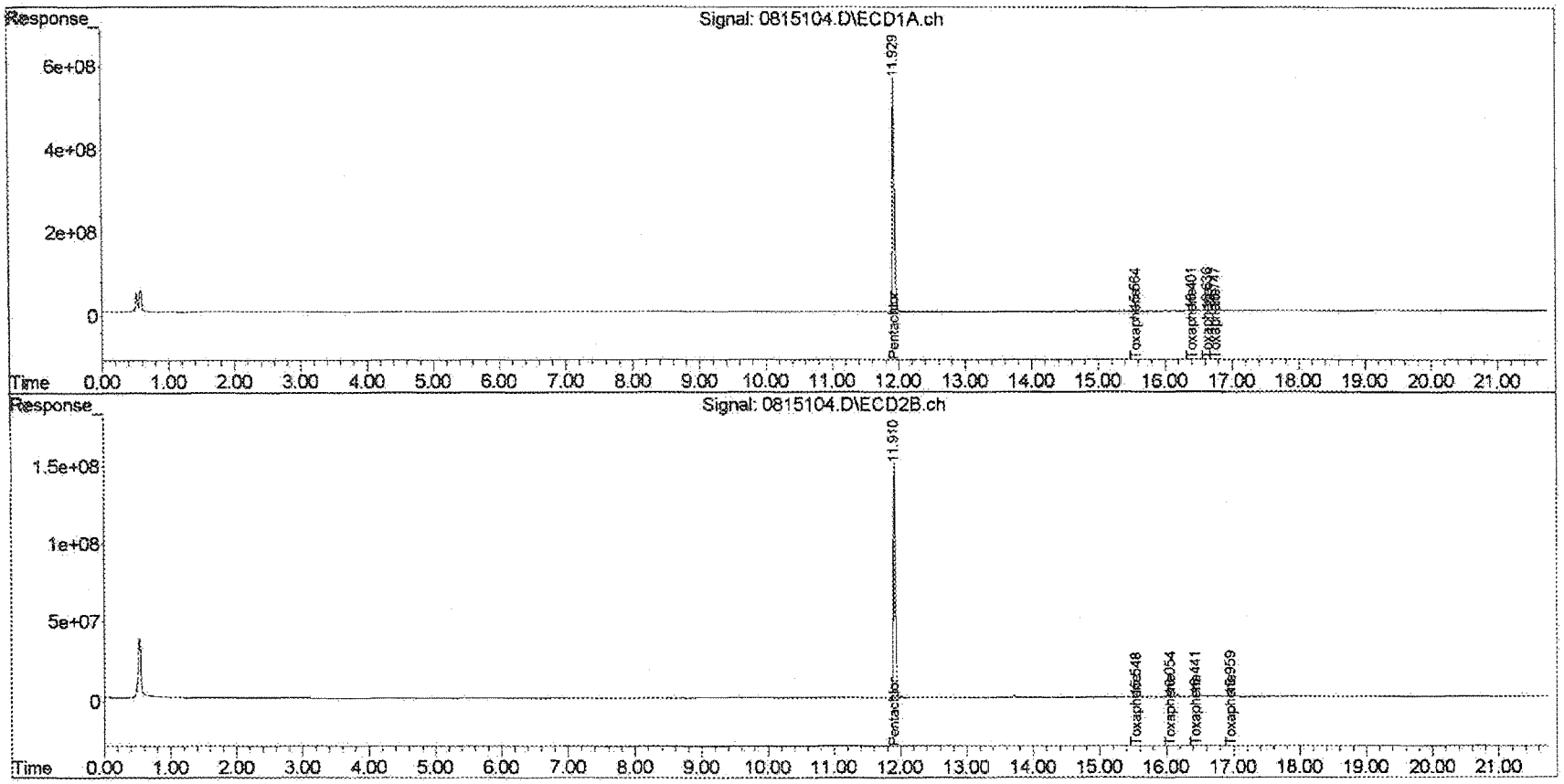
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815104.D
Acq On : 15-Aug-2013, 20:06:11 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 50PPB DWSTD06-59B Vial : 1
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:49:14 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

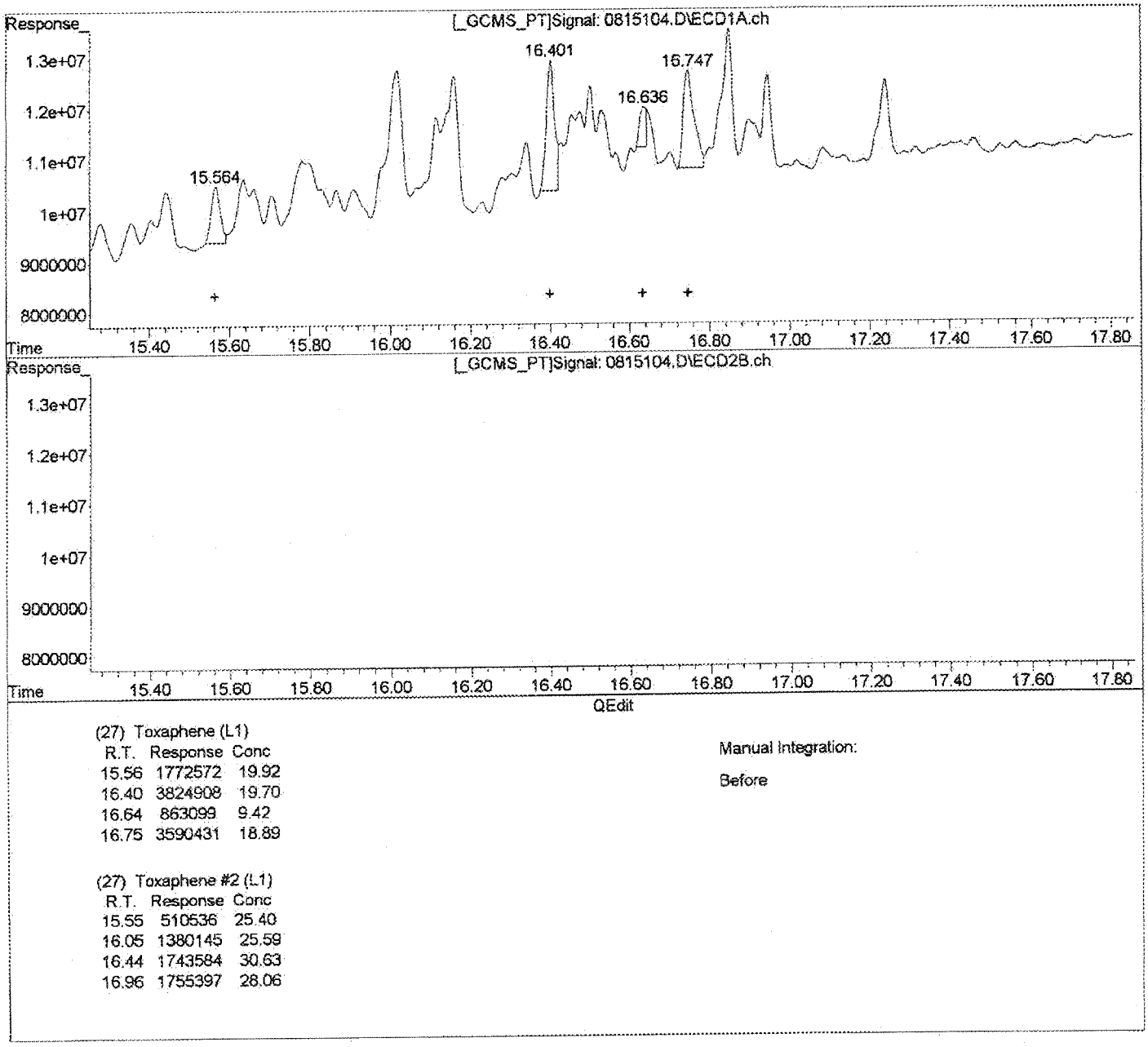


Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815104.D
Acq On : 15-Aug-2013, 20:06:11
Acq Meth : 508.M
Sample : TOX ICAL 50PPB DWSTD06-59B
Misc :
Quant Time : Aug 17 09:37:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 1
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(27) Toxaphene (L1)

R.T.	Response	Conc
15.56	1772572	19.92
16.40	3824908	19.70
16.64	863099	9.42
16.75	3590431	18.89

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	510536	25.40
16.05	1380145	25.59
16.44	1743584	30.63
16.96	1755397	28.06

Manual Integration:

Before

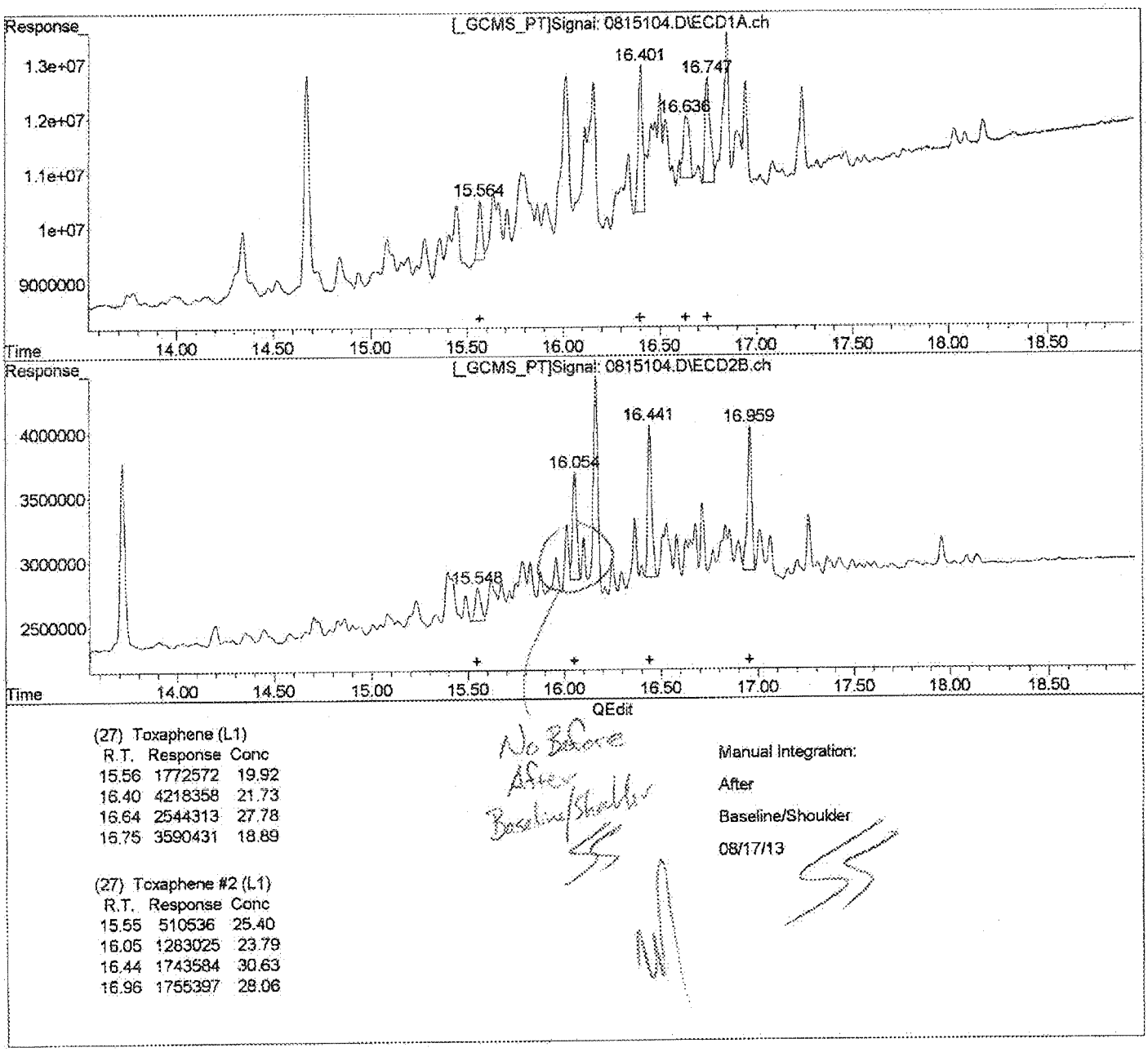
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815104.D
Acq On : 15-Aug-2013, 20:06:11
Acq Meth : 508.M
Sample : TOX ICAL 50PPB DWSTD06-59B
Misc :
Quant Time : Aug 17 09:37:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 1
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(27) Toxaphene (L1)

R.T.	Response	Conc
15.56	1772572	19.92
16.40	4218358	21.73
16.64	2544313	27.78
16.75	3590431	18.89

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	510536	25.40
16.05	1283025	23.79
16.44	1743584	30.63
16.96	1755397	28.06

No BCore After Baseline/Shoulder

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815105.D
Acq On : 15-Aug-2013, 20:41:57 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 100PPB DWSTD06-59C Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:51:13 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1319.7E6	319.0E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	3803372	988733	42.354	49.173
28) Toxaphene {2}	16.40	16.05	8229724	2763942	42.017	51.223
29) Toxaphene {3}	16.63	16.44	4723264	2885648	51.111	50.675m
30) Toxaphene {4}	16.74	16.96	7045166	3176658	36.743	50.771 #
31) Toxaphene - TOTAL	0.00	0.00	23801526	9814981	41.770T	50.703T

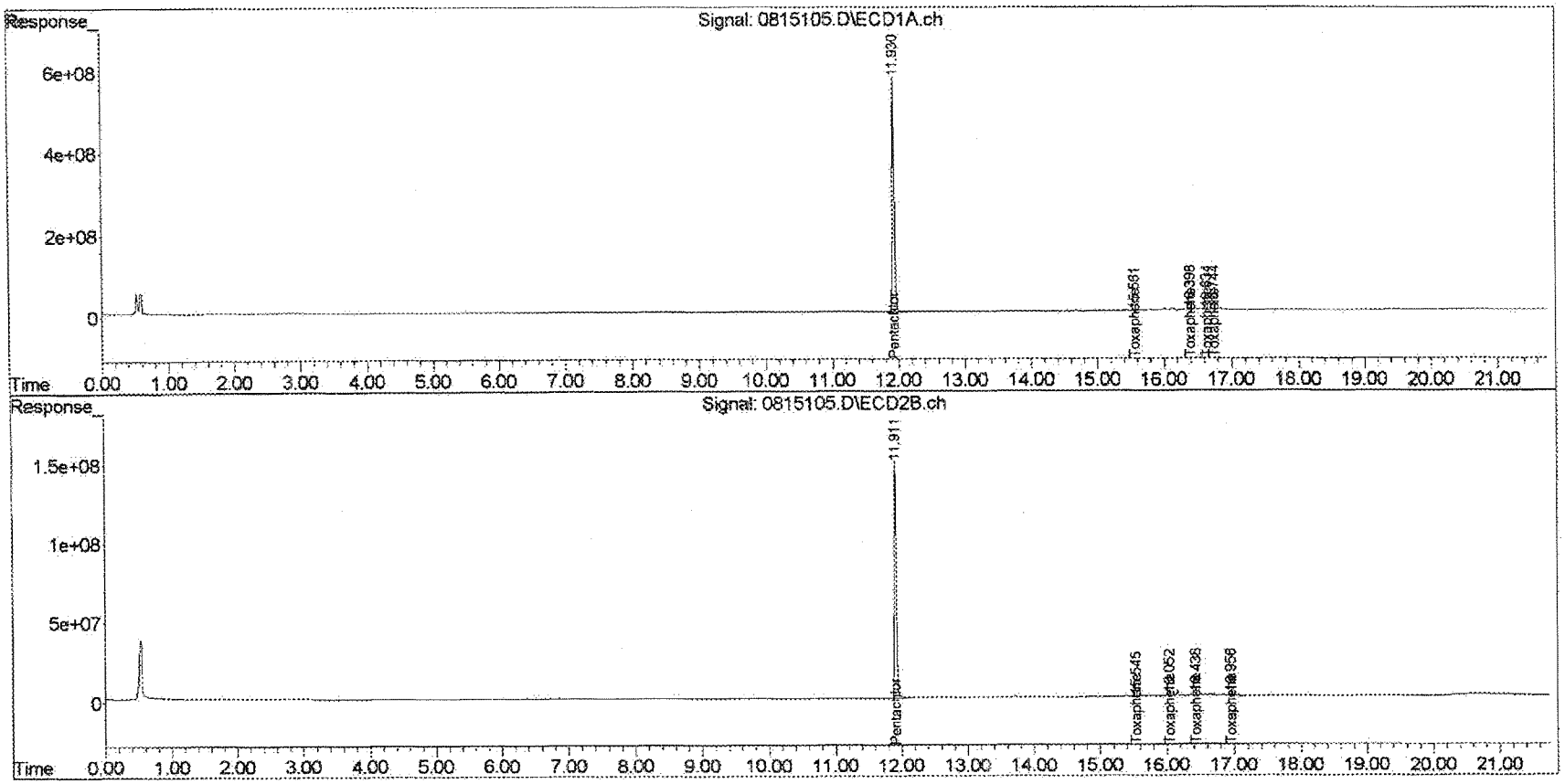
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815105.D
Acq On : 15-Aug-2013, 20:41:57 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 100PPB DWSTD06-59C Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:51:13 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



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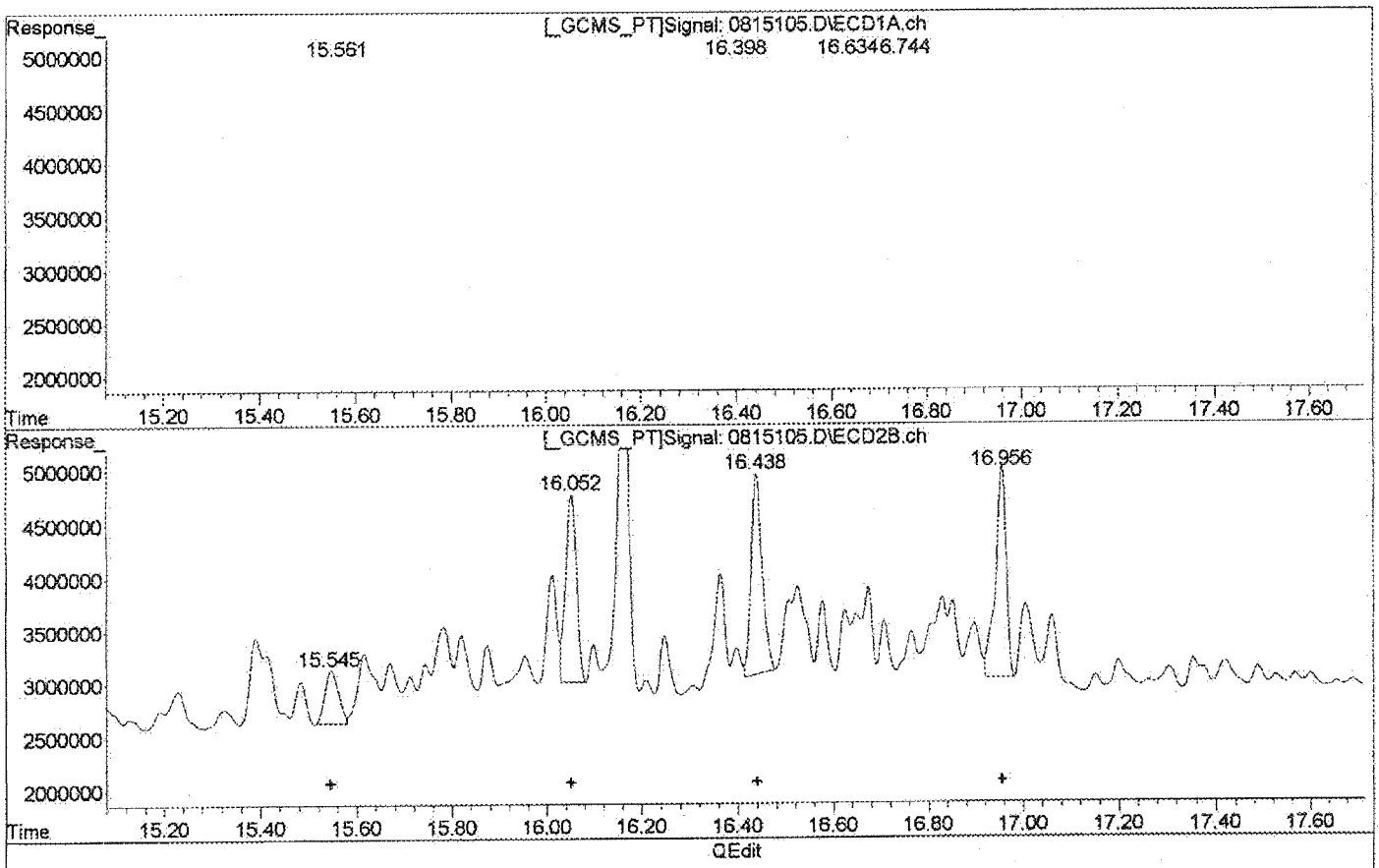
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815105.D
Acq On : 15-Aug-2013, 20:41:57 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 100PPB DWSTD06-59C Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 09:38:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(27) Toxaphene (L1)

R.T.	Response	Conc
15.56	3803372	42.35
16.40	8229724	42.02
16.63	4723264	51.11
16.74	7045166	36.74

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	988733	49.17
16.05	2763942	51.22
16.44	3000808	52.70
16.96	3176658	50.77

Manual Integration:

Before

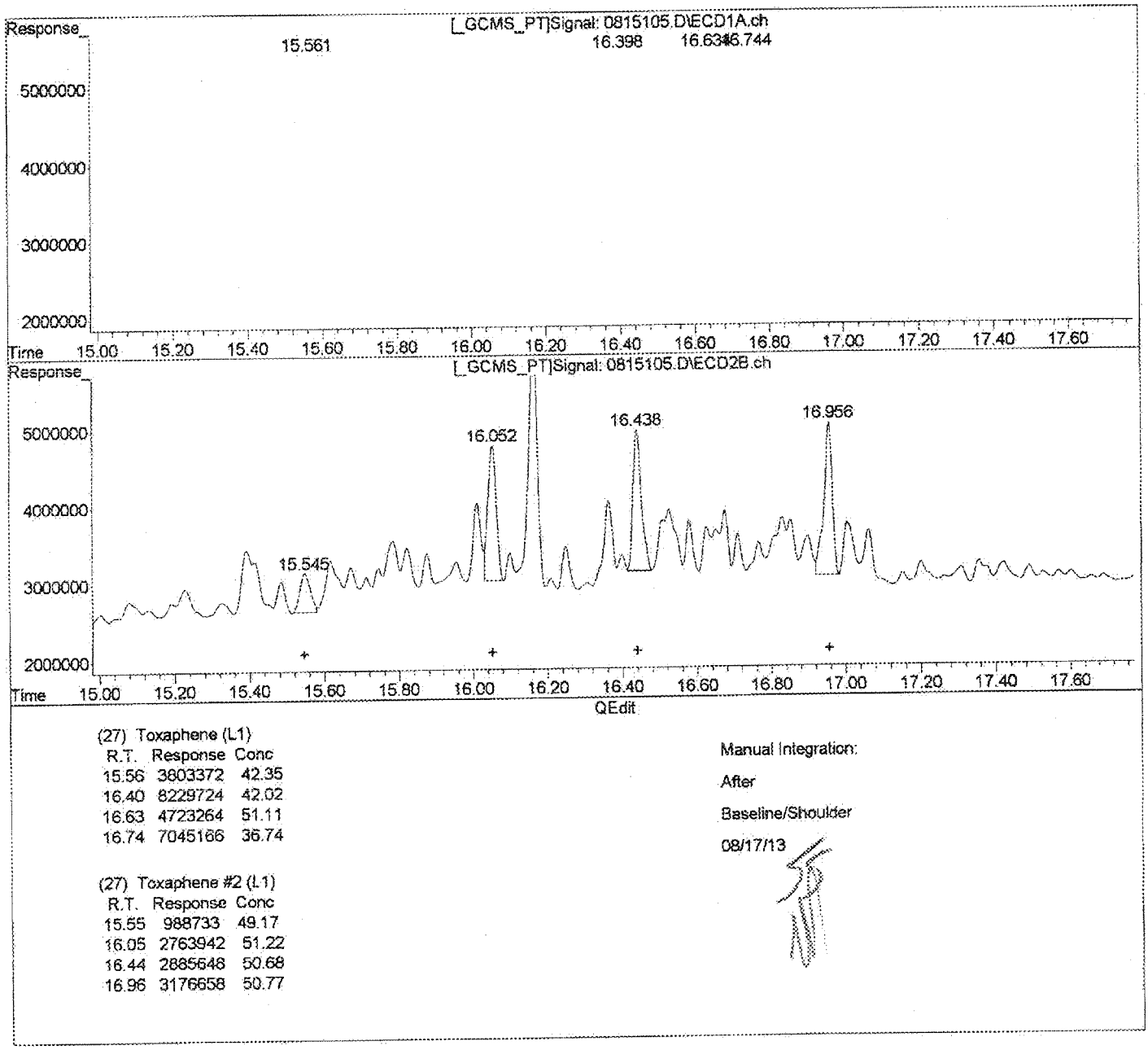
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815105.D
Acq On : 15-Aug-2013, 20:41:57
Acq Meth : 508.M
Sample : TOX ICAL 100PPB DWSTD06-59C
Misc :
Quant Time : Aug 17 09:38:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 2
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(27) Toxaphene (L1)

R.T.	Response	Conc
15.56	3803372	42.35
16.40	8229724	42.02
16.63	4723264	51.11
16.74	7045166	36.74

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	988733	49.17
16.05	2763942	51.22
16.44	2885648	50.68
16.96	3176658	50.77

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815106.D
Acq On : 15-Aug-2013, 21:21:52 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 200PPB DWSTD06-59D Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:51:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1312.1E6	319.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	7764755	2024476	86.969	100.473
28) Toxaphene {2}	16.40	16.05	16087915	5660745	82.612	104.689 #
29) Toxaphene {3}	16.63	16.44	9345388	5775306	101.712	101.208m
30) Toxaphene {4}	16.74	16.96	13741518	6323923	72.081	100.860 #
31) Toxaphene - TOTAL	0.00	0.00	46939576	19784450	82.852T	101.989T

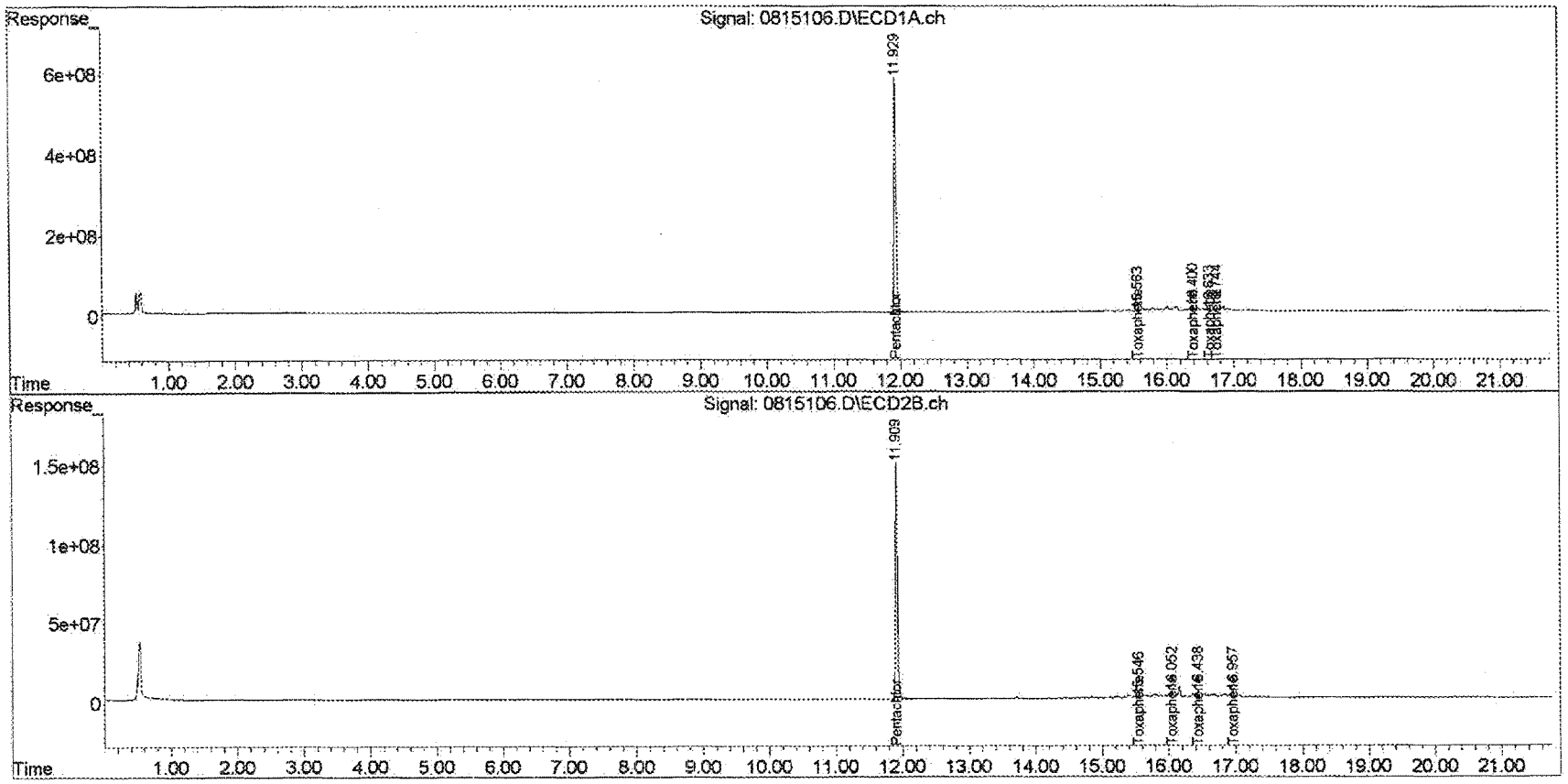
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815106.D
Acq On : 15-Aug-2013, 21:21:52 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 200PPB DWSTD06-59D Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:51:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



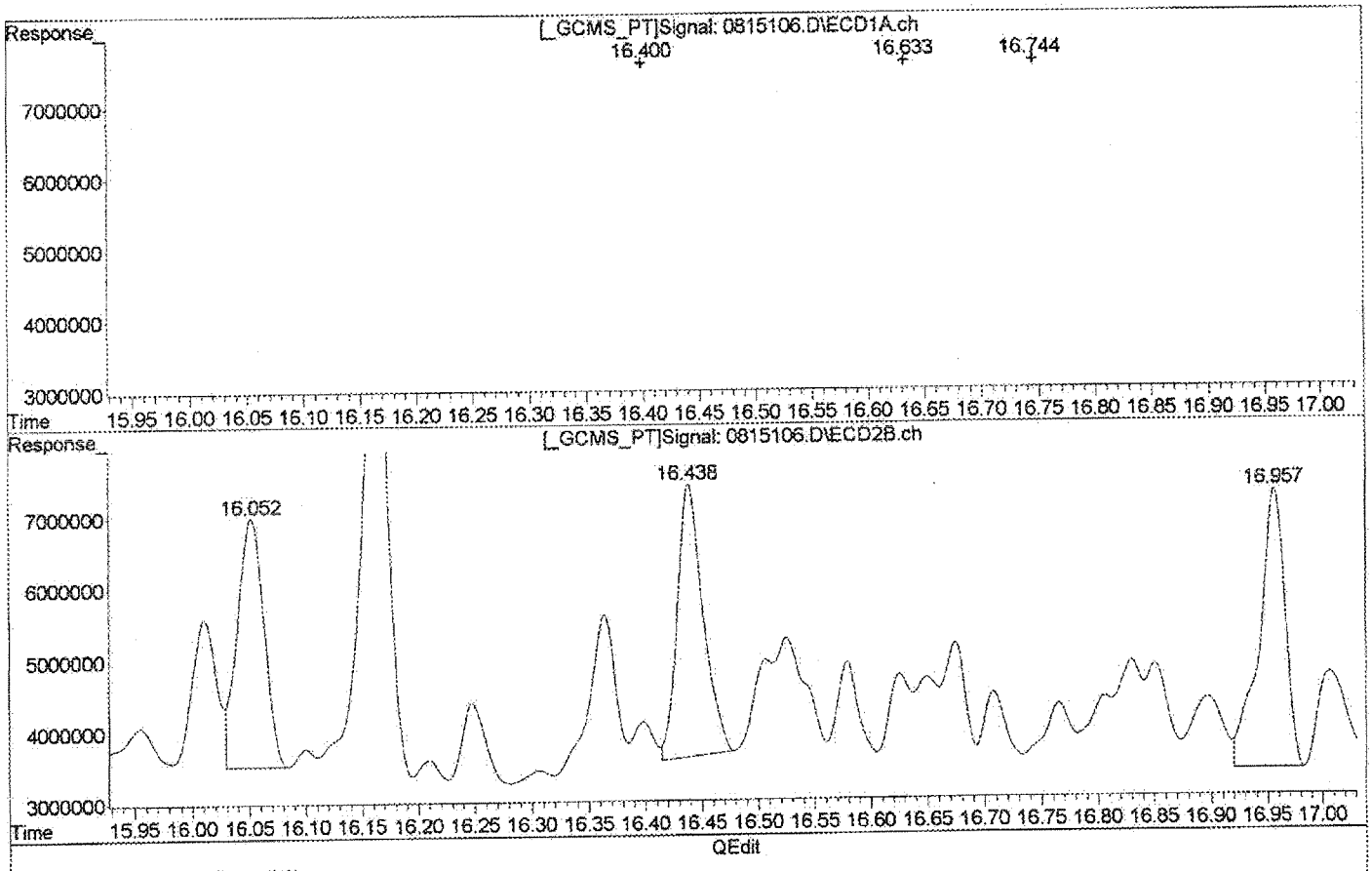
927

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815106.D
Acq On : 15-Aug-2013, 21:21:52
Acq Meth : 508.M
Sample : TOX ICAL 200PPB DWSTD06-59D
Misc :
Quant Time : Aug 17 09:39:16 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 3
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(27) Toxaphene (L1)

R.T.	Response	Conc
15.56	7764755	86.97
16.40	16087915	82.61
16.63	9345388	101.71
16.74	13741518	72.08

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	2024476	100.47
16.05	5660745	104.69
16.44	5983936	104.86
16.96	6323923	100.86

Manual Integration:

Before

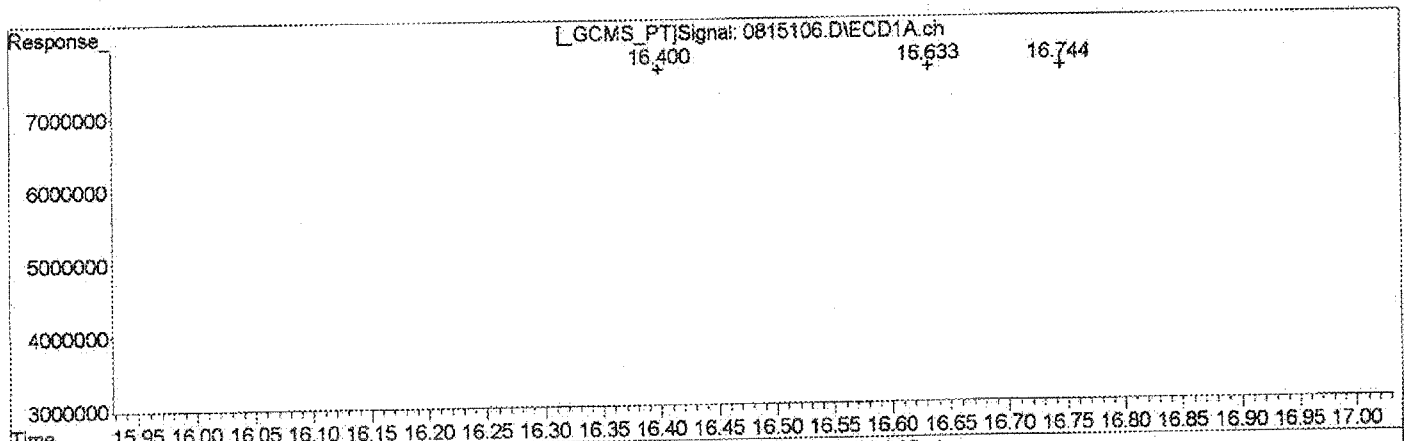
(+) = Expected Retention Time

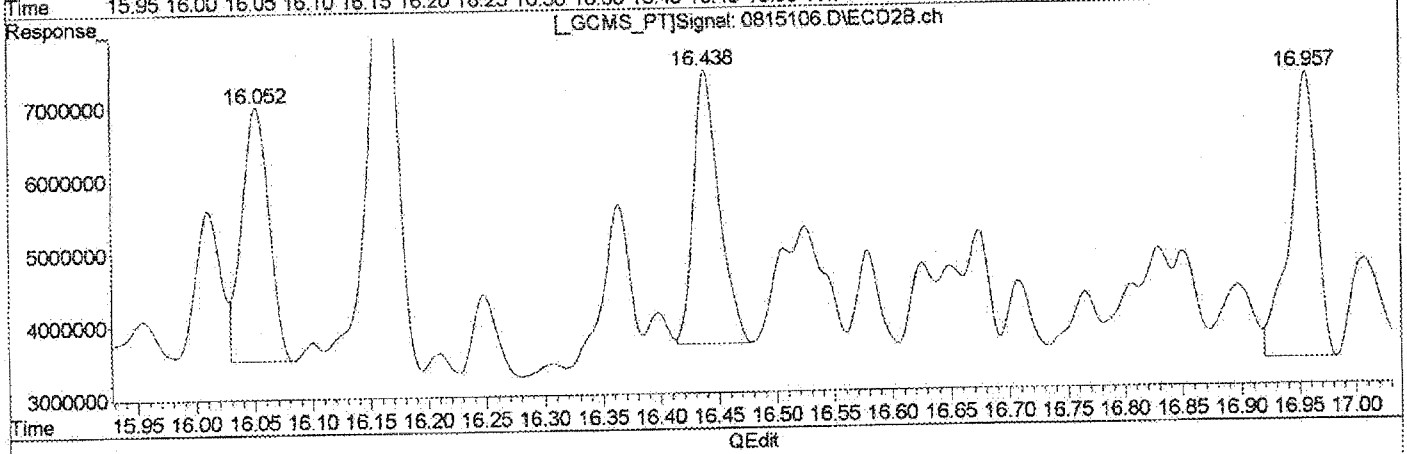
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815106.D
Acq On : 15-Aug-2013, 21:21:52
Acq Meth : 508.M
Sample : TOX ICAL 200PPB DWSTD06-59D
Misc :
Quant Time : Aug 17 09:39:16 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 3
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.56	7764755	86.97
16.40	16087915	82.61
16.63	9345388	101.71
16.74	13741518	72.08

(27) Toxaphene #2 (L1)

R.T.	Response	Conc
15.55	2024476	100.47
16.05	5660745	104.69
16.44	5775306	101.21
16.96	6323923	100.86

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:48:24 2013

Page: 1

Quantitation Report (QT Reviewed)

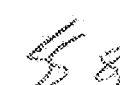
Data File : J:\GC33\Data\081513-ICAL2\0815107.D
Acq On : 15-Aug-2013, 22:02:53
Acq Meth : 508.M
Sample : TOX ICAL 500PPB DWSTD06-59E
Misc :
Quant Time : Aug 17 10:51:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 4
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1300.5E6	316.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	20150723	5319932	227.722	266.538
28) Toxaphene {2}	16.40	16.05	40524620	15209910	209.961	283.969 #
29) Toxaphene {3}	16.63	16.44	20969799	14586168	230.276	258.047
30) Toxaphene {4}	16.75	16.96	39524290	16087622	209.185	259.024
31) Toxaphene - TOTAL	0.00	0.00	121.2E6	51203632	215.793T	266.470T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

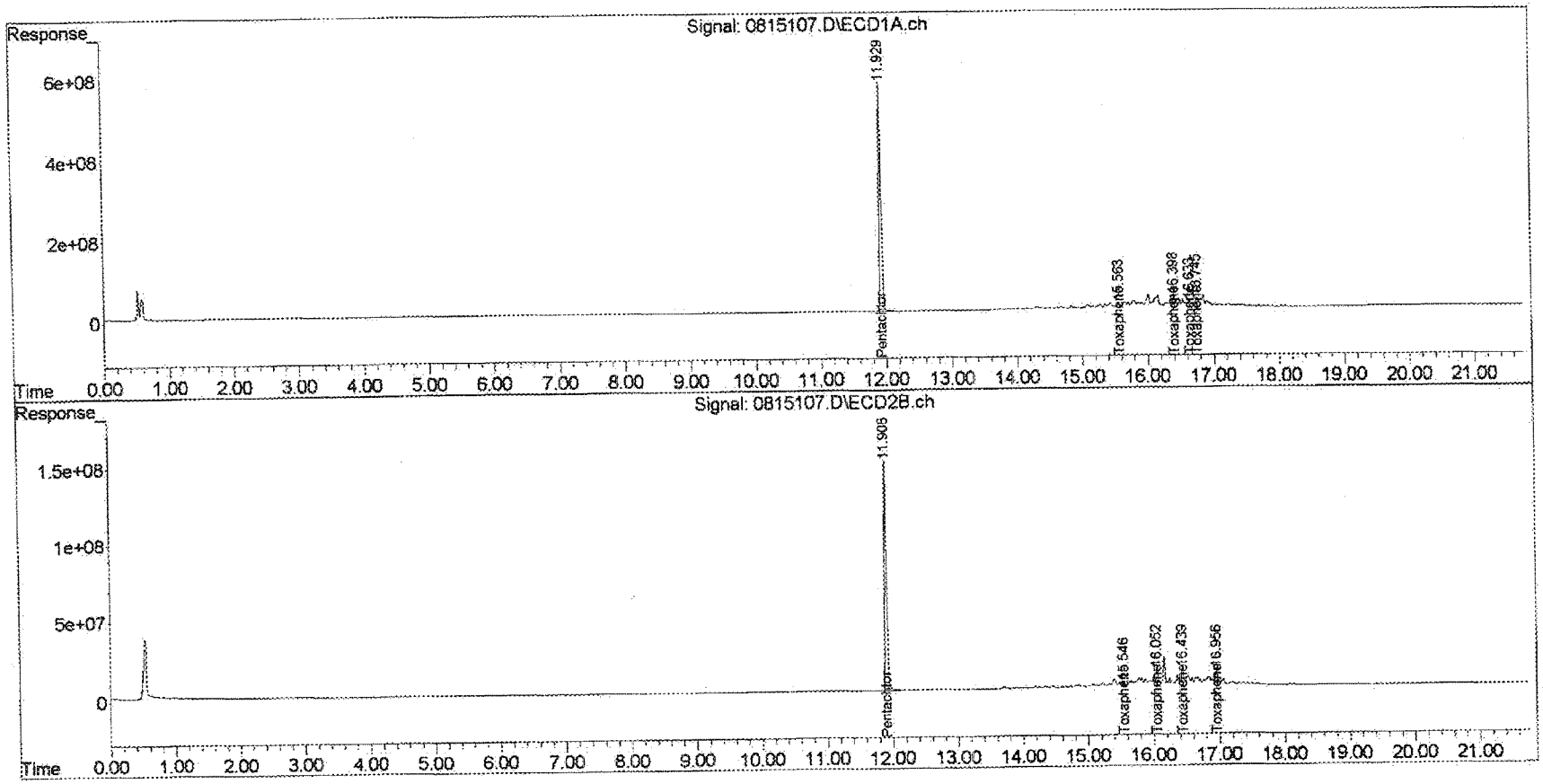


Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815107.D
Acq On : 15-Aug-2013, 22:02:53
Acq Meth : 508.M
Sample : TOX ICAL 500PPB DWSTD06-59E
Misc :
Quant Time : Aug 17 10:51:51 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 4
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



931

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815108.D
Acq On : 15-Aug-2013, 22:35:23 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 1000PPB DWSTD06-59F Vial : 5
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:52:01 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1313.4E6	316.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	40756028	10866226	456.035	544.329
28) Toxaphene {2}	16.40	16.05	81568040	31709883	418.438	591.927 #
29) Toxaphene {3}	16.63	16.44	43472190	29980272	472.670	530.301
30) Toxaphene {4}	16.74	16.95	76396132	32575810	400.340	524.412 #
31) Toxaphene - TOTAL	0.00	0.00	242.2E6	105.1E6	427.068T	547.032T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

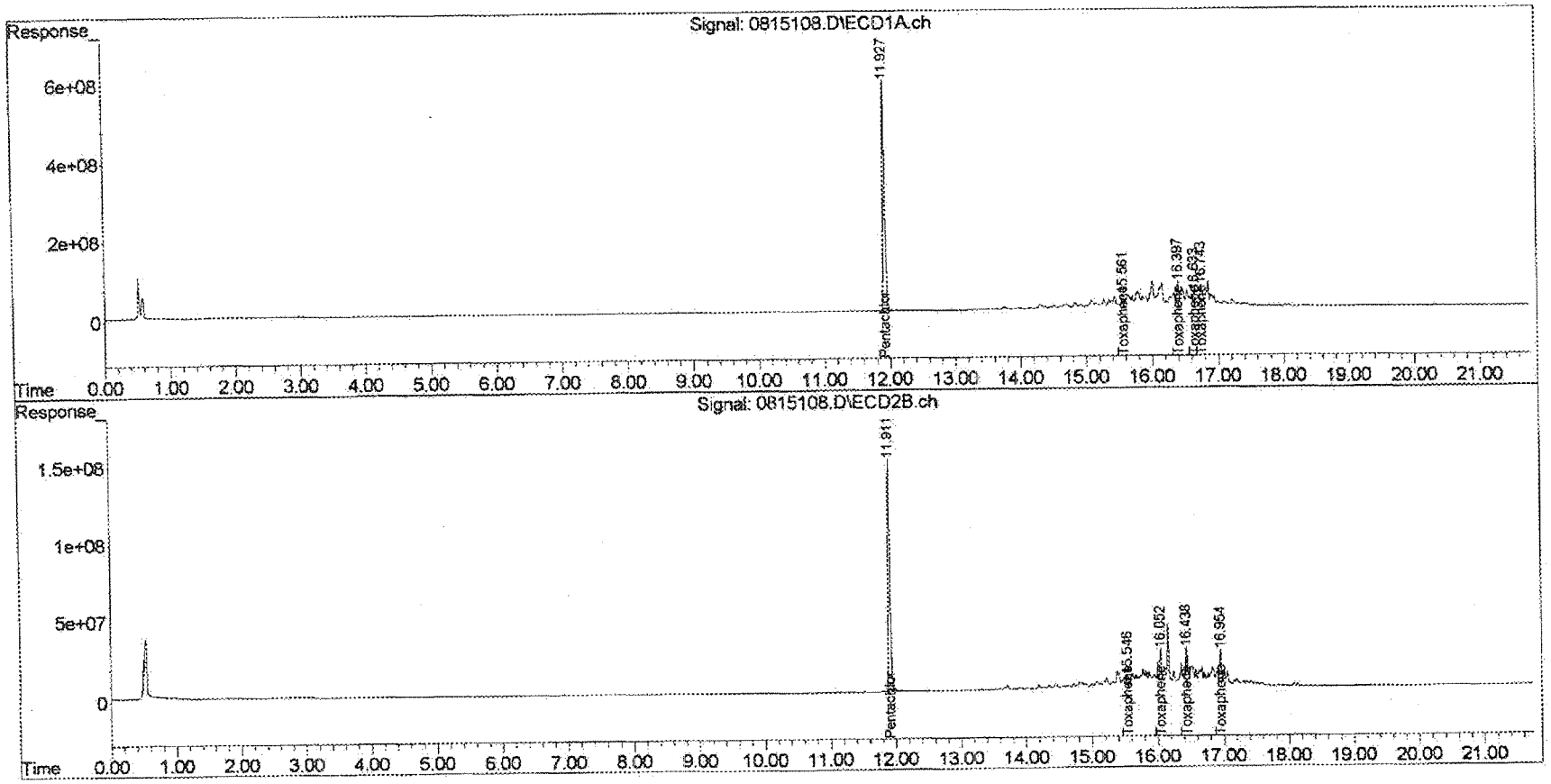
MN
55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815108.D
Acq On : 15-Aug-2013, 22:35:23
Acq Meth : 508.M
Sample : TOX ICAL 1000PPB DWSTD06-59F
Misc :
Quant Time : Aug 17 10:52:01 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 5
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



933

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815109.D
Acq On : 15-Aug-2013, 23:08:18 Operator : SSullivan
Acq Meth : 508.M
Sample : TOX ICAL 2000PPB DWSTD06-59G Vial : 6
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:52:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1304.1E6	317.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
27) Toxaphene	15.56	15.55	81289857	22610541	916.049	1129.124
28) Toxaphene {2}	16.40	16.05	179.5E6	65356357	927.523	1216.212 #
29) Toxaphene {3}	16.63	16.44	87936365	62447942	962.921	1101.165
30) Toxaphene {4}	16.74	16.96	159.6E6	66021485	842.129	1059.522 #
31) Toxaphene - TOTAL	0.00	0.00	508.3E6	216.4E6	902.721T	1122.678T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

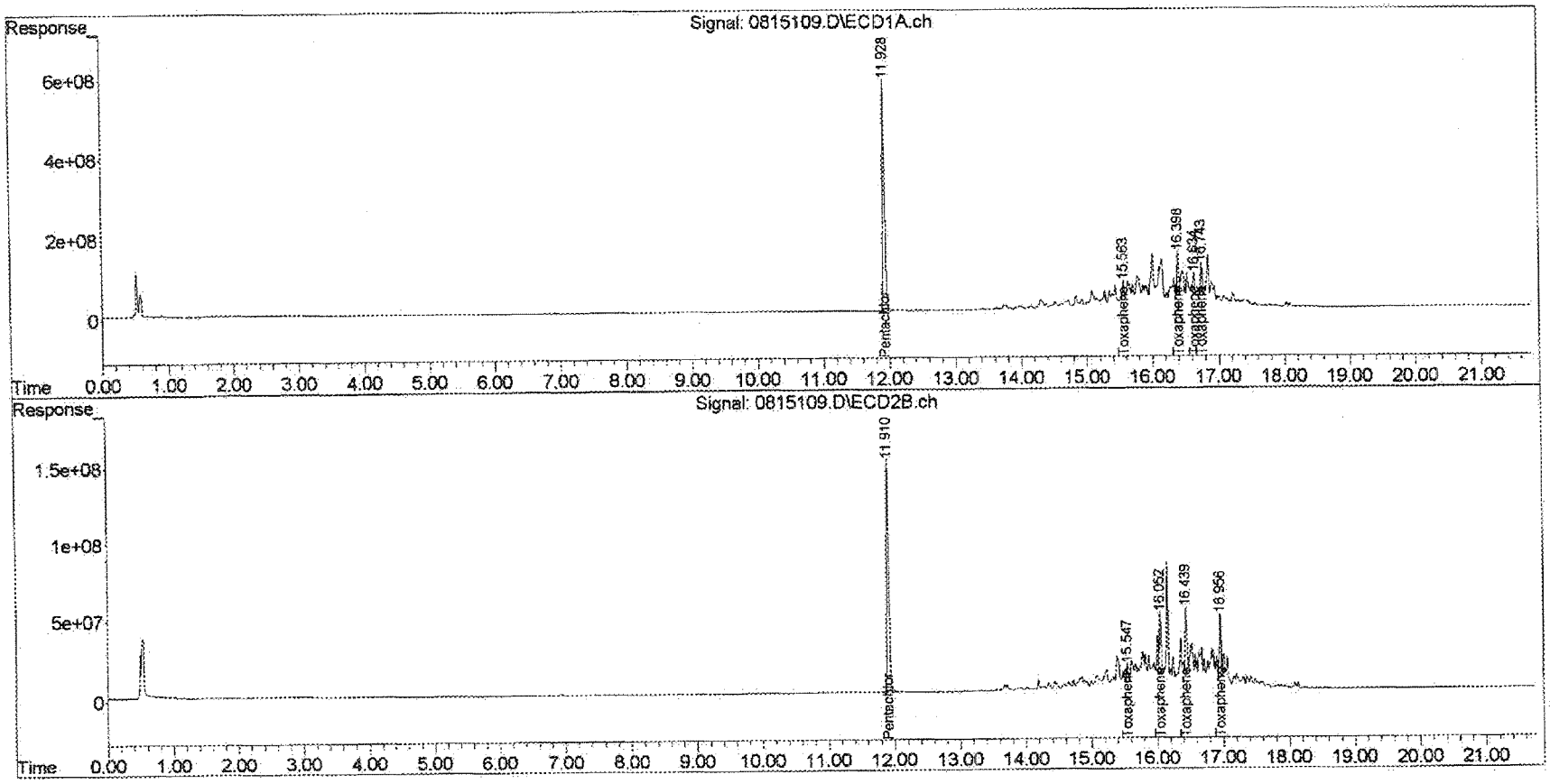
55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815109.D
Acq On : 15-Aug-2013, 23:08:18
Acq Meth : 508.M
Sample : TOX ICAL 2000PPB DWSTD06-59G
Misc :
Quant Time : Aug 17 10:52:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 6
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



935

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815110.D
Acq On : 15-Aug-2013, 23:35:50
Acq Meth : 508.M
Sample : TOX ICV 500PPB DWSTD06-59H
Misc :
Quant Time : Aug 17 11:57:38 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:53 2013

Operator : SSullivan
Vial : 7
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
26)	Pentachloronitrob...	11.92	11.91	1324.3E6	322.5E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
27)	Toxaphene	15.56	15.55	19028035	5203823	482.428	488.538
28)	Toxaphene {2}	16.40	16.05	40285017	16007541	478.514	536.896
29)	Toxaphene {3}	16.63	16.44	24742624	15078223	535.418	487.691
30)	Toxaphene {4}	16.74	16.95	35582123	16281061	473.067	490.963
31)	Toxaphene - TOTAL	0.00	0.00	119.6E6	52570648	488.203T	502.847T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

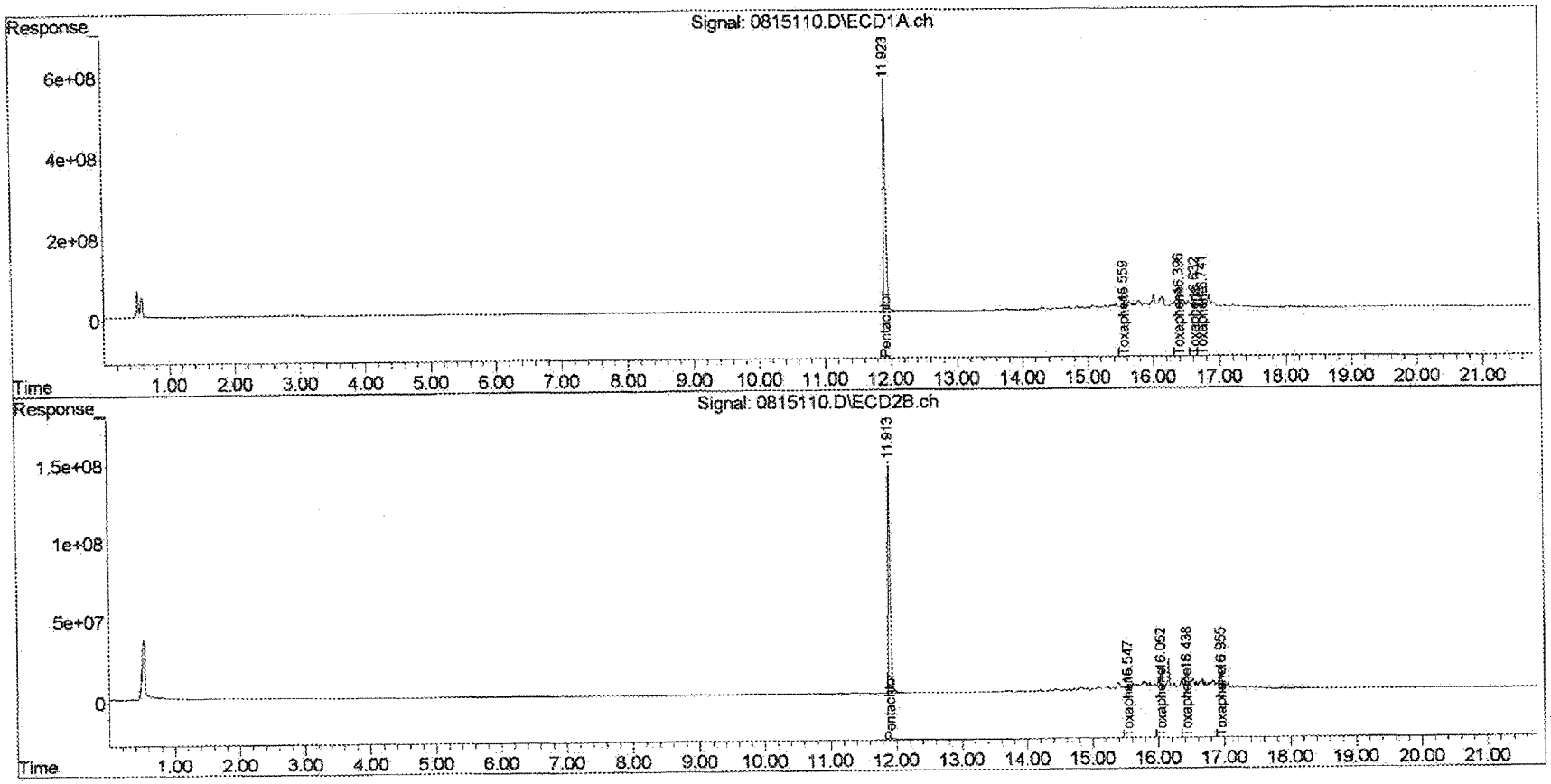
3/10/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815110.D
Acq On : 15-Aug-2013, 23:35:50
Acq Meth : 508.M
Sample : TOX ICV 500PPB DWSTD06-59H
Misc :
Quant Time : Aug 17 11:57:38 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:53 2013

Operator : SSullivan
Vial : 7
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



937

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815111.D
Acq On : 16-Aug-2013, 00:10:05 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 50PPB DWSTD06-59I Vial : 8
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:52:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1317.6E6	322.3E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	40916193	11227240	20.940	23.535
33) Chlordane {2}	14.86	14.96	62332421	8861871	21.529m	24.344
34) Chlordane {3}	15.94	16.12	7865577	2479804	21.395	24.134
35) Chlordane - TOTAL	0.00	0.00	111.1E6	22568915	21.299T	23.912T

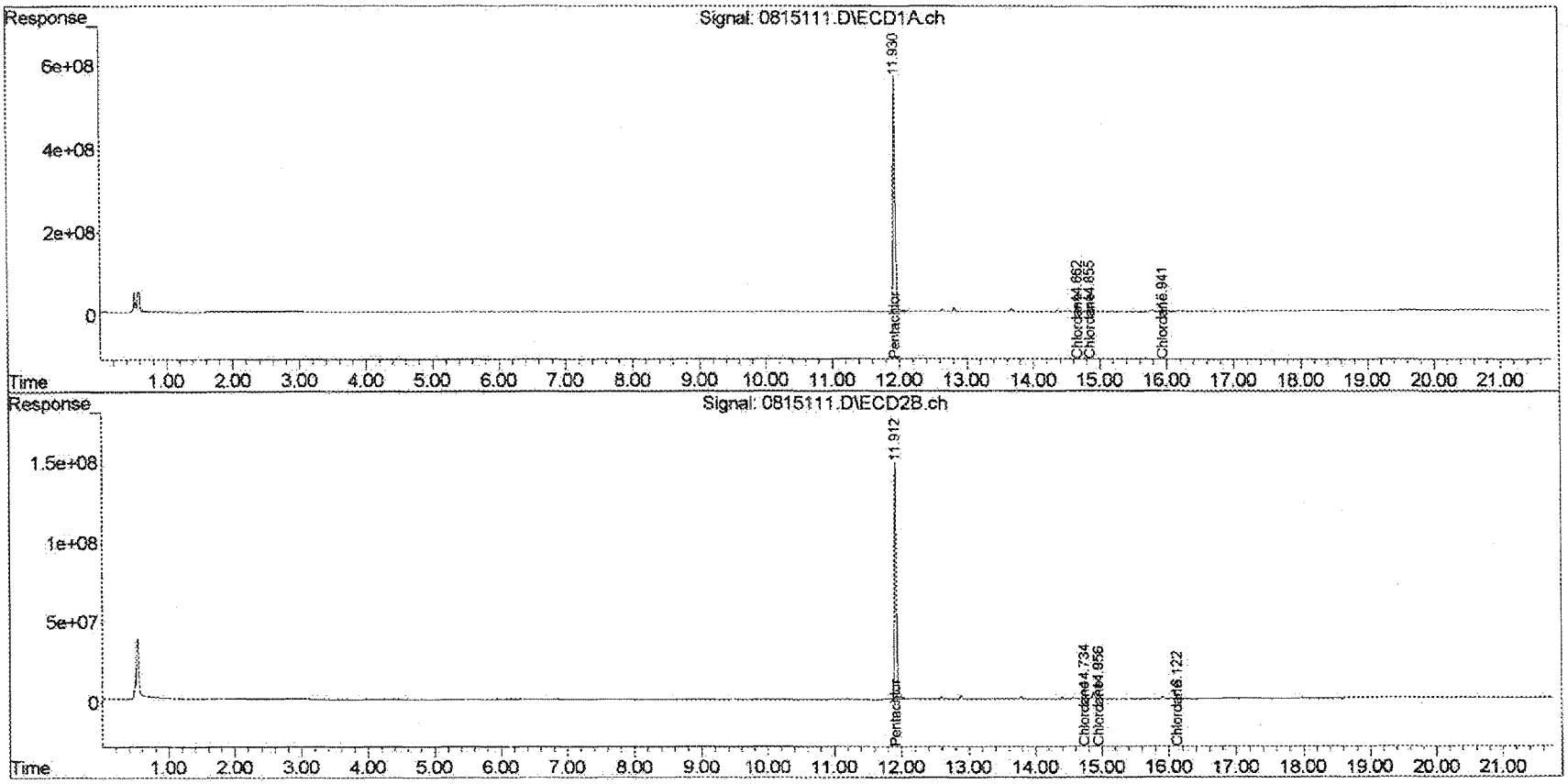
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815111.D
Acq On : 16-Aug-2013, 00:10:05 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 50PPB DWSTD06-59I Vial : 8
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:52:55 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

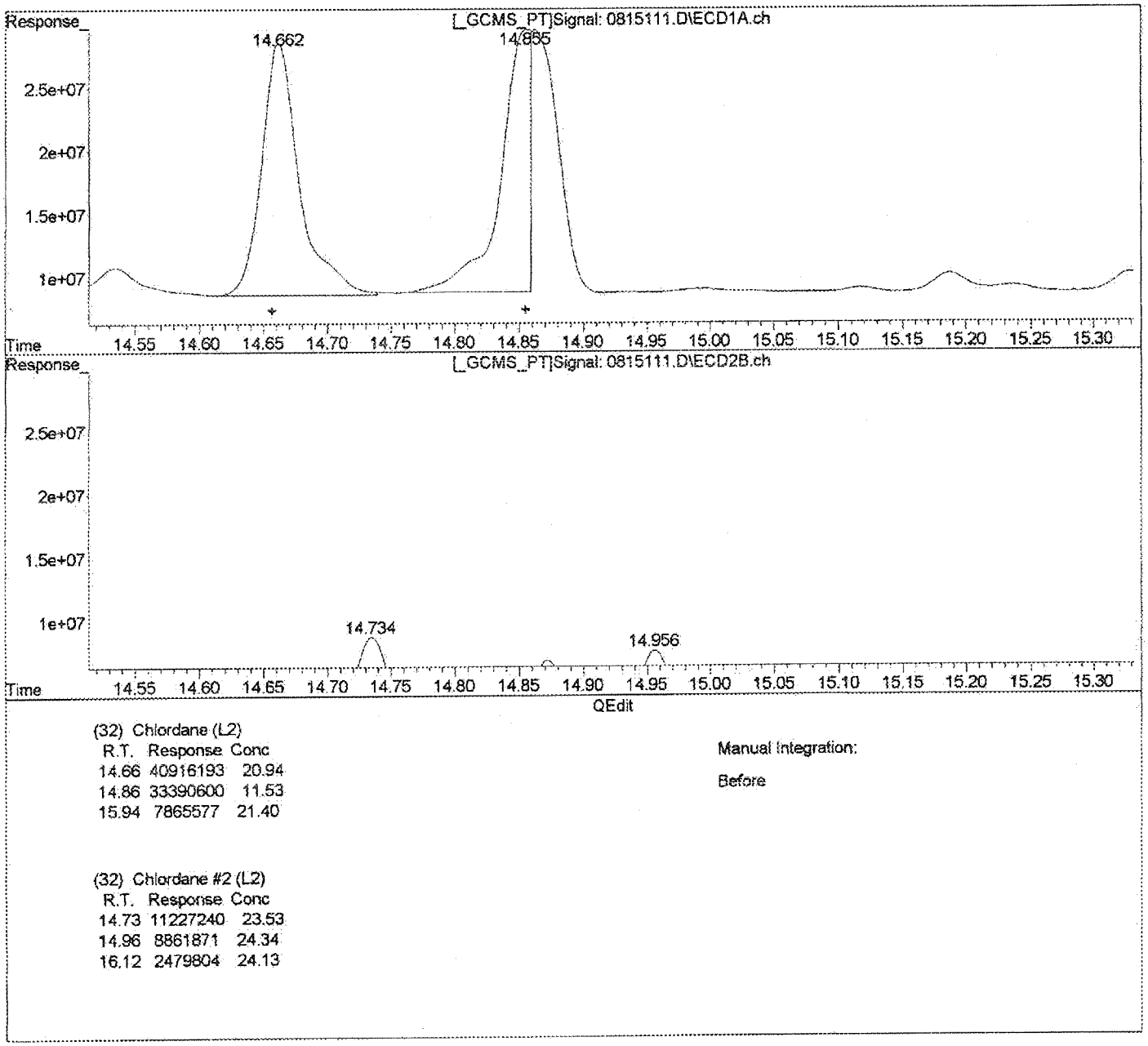


939

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815111.D
Acq On : 16-Aug-2013, 00:10:05 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 50PPB DWSTD06-59I Vial : 8
Misc : Multiplier : 1.00
Quant Time : Aug 17 09:50:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(32) Chlordane (L2)

R.T.	Response	Conc
14.66	40916193	20.94
14.86	33390600	11.53
15.94	7865577	21.40

Manual Integration:

Before

(32) Chlordane #2 (L2)

R.T.	Response	Conc
14.73	11227240	23.53
14.96	8861871	24.34
16.12	2479804	24.13

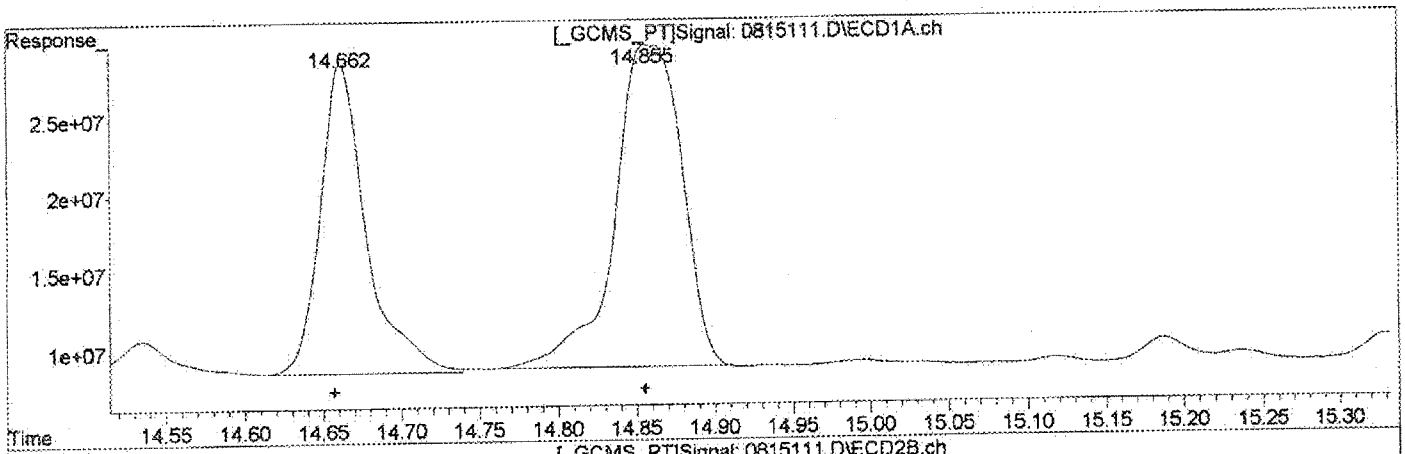
(+) = Expected Retention Time

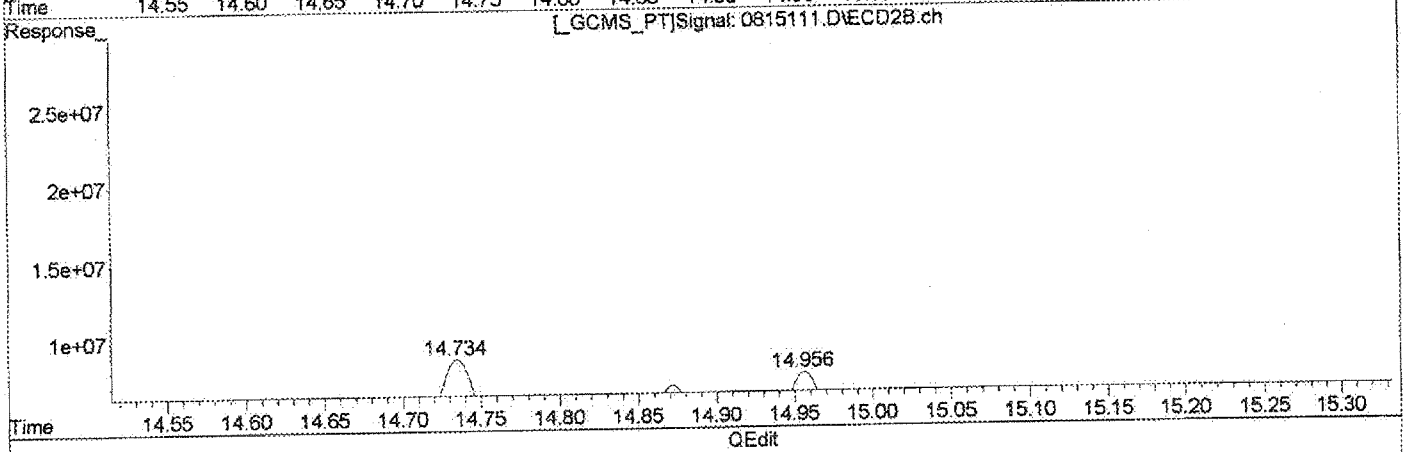
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815111.D
Acq On : 16-Aug-2013, 00:10:05
Acq Meth : 508.M
Sample : CHLOR ICAL 50PPB DWSTD06-59I
Misc :
Quant Time : Aug 17 09:50:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 8
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





(32) Chlordane #2 (L2)

R.T.	Response	Conc
14.66	40916193	20.94
14.86	62332421	21.53
15.94	7865577	21.40

(32) Chlordane #2 (L2)

R.T.	Response	Conc
14.73	11227240	23.53
14.96	8861871	24.34
16.12	2479804	24.13

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:49:39 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815112.D
Acq On : 16-Aug-2013, 00:43:10 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 100PPB DWSTD06-59J Vial : 9
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:53:22 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1321.2E6	319.0E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	82561029	22976396	42.138	48.667
33) Chlordane {2}	14.86	14.96	127.5E6	18153581	43.910m	50.390
34) Chlordane {3}	15.94	16.12	15796016	5020448	42.850	49.372
35) Chlordane - TOTAL	0.00	0.00	225.8E6	46150425	43.172T	49.408T

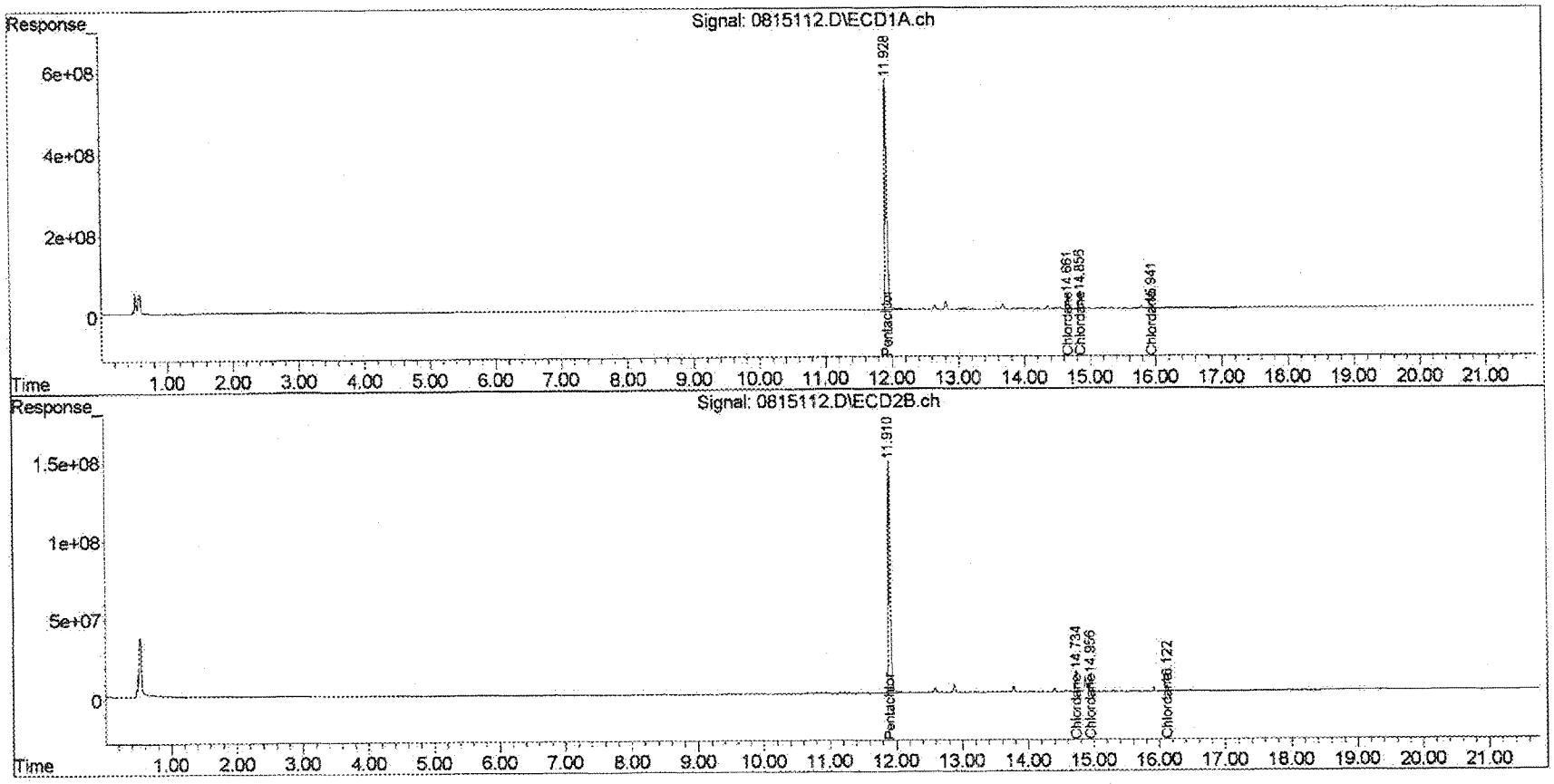
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815112.D
Acq On : 16-Aug-2013, 00:43:10 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 100PPB DWSTD06-59J Vial : 9
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:53:22 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



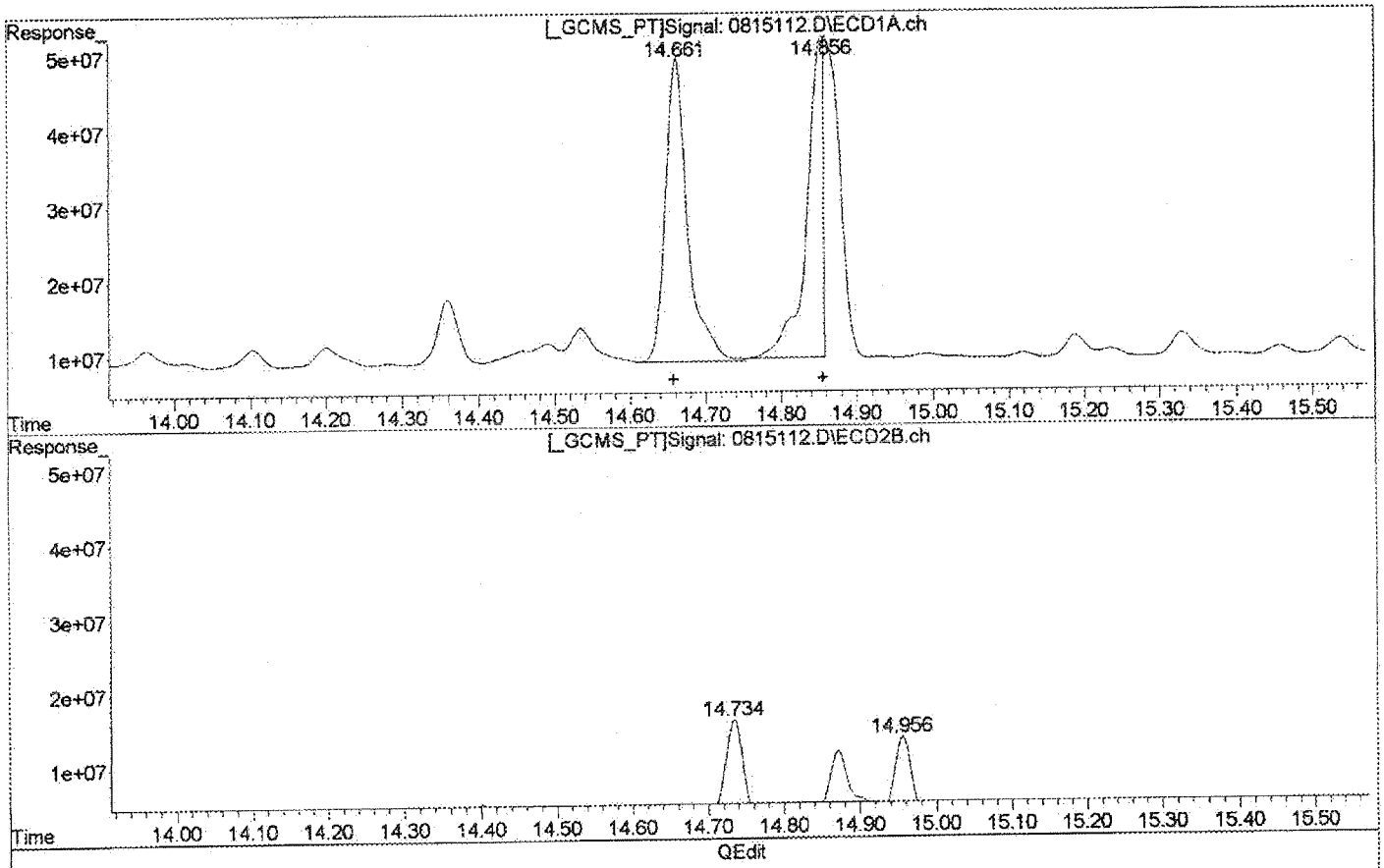
943

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815112.D
Acq On : 16-Aug-2013, 00:43:10
Acq Meth : 508.M
Sample : CHLOR ICAL 100PPB DWSTD06-59J
Misc :
Quant Time : Aug 17 09:51:08 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 9
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(32) Chlordane (L2)

R.T.	Response	Conc
14.66	82561029	42.14
14.86	65511656	22.57
15.94	15796016	42.85

(32) Chlordane #2 (L2)

R.T.	Response	Conc
14.73	22976396	48.67
14.96	18153581	50.39
16.12	5020448	49.37

Manual Integration:

Before

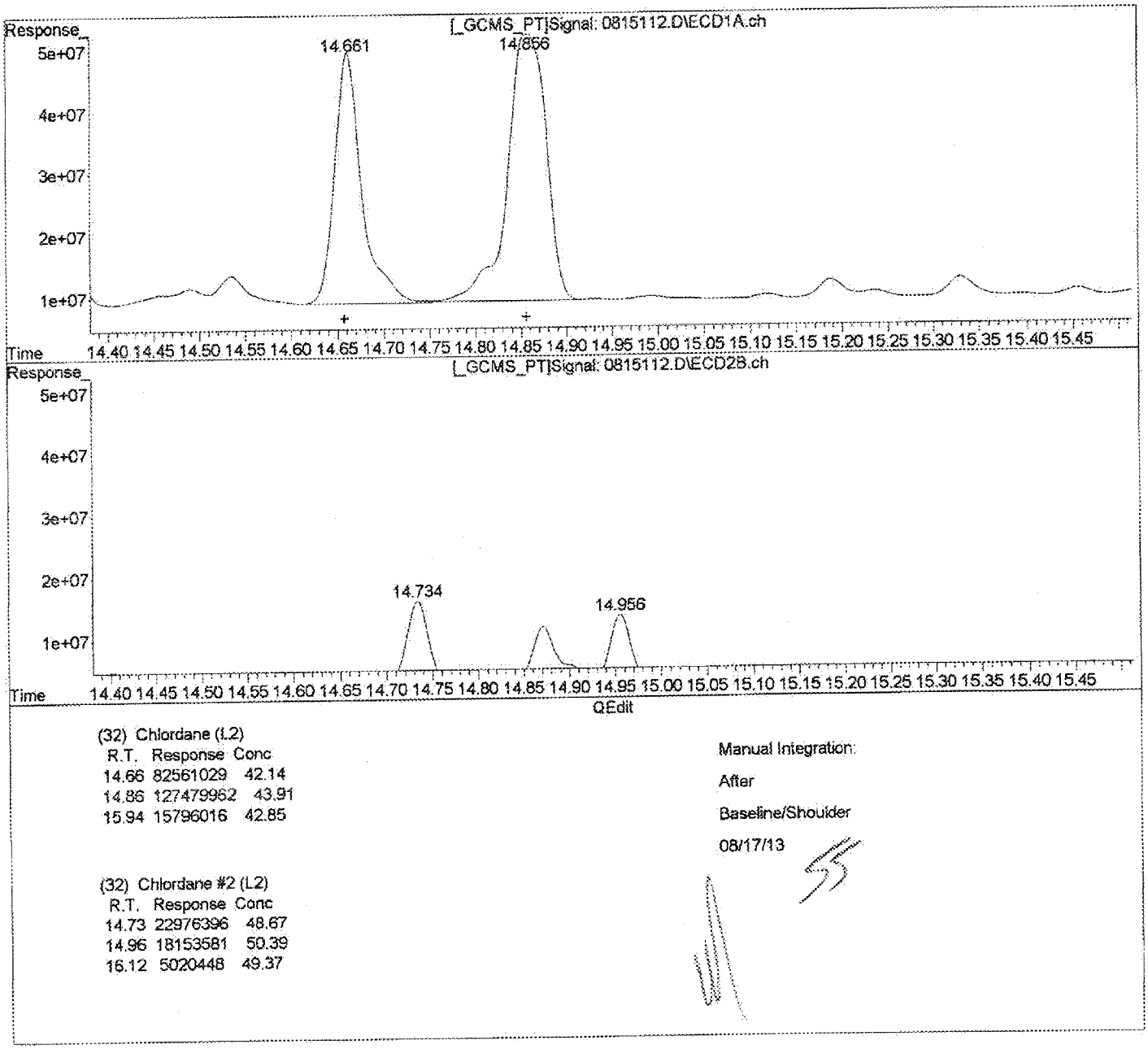
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815112.D
Acq On : 16-Aug-2013, 00:43:10
Acq Meth : 508.M
Sample : CHLOR ICAL 100PPB DWSTD06-59J
Misc :
Quant Time : Aug 17 09:51:08 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 9
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(32) Chlordane (L2)

R.T.	Response	Conc
14.66	82561029	42.14
14.86	127479962	43.91
15.94	15796016	42.85

(32) Chlordane #2 (L2)

R.T.	Response	Conc
14.73	22976396	48.67
14.96	18153581	50.39
16.12	5020448	49.37

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:50:06 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815113.D
Acq On : 16-Aug-2013, 01:10:24
Acq Meth : 508.M
Sample : CHLOR ICAL 200PPB DWSTD06-59K
Misc :
Quant Time : Aug 17 10:53:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 10
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1310.7E6	316.6E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	167.6E6	47882359	86.220	102.179
33) Chlordane {2}	14.85	14.96	260.0E6	37554626	90.261	105.021
34) Chlordane {3}	15.94	16.12	31899230	10233749	87.226	101.391
35) Chlordane - TOTAL	0.00	0.00	459.5E6	95670734	88.534T	103.189T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

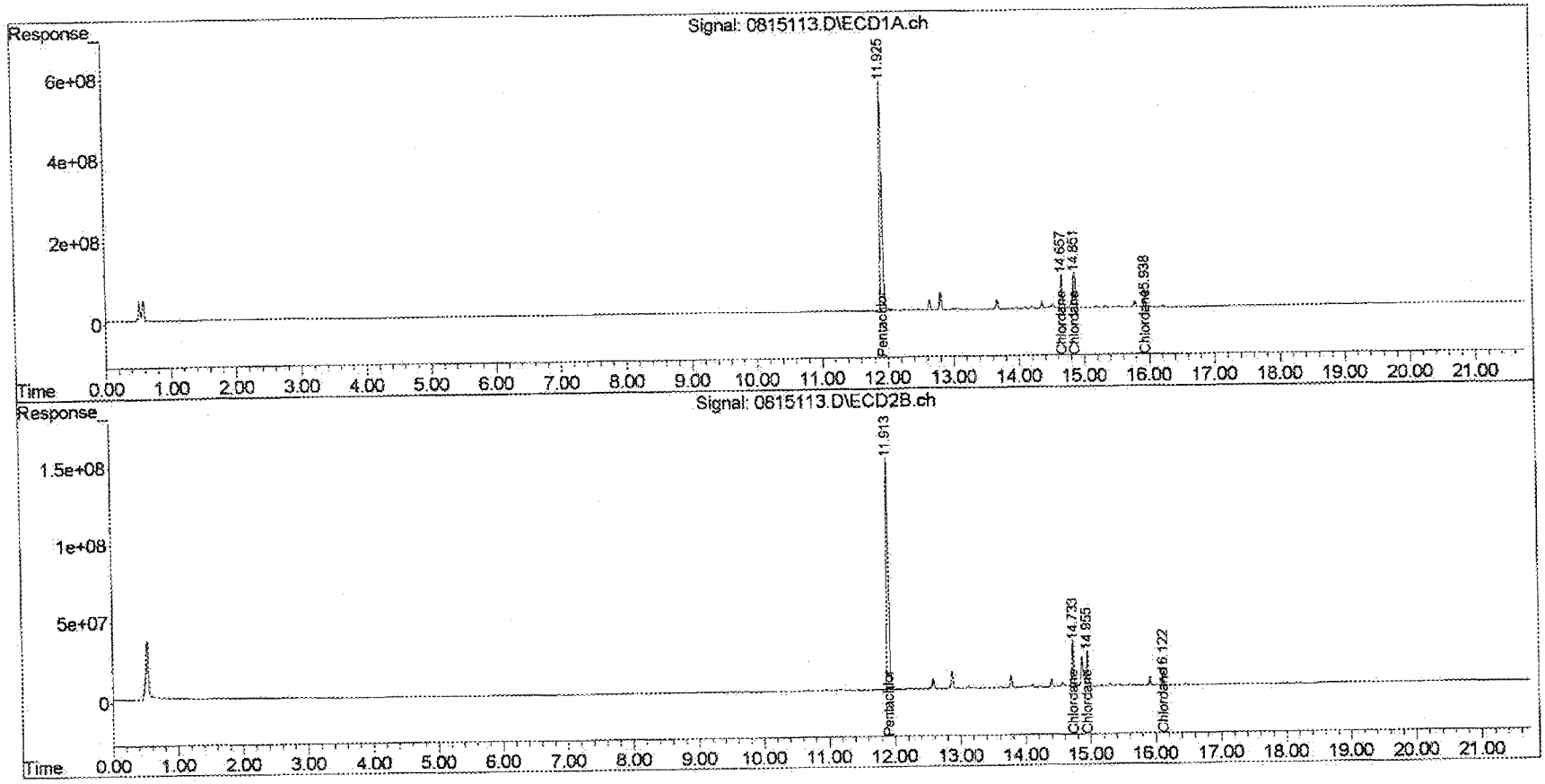
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815113.D
Acq On : 16-Aug-2013, 01:10:24
Acq Meth : 508.M
Sample : CHLOR ICAL 200PPB DWSTD06-59K
Misc :
Quant Time : Aug 17 10:53:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 10
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



947

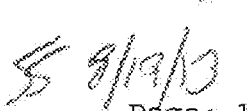
Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815114.D
Acq On : 16-Aug-2013, 01:37:35 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 500PPB DWSTD06-59L Vial : 11
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:53:36 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.92	11.91	1331.9E6	323.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	437.8E6	126.6E6	221.646	264.687
33) Chlordane {2}	14.86	14.96	677.5E6	98697847	231.491	270.472
34) Chlordane {3}	15.94	16.12	82205620	27042753	221.212	262.554
35) Chlordane - TOTAL	0.00	0.00	1197.5E6	252.3E6	227.080T	266.686T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

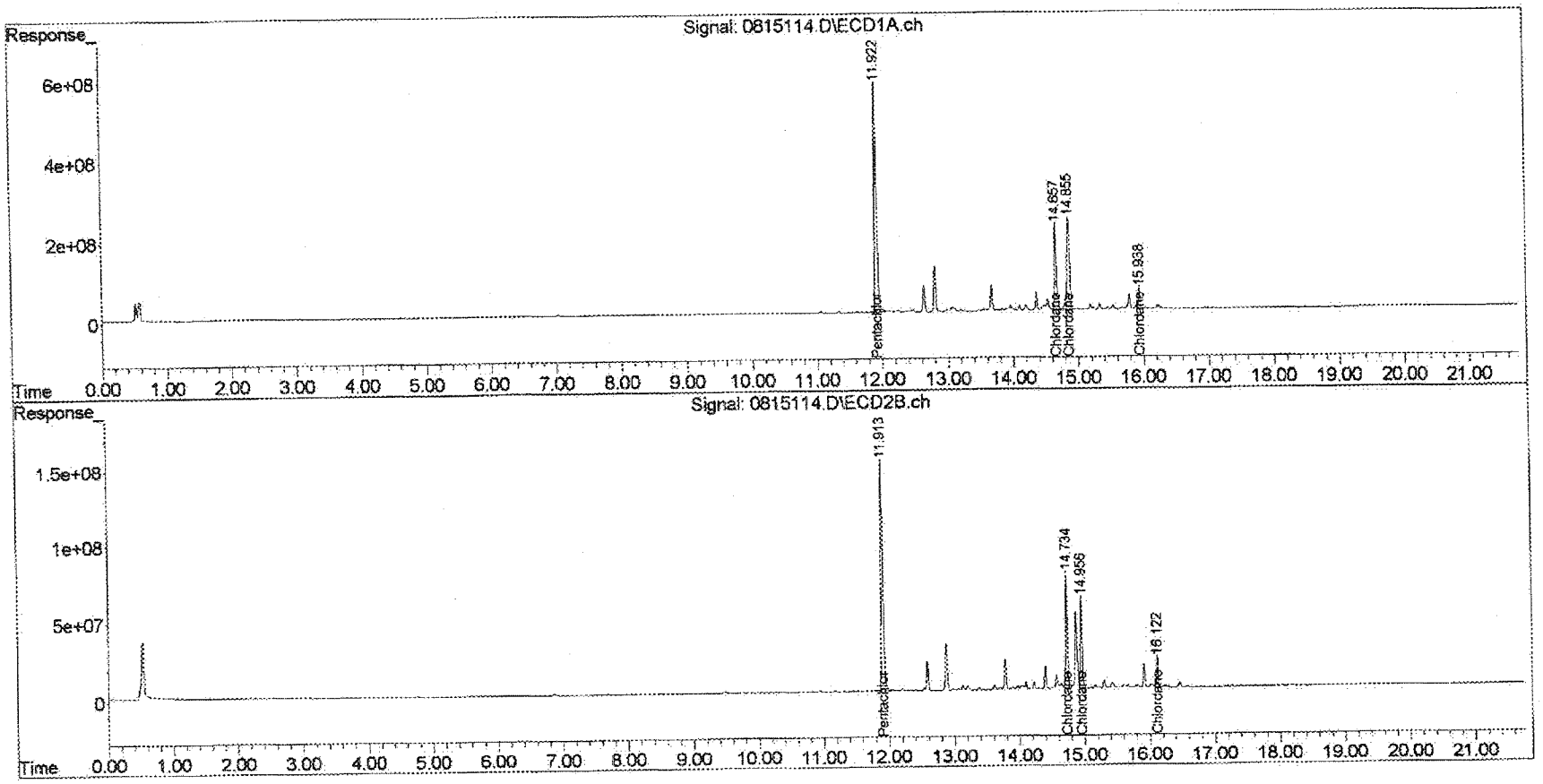


Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815114.D
Acq On : 16-Aug-2013, 01:37:35
Acq Meth : 508.M
Sample : CHLOR ICAL 500PPB DWSTD06-59L
Misc :
Quant Time : Aug 17 10:53:36 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 11
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



949

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815115.D
Acq On : 16-Aug-2013, 02:17:10 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 1000PPB DWSTD06-59M Vial : 12
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:53:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1258.3E6	313.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	880.1E6	256.7E6	471.646	553.922
33) Chlordane (2)	14.86	14.95	1360.1E6	199.9E6	491.898	565.331
34) Chlordane (3)	15.94	16.12	168.2E6	55518358	479.095	556.203
35) Chlordane - TOTAL	0.00	0.00	2408.4E6	512.1E6	483.410T	558.570T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

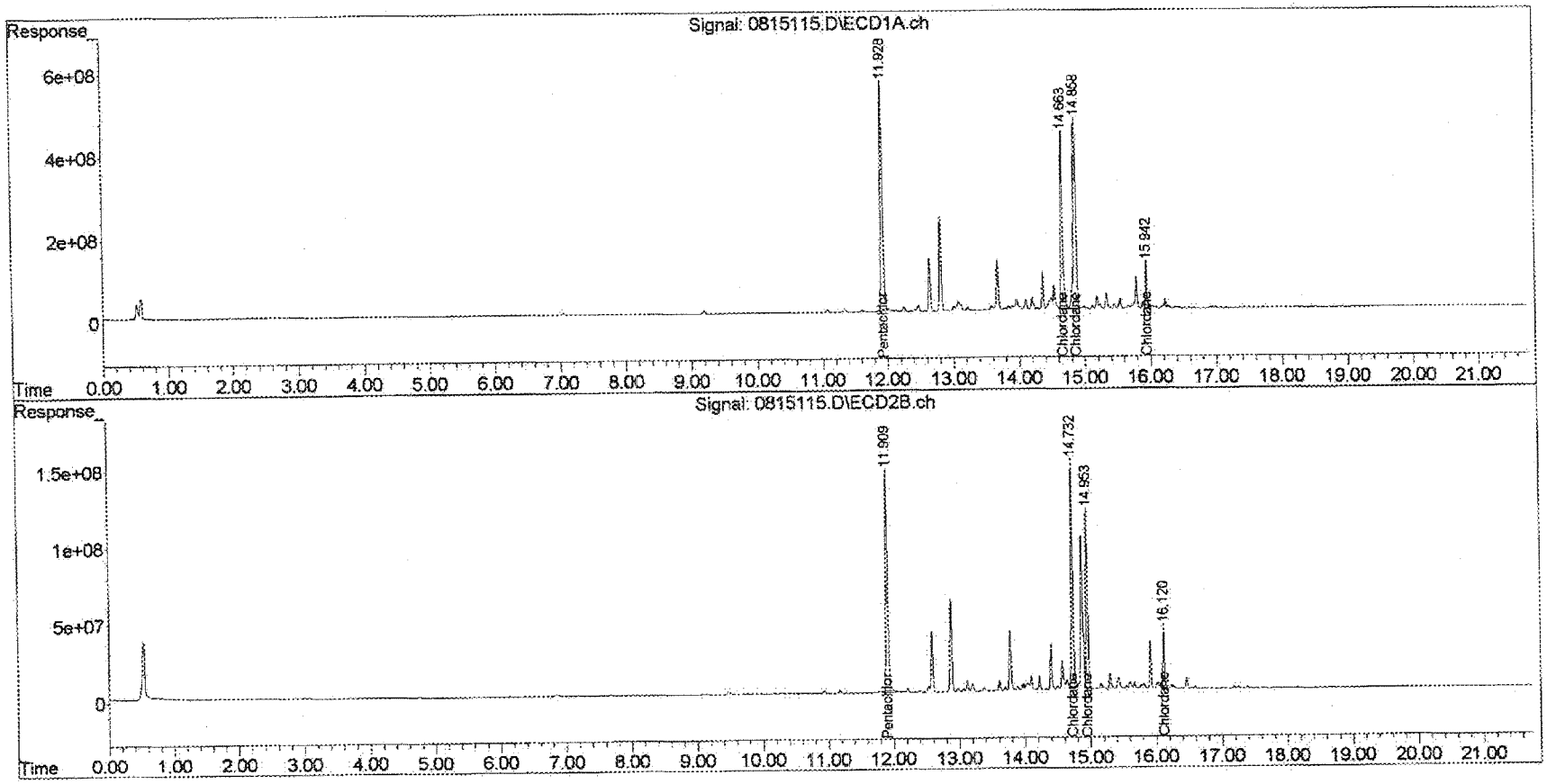
55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815115.D
Acq On : 16-Aug-2013, 02:17:10
Acq Meth : 508.M
Sample : CHLOR ICAL 1000PPB DWSTD06-59M
Misc :
Quant Time : Aug 17 10:53:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 12
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



951

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815116.D
Acq On : 16-Aug-2013, 02:43:08 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICAL 2000PPB DWSTD06-59N Vial : 13
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:53:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.92	11.91	1277.4E6	316.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	1777.5E6	519.9E6	938.327	1111.310
33) Chlordane {2}	14.85	14.96	2147.5E6	404.3E6	765.086	1132.668 #
34) Chlordane {3}	15.94	16.12	350.8E6	115.7E6	984.337	1148.169
35) Chlordane - TOTAL	0.00	0.00	4275.8E6	1039.9E6	845.423T	1123.561T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

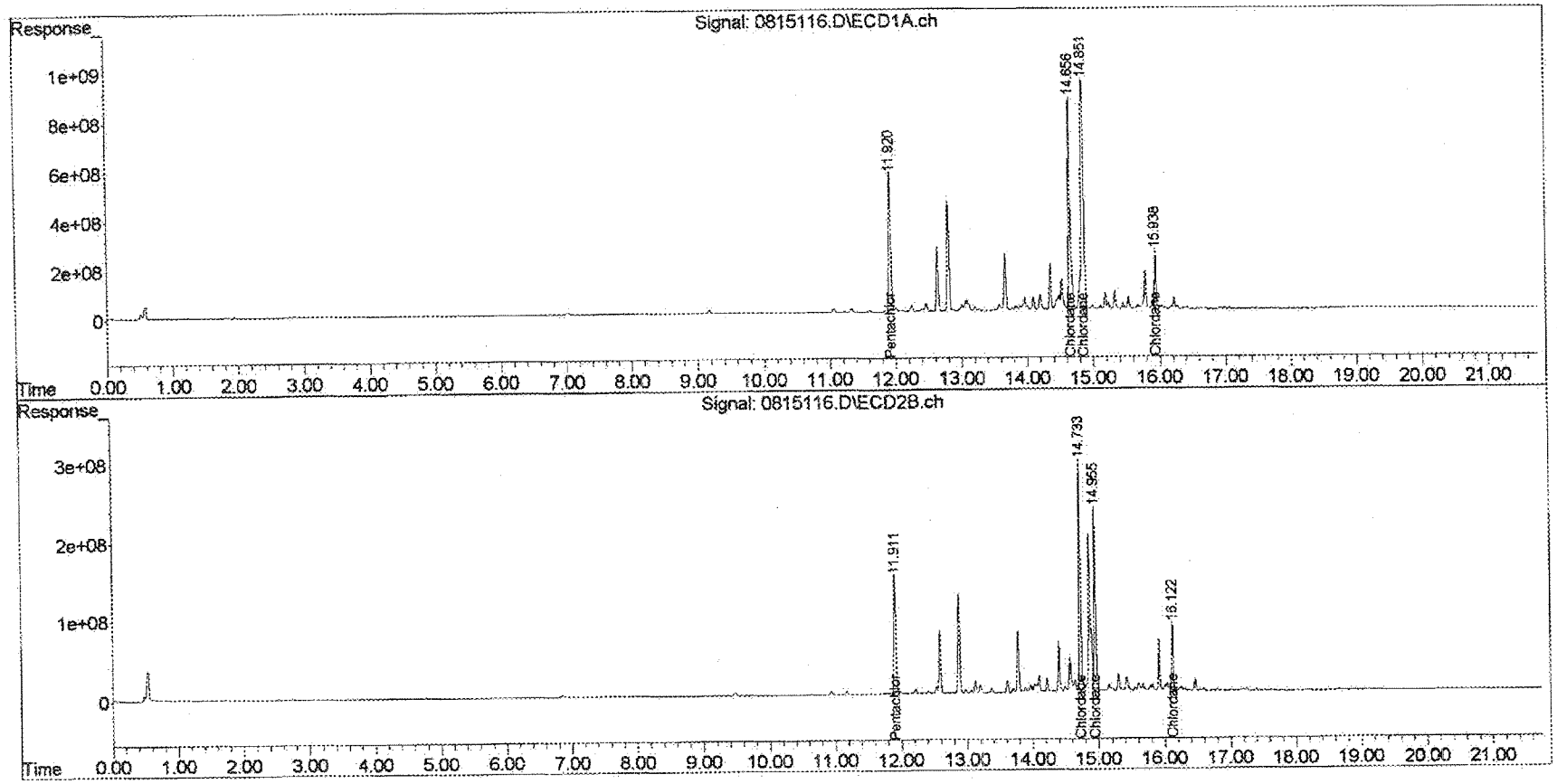
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815116.D
Acq On : 16-Aug-2013, 02:43:08
Acq Meth : 508.M
Sample : CHLOR ICAL 2000PPB DWSTD06-59N
Misc :
Quant Time : Aug 17 10:53:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 13
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



953

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815117.D
Acq On : 16-Aug-2013, 03:20:00 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICV 500PPB DWSTD06-59O Vial : 14
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:58:53 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
26) Pentachloronitrob...	11.93	11.91	1319.8E6	320.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
32) Chlordane	14.66	14.73	426.1E6	126.6E6	491.907	515.019
33) Chlordane {2}	14.85	14.95	705.8E6	91854802	549.267	477.212
34) Chlordane {3}	15.94	16.12	86107666	28295131	518.422	529.056
35) Chlordane - TOTAL	0.00	0.00	1218.0E6	246.7E6	525.614T	501.748T

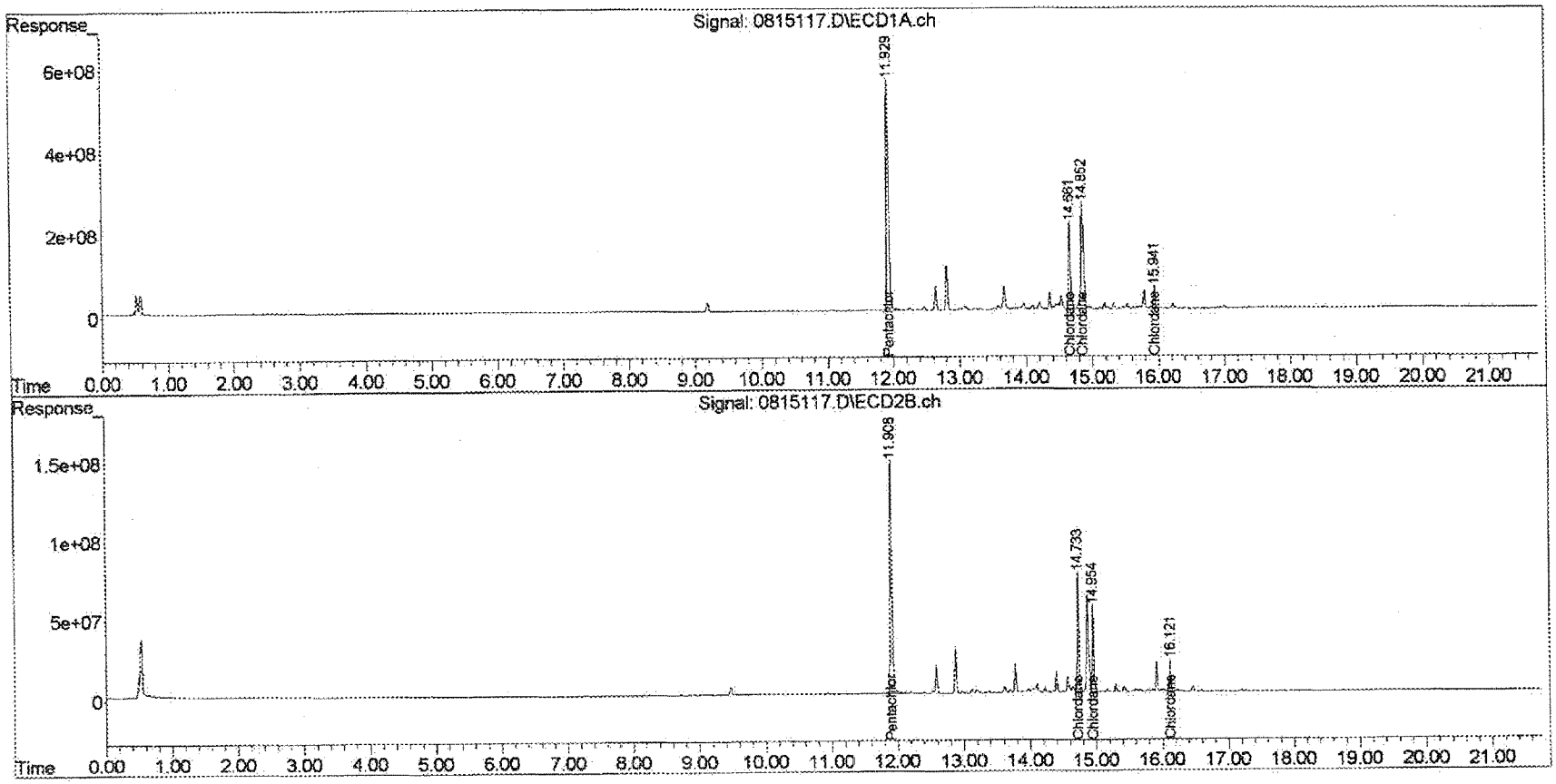
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815117.D
Acq On : 16-Aug-2013, 03:20:00 Operator : SSullivan
Acq Meth : 508.M
Sample : CHLOR ICV 500PPB DWSTD06-590 Vial : 14
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:58:53 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



955

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815118.D
Acq On : 16-Aug-2013, 03:56:06 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 25PPB DWSTD06-60A Vial : 15
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:54:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	Pentachloronitrob...	11.93	11.91	1296.5E6	319.0E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
37)	Aroclor 1016	11.38	10.80	8029733	868037	1.966	2.306
38)	Aroclor 1016 (2)	12.73	13.00	4689158	1385140	5.279	3.483 #
39)	Aroclor 1016 (3)	13.21	13.18	2557350	837587	5.136	1.276 #
40)	Aroclor 1016 (4)	13.51	13.44	4579891	948386	2.792	2.359m
41)	Aroclor 1016 - TOTAL	0.00	0.00	19856132	4039150	3.434T	2.512T#
42)	Aroclor 1260	16.25	16.38	4549234	1549344	BelowCal	2.536 #
43)	Aroclor 1260 (2)	16.52	16.69	6728009	1807263	BelowCal	3.215 #
44)	Aroclor 1260 (3)	16.82	16.92	10313752	3443677	BelowCal	5.015 #
45)	Aroclor 1260 (4)	17.74	17.88	2376801	804193	BelowCal	3.880 #
46)	Aroclor 1260 - TOTAL	0.00	0.00	23967796	7604477	BelowCalT	3.990T#

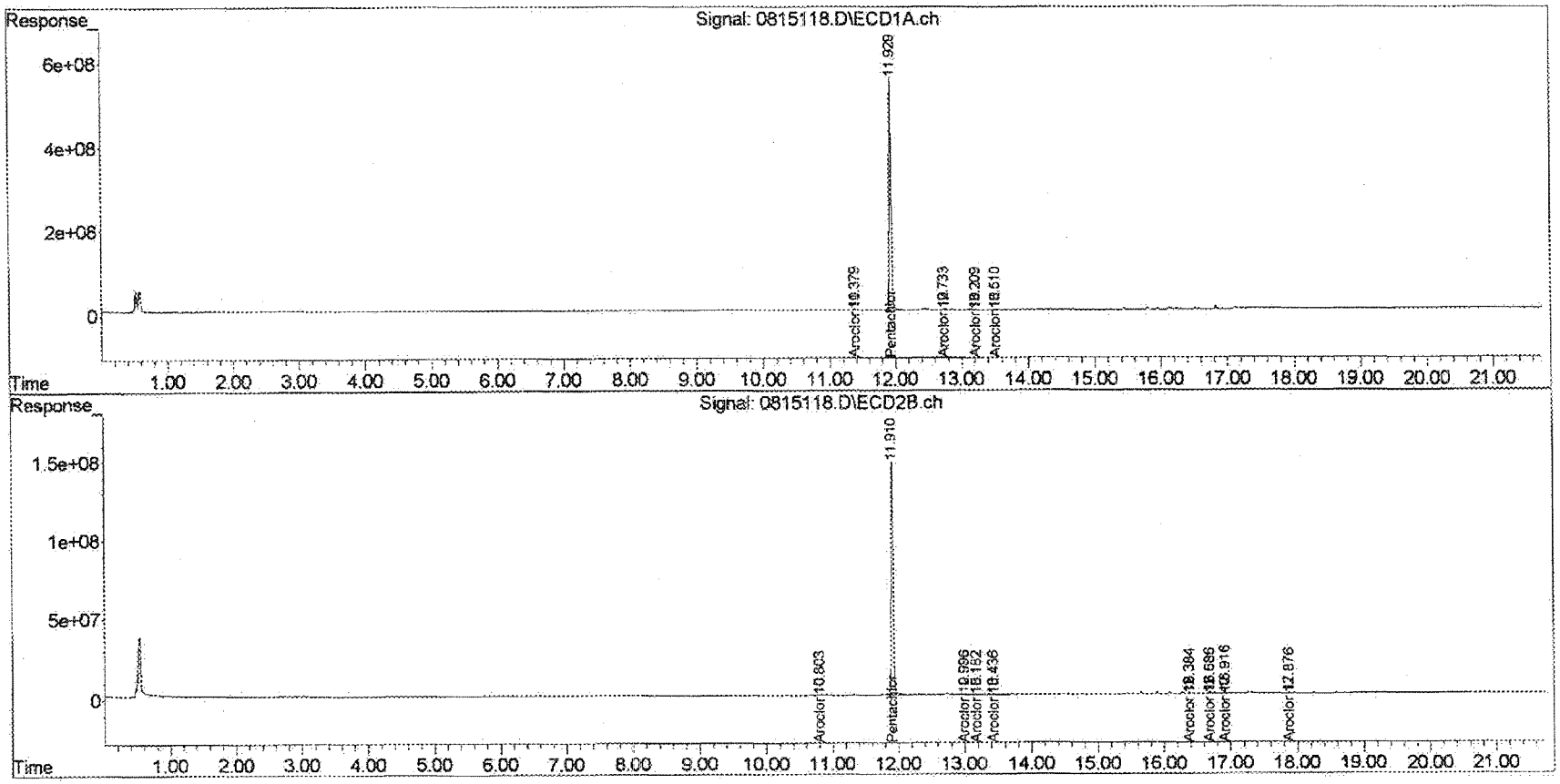
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815118.D
Acq On : 16-Aug-2013, 03:56:06 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 25PPB DWSTD06-60A Vial : 15
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:54:50 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



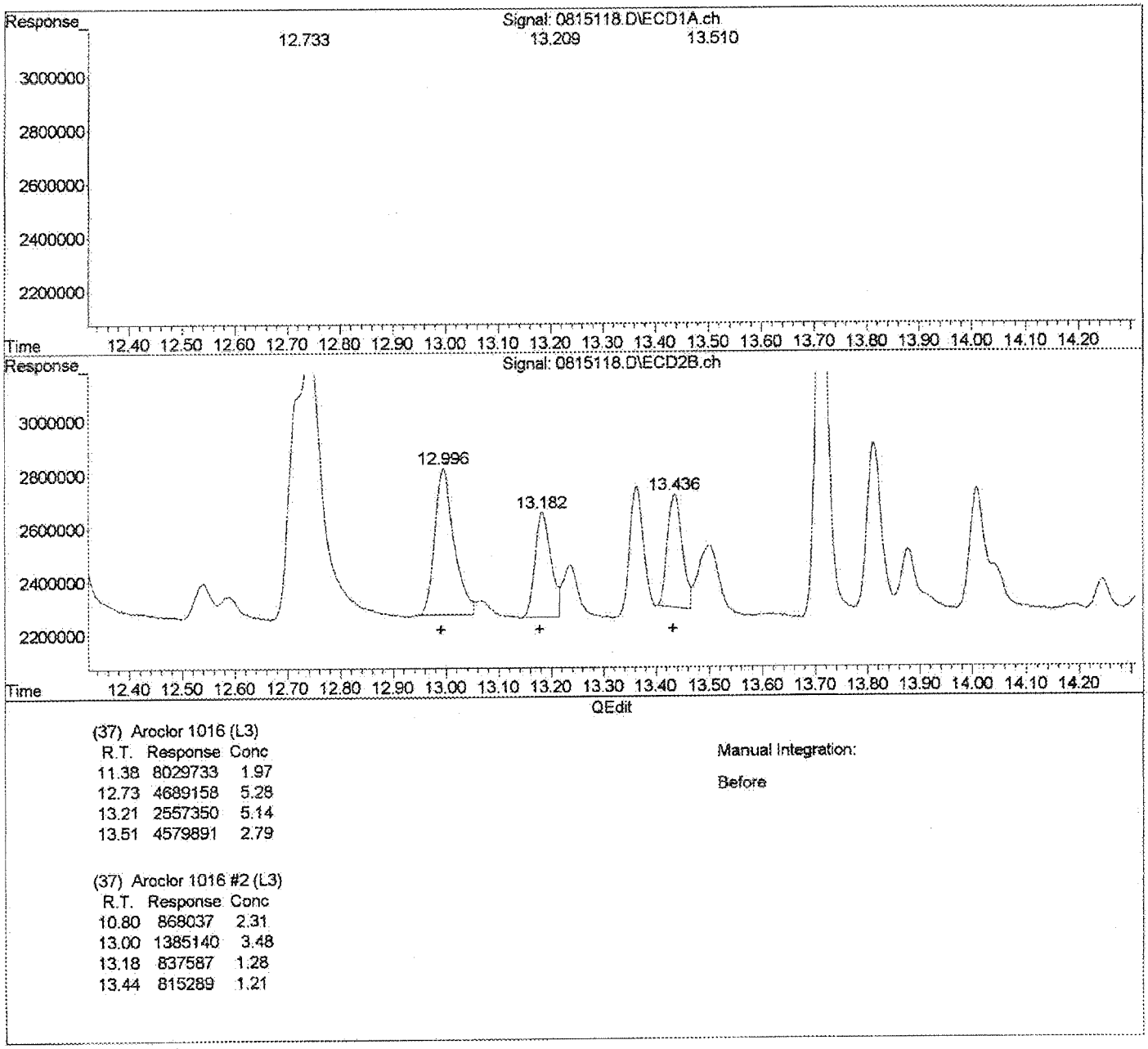
957

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815118.D
Acq On : 16-Aug-2013, 03:56:06
Acq Meth : 508.M
Sample : 1660 ICAL 25PPB DWSTD06-60A
Misc :
Quant Time : Aug 17 09:56:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 15
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(37) Aroclor 1016 (L3)

R.T.	Response	Conc
11.38	8029733	1.97
12.73	4689158	5.28
13.21	2557350	5.14
13.51	4579891	2.79

(37) Aroclor 1016 #2 (L3)

R.T.	Response	Conc
10.80	868037	2.31
13.00	1385140	3.48
13.18	837587	1.28
13.44	815289	1.21

Manual Integration:

Before

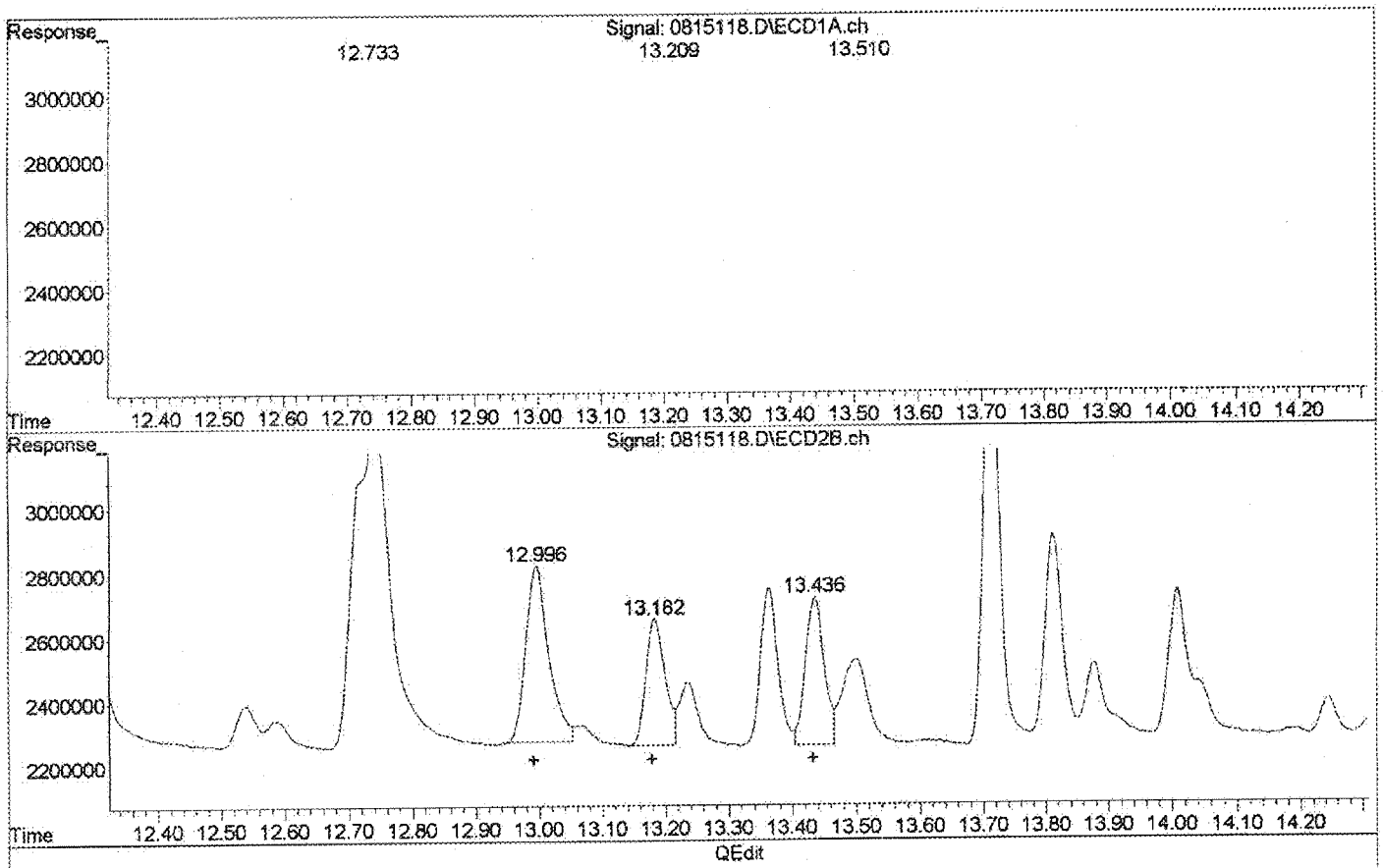
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815118.D
Acq On : 16-Aug-2013, 03:56:06
Acq Meth : 508.M
Sample : 1660 ICAL 25PPB DWSTD06-60A
Misc :
Quant Time : Aug 17 09:56:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 15
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(37) Aroclor 1016 #2 (L3)

R.T.	Response	Conc
11.38	8029733	1.97
12.73	4689158	5.28
13.21	2557350	5.14
13.51	4579891	2.79

(37) Aroclor 1016 #2 (L3)

R.T.	Response	Conc
10.80	868037	2.31
13.00	1385140	3.48
13.18	837587	1.28
13.44	948385	2.36

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815119.D
Acq On : 16-Aug-2013, 04:23:22
Acq Meth : 508.M
Sample : 1660 ICAL 50PPB DWSTD06-60B
Misc :
Quant Time : Aug 17 10:55:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 16
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.92	11.91	1303.3E6	320.5E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.37	10.80	16264187	1765092	10.963	10.263
38) Aroclor 1016 (2)	12.73	12.99	9505754	2792153	13.196	10.812
39) Aroclor 1016 (3)	13.21	13.18	5481711	1634957	13.938	8.056 #
40) Aroclor 1016 (4)	13.51	13.44	9170207	1889331	11.311	10.452
41) Aroclor 1016 - TOTAL	0.00	0.00	40421859	8081533	12.022T	10.017T
42) Aroclor 1260	16.25	16.39	9005387	3049921	0.910	11.017 #
43) Aroclor 1260 (2)	16.51	16.69	12278076	3604878	7.117	11.831 #
44) Aroclor 1260 (3)	16.82	16.92	20041225	6828611	5.137	13.083 #
45) Aroclor 1260 (4)	17.74	17.88	4686402	1672662	1.160	12.342 #
46) Aroclor 1260 - TOTAL	0.00	0.00	46011090	15156072	4.278T	12.309T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

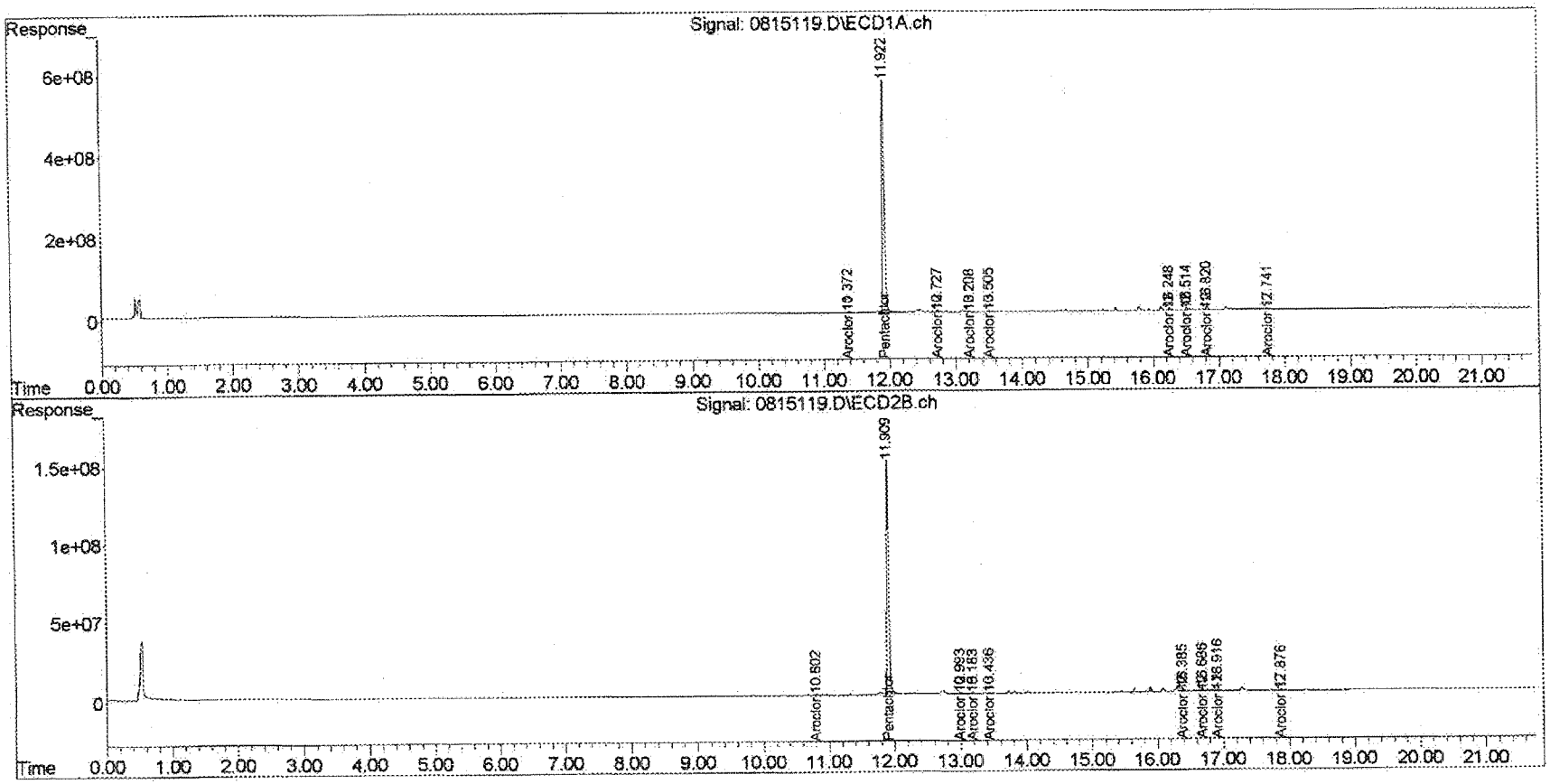
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815119.D
Acq On : 16-Aug-2013, 04:23:22
Acq Meth : 508.M
Sample : 1660 ICAL 50PPB DWSTD06-60B
Misc :
Quant Time : Aug 17 10:55:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 16
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815120.D
Acq On : 16-Aug-2013, 04:55:47
Acq Meth : 508.M
Sample : 1660 ICAL 200PPB DWSTD06-60C
Misc :
Quant Time : Aug 17 10:55:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 17
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1284.7E6	314.9E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.38	10.80	65314810	7231382	66.492	60.611
38) Aroclor 1016 (2)	12.73	12.99	40397094	12127984	65.670	61.251
39) Aroclor 1016 (3)	13.21	13.18	22365301	7208434	66.461	57.177
40) Aroclor 1016 (4)	13.51	13.44	37316474	7855934	65.347	63.743
41) Aroclor 1016 - TOTAL	0.00	0.00	165.4E6	34423734	66.021T	60.764T
42) Aroclor 1260	16.25	16.39	38555907	12806391	53.951	68.288 #
43) Aroclor 1260 (2)	16.52	16.69	41947159	14501620	55.464	66.040
44) Aroclor 1260 (3)	16.82	16.92	80438702	28502639	49.453	66.611 #
45) Aroclor 1260 (4)	17.74	17.88	19999969	6883144	47.024	65.004 #
46) Aroclor 1260 - TOTAL	0.00	0.00	180.9E6	62693794	51.332T	66.624T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

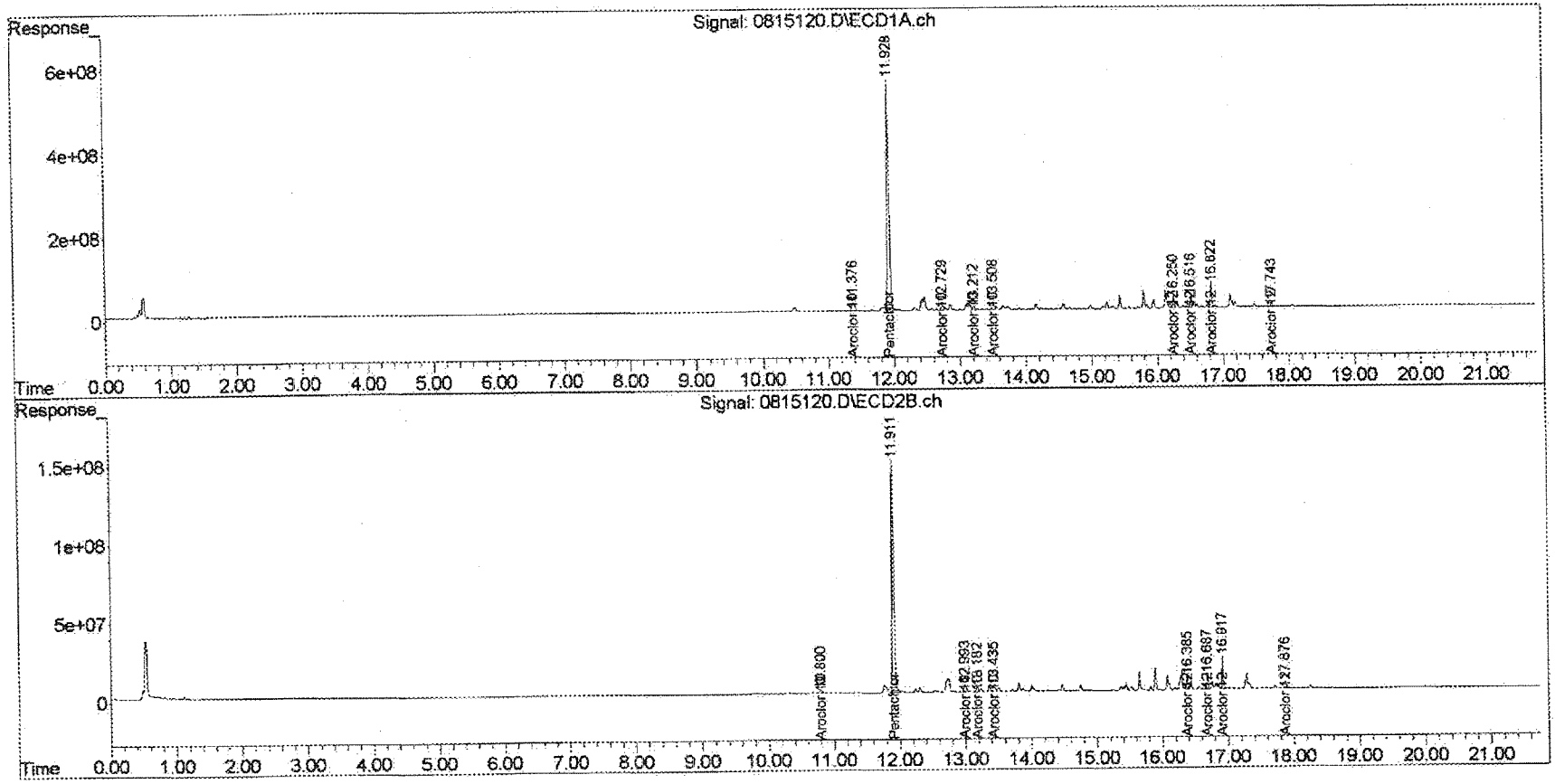
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815120.D
Acq On : 16-Aug-2013, 04:55:47
Acq Meth : 508.M
Sample : 1660 ICAL 200PPB DWSTD06-60C
Misc :
Quant Time : Aug 17 10:55:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 17
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



963

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815121.D
Acq On : 16-Aug-2013, 05:23:17
Acq Meth : 508.M
Sample : 1660 ICAL 500PPB DWSTD06-60D
Misc :
Quant Time : Aug 17 10:55:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 18
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.92	11.91	1305.1E6	316.5E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.37	10.80	148.3E6	17018285	159.892	151.605
38) Aroclor 1016 {2}	12.73	12.99	94959181	28840939	157.471	152.308
39) Aroclor 1016 {3}	13.21	13.18	52600078	17198010	159.671	145.770
40) Aroclor 1016 {4}	13.50	13.43	87157149	18023820	160.214	155.366
41) Aroclor 1016 - TOTAL	0.00	0.00	383.0E6	81081054	159.316T	151.387T
42) Aroclor 1260	16.25	16.39	80762332	29622260	127.630	167.900 #
43) Aroclor 1260 {2}	16.51	16.69	94956762	33523648	140.015	161.322
44) Aroclor 1260 {3}	16.82	16.92	189.6E6	67802418	127.643	164.080 #
45) Aroclor 1260 {4}	17.74	17.88	46376382	16036624	124.557	158.152 #
46) Aroclor 1260 - TOTAL	0.00	0.00	411.7E6	147.0E6	129.922T	163.520T#

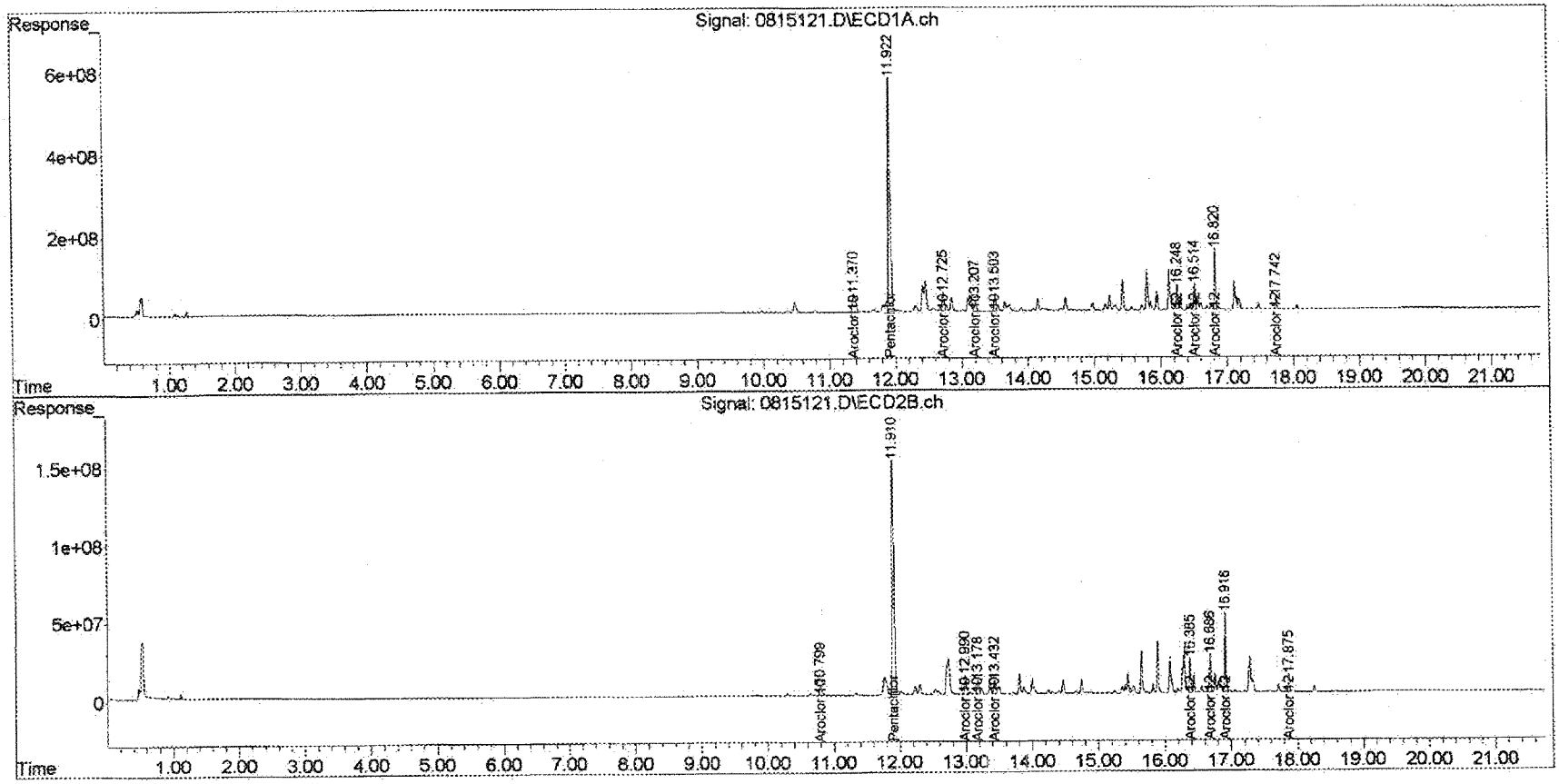
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 9/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815121.D
Acq On : 16-Aug-2013, 05:23:17 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 500PPB DWSTD06-60D Vial : 18
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:55:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



965

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815121.D
Acq On : 16-Aug-2013, 05:23:17 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 500PPB DWSTD06-60D Vial : 18
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:55:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	Pentachloronitrob...	11.92	11.91	1305.1E6	316.5E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
37)	Aroclor 1016	11.37	10.80	148.3E6	17018285	159.892	151.605
38)	Aroclor 1016 (2)	12.73	12.99	94959181	28840939	157.471	152.308
39)	Aroclor 1016 (3)	13.21	13.18	52600078	17198010	159.671	145.770
40)	Aroclor 1016 (4)	13.50	13.43	87157149	18023820	160.214	155.366
41)	Aroclor 1016 - TOTAL	0.00	0.00	383.0E6	81081054	159.316T	151.387T
42)	Aroclor 1260	16.25	16.39	80762332	29622260	127.630	167.900 #
43)	Aroclor 1260 (2)	16.51	16.69	94956762	33523648	140.015	161.322
44)	Aroclor 1260 (3)	16.82	16.92	189.6E6	67802418	127.643	164.080 #
45)	Aroclor 1260 (4)	17.74	17.88	46376382	16036624	124.557	158.152 #
46)	Aroclor 1260 - TOTAL	0.00	0.00	411.7E6	147.0E6	129.922T	163.520T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

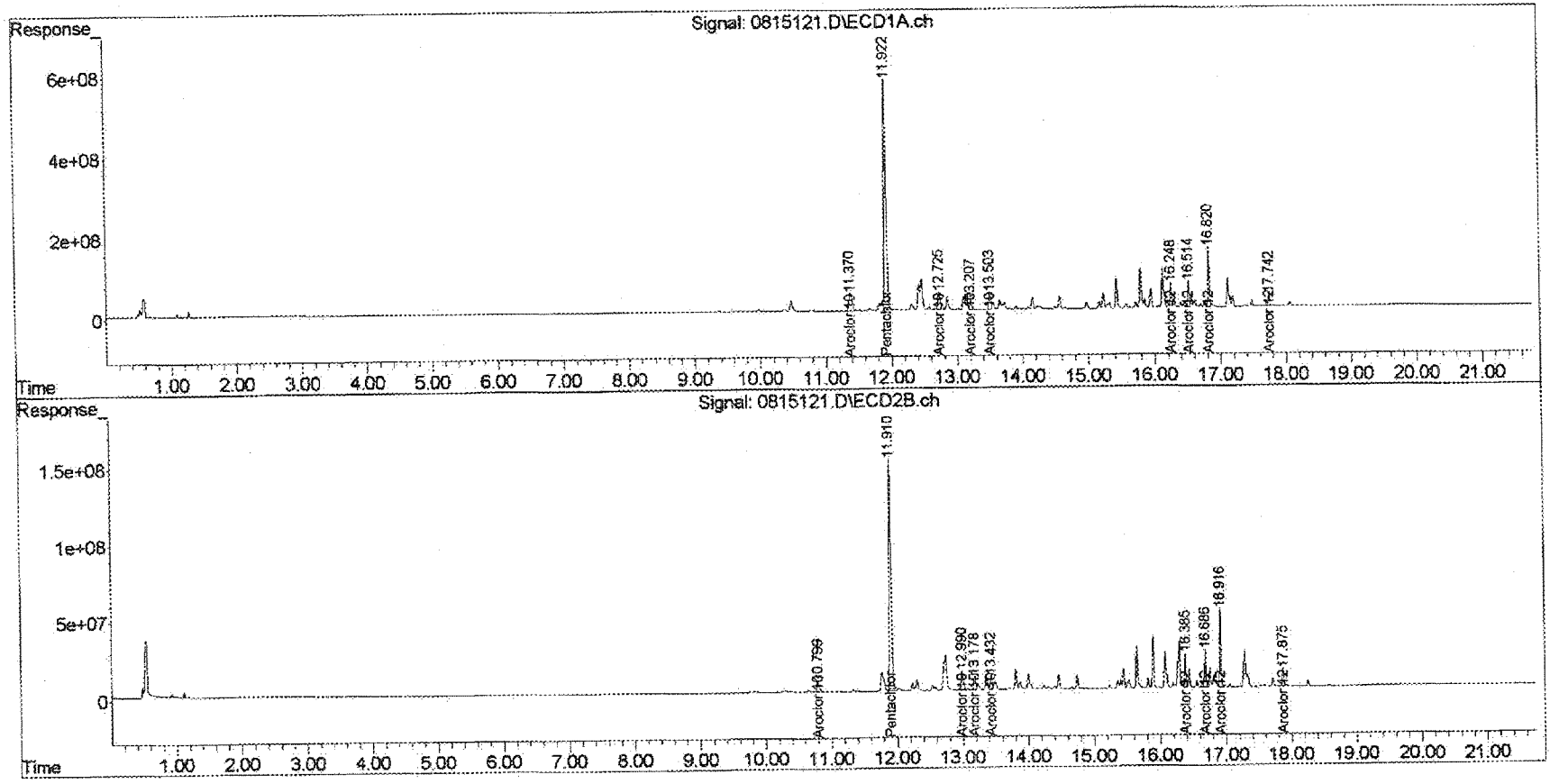
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815121.D
Acq On : 16-Aug-2013, 05:23:17
Acq Meth : 508.M
Sample : 1660 ICAL 500PPB DWSTD06-60D
Misc :
Quant Time : Aug 17 10:55:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 18
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



967

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815122.D
Acq On : 16-Aug-2013, 05:56:34 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 1000PPB DWSTD06-60E Vial : 19
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:56:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1297.0E6	317.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.38	10.80	271.2E6	32651375	308.438	303.189
38) Aroclor 1016 (2)	12.73	12.99	179.9E6	56035802	309.877	306.472
39) Aroclor 1016 (3)	13.21	13.18	98518842	34226780	310.728	302.411
40) Aroclor 1016 (4)	13.51	13.43	162.6E6	35034884	313.617	315.207
41) Aroclor 1016 - TOTAL	0.00	0.00	712.3E6	157.9E6	310.296T	306.775T
42) Aroclor 1260	16.25	16.39	164.6E6	57023551	279.868	337.088
43) Aroclor 1260 (2)	16.52	16.69	173.6E6	64694272	271.568	323.531
44) Aroclor 1260 (3)	16.82	16.92	373.1E6	133.0E6	264.217	331.120 #
45) Aroclor 1260 (4)	17.74	17.88	88458913	30973777	254.351	315.984
46) Aroclor 1260 - TOTAL	0.00	0.00	799.8E6	285.7E6	267.714T	328.833T

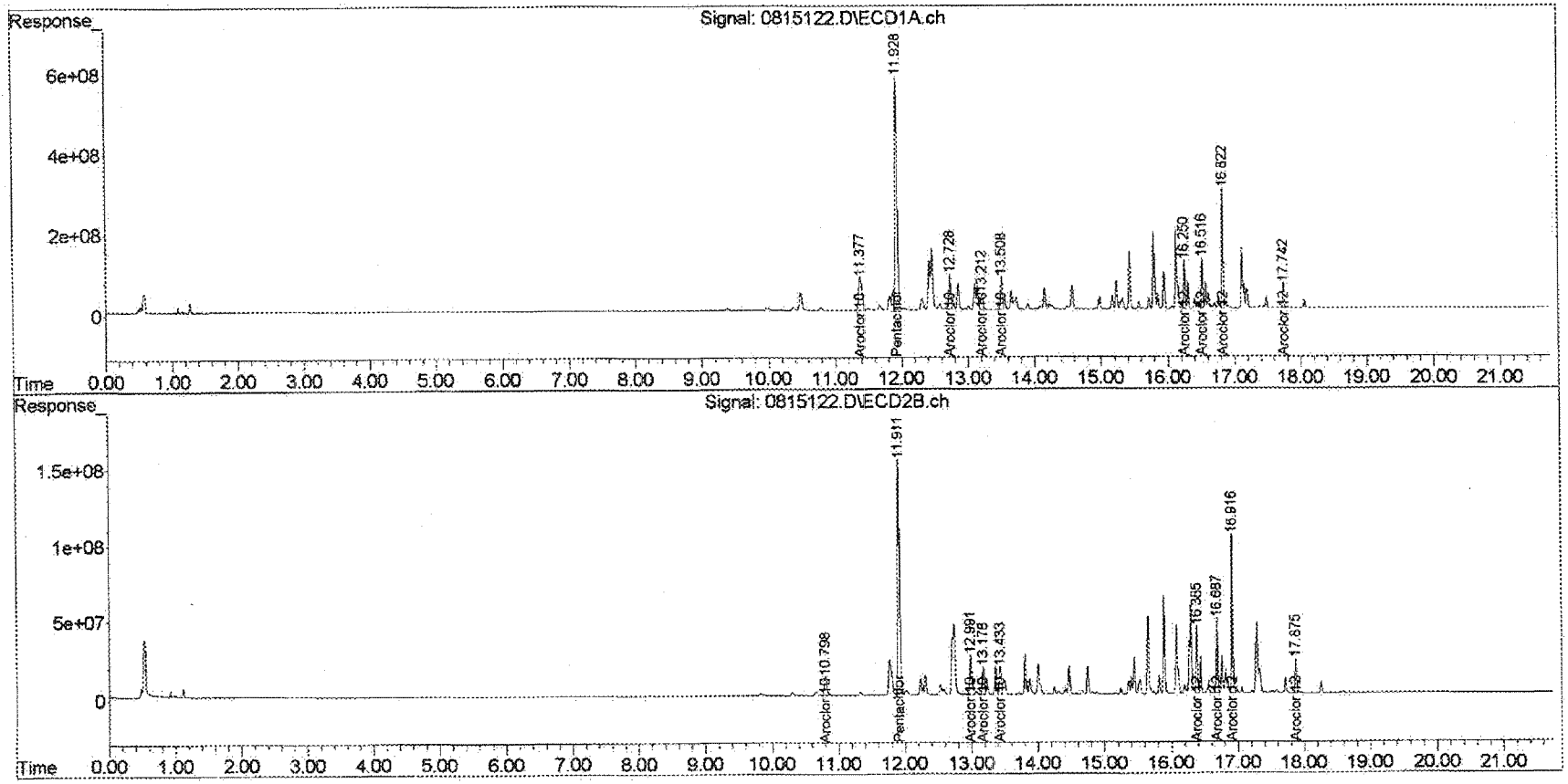
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815122.D
Acq On : 16-Aug-2013, 05:56:34 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 1000PPB DWSTD06-60E Vial : 19
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:56:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



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Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815123.D
Acq On : 16-Aug-2013, 06:32:55 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 2000PPB DWSTD06-60F Vial : 20
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:56:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1329.4E6	319.2E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.37	10.79	499.0E6	62082905	590.484	610.286
38) Aroclor 1016 (2)	12.73	12.99	346.8E6	109.6E6	614.633	632.793
39) Aroclor 1016 (3)	13.21	13.18	187.9E6	68413131	610.033	638.660
40) Aroclor 1016 (4)	13.51	13.43	315.4E6	68387417	631.729	653.724
41) Aroclor 1016 - TOTAL	0.00	0.00	1349.1E6	308.5E6	608.790T	633.916T
42) Aroclor 1260	16.25	16.38	324.3E6	111.4E6	560.186	699.552
43) Aroclor 1260 (2)	16.52	16.69	341.9E6	127.8E6	548.173	675.412
44) Aroclor 1260 (3)	16.82	16.92	757.3E6	267.7E6	542.377	697.498 #
45) Aroclor 1260 (4)	17.74	17.88	173.9E6	61955858	514.400	667.160 #
46) Aroclor 1260 - TOTAL	0.00	0.00	1597.3E6	568.8E6	543.984T	689.489T#

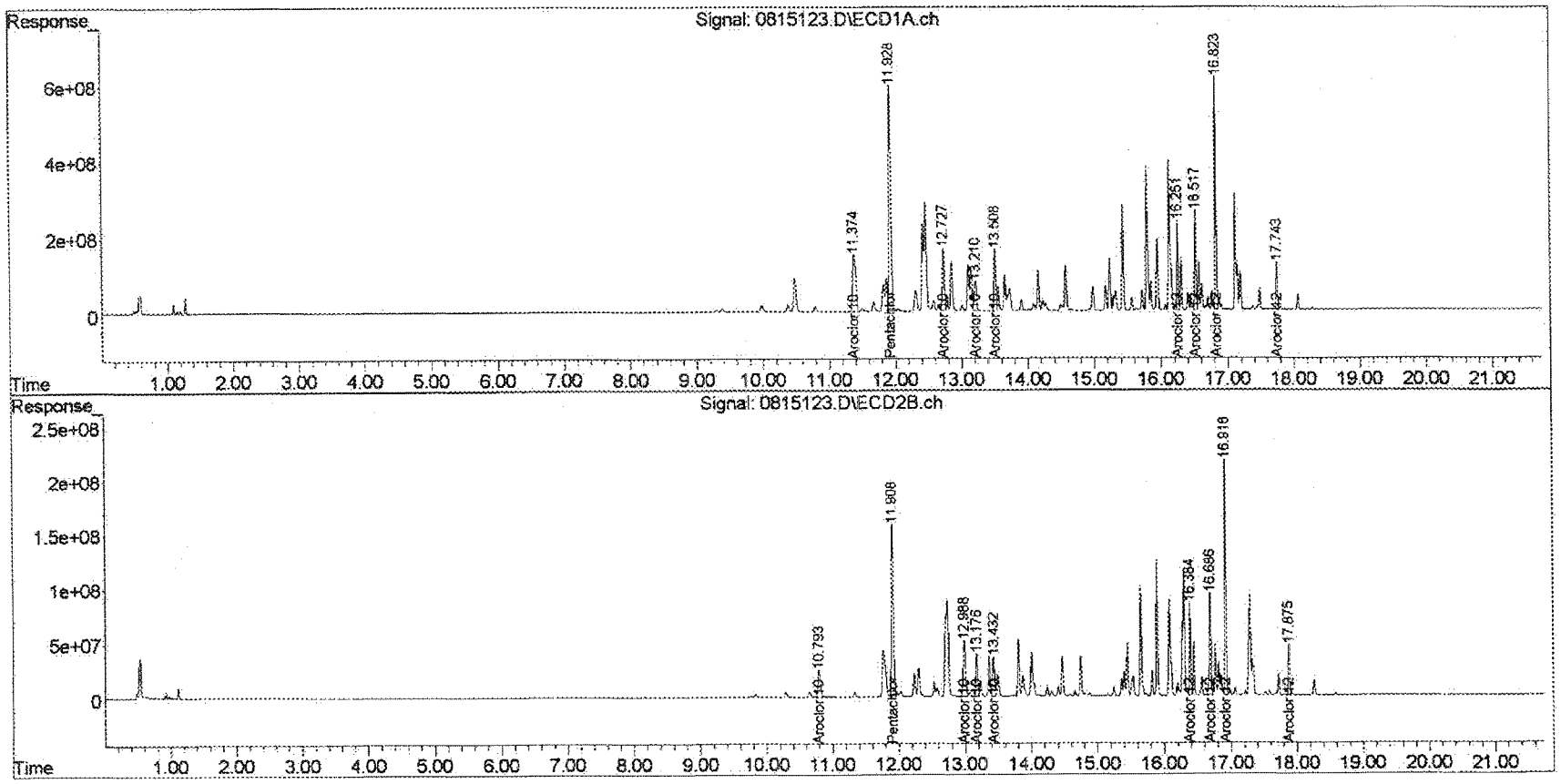
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815123.D
Acq On : 16-Aug-2013, 06:32:55 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICAL 2000PPB DWSTD06-60F Vial : 20
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:56:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



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Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815124.D
Acq On : 16-Aug-2013, 07:07:21 Operator : SSullivan
Acq Meth : 508.M
Sample : 1660 ICV 500PPB DWSTD06-58A Vial : 21
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:59:58 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1303.8E6	319.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
37) Aroclor 1016	11.38	10.80	131.1E6	15898699	491.509	465.900
38) Aroclor 1016 (2)	12.73	12.99	84140835	25301259	471.913	444.085
39) Aroclor 1016 (3)	13.21	13.18	44532333	14880531	456.689	433.551
40) Aroclor 1016 (4)	13.51	13.43	77586043	15908520	476.993	431.552
41) Aroclor 1016 - TOTAL	0.00	0.00	337.3E6	71989009	478.328T	443.597T
42) Aroclor 1260	16.25	16.38	105.1E6	35127627	642.983	584.717
43) Aroclor 1260 (2)	16.52	16.68	106.5E6	37269230	602.862	539.905
44) Aroclor 1260 (3)	16.82	16.91	221.7E6	78962382	589.498	575.953
45) Aroclor 1260 (4)	17.74	17.88	56565673	19504122	641.036	600.569
46) Aroclor 1260 - TOTAL	0.00	0.00	489.9E6	170.9E6	608.956T	572.061T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

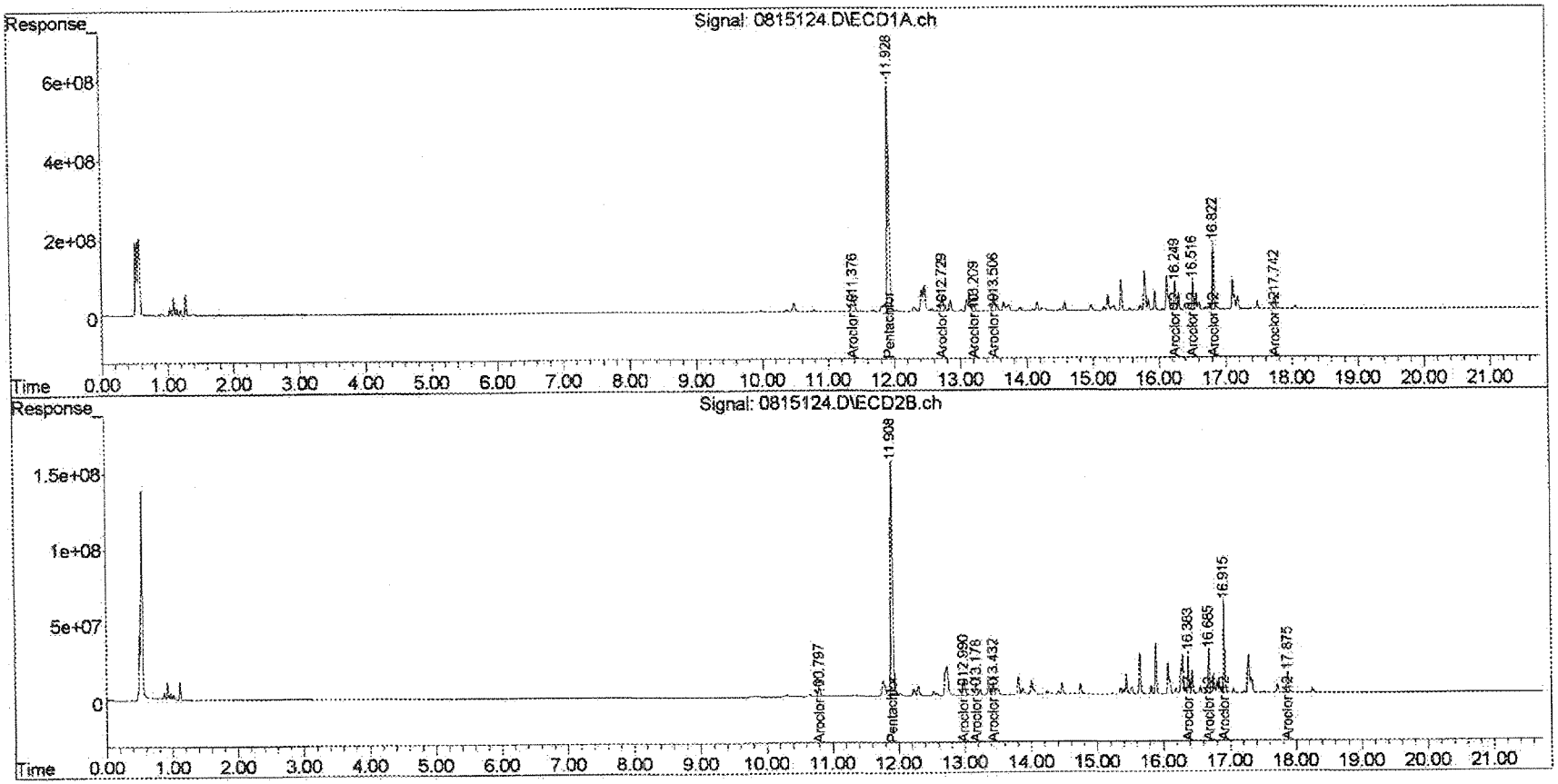
8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815124.D
Acq On : 16-Aug-2013, 07:07:21
Acq Meth : 508.M
Sample : 1660 ICV 500PPB DWSTD06-58A
Misc :
Quant Time : Aug 17 11:59:58 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Operator : SSullivan
Vial : 21
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



973

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J Vial : 22
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:58:44 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	Pentachloronitrob...	11.93	11.91	1284.9E6	317.1E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
48)	Aroclor 1221 {2}	9.98	10.30	3481055	778630	12.847	0.995 #
49)	Aroclor 1221 {3}	10.38	10.66	2136969	611199	6.953	BelowCal #
50)	Aroclor 1221 {4}	10.48	10.80	9359507	2246107	8.492m	BelowCal #
51)	Aroclor 1221 - TOTAL	0.00	0.00	18060676	4334648	7.894T	BelowCalT#
55)	Aroclor 1254 {4}	15.56	15.69	11823261	3412696	0.434	12.015 #

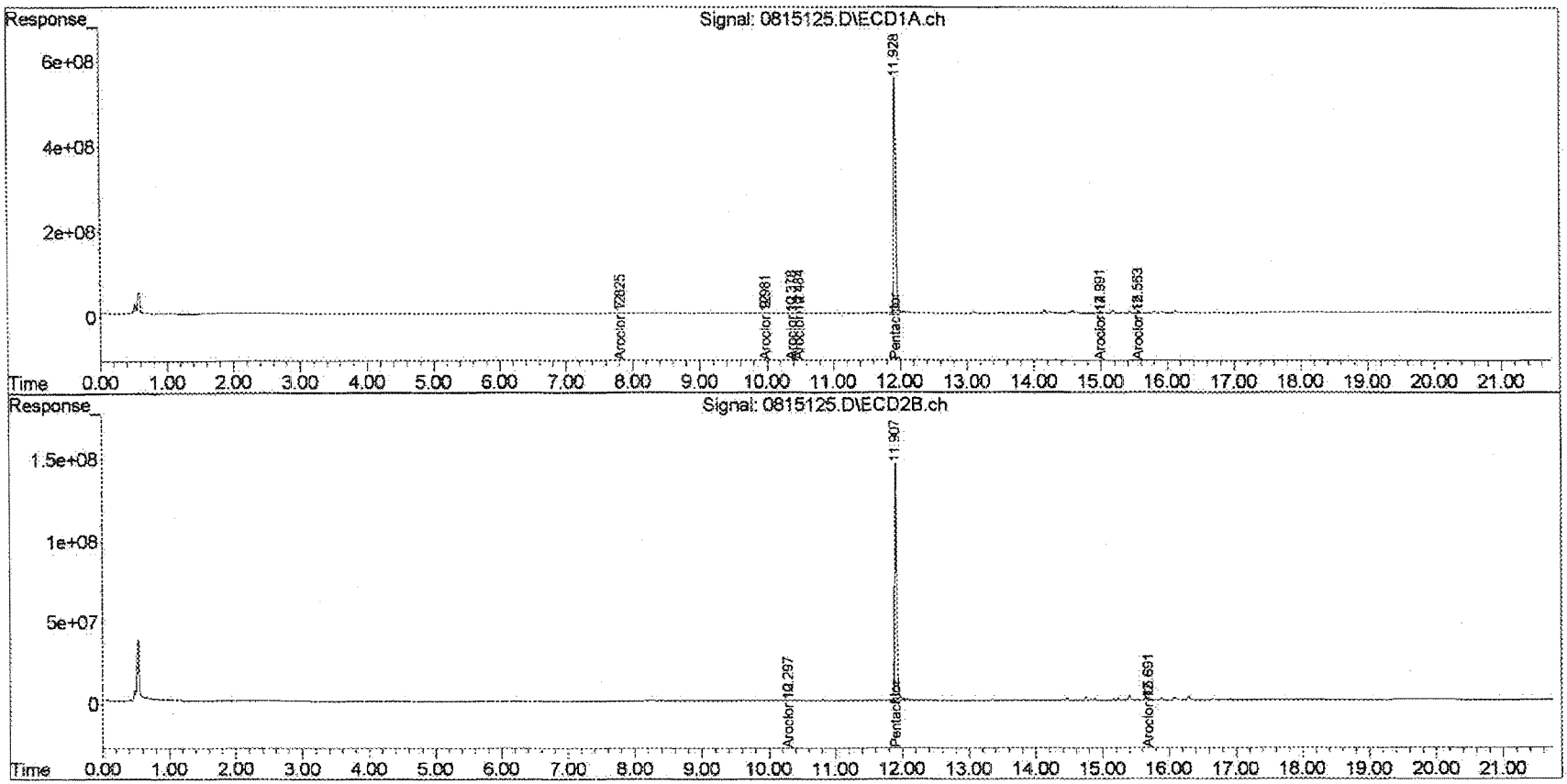
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J Vial : 22
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:58:44 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



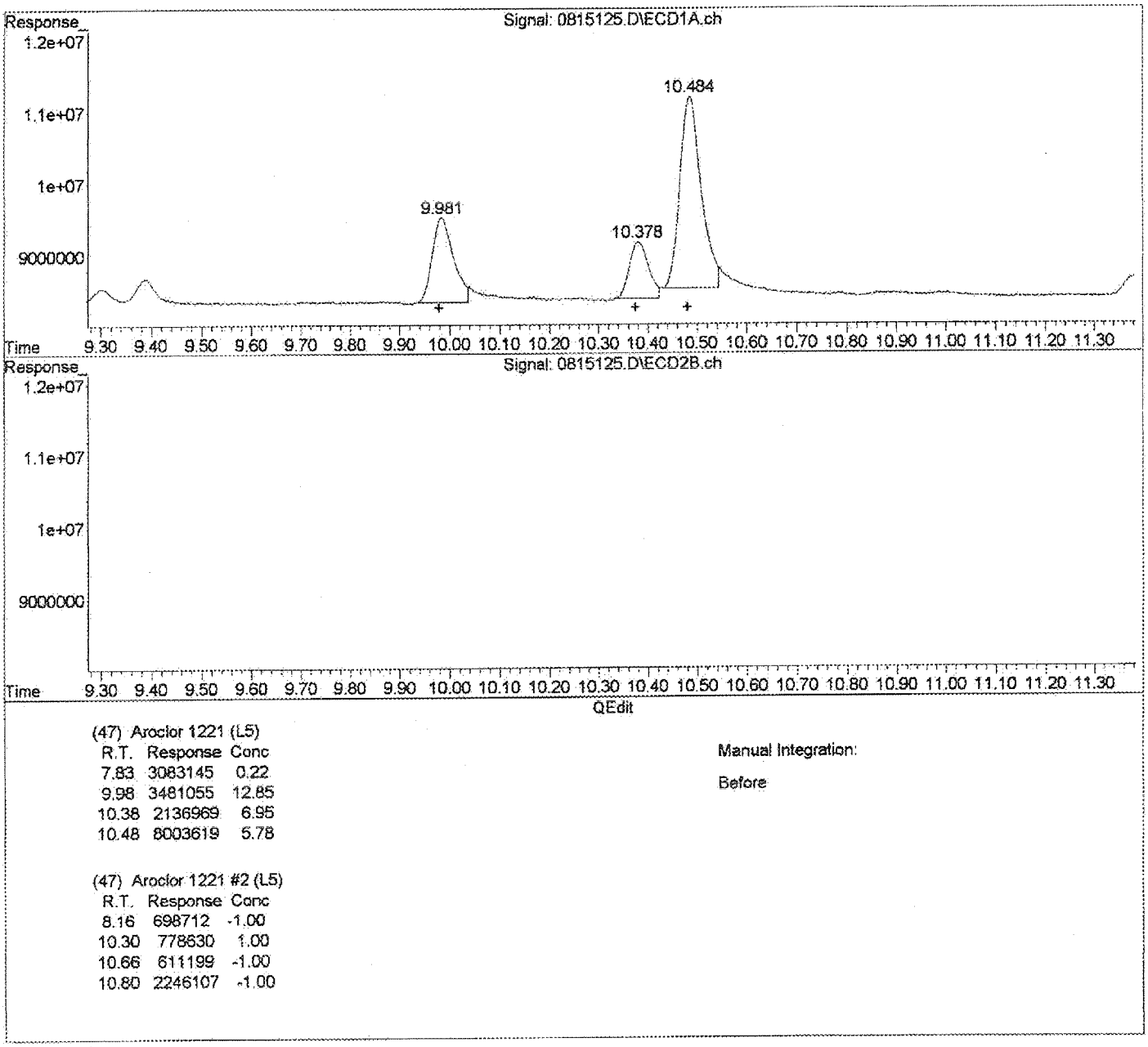
975

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J
Misc :
Quant Time : Aug 17 10:01:31 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 22
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.83	3083145	0.22
9.98	3481055	12.85
10.38	2136969	6.95
10.48	8003619	5.78

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	698712	-1.00
10.30	778630	1.00
10.66	611199	-1.00
10.80	2246107	-1.00

Manual Integration:
Before

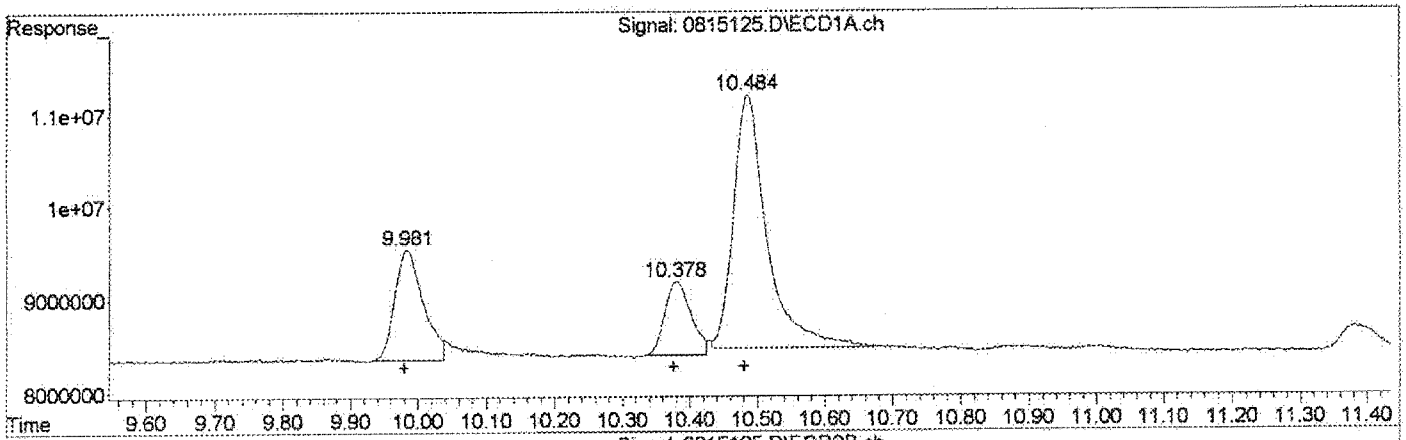
(+) = Expected Retention Time

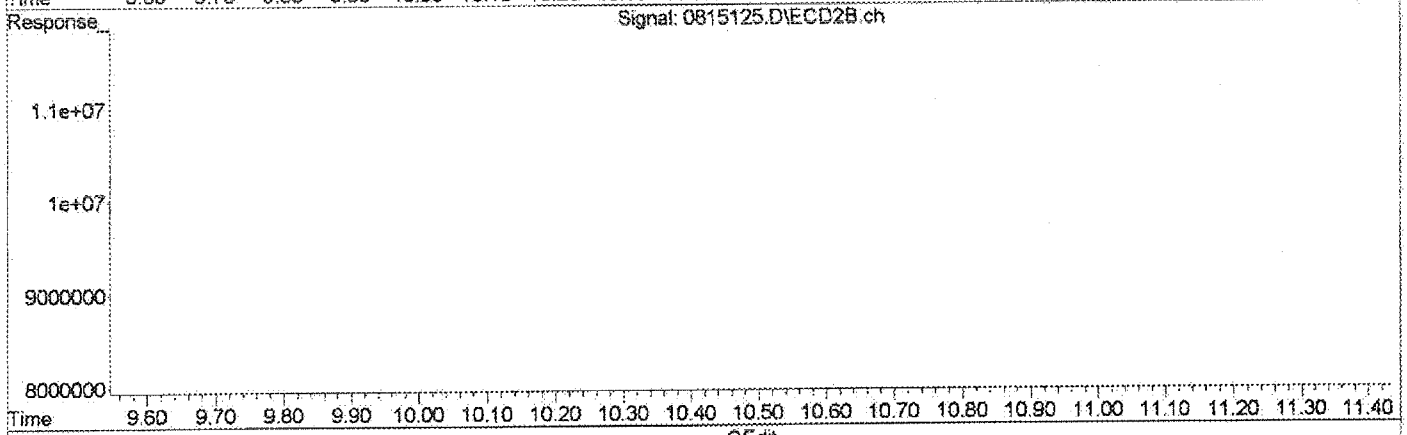
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J
Misc :
Quant Time : Aug 17 10:01:31 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 22
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.83	3083145	0.22
9.98	3481055	12.85
10.38	2136969	6.95
10.48	9359507	8.49

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	698712	-1.00
10.30	778630	1.00
10.66	611199	-1.00
10.80	2246107	-1.00

Manual Integration:
After
Baseline/Shoulder
08/17/13

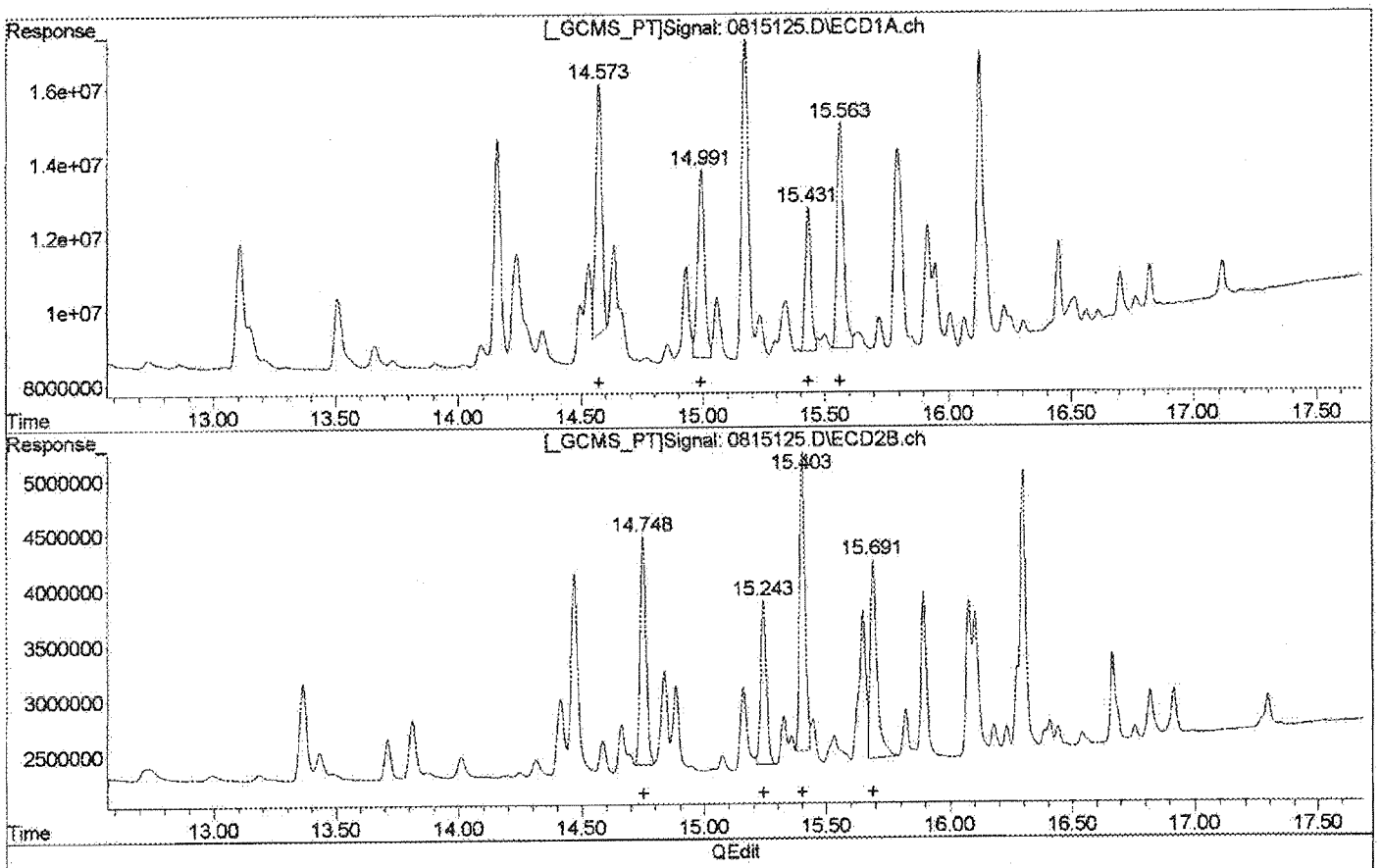
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J
Misc :
Quant Time : Aug 17 10:01:31 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 22
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(52) Aroclor 1254 (L6)

R.T.	Response	Conc
14.57	11881857	-6.54
14.99	10174158	0.51
15.43	6262912	-4.26
15.56	11823261	0.43

(52) Aroclor 1254 #2 (L6)

R.T.	Response	Conc
14.75	3528903	-8.61
15.24	2428091	-4.25
15.40	4286418	-2.53
15.69	3412696	12.01

Manual Integration:

Before

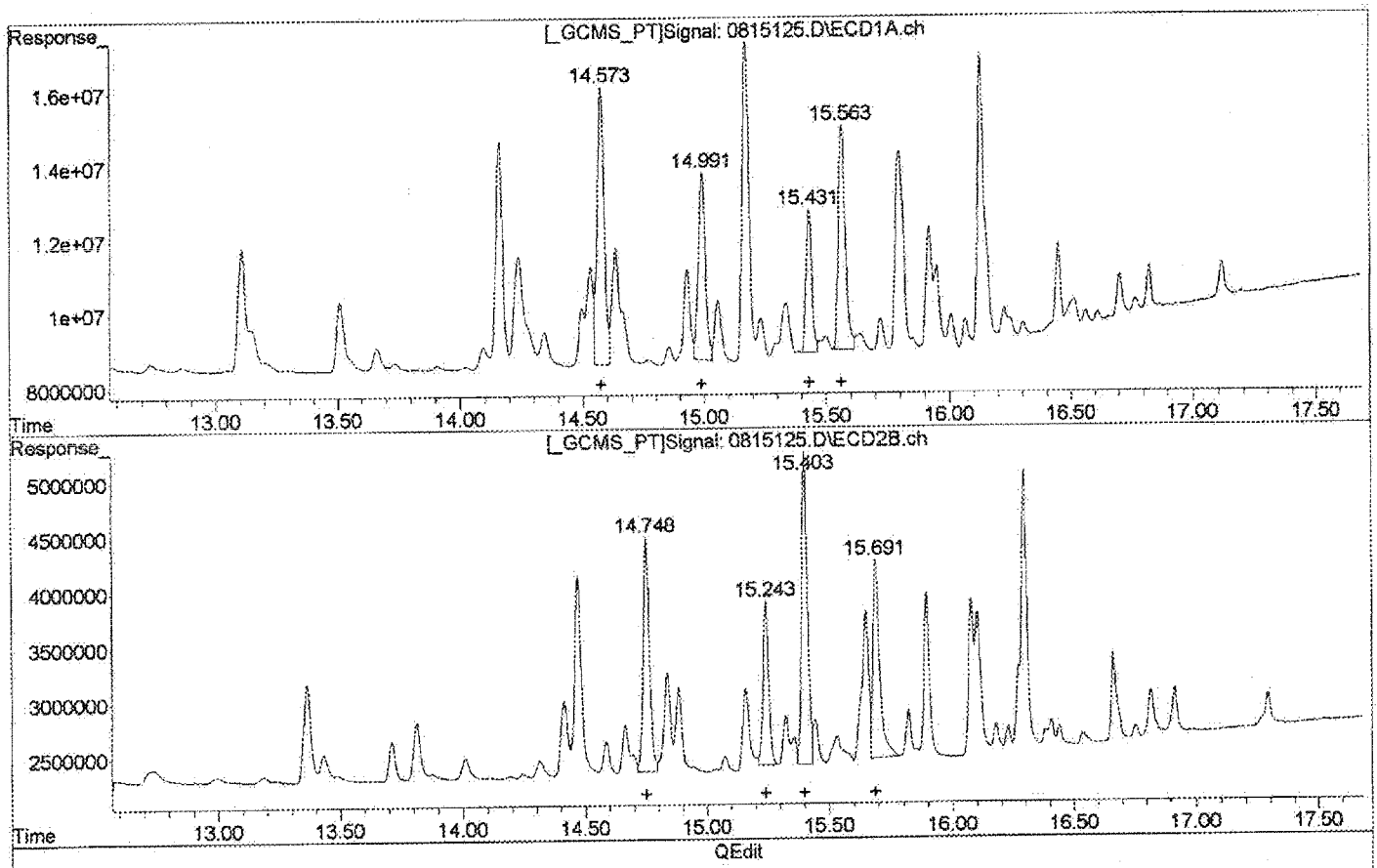
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815125.D
Acq On : 16-Aug-2013, 07:50:26
Acq Meth : 508.M
Sample : 2154 ICAL 50PPB DWSTD06-61J
Misc :
Quant Time : Aug 17 10:01:31 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 22
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(52) Aroclor 1254 (L6)

R.T.	Response	Conc
14.57	14900651	-2.04
14.99	10174158	0.51
15.43	6262912	-4.26
15.56	11823261	0.43

(52) Aroclor 1254 #2 (L6)

R.T.	Response	Conc
14.75	3811702	-6.94
15.24	2428091	-4.25
15.40	4700610	-0.72
15.69	3412696	12.01

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:55:26 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815126.D
Acq On : 16-Aug-2013, 08:22:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 100PPB DWSTD06-61K Vial : 23
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:59:21 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1308.6E6	323.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
47) Aroclor 1221	7.82	8.16	5985647	1504434	16.778	12.149 #
48) Aroclor 1221 (2)	9.98	10.30	7488691	1835623	29.870	19.346 #
49) Aroclor 1221 (3)	10.38	10.65	4449434	1269618	23.017	7.777 #
50) Aroclor 1221 (4)	10.48	10.80	18023823	4556800	25.209m	14.750 #
51) Aroclor 1221 - TOTAL	0.00	0.00	35947595	9166475	24.566T	14.325T#
52) Aroclor 1254	14.57	14.75	28219728	7059467	17.057	11.416 #
53) Aroclor 1254 (2)	14.99	15.24	19874737	4829608	18.798	14.668
54) Aroclor 1254 (3)	15.43	15.40	11888744	9240937	15.434	18.362
55) Aroclor 1254 (4)	15.56	15.69	22396083	6591473	17.439	34.310 #
56) Aroclor 1254 - TOTAL	0.00	0.00	82379292	27721485	17.384T	19.206T

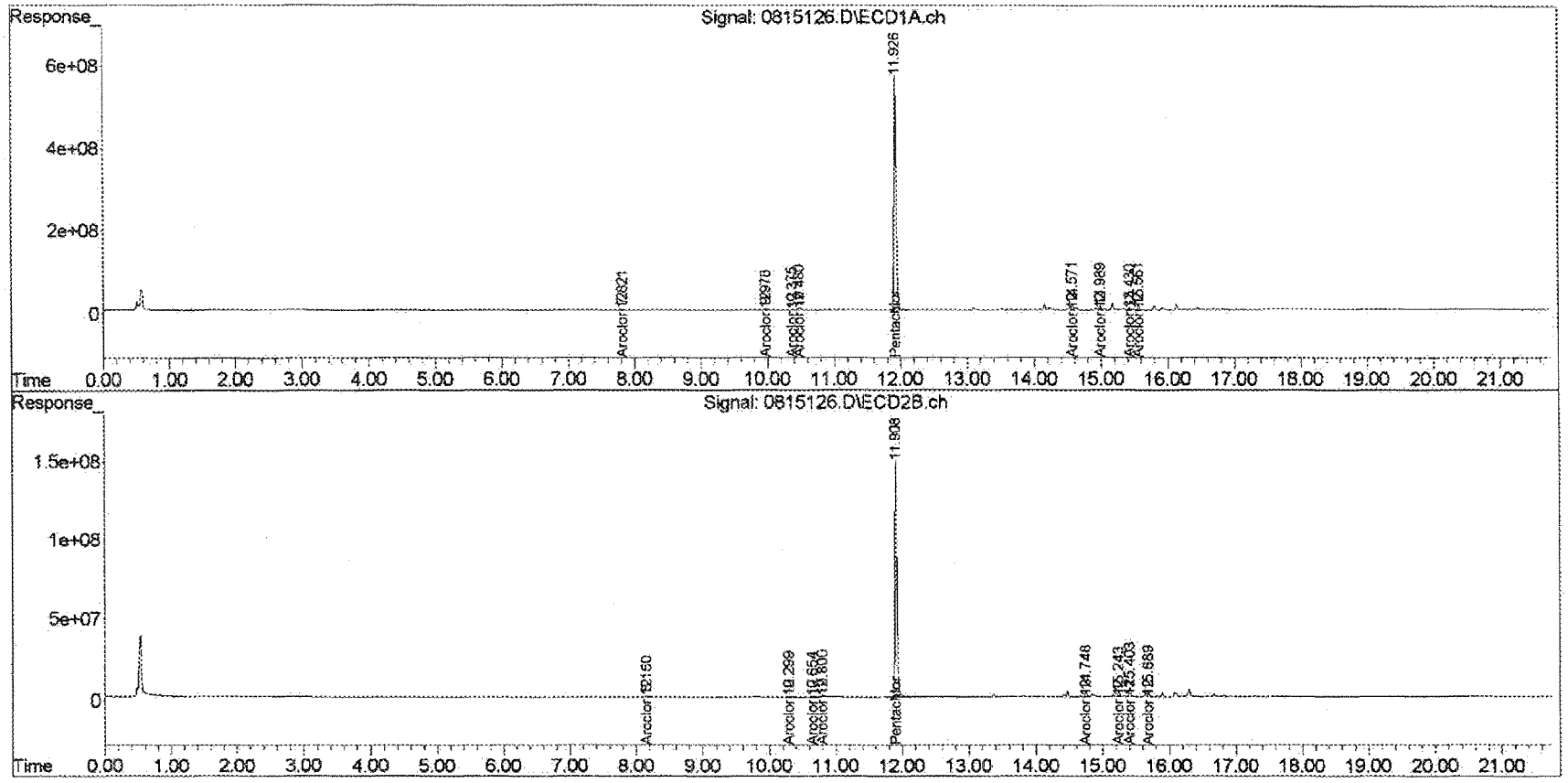
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815126.D
Acq On : 16-Aug-2013, 08:22:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 100PPB DWSTD06-61K Vial : 23
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:59:21 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

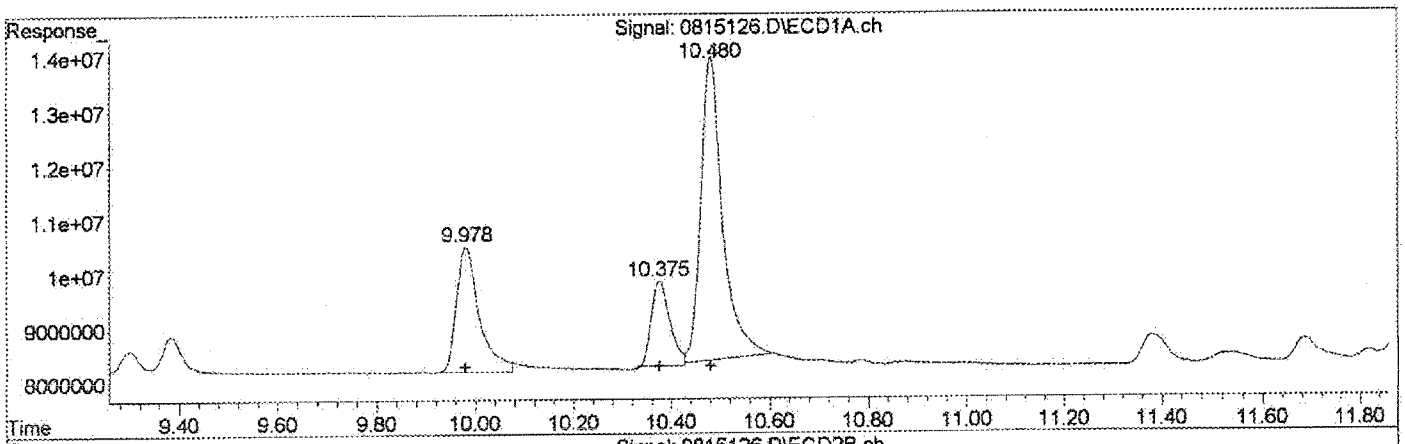
Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

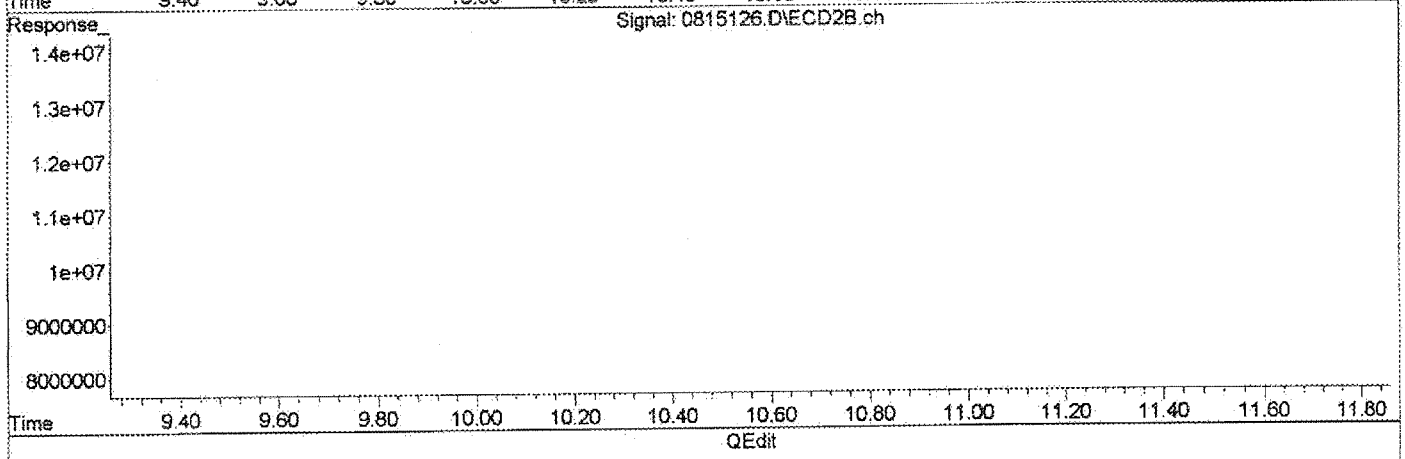


Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815126.D
Acq On : 16-Aug-2013, 08:22:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 100PPB DWSTD06-61K Vial : 23
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:02:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.82	5985647	16.78
9.98	7488691	29.87
10.38	4449434	23.02
10.48	17359670	23.90

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	1504434	12.15
10.30	1835623	19.35
10.65	1269618	7.78
10.80	4556800	14.75

Manual Integration:

Before

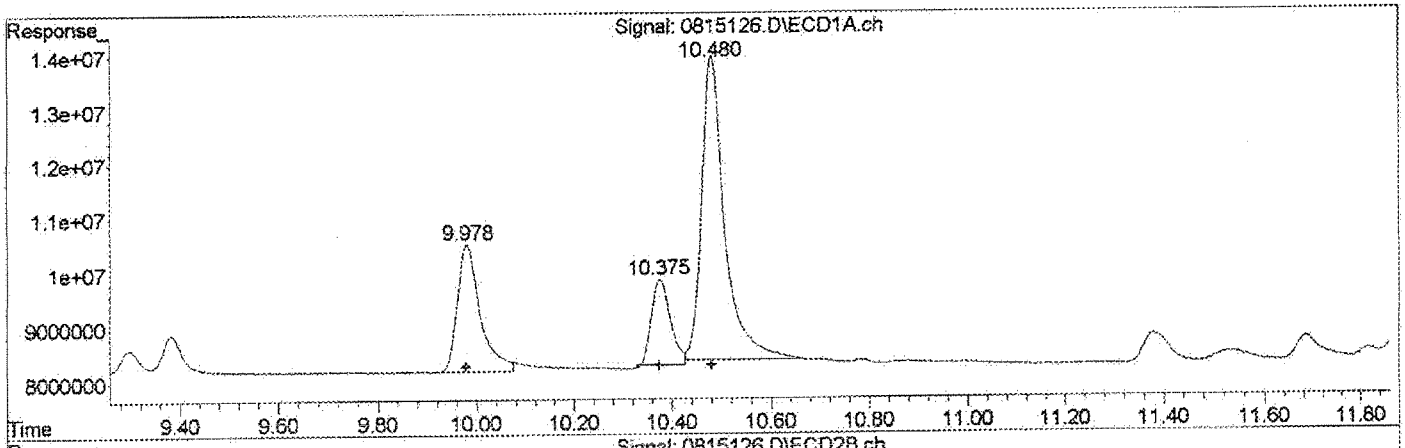
(+) = Expected Retention Time

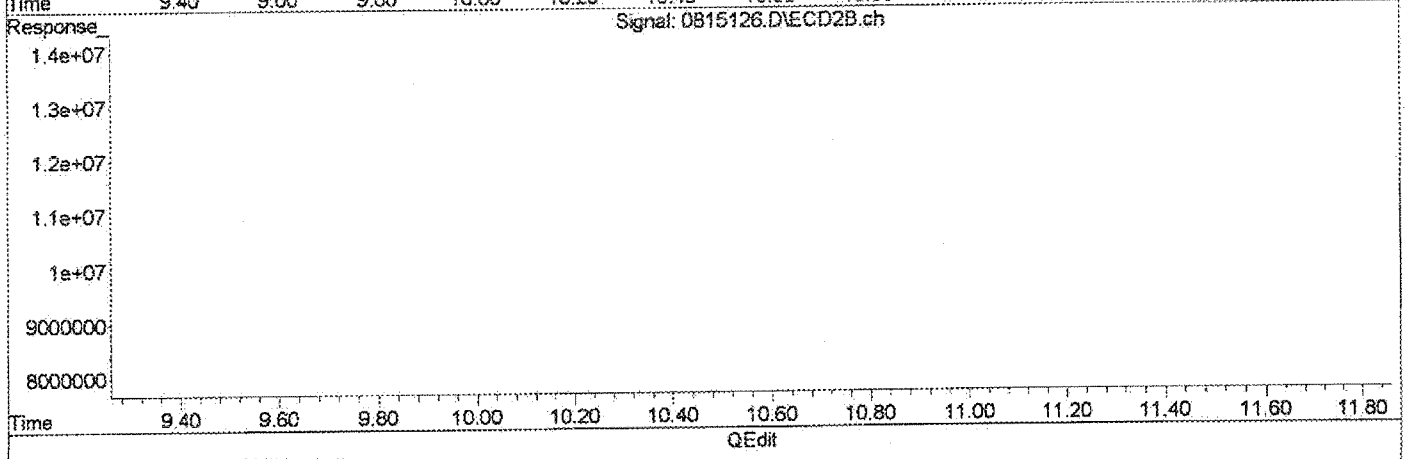
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815126.D
Acq On : 16-Aug-2013, 08:22:01
Acq Meth : 508.M
Sample : 2154 ICAL 100PPB DWSTD06-61K
Misc :
Quant Time : Aug 17 10:02:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 23
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
7.82	5985647	16.78
9.98	7488691	29.87
10.38	4449434	23.02
10.48	18023823	25.21

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	1504434	12.15
10.30	1835623	19.35
10.65	1269618	7.78
10.80	4556800	14.75

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:55:51 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815127.D
Acq On : 16-Aug-2013, 08:55:43 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 200PPB DWSTD06-61L Vial : 24
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:00:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1308.0E6	321.8E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
47) Aroclor 1221	7.82	8.16	12082824	3087798	52.518	48.432
48) Aroclor 1221 (2)	9.98	10.30	16211846	3555683	67.690m	50.141 #
49) Aroclor 1221 (3)	10.38	10.65	9268723	2418050	57.212	39.023 #
50) Aroclor 1221 (4)	10.48	10.80	36053479	8996140	60.894m	48.897
51) Aroclor 1221 - TOTAL	0.00	0.00	73616872	18057671	60.536T	47.719T
52) Aroclor 1254	14.57	14.75	54466874	13772250	55.520	50.766
53) Aroclor 1254 (2)	14.99	15.24	38872702	9524139	55.352	52.907
54) Aroclor 1254 (3)	15.43	15.40	22487442	18175286	53.351	57.195
55) Aroclor 1254 (4)	15.56	15.69	43308377	12810215	51.815	79.467 #
56) Aroclor 1254 - TOTAL	0.00	0.00	159.1E6	54281890	54.110T	59.380T

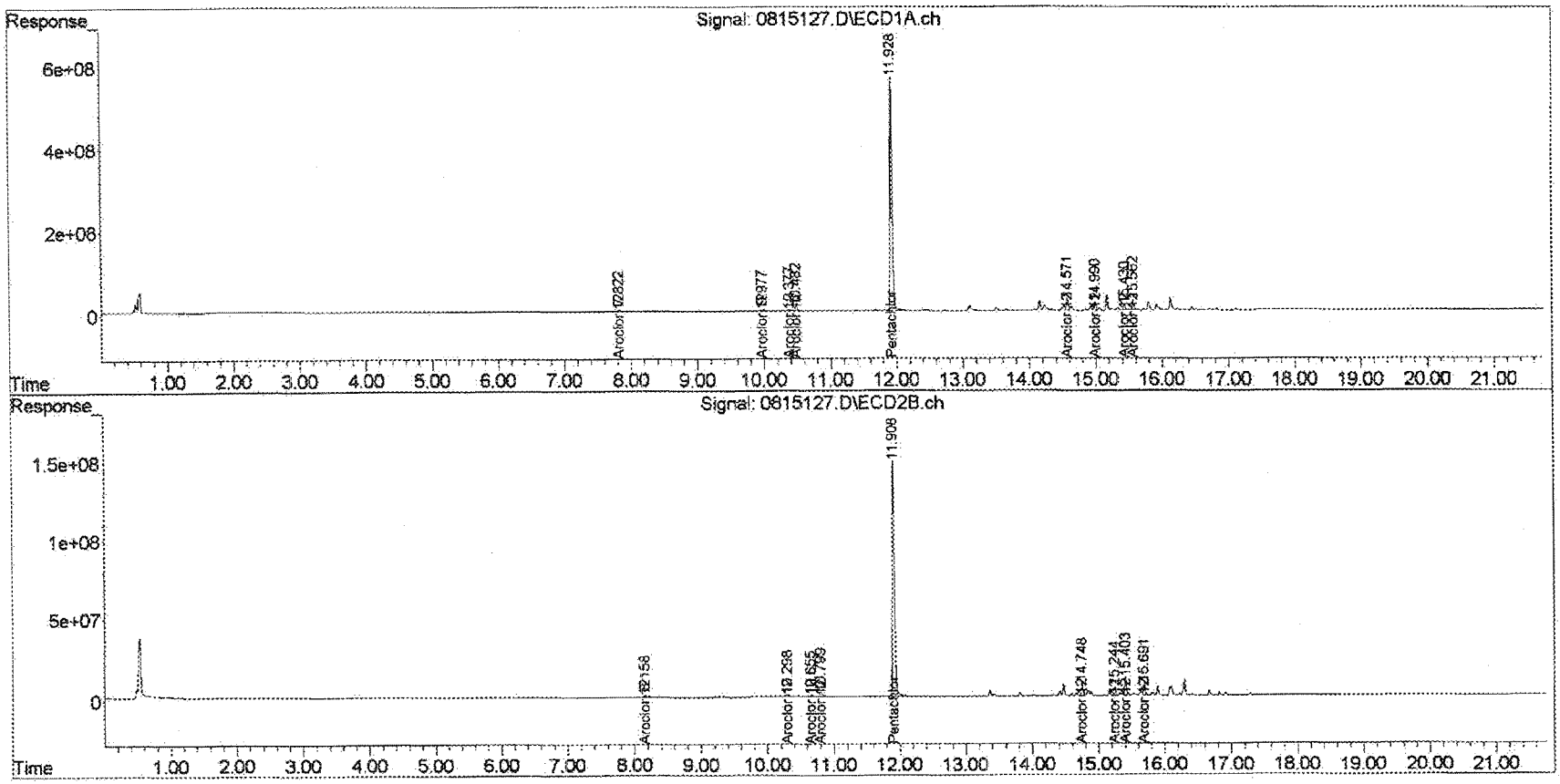
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815127.D
Acq On : 16-Aug-2013, 08:55:43 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 200PPB DWSTD06-61L Vial : 24
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:00:11 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



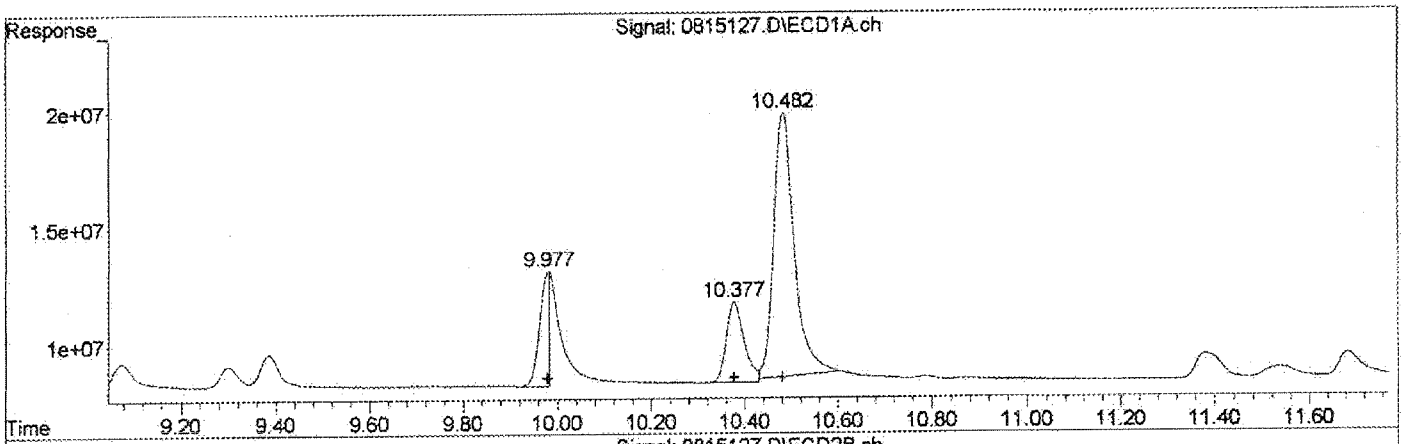
985

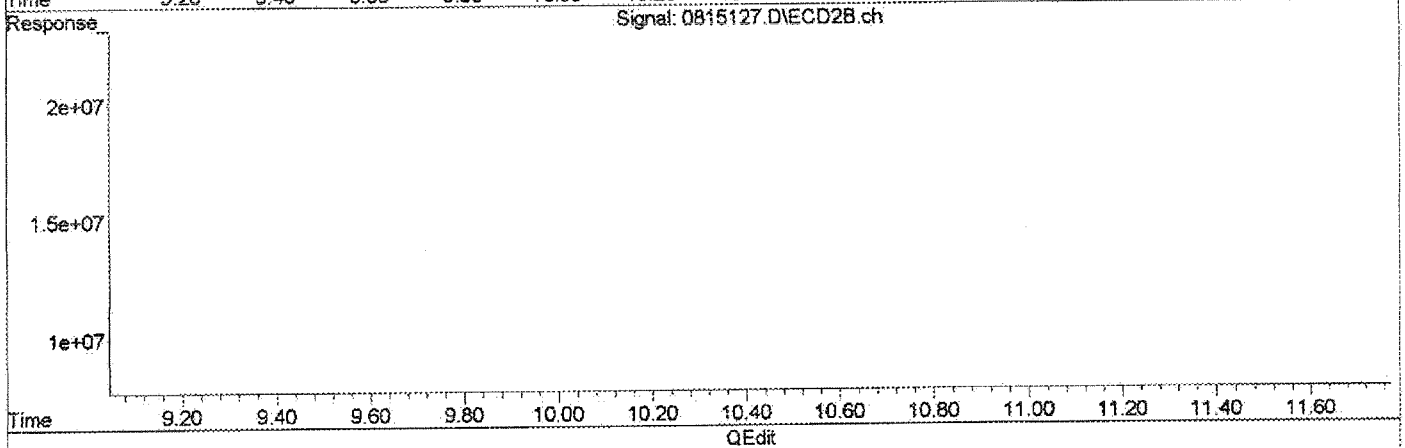
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815127.D
Acq On : 16-Aug-2013, 08:55:43
Acq Meth : 508.M
Sample : 2154 ICAL 200PPB DWSTD06-61L
Misc :
Quant Time : Aug 17 10:02:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 24
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.82	12082824	52.52
9.98	6411801	25.23
10.38	9268723	57.21
10.48	34127017	57.07

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	3087798	48.43
10.30	3555683	50.14
10.65	2418050	39.02
10.80	8996140	48.90

Manual Integration:

Before

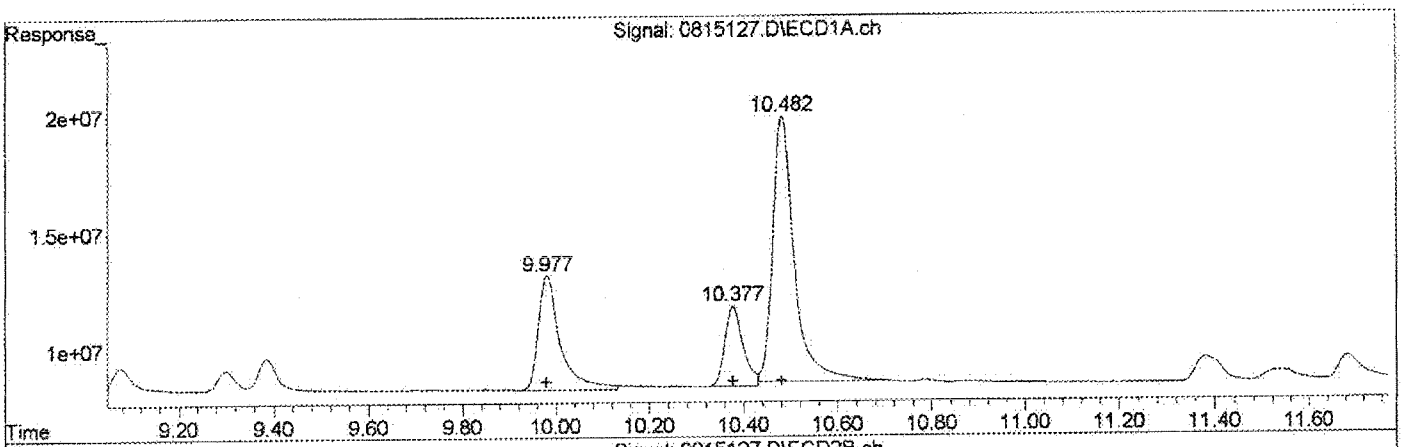
(+) = Expected Retention Time

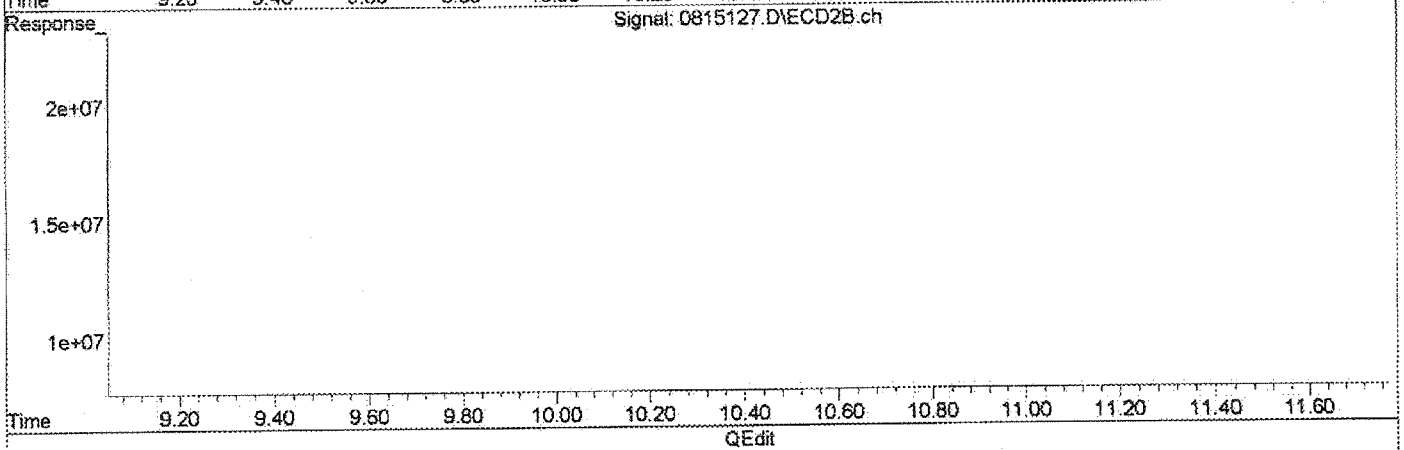
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815127.D
Acq On : 16-Aug-2013, 08:55:43
Acq Meth : 508.M
Sample : 2154 ICAL 200PPB DWSTD06-61L
Misc :
Quant Time : Aug 17 10:02:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 24
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
7.82	12082824	52.52
9.98	16211846	67.69
10.38	9268723	57.21
10.48	36053479	60.89

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	3087798	48.43
10.30	3555683	50.14
10.65	2418050	39.02
10.80	8996140	48.90

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815128.D
Acq On : 16-Aug-2013, 09:27:40 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 500PPB DWSTD06-61M Vial : 25
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:00:39 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.93	11.91	1302.3E6	320.0E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
47) Aroclor 1221	7.82	8.16	26709315	7083099	140.272	141.717
48) Aroclor 1221 (2)	9.98	10.30	37218108	9089687	160.212	150.344
49) Aroclor 1221 (3)	10.38	10.65	22486764	5871150	152.437	134.213
50) Aroclor 1221 (4)	10.48	10.80	87261001	21997413	164.176m	150.313
51) Aroclor 1221 - TOTAL	0.00	0.00	173.7E6	44041349	157.855T	146.697T
52) Aroclor 1254	14.57	14.75	127.0E6	33611635	162.633	167.427
53) Aroclor 1254 (2)	14.99	15.24	94303283	23716713	162.751	168.873
54) Aroclor 1254 (3)	15.43	15.40	52799885	45117322	162.565	174.663
55) Aroclor 1254 (4)	15.56	15.69	102.7E6	31345152	150.201	214.469 #
56) Aroclor 1254 - TOTAL	0.00	0.00	376.9E6	133.8E6	159.034T	180.013T

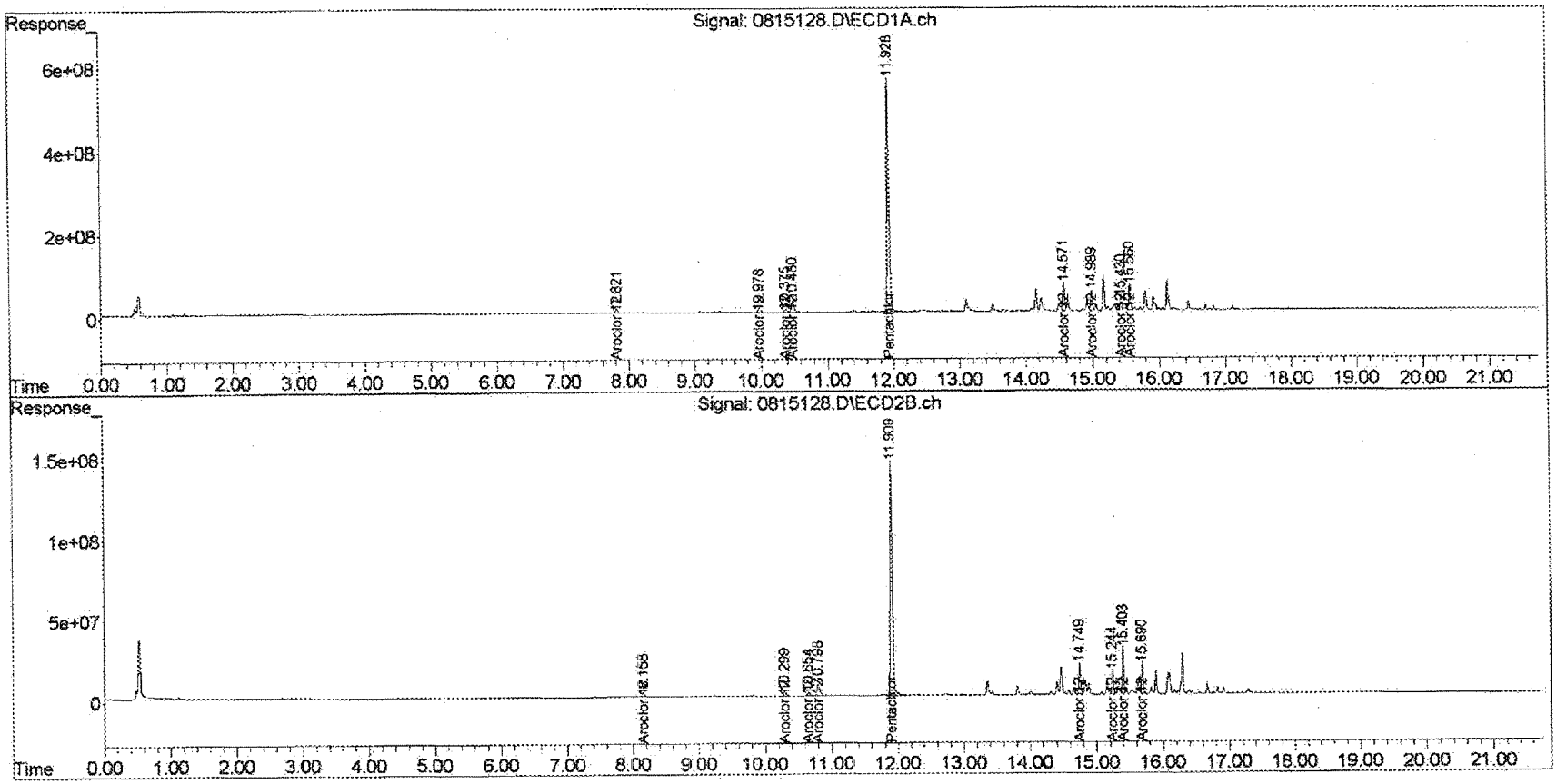
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815128.D
Acq On : 16-Aug-2013, 09:27:40 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 500PPB DWSTD06-61M Vial : 25
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:00:39 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



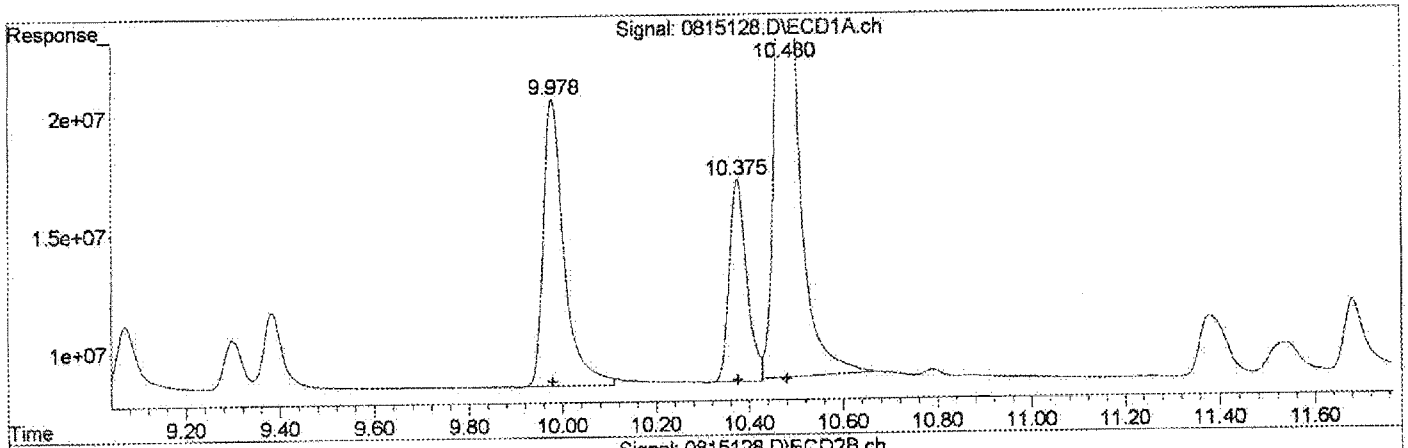
686

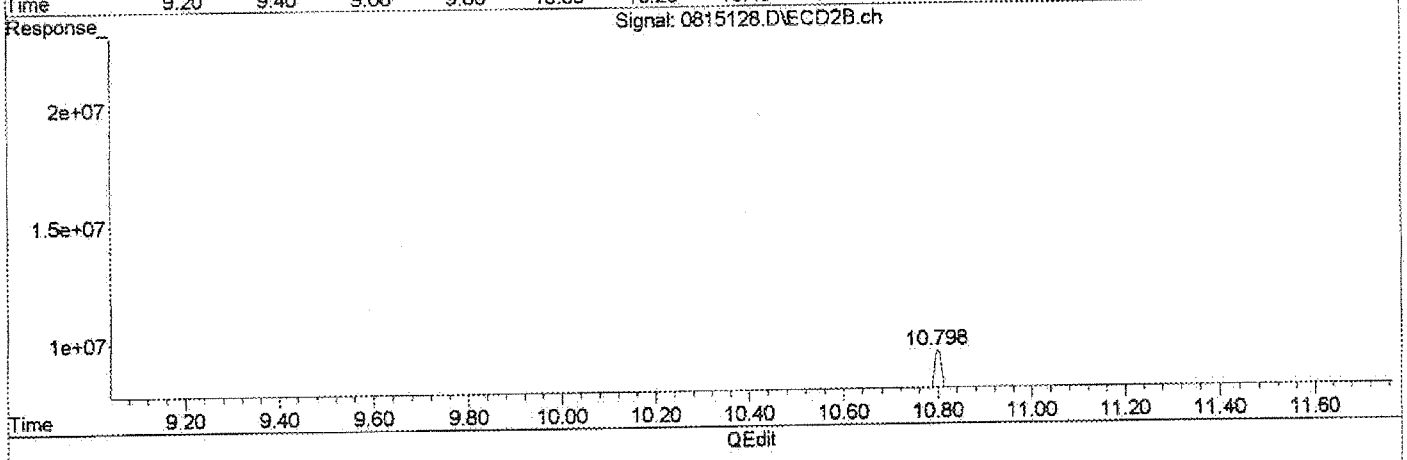
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815128.D
Acq On : 16-Aug-2013, 09:27:40
Acq Meth : 508.M
Sample : 2154 ICAL 500PPB DWSTD06-61M
Misc :
Quant Time : Aug 17 10:03:43 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 25
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.82	26709315	140.27
9.98	37218108	160.21
10.38	22486764	152.44
10.48	86544030	162.72

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	7083099	141.72
10.30	9089687	150.34
10.65	5871150	134.21
10.80	21997413	150.31

Manual Integration:

Before

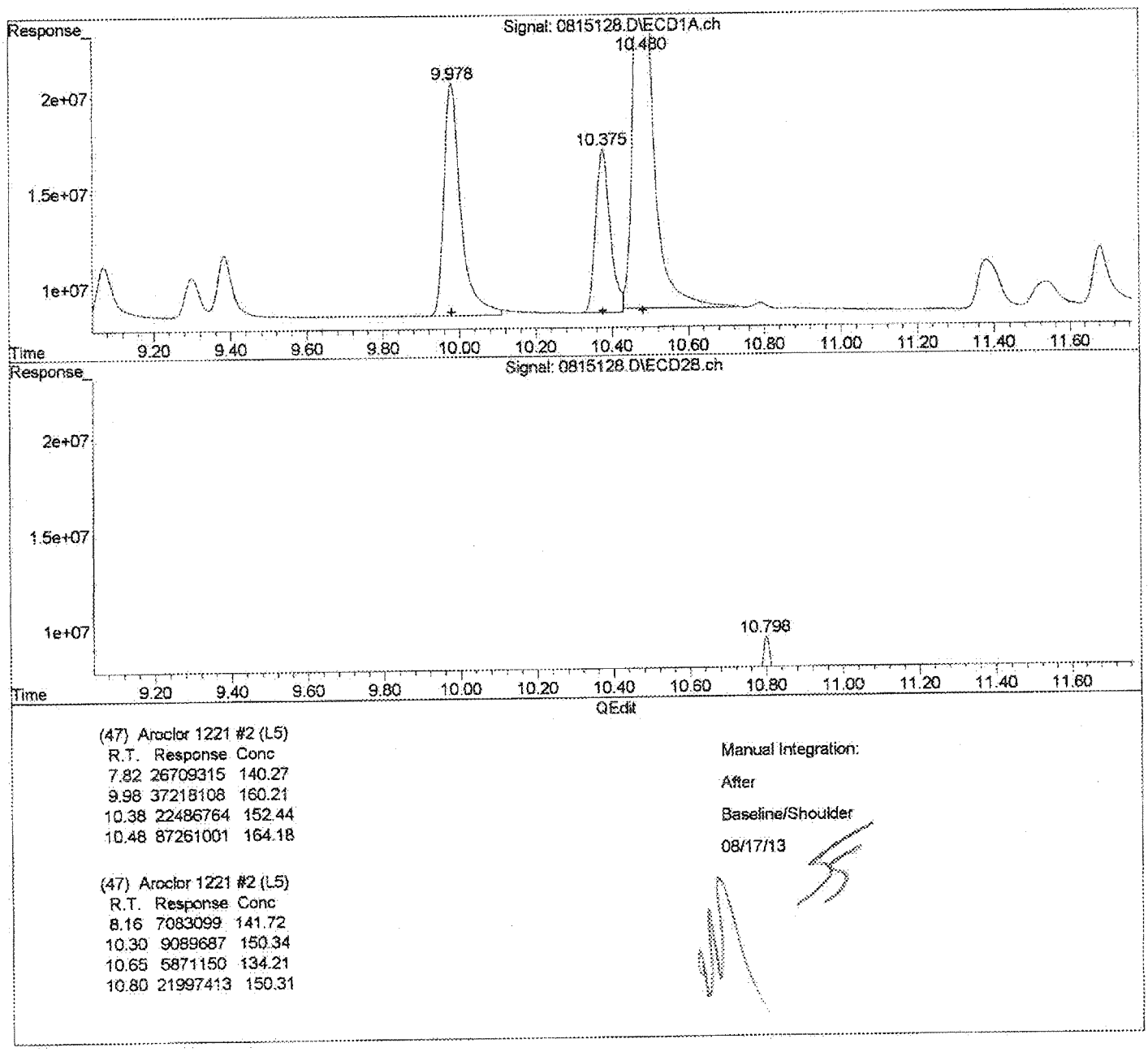
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815128.D
Acq On : 16-Aug-2013, 09:27:40
Acq Meth : 508.M
Sample : 2154 ICAL 500PPB DWSTD06-61M
Misc :
Quant Time : Aug 17 10:03:43 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 25
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
7.82	26709315	140.27
9.98	37218108	160.21
10.38	22486764	152.44
10.48	87261001	164.18

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	7083099	141.72
10.30	9089687	150.34
10.65	5871150	134.21
10.80	21997413	150.31

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:57:17 2013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815129.D
Acq On : 16-Aug-2013, 09:54:55 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 1000PPB DWSTD06-61N Vial : 26
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:01:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
36)	Pentachloronitrob...	11.92	11.91	1289.0E6	323.4E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
47)	Aroclor 1221	7.81	8.16	48767258	13491755	279.192	291.573
48)	Aroclor 1221 (2)	9.97	10.30	73672574	18226704	326.370	314.611
49)	Aroclor 1221 (3)	10.37	10.65	43961539	11582347	312.536	290.947
50)	Aroclor 1221 (4)	10.47	10.80	162.5E6	43057503	322.355m	313.935
51)	Aroclor 1221 - TOTAL	0.00	0.00	328.9E6	86358309	315.034T	307.297T
52)	Aroclor 1254	14.57	14.75	245.8E6	67814613	341.089	363.637
53)	Aroclor 1254 (2)	14.99	15.24	173.9E6	47940963	319.957	362.004
54)	Aroclor 1254 (3)	15.43	15.40	99324279	91137549	333.335	370.437
55)	Aroclor 1254 (4)	15.56	15.69	203.6E6	62751242	320.146	437.600 #
56)	Aroclor 1254 - TOTAL	0.00	0.00	722.6E6	269.6E6	328.701T	381.108T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

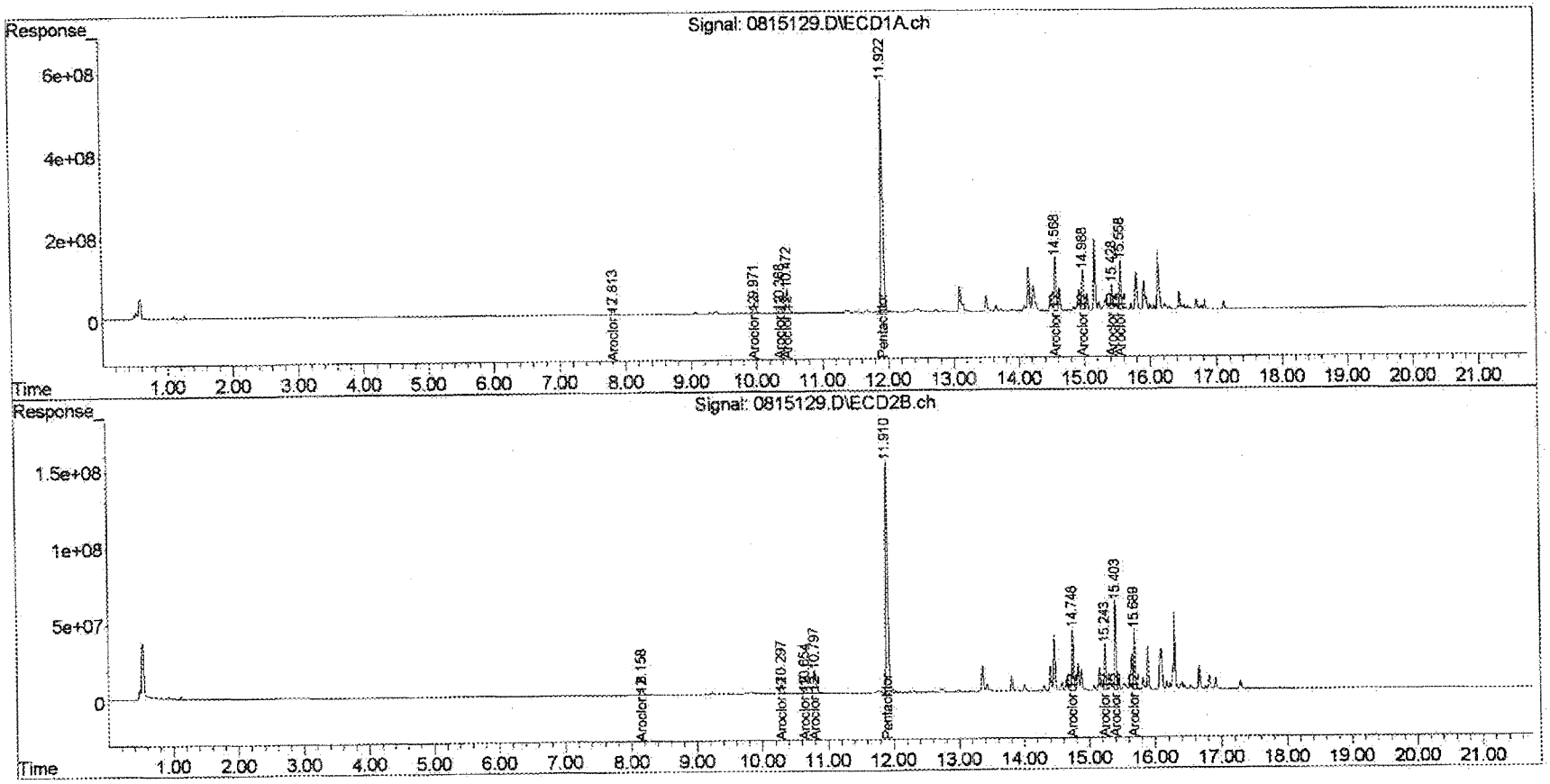
55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815129.D
Acq On : 16-Aug-2013, 09:54:55
Acq Meth : 508.M
Sample : 2154 ICAL 1000PPB DWSTD06-61N
Misc :
Quant Time : Aug 17 11:01:24 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 26
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

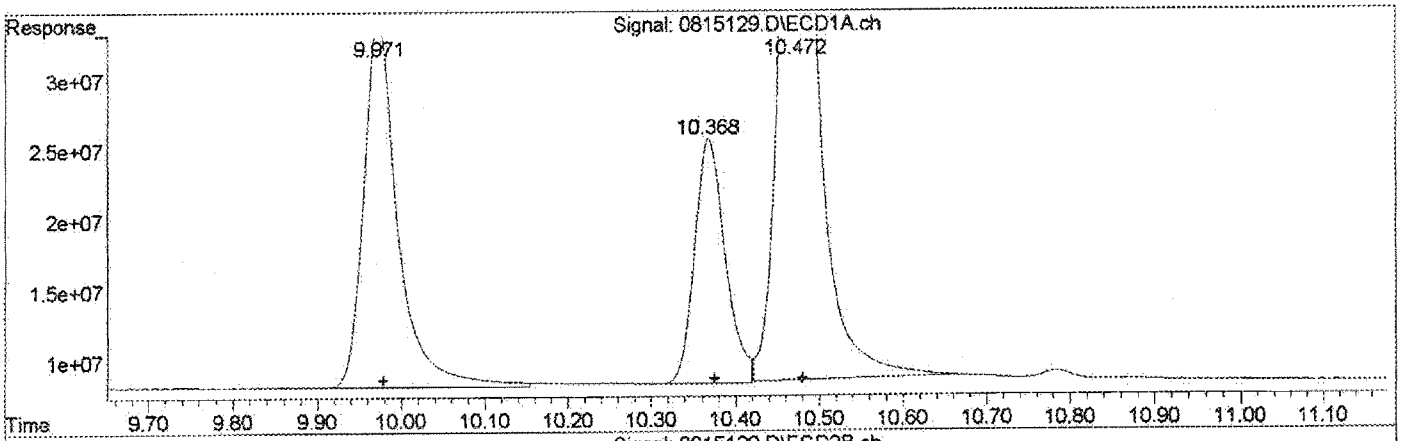


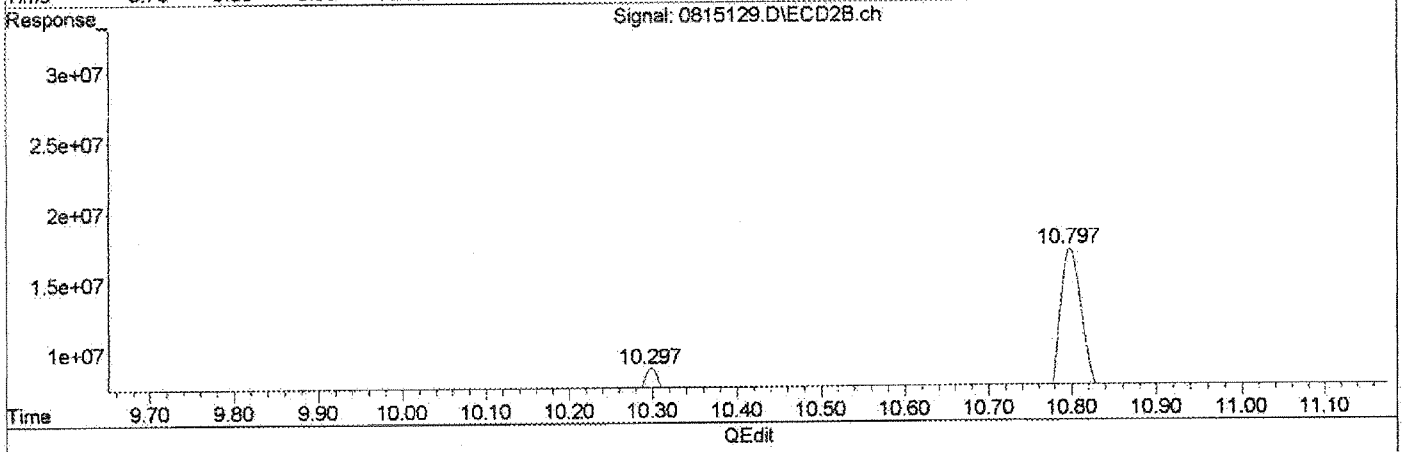
993

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815129.D
Acq On : 16-Aug-2013, 09:54:55 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 1000PPB DWSTD06-61N Vial : 26
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:04:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.81	48767258	279.19
9.97	73672574	326.37
10.37	43961539	312.54
10.47	163075176	323.61

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	13491755	291.57
10.30	18226704	314.61
10.65	11582347	290.95
10.80	43057503	313.93

Manual Integration:

Before

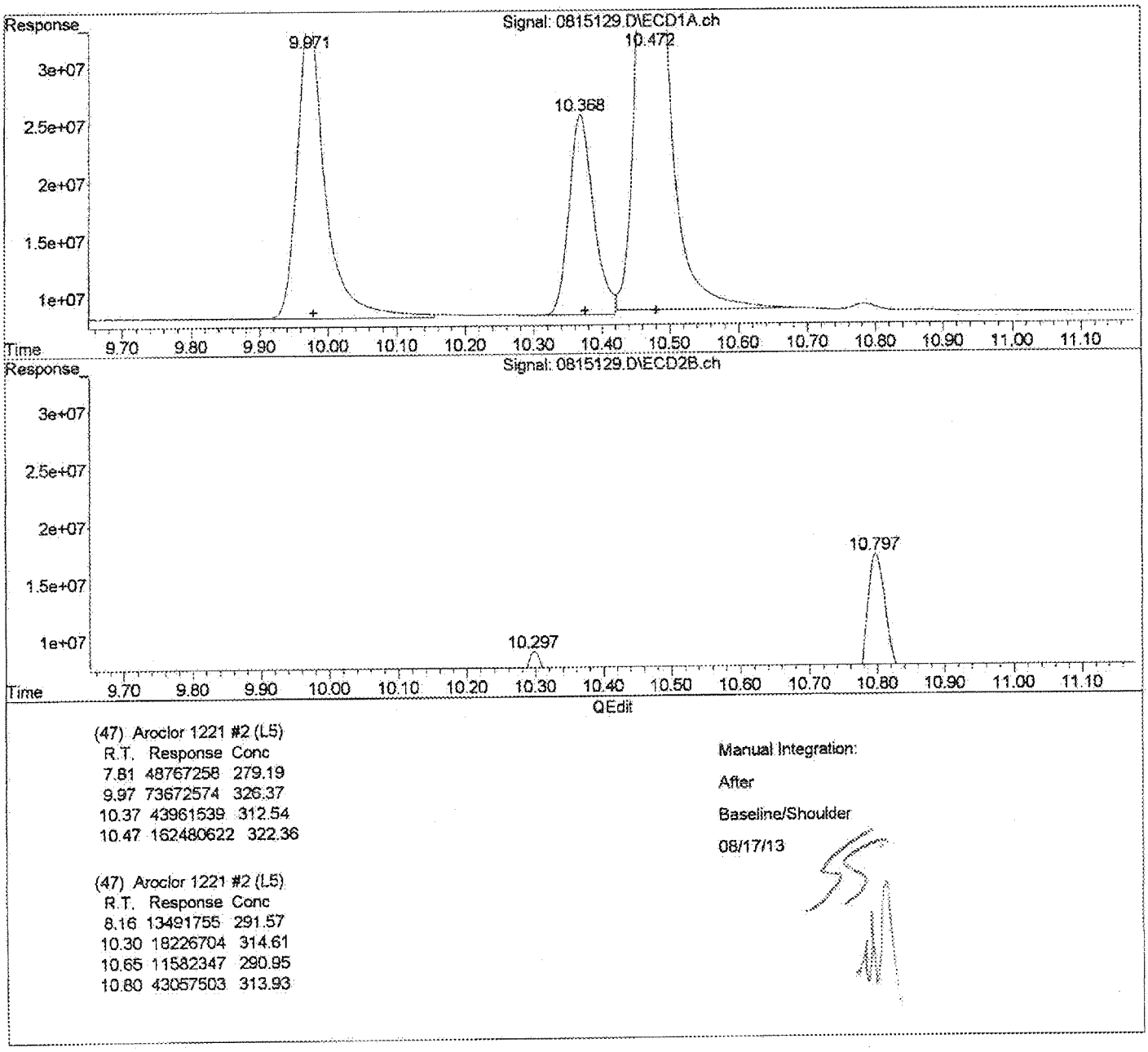
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815129.D
Acq On : 16-Aug-2013, 09:54:55
Acq Meth : 508.M
Sample : 2154 ICAL 1000PPB DWSTD06-61N
Misc :
Quant Time : Aug 17 10:04:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 26
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
7.81	48767258	279.19
9.97	73672574	326.37
10.37	43961539	312.54
10.47	162480622	322.36

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	13491755	291.57
10.30	18226704	314.61
10.65	11582347	290.95
10.80	43057503	313.93

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 10:58:00 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815130.D
Acq On : 16-Aug-2013, 10:22:44 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 2000PPB DWSTD06-610 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:02:06 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.92	11.91	1313.3E6	331.5E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
47) Aroclor 1221	7.82	8.16	86785169	24727186	517.604	555.911
48) Aroclor 1221 (2)	9.97	10.30	142.1E6	35824402	632.539	628.475
49) Aroclor 1221 (3)	10.37	10.65	85616932	22467161	617.271	589.054
50) Aroclor 1221 (4)	10.48	10.80	303.5E6	83869727	615.276m	630.918
51) Aroclor 1221 - TOTAL	0.00	0.00	617.9E6	166.9E6	604.216T	612.714T
52) Aroclor 1254	14.57	14.75	475.0E6	133.3E6	668.718	724.323
53) Aroclor 1254 (2)	14.99	15.24	344.5E6	97627304	640.407	743.115
54) Aroclor 1254 (3)	15.43	15.40	193.5E6	183.3E6	662.181	747.571
55) Aroclor 1254 (4)	15.56	15.69	403.4E6	124.6E6	640.735	860.138 #
56) Aroclor 1254 - TOTAL	0.00	0.00	1416.4E6	538.9E6	652.658T	764.194T

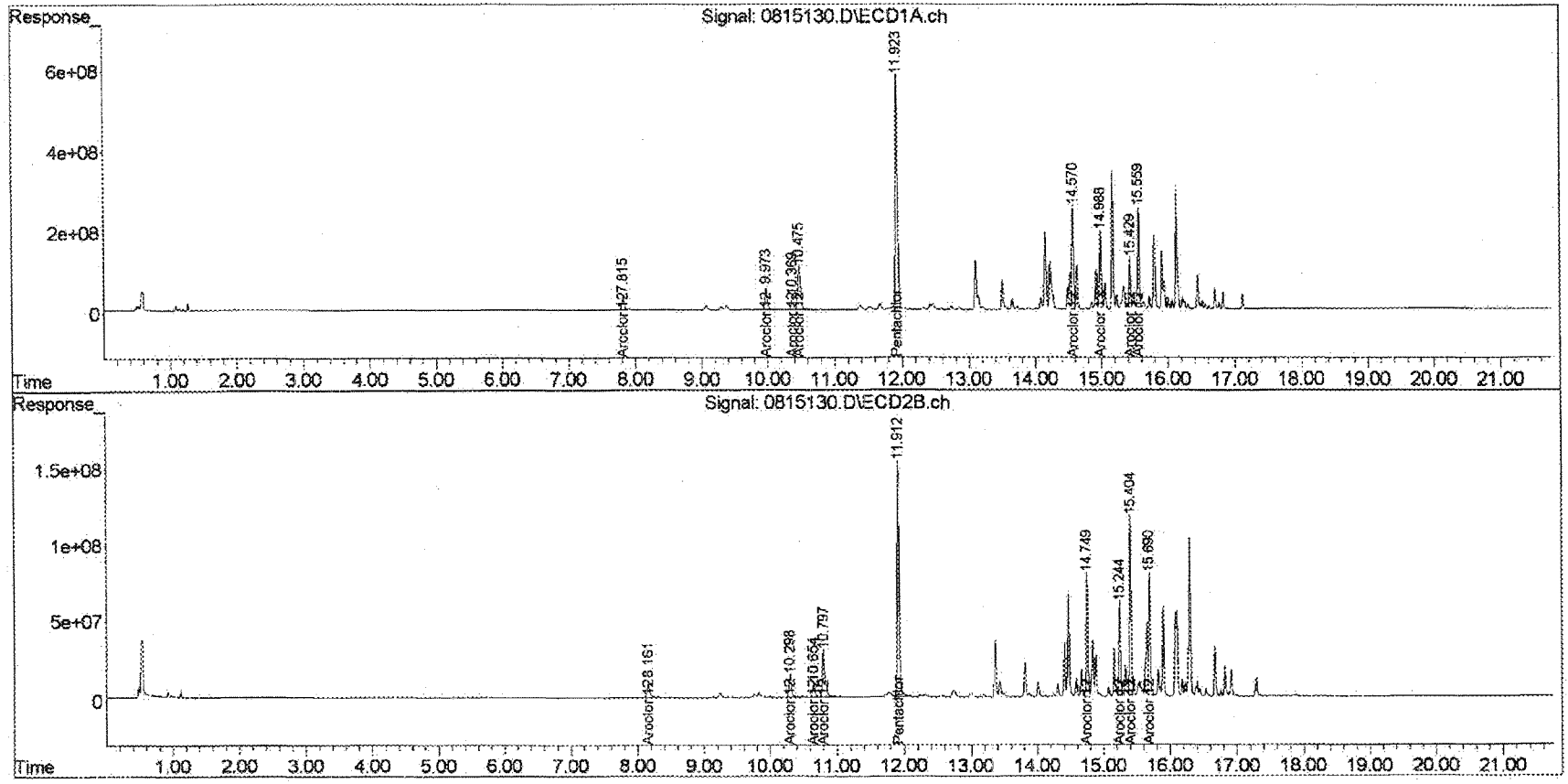
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815130.D
Acq On : 16-Aug-2013, 10:22:44 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICAL 2000PPB DWSTD06-610 Vial : 27
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:02:06 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

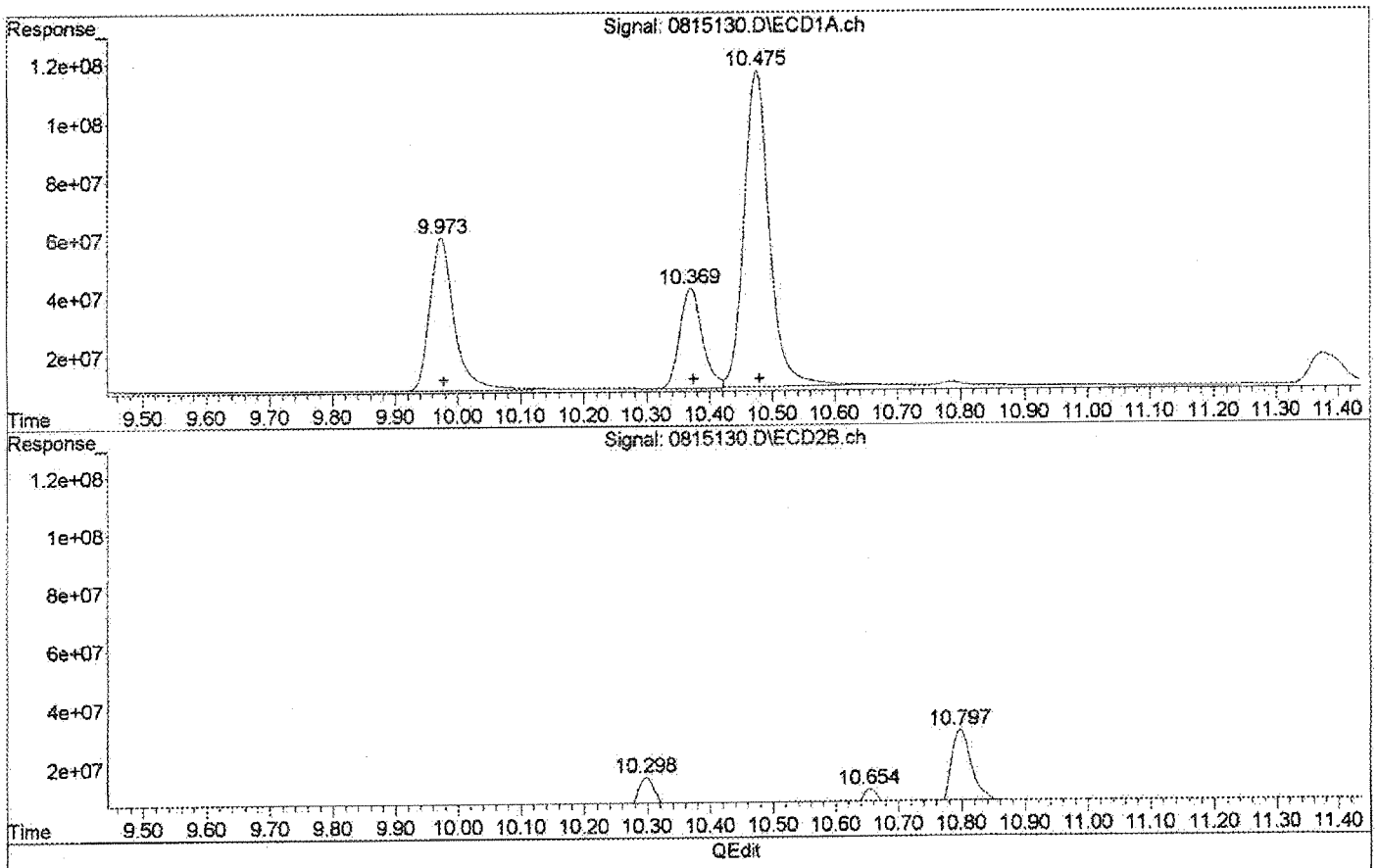


Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815130.D
Acq On : 16-Aug-2013, 10:22:44
Acq Meth : 508.M
Sample : 2154 ICAL 2000PPB DWSTD06-61O
Misc :
Quant Time : Aug 17 10:05:05 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 27
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.82	86785169	517.60
9.97	142057039	632.54
10.37	85616932	617.27
10.48	304435423	617.43

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	24727186	555.91
10.30	35824402	628.47
10.65	22467161	589.05
10.80	83869727	630.92

Manual Integration:

Before

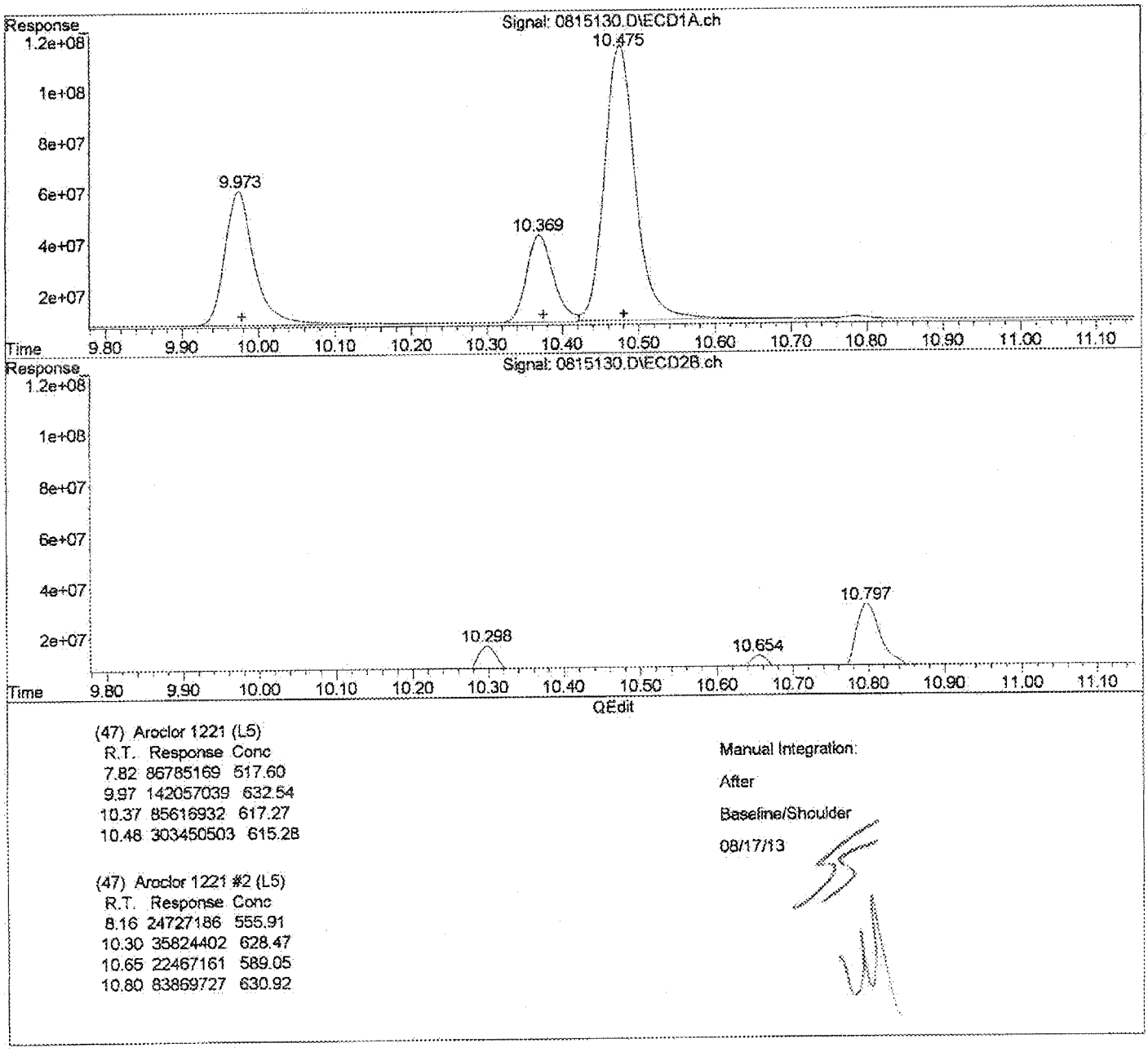
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815130.D
Acq On : 16-Aug-2013, 10:22:44
Acq Meth : 508.M
Sample : 2154 ICAL 2000PPB DWSTD06-610
Misc :
Quant Time : Aug 17 10:05:05 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 27
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.82	86785169	517.60
9.97	142057039	632.54
10.37	85616932	617.27
10.48	303450503	615.28

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.16	24727186	555.91
10.30	35824402	628.47
10.65	22467161	589.05
10.80	83869727	630.92

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815132.D
Acq On : 16-Aug-2013, 11:23:49 Operator : SSullivan
Acq Meth : 508.M
Sample : 1232 ICAL 50PPB DWSTD06-60G Vial : 29
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:07:23 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.93	11.91	1282.1E6	316.4E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.49	10.80	7783262	1928270	19.365	N.D. #
59) Aroclor 1232 (2)	11.38	12.31	6904746	699541	20.688	3.589 #
60) Aroclor 1232 (3)	12.47	13.00	6486243	1249048	18.066	N.D. #
61) Aroclor 1232 (4)	13.51	13.81	3585351	842149	19.784	N.D. #
62) Aroclor 1232 - TOTAL	0.00	0.00	24759602	4719008	19.405T	N.D. T#

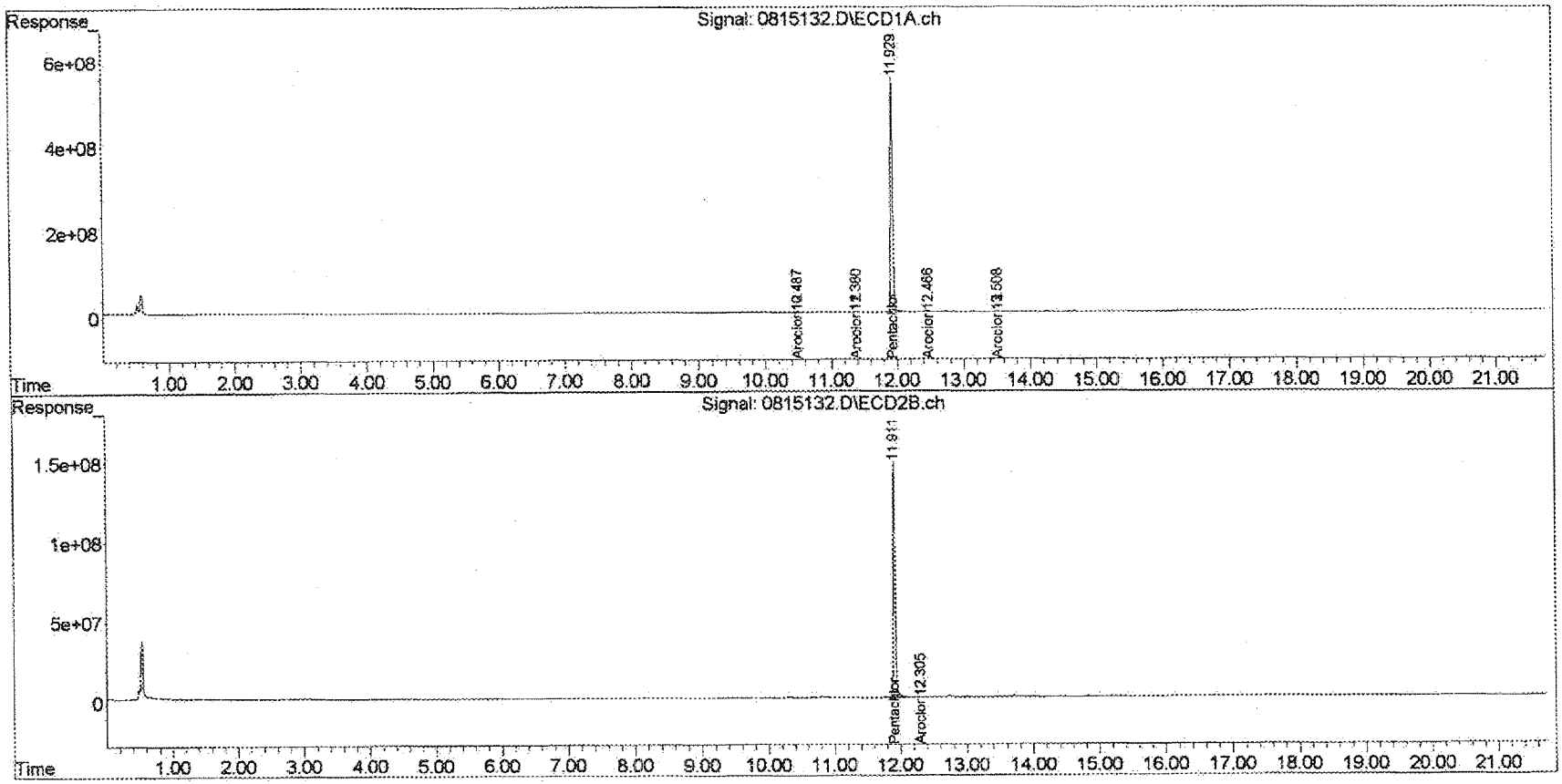
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815132.D
Acq On : 16-Aug-2013, 11:23:49 Operator : SSullivan
Acq Meth : 508.M
Sample : 1232 ICAL 50PPB DWSTD06-60G Vial : 29
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:07:23 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



1001

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815133.D
Acq On : 16-Aug-2013, 12:01:33 Operator : SSullivan
Acq Meth : 508.M
Sample : 1232 ICAL 100PPB DWSTD06-60H Vial : 30
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:08:06 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.93	11.91	1282.7E6	316.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.48	10.80	15869923	4022922	39.465	16.864 #
59) Aroclor 1232 {2}	11.38	12.30	13443460	1343825	40.259	24.721 #
60) Aroclor 1232 {3}	12.46	12.99	12867376	2212849	35.821	10.024 #
61) Aroclor 1232 {4}	13.51	13.81	6901547	1704273	38.064	15.148 #
62) Aroclor 1232 - TOTAL	0.00	0.00	49082306	9283869	38.448T	15.755T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

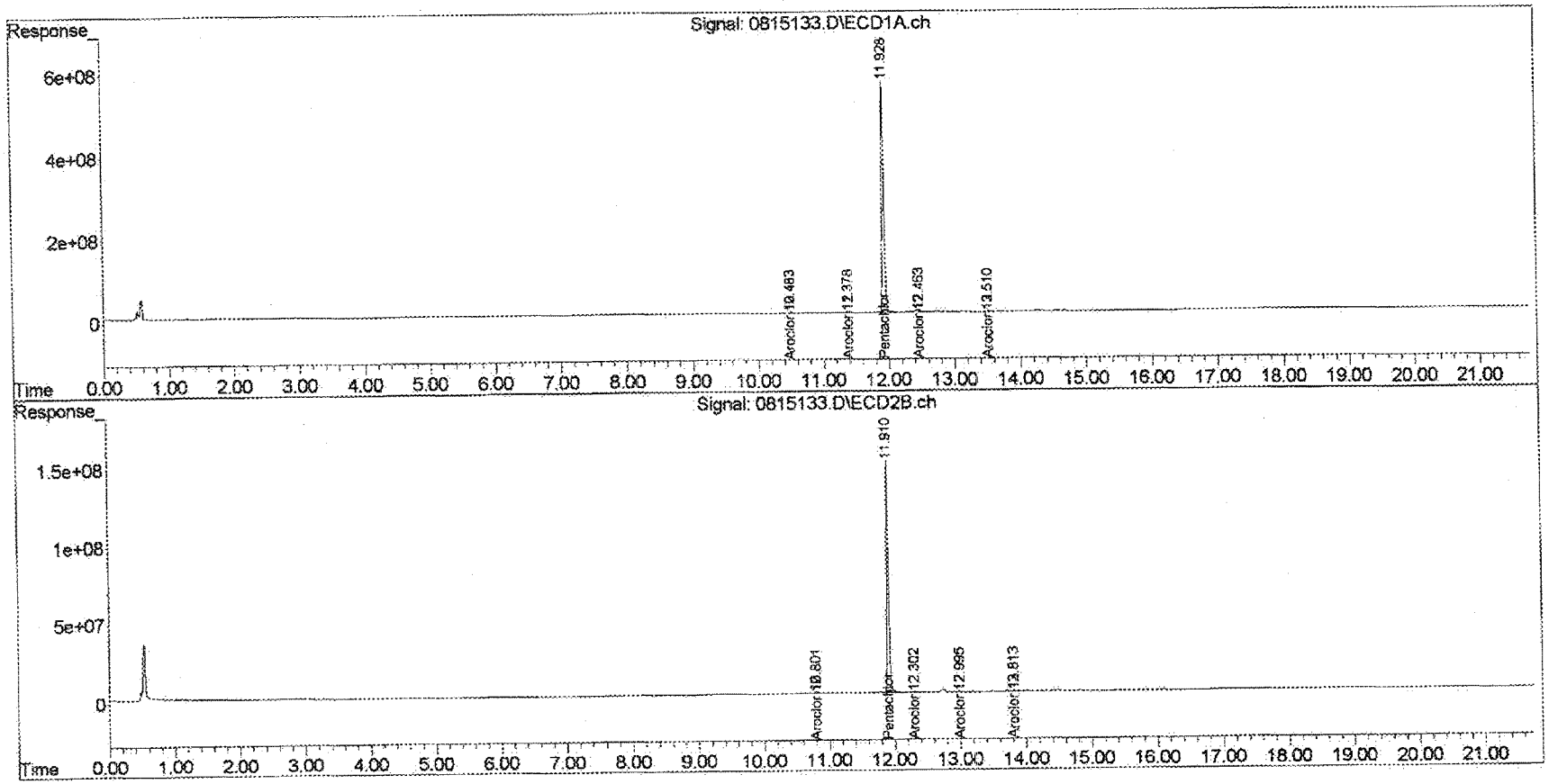
Data File : J:\GC33\Data\081513-ICAL2\0815133.D
Acq On : 16-Aug-2013, 12:01:33
Acq Meth : 508.M
Sample : 1232 ICAL 100PPB DWSTD06-60H
Misc :
Quant Time : Aug 17 10:08:06 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan

Vial : 30
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um

Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1003

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815134.D
Acq On : 16-Aug-2013, 12:29:06
Acq Meth : 508.M
Sample : 1232 ICAL 200PPB DWSTD06-60I
Misc :
Quant Time : Aug 17 10:08:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 31
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.92	11.91	1273.5E6	316.4E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.48	10.80	29995396	7877870	75.132	55.858 #
59) Aroclor 1232 (2)	11.37	12.30	26419677	2825678	79.691	73.203
60) Aroclor 1232 (3)	12.46	12.99	26944224	4838493	75.551	52.177 #
61) Aroclor 1232 (4)	13.50	13.81	13788483	3543226	76.597	57.162 #
62) Aroclor 1232 - TOTAL	0.00	0.00	97147780	19085267	76.650T	57.378T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

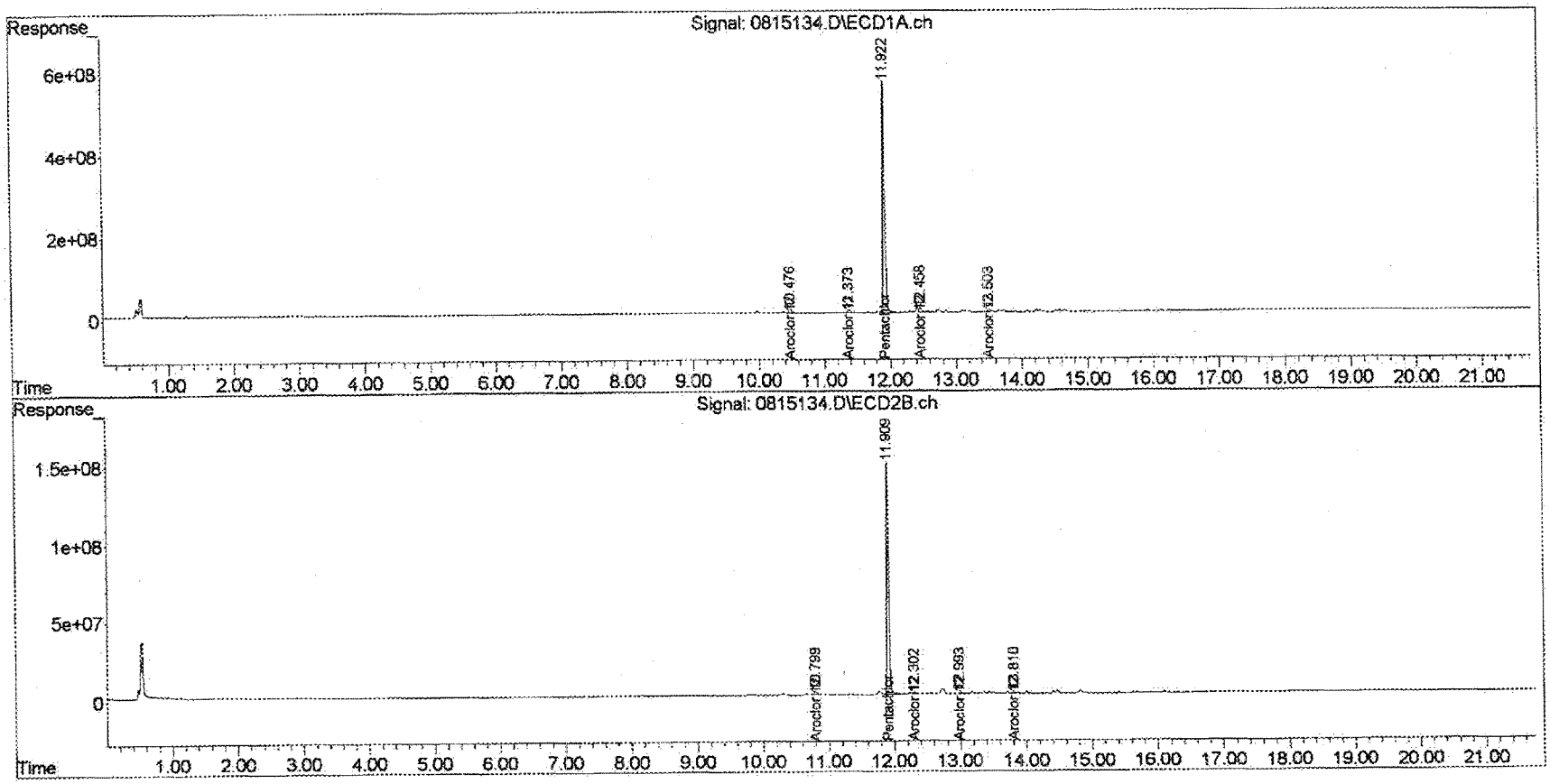
8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815134.D
Acq On : 16-Aug-2013, 12:29:06
Acq Meth : 508.M
Sample : 1232 ICAL 200PPB DWSTD06-60I
Misc :
Quant Time : Aug 17 10:08:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 31
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1005

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815135.D
Acq On : 16-Aug-2013, 12:55:06 Operator : SSullivan
Acq Meth : 508.M
Sample : 1232 ICAL 500PPB DWSTD06-6OJ Vial : 32
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:09:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.92	11.91	1301.9E6	319.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.47	10.80	76482705	20224509	187.395	179.135
59) Aroclor 1232 (2)	11.37	12.30	63065997	6710678	186.081	198.557
60) Aroclor 1232 (3)	12.45	12.99	67525701	11869906	185.212	163.538
61) Aroclor 1232 (4)	13.50	13.81	33165171	8735561	180.219	174.201
62) Aroclor 1232 - TOTAL	0.00	0.00	240.2E6	47540654	185.418T	176.613T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

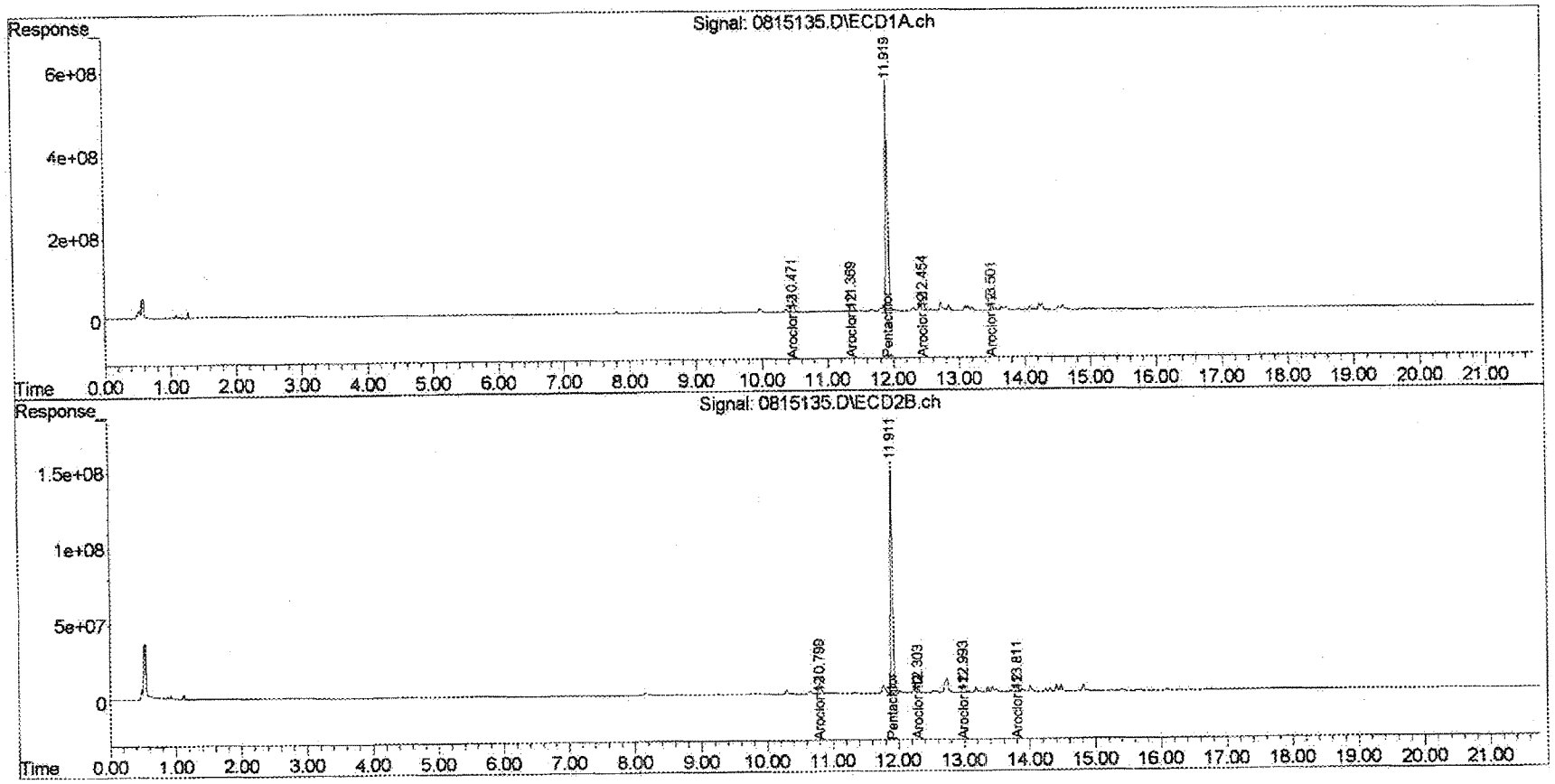
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815135.D
Acq On : 16-Aug-2013, 12:55:06
Acq Meth : 508.M
Sample : 1232 ICAL 500PPB DWSTD06-60J
Misc :
Quant Time : Aug 17 10:09:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 32
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1007

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815136.D
Acq On : 16-Aug-2013, 13:28:15 Operator : SSullivan
Acq Meth : 508.M
Sample : 1232 ICAL 1000PPB DWSTD06-60K Vial : 33
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:07:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.93	11.91	1293.4E6	319.2E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.48	10.80	147.5E6	39008469	363.680	367.648
59) Aroclor 1232 (2)	11.38	12.30	121.5E6	12999945	360.734	402.684
60) Aroclor 1232 (3)	12.46	12.99	131.9E6	23569130	364.199m	349.856
61) Aroclor 1232 (4)	13.51	13.81	64871208	17129340	354.826	364.445
62) Aroclor 1232 - TOTAL	0.00	0.00	465.7E6	92706884	361.798T	366.894T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

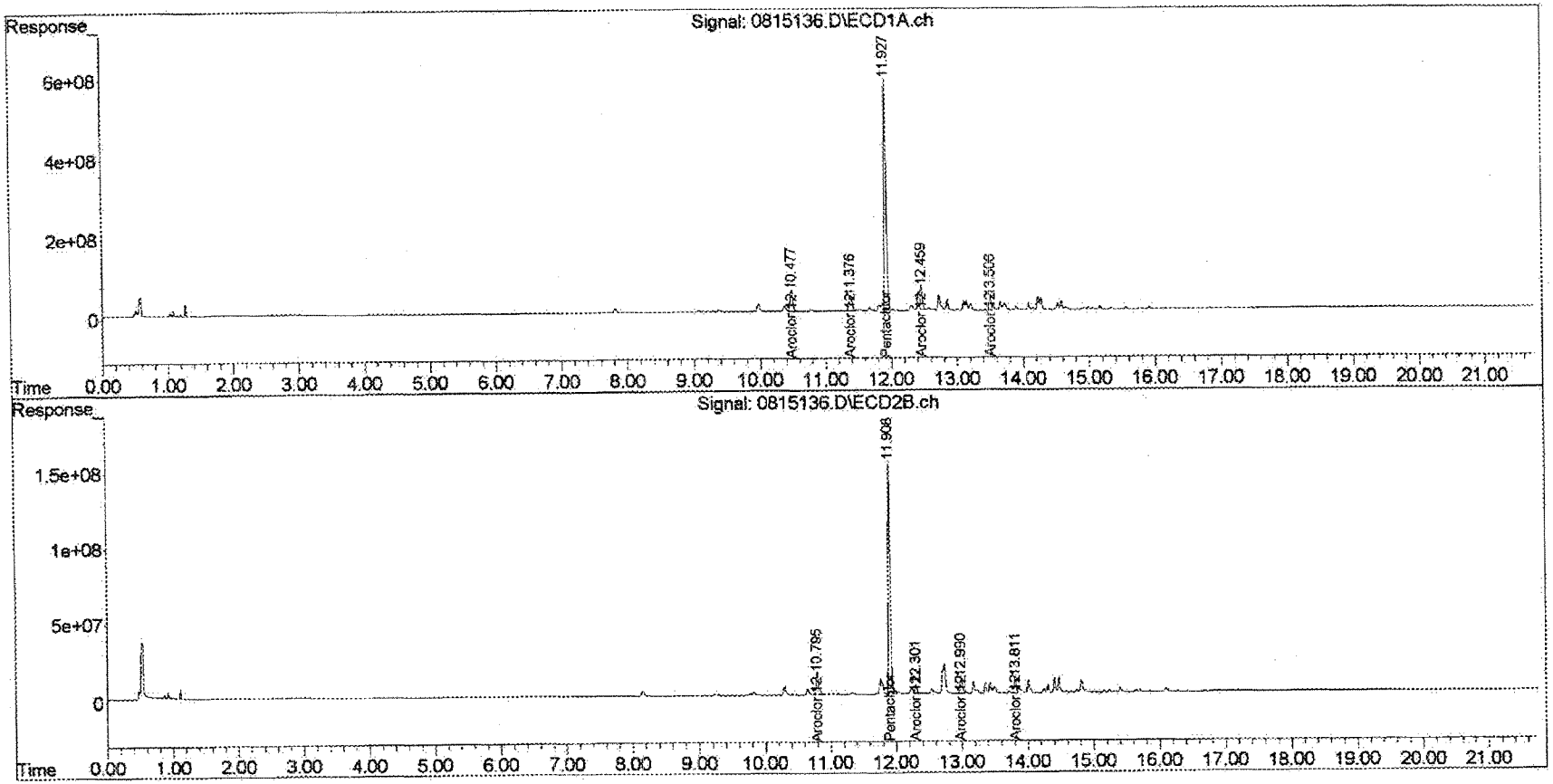
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815136.D
Acq On : 16-Aug-2013, 13:28:15
Acq Meth : 508.M
Sample : 1232 ICAL 1000PPB DWSTD06-60K
Misc :
Quant Time : Aug 17 11:07:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 33
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



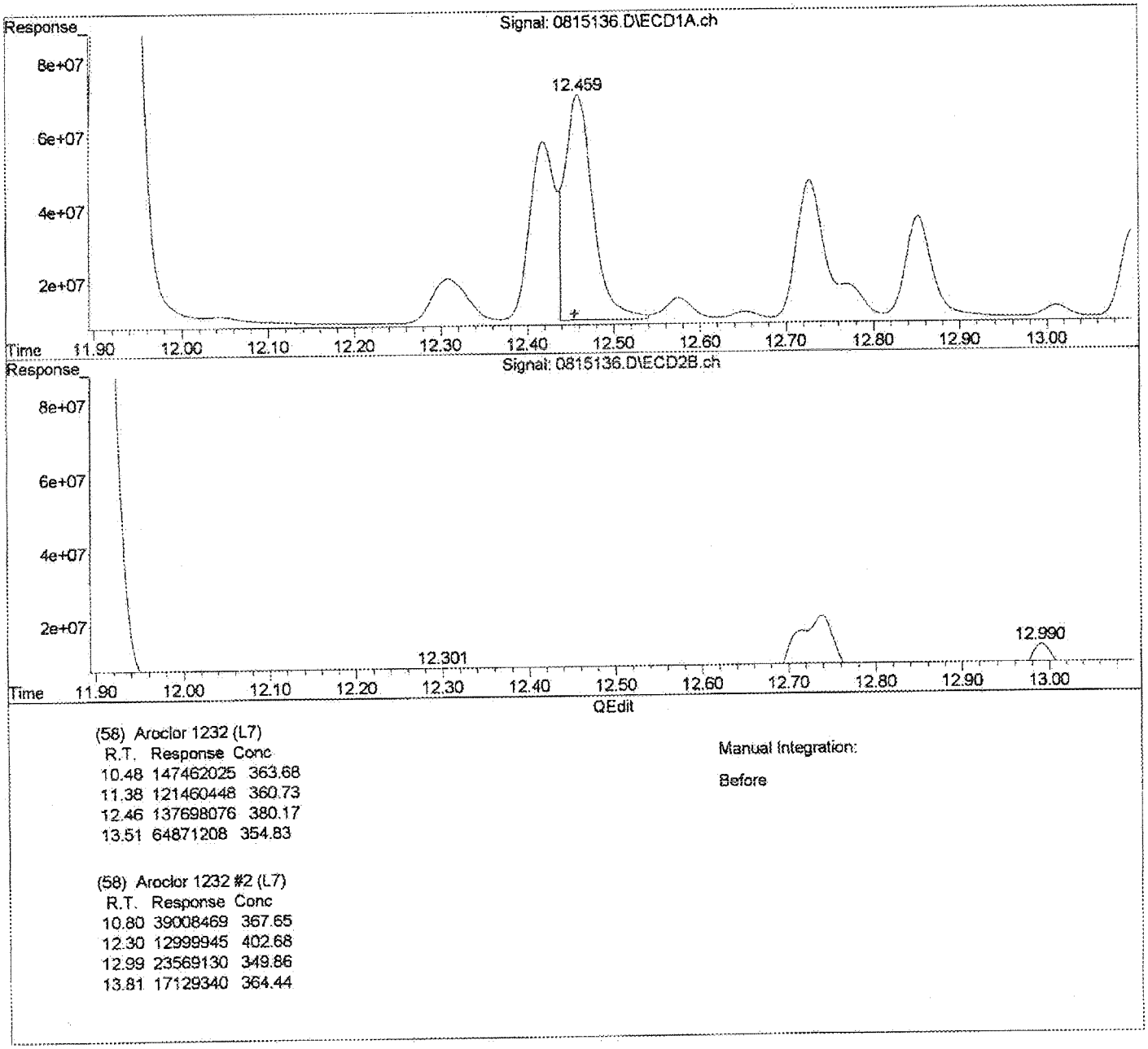
1009

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815136.D
Acq On : 16-Aug-2013, 13:28:15
Acq Meth : 508.M
Sample : 1232 ICAL 1000PPB DWSTD06-60K
Misc :
Quant Time : Aug 17 10:10:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 33
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(58) Aroclor 1232 (L7)

R.T.	Response	Conc
10.48	147462025	363.68
11.38	121460448	360.73
12.46	137698076	380.17
13.51	64871208	354.83

(58) Aroclor 1232 #2 (L7)

R.T.	Response	Conc
10.80	39008469	367.65
12.30	12999945	402.68
12.99	23569130	349.86
13.81	17129340	364.44

Manual Integration:

Before

(+) = Expected Retention Time

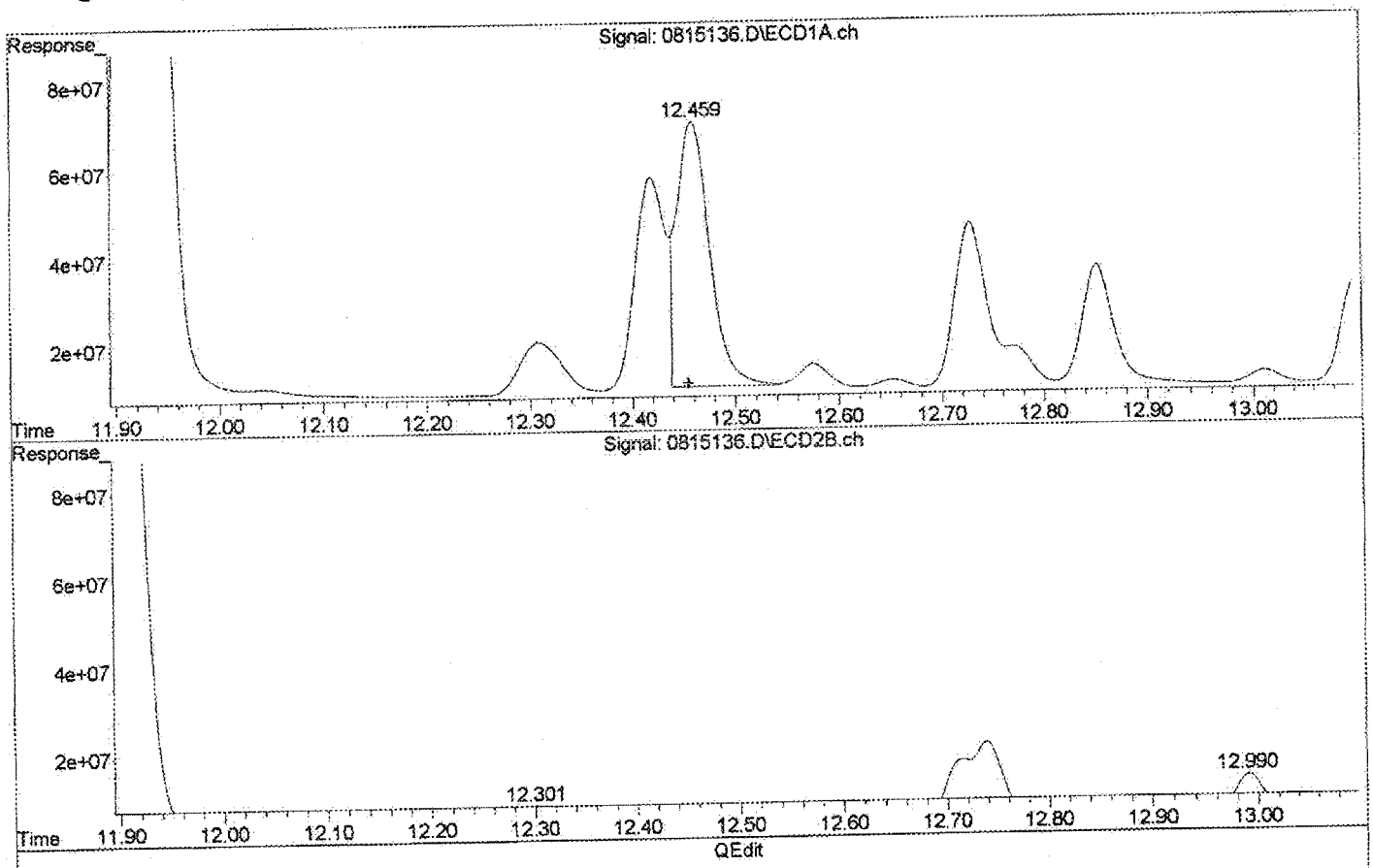
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815136.D
Acq On : 16-Aug-2013, 13:28:15
Acq Meth : 508.M
Sample : 1232 ICAL 1000PPB DWSTD06-60K
Misc :
Quant Time : Aug 17 10:10:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 33
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um

Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(58) Aroclor 1232 #2 (L7)

R.T.	Response	Conc
10.48	147462025	363.68
11.38	121460448	360.73
12.46	131914961	364.20
13.51	64871208	354.83

(58) Aroclor 1232 #2 (L7)

R.T.	Response	Conc
10.80	39008469	367.65
12.30	12999945	402.68
12.99	23569130	349.86
13.81	17129340	364.44

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:04:24 2013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815137.D
Acq On : 16-Aug-2013, 14:06:47
Acq Meth : 508.M
Sample : 1232 ICAL 2000PPB DWSTD06-60L
Misc :
Quant Time : Aug 17 11:07:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 34
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.93	11.90	1332.5E6	327.4E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
58) Aroclor 1232	10.48	10.79	277.3E6	74915946	663.879	709.021
59) Aroclor 1232 {2}	11.38	12.30	229.7E6	24730871	662.107	763.153
60) Aroclor 1232 {3}	12.46	12.99	254.0E6	46720969	680.700	699.772
61) Aroclor 1232 {4}	13.50	13.81	126.3E6	33637605	670.513	719.347
62) Aroclor 1232 - TOTAL	0.00	0.00	887.3E6	180.0E6	669.091T	715.520T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

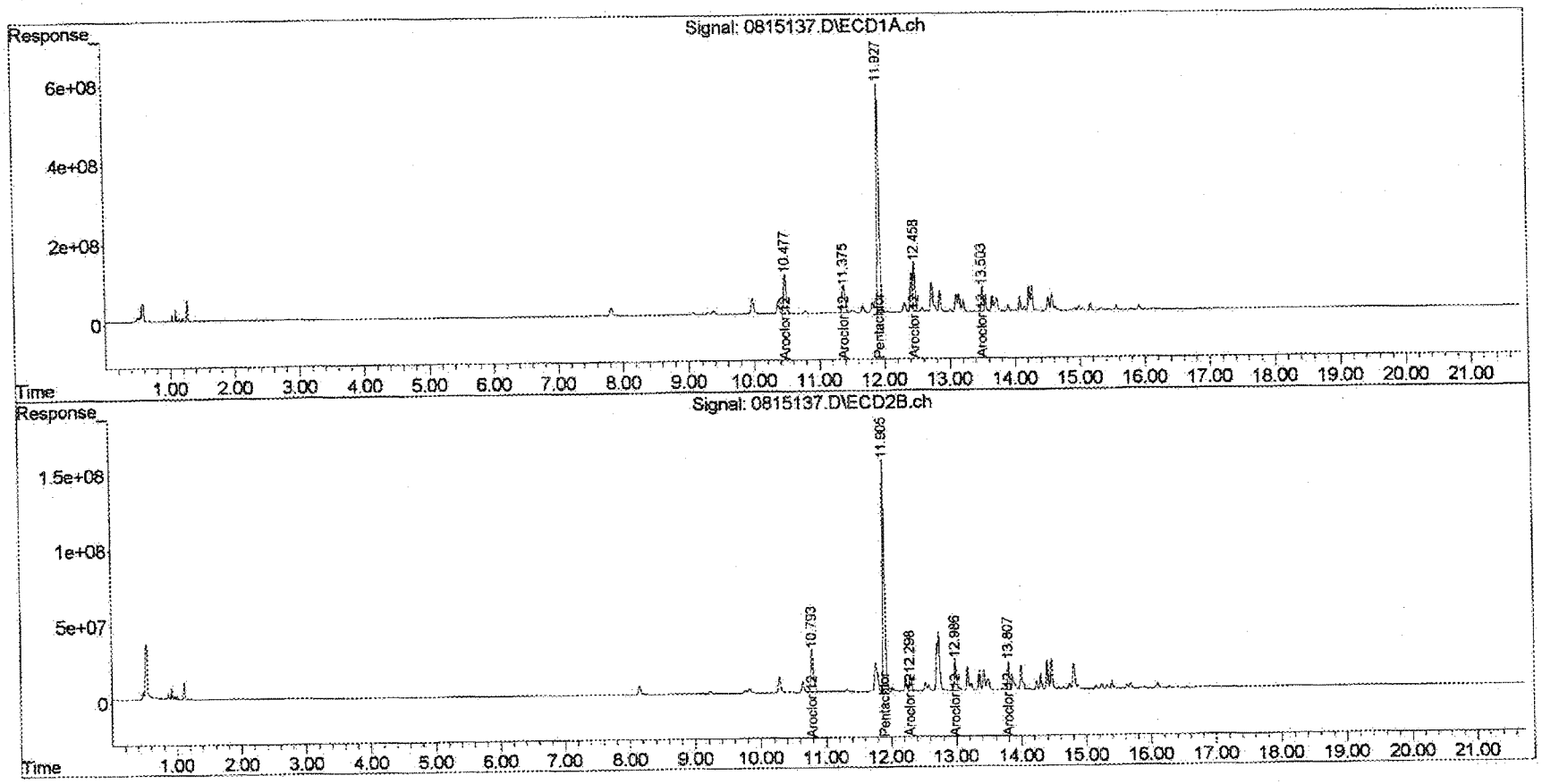
8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815137.D
Acq On : 16-Aug-2013, 14:06:47
Acq Meth : 508.M
Sample : 1232 ICAL 2000PPB DWSTD06-60L
Misc :
Quant Time : Aug 17 11:07:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 34
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815138.D
Acq On : 16-Aug-2013, 14:39:59
Acq Meth : 508.M
Sample : 1232 ICV 500PPB DWSTD06-57M
Misc :
Quant Time : Aug 17 12:22:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Operator : SSullivan
Vial : 35
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
57)	Pentachloronitrob...	11.92	11.91	1307.7E6	317.0E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
58)	Aroclor 1232	10.48	10.79	72602485	18903637	476.940	485.482
59)	Aroclor 1232 (2)	11.37	12.30	65897265	7144838	509.699	536.790
60)	Aroclor 1232 (3)	12.46	12.99	69529446	12290866	524.440	522.788
61)	Aroclor 1232 (4)	13.50	13.81	36576472	9683466	537.280	567.592
62)	Aroclor 1232 - TOTAL	0.00	0.00	244.6E6	48022807	507.304T	517.381T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

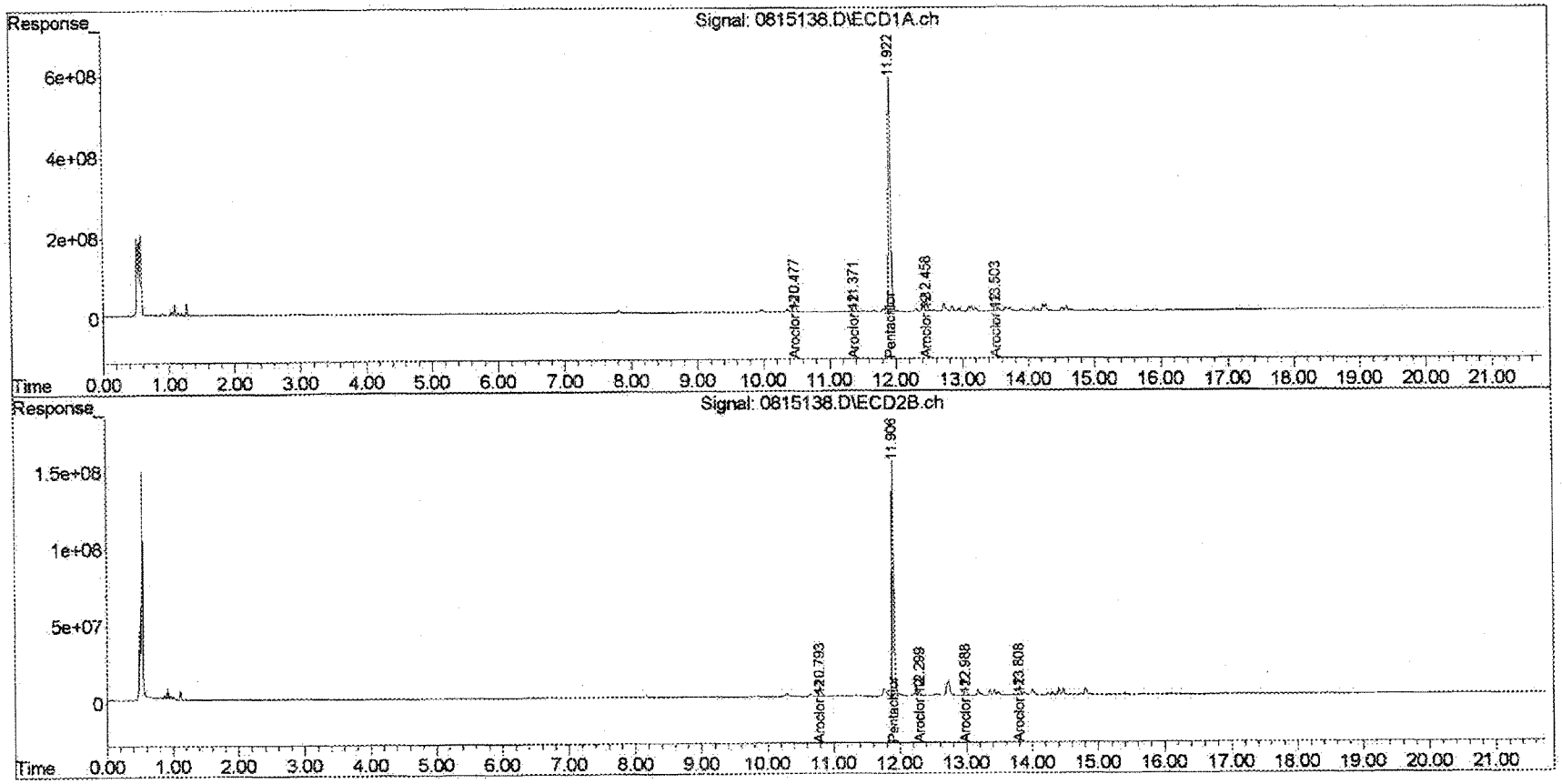
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815138.D
Acq On : 16-Aug-2013, 14:39:59
Acq Meth : 508.M
Sample : 1232 ICV 500PPB DWSTD06-57M
Misc :
Quant Time : Aug 17 12:22:27 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Operator : SSullivan
Vial : 35
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1015

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815139.D
Acq On : 16-Aug-2013, 15:07:07 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 50PPB DWSTD06-60M Vial : 36
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:18:44 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.92	11.91	1305.9E6	318.7E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
63) Aroclor 1242	10.48	10.81	5214404	1336094	N.D. m	14.693 #
64) Aroclor 1242 {2}	13.50	12.99	6827623	1916248	N.D.	13.525 #
65) Aroclor 1242 {3}	14.08	14.48	3511550	1903131	N.D.	18.886 #
66) Aroclor 1242 {4}	14.52	14.82	3446154	1681812	0.508	13.379 #
67) Aroclor 1242 - TOTAL	0.00	0.00	18999731	6837285	N.D. T	14.893T#

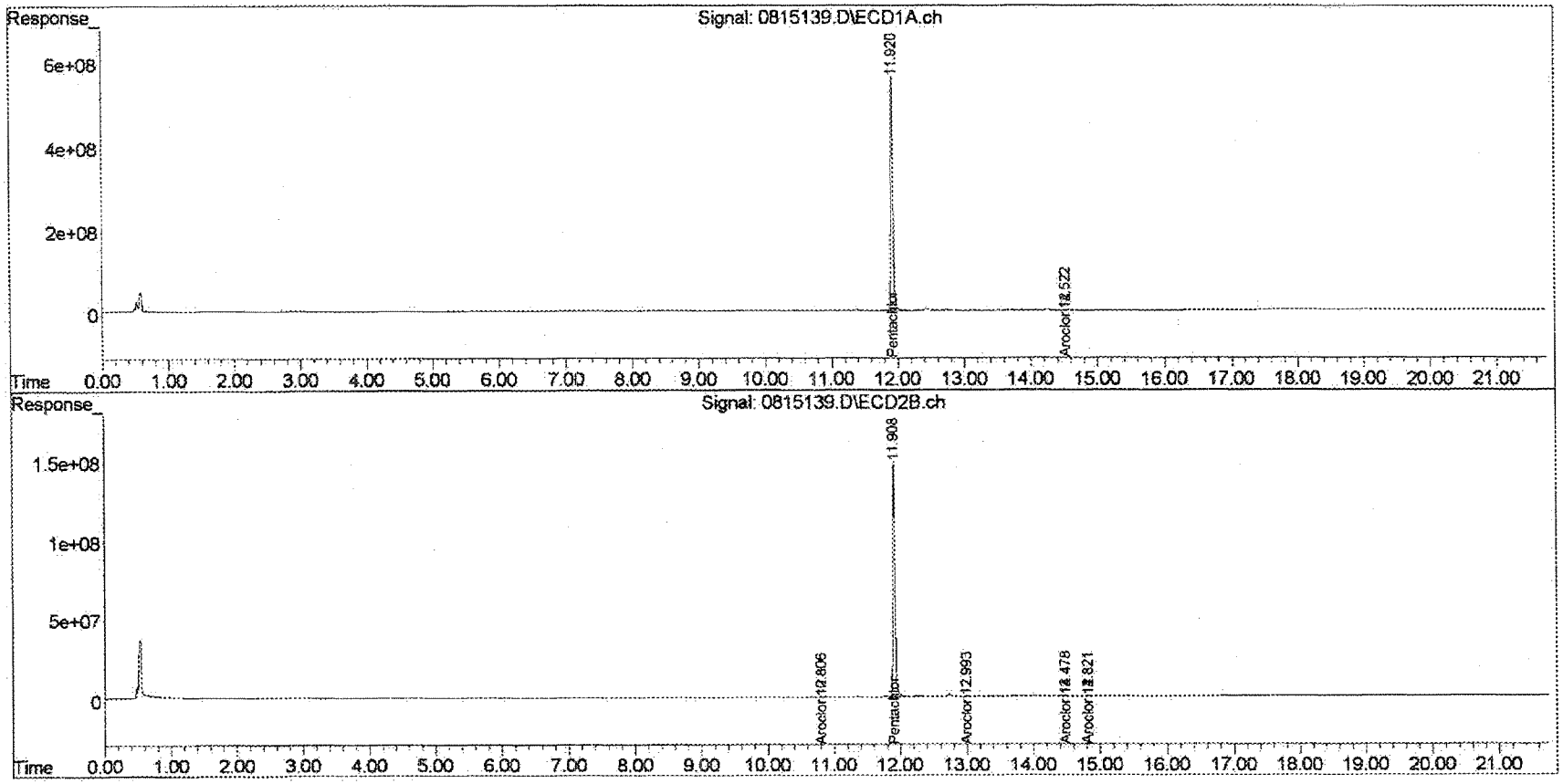
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815139.D
Acq On : 16-Aug-2013, 15:07:07 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 50PPB DWSTD06-60M Vial : 36
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:18:44 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



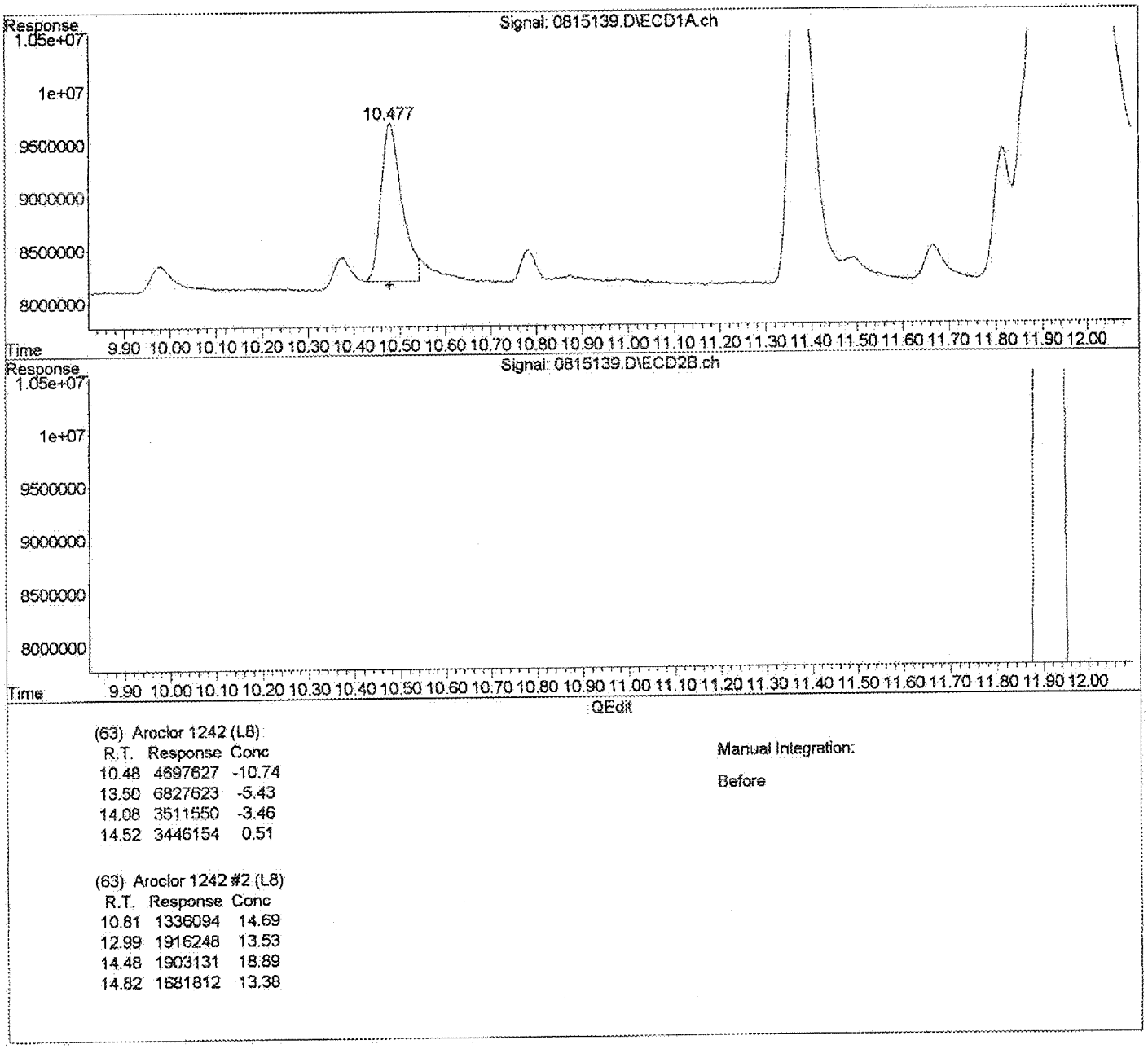
1017

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815139.D
Acq On : 16-Aug-2013, 15:07:07
Acq Meth : 508.M
Sample : 1242 ICAL 50PPB DWSTD06-60M
Misc :
Quant Time : Aug 17 10:12:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 36
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(63) Aroclor 1242 (L8)

R.T.	Response	Conc
10.48	4697627	-10.74
13.50	6827623	-5.43
14.08	3511550	-3.46
14.52	3446154	0.51

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.81	1336094	14.69
12.99	1916248	13.53
14.48	1903131	18.89
14.82	1681812	13.38

Manual Integration:

Before

(+) = Expected Retention Time

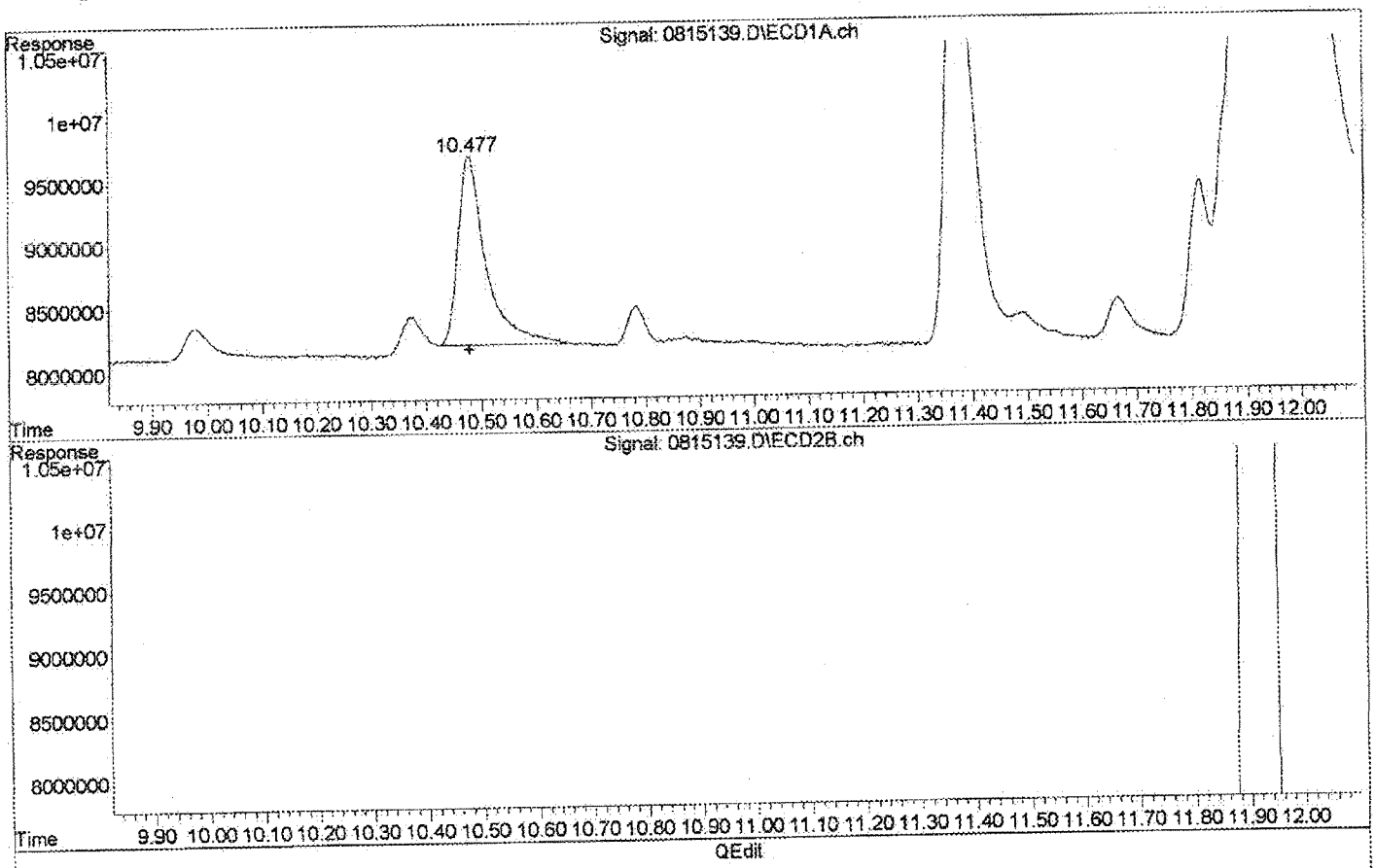
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815139.D
Acq On : 16-Aug-2013, 15:07:07
Acq Meth : 508.M
Sample : 1242 ICAL 50PPB DWSTD06-60M
Misc :
Quant Time : Aug 17 10:12:59 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 36
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um

Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.48	5214404	-8.85
13.50	6827623	-5.43
14.08	3511550	-3.46
14.52	3446154	0.51

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.81	1336094	14.69
12.99	1916248	13.53
14.48	1903131	18.89
14.82	1661812	13.38

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:15:18 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815140.D
Acq On : 16-Aug-2013, 15:41:47 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 100PPB DWSTD06-60N Vial : 37
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:19:25 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.92	11.90	1289.2E6	315.3E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
63) Aroclor 1242	10.48	10.80	9967275	2637776	8.999	29.319 #
64) Aroclor 1242 (2)	13.50	12.99	13639879	3955655	13.791	28.219 #
65) Aroclor 1242 (3)	14.09	14.48	7112256	4052018	14.307	40.643m#
66) Aroclor 1242 (4)	14.52	14.82	7030904	3382145	16.958	27.194 #
67) Aroclor 1242 - TOTAL	0.00	0.00	37750314	14027594	13.327T	30.883T#

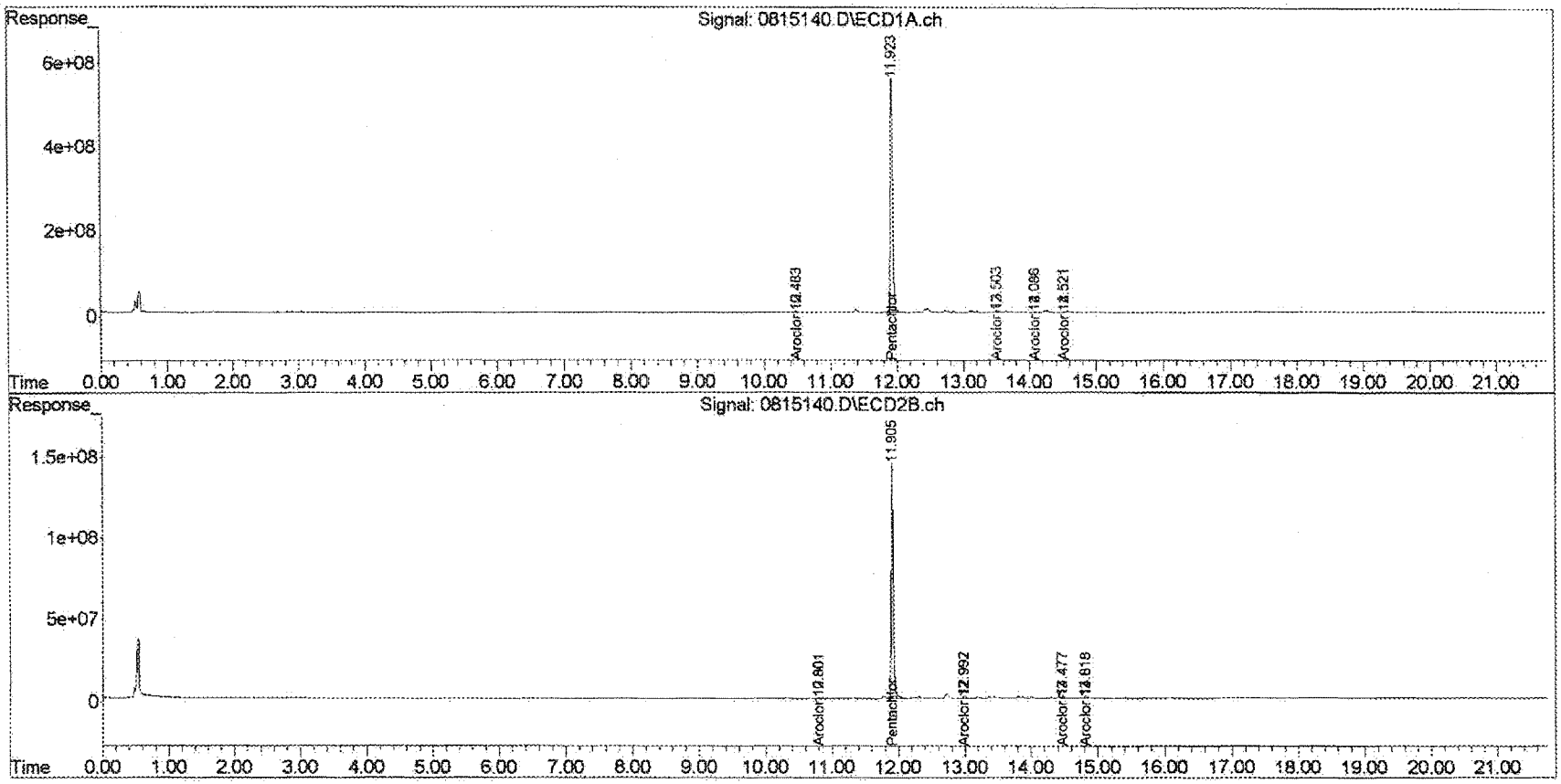
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815140.D
Acq On : 16-Aug-2013, 15:41:47 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 100PPB DWSTD06-60N Vial : 37
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:19:25 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



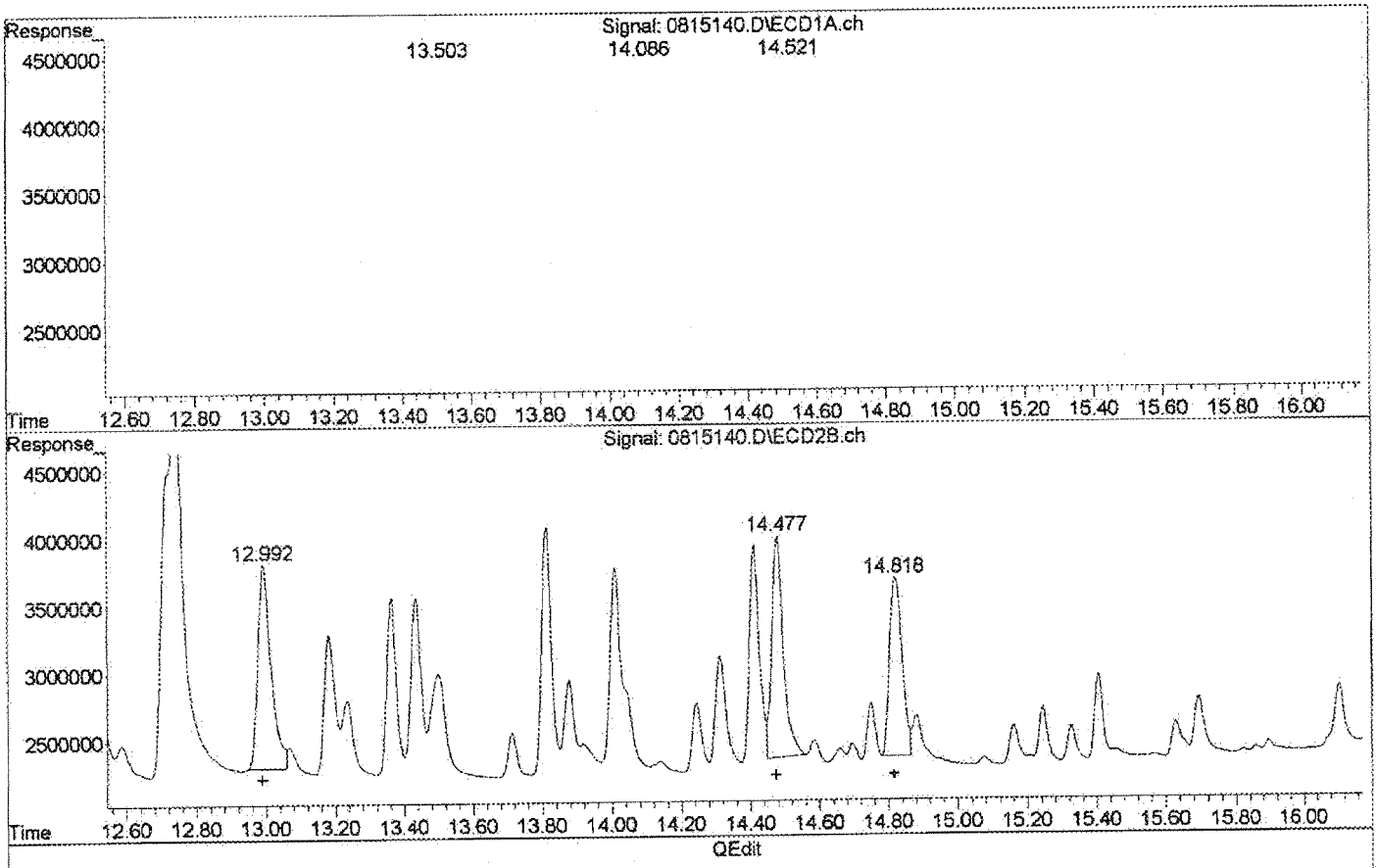
1021

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815140.D
Acq On : 16-Aug-2013, 15:41:47
Acq Meth : 508.M
Sample : 1242 ICAL 100PPB DWSTD06-60N
Misc :
Quant Time : Aug 17 10:13:38 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 37
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(63) Aroclor 1242 (L8)

R.T.	Response	Conc
10.48	9967275	9.00
13.50	13639879	13.79
14.09	7112256	14.31
14.52	7030904	16.96

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.80	2637776	29.32
12.99	3955655	28.22
14.48	3806820	38.18
14.82	3382145	27.19

Manual Integration:

Before

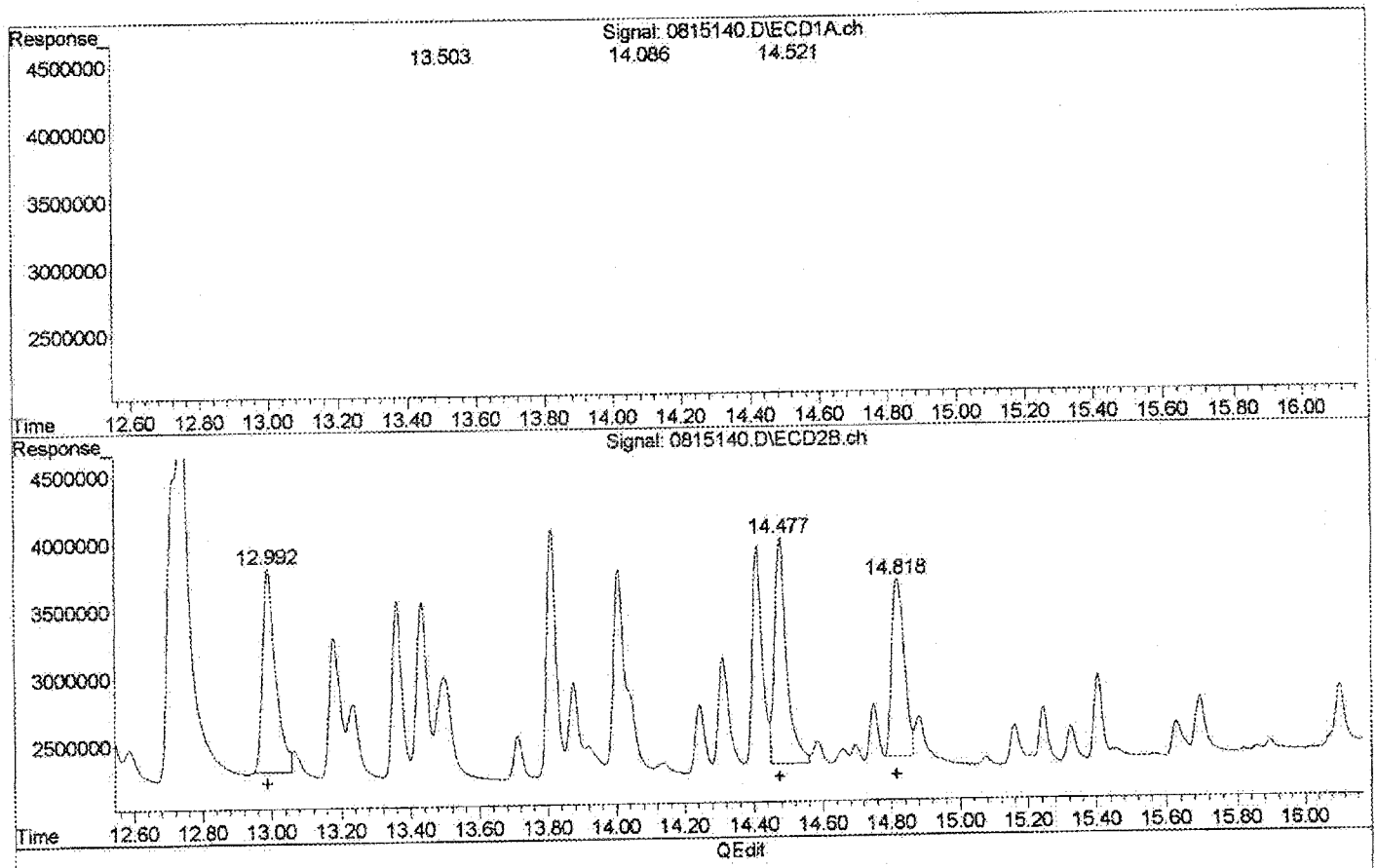
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815140.D
Acq On : 16-Aug-2013, 15:41:47
Acq Meth : 508.M
Sample : 1242 ICAL 100PPB DWSTD06-60N
Misc :
Quant Time : Aug 17 10:13:38 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 37
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.48	9967275	9.00
13.50	13639879	13.79
14.09	7112256	14.31
14.52	7030904	16.96

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.80	2637776	29.32
12.99	3955655	28.22
14.48	4052018	40.64
14.82	3382145	27.19

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:16:01 2013

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Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815141.D
Acq On : 16-Aug-2013, 16:18:17 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 200PPB DWSTD06-60P Vial : 38
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:19:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
57)	Pentachloronitrob...	11.93	11.91	1322.2E6	320.6E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
63)	Aroclor 1242	10.48	10.80	20424611	5242987	45.843	57.324 #
64)	Aroclor 1242 (2)	13.51	12.99	26871715	8004686	48.791	56.171
65)	Aroclor 1242 (3)	14.08	14.48	14317898	7554579	47.678	74.537 #
66)	Aroclor 1242 (4)	14.52	14.82	14496087	7330624	49.159	57.980
67)	Aroclor 1242 - TOTAL	0.00	0.00	76110311	28132876	47.897T	60.926T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

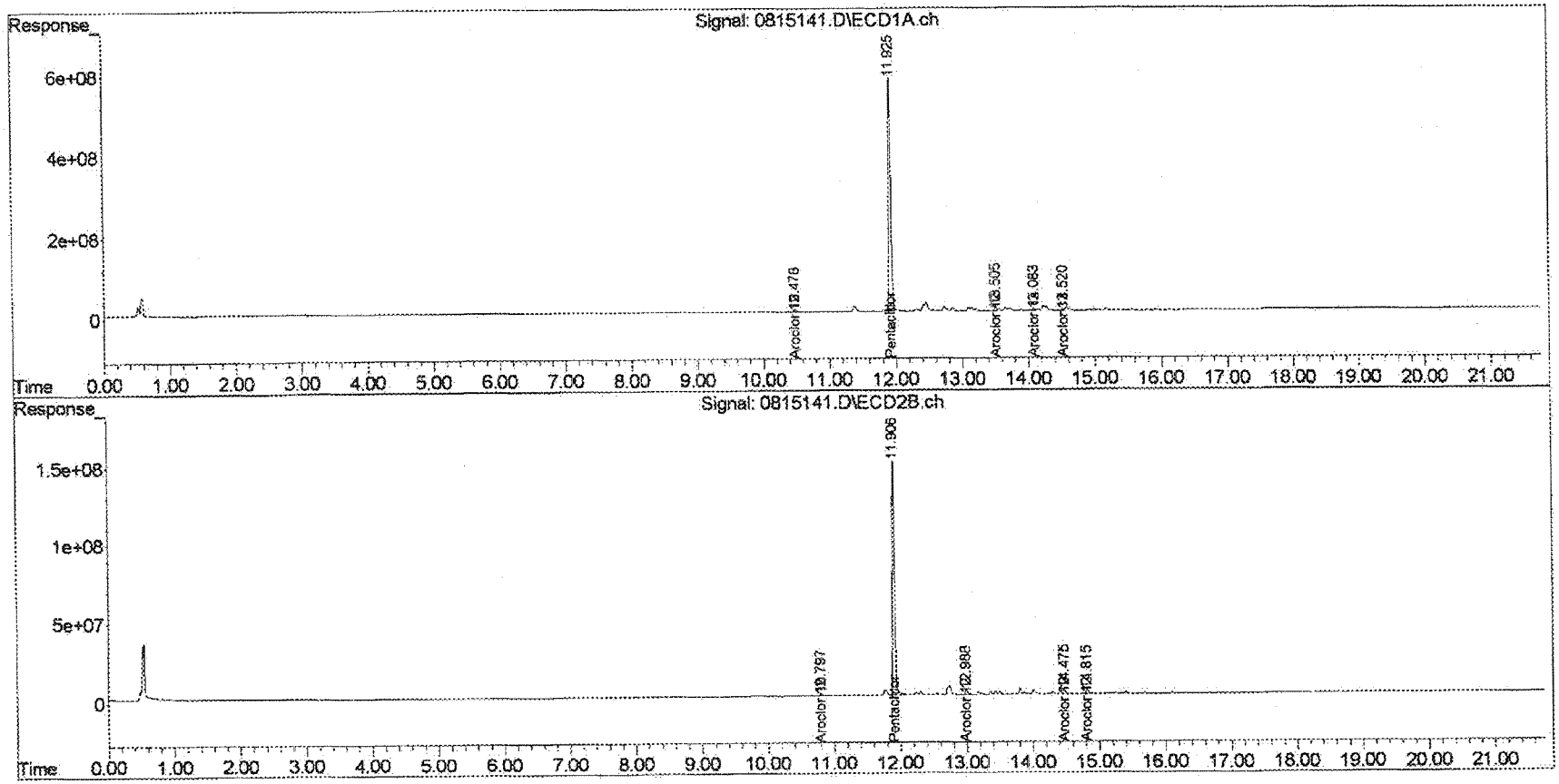
55 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815141.D
Acq On : 16-Aug-2013, 16:18:17
Acq Meth : 508.M
Sample : 1242 ICAL 200PPB DWSTD06-60P
Misc :
Quant Time : Aug 17 11:19:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 38
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1025

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815142.D
Acq On : 16-Aug-2013, 16:52:20 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 500PPB DWSTD06-61A Vial : 39
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:20:02 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
57)	Pentachloronitrob...	11.92	11.91	1309.1E6	312.9E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
63)	Aroclor 1242	10.48	10.80	49569712	13115009	152.889	146.924
64)	Aroclor 1242 (2)	13.50	12.99	65914202	20384902	156.652	146.570
65)	Aroclor 1242 (3)	14.08	14.47	34965545	19302504	147.442	195.138 #
66)	Aroclor 1242 (4)	14.52	14.81	36046034	18027906	146.007	146.099
67)	Aroclor 1242 - TOTAL	0.00	0.00	186.5E6	70830321	151.670T	157.172T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

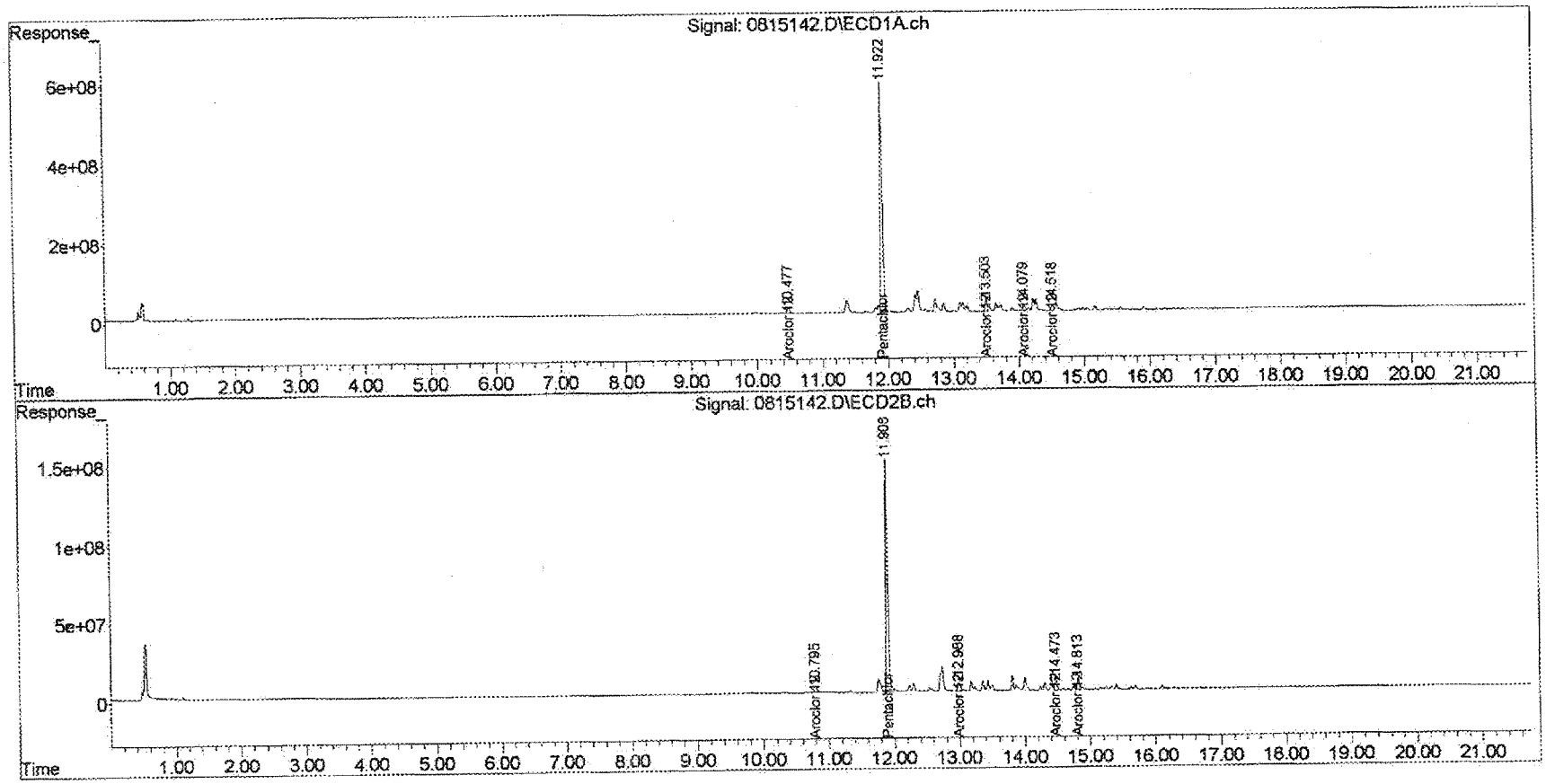
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815142.D
Acq On : 16-Aug-2013, 16:52:20
Acq Meth : 508.M
Sample : 1242 ICAL 500PPB DWSTD06-61A
Misc :
Quant Time : Aug 17 11:20:02 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 39
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1027

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815143.D
Acq On : 16-Aug-2013, 17:30:17 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICAL 1000PPB DWSTD06-61B Vial : 40
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:20:15 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.92	11.90	1341.0E6	319.9E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
63) Aroclor 1242	10.48	10.79	101.5E6	26229340	333.529	287.386
64) Aroclor 1242 {2}	13.50	12.98	129.2E6	41440719	321.905	291.418
65) Aroclor 1242 {3}	14.08	14.47	70513631	37412806	309.973	369.916
66) Aroclor 1242 {4}	14.52	14.81	73824042	37206524	306.815	294.901
67) Aroclor 1242 - TOTAL	0.00	0.00	375.1E6	142.3E6	319.403T	308.803T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

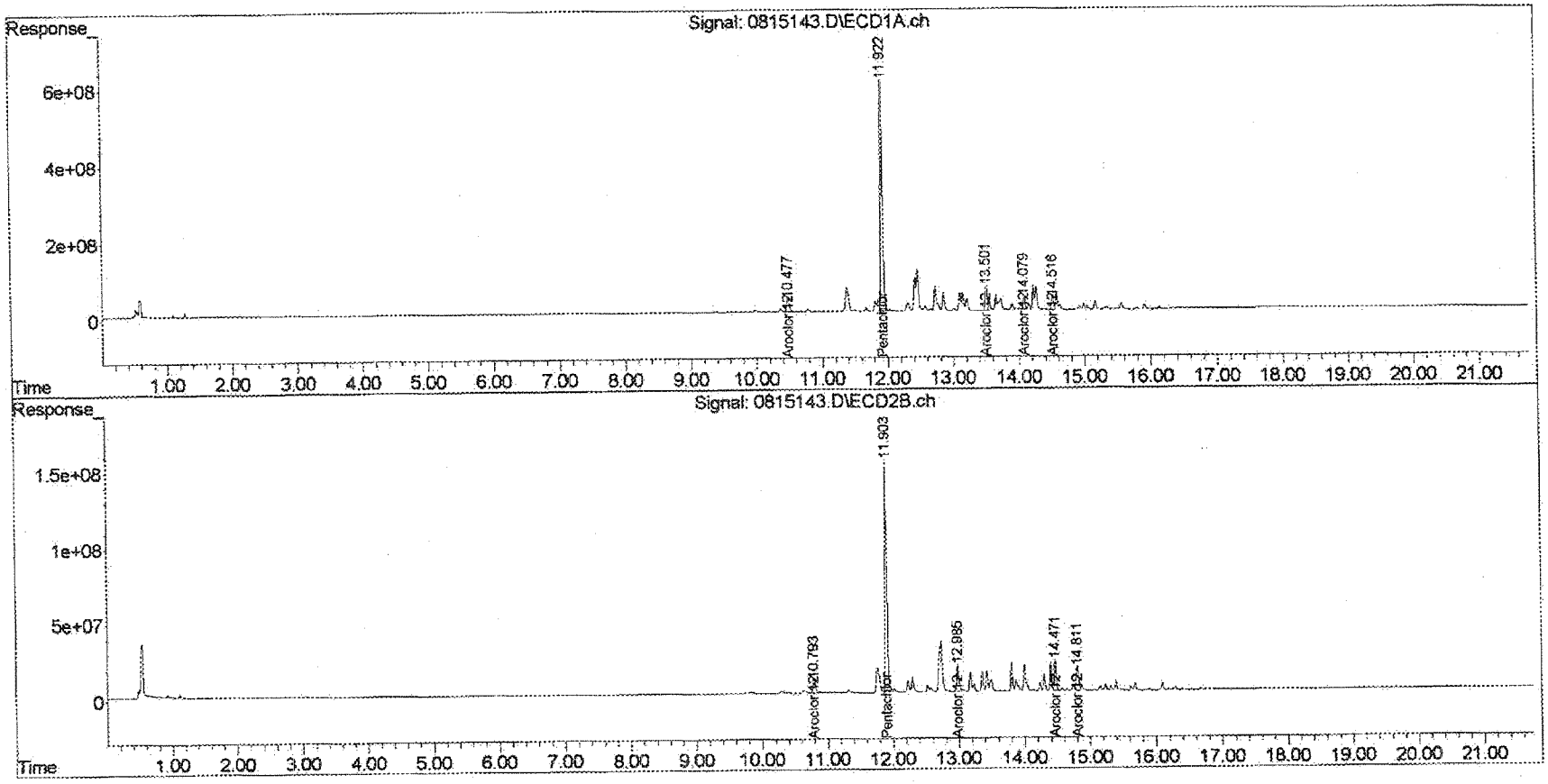
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815143.D
Acq On : 16-Aug-2013, 17:30:17
Acq Meth : 508.M
Sample : 1242 ICAL 1000PPB DWSTD06-61B
Misc :
Quant Time : Aug 17 11:20:15 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 40
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1029

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815144.D
Acq On : 16-Aug-2013, 17:56:40
Acq Meth : 508.M
Sample : 1242 ICAL 2000PPB DWSTD06-61C
Misc :
Quant Time : Aug 17 11:20:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 41
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
57)	Pentachloronitrob...	11.91	11.90	1367.4E6	319.9E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
63)	Aroclor 1242	10.47	10.79	191.6E6	50797743	641.128	556.595
64)	Aroclor 1242 {2}	13.50	12.98	247.2E6	82735909	625.158	581.836
65)	Aroclor 1242 {3}	14.07	14.47	143.4E6	76745745	638.228	758.848
66)	Aroclor 1242 {4}	14.51	14.81	148.6E6	74234721	620.227	588.412
67)	Aroclor 1242 - TOTAL	0.00	0.00	730.8E6	284.5E6	630.758T	617.490T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

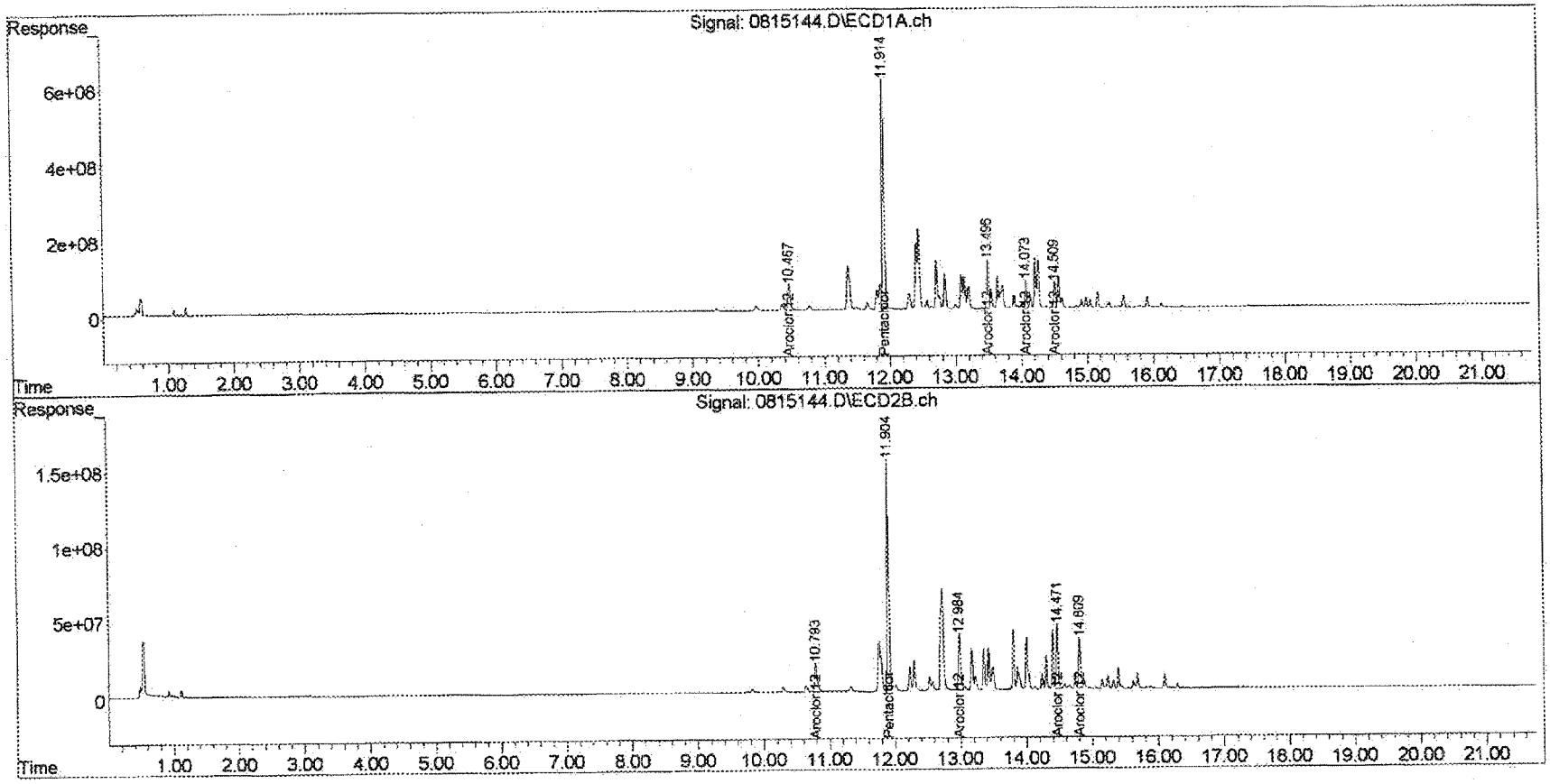
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815144.D
Acq On : 16-Aug-2013, 17:56:40
Acq Meth : 508.M
Sample : 1242 ICAL 2000PPB DWSTD06-61C
Misc :
Quant Time : Aug 17 11:20:26 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 41
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1031

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815146.D
Acq On : 16-Aug-2013, 19:04:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 50PPB DWSTD06-61D Vial : 43
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:22:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	Pentachloronitrob...	11.92	11.90	1308.3E6	315.6E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	Aroclor 1248	13.50	13.81	11327978	2911612	N.D.	15.481 #
70)	Aroclor 1248 {2}	13.65	14.01	6374691	2976051	5.023	17.984 #
71)	Aroclor 1248 {3}	14.57	14.82	10087696	3228679	1.136m	15.065 #
72)	Aroclor 1248 {4}	15.17	15.40	6038962	1593118	5.812	15.324 #
73)	Aroclor 1248 - TOTAL	0.00	0.00	33829327	10709460	1.352T	15.940T#

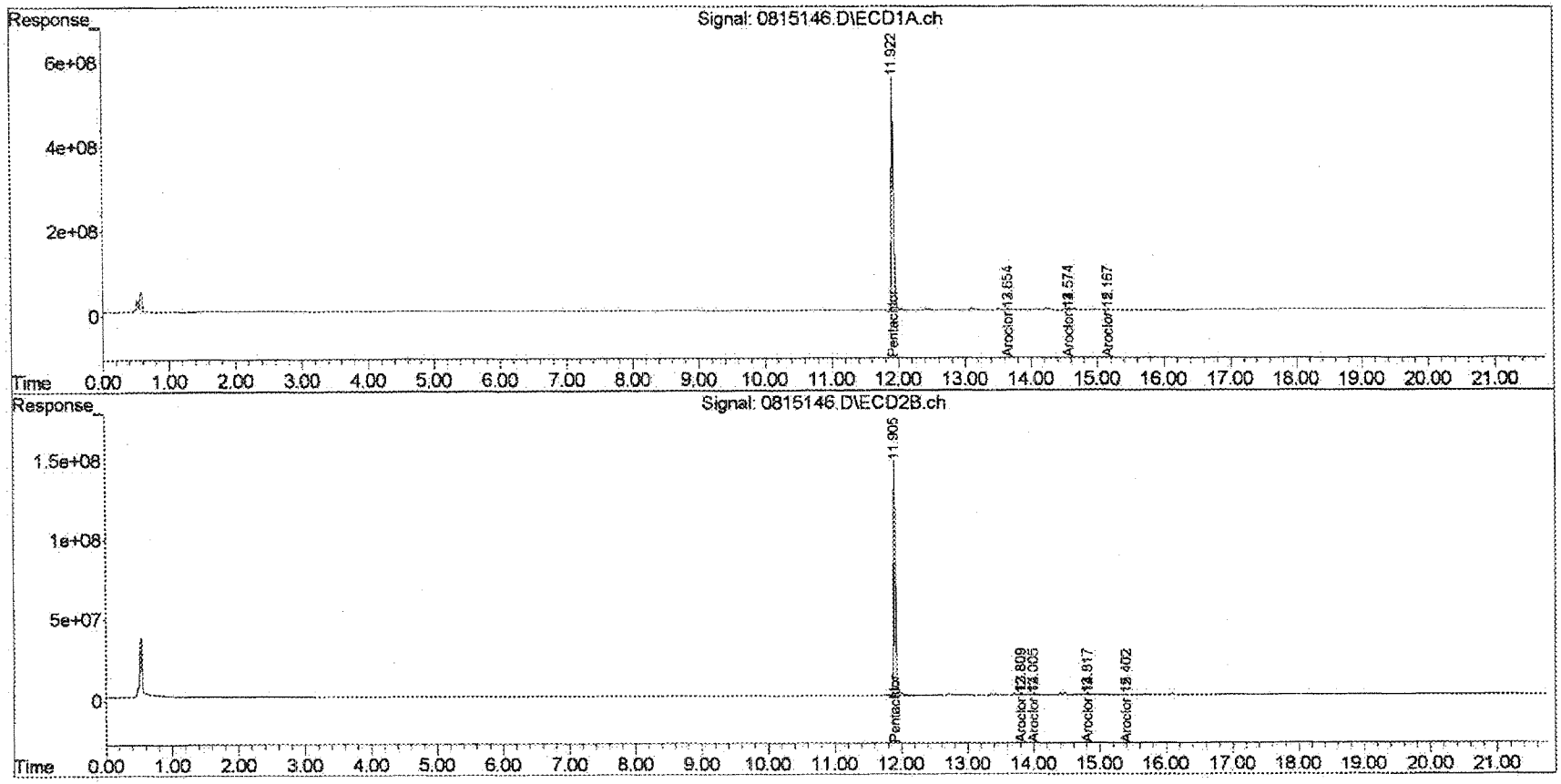
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815146.D
Acq On : 16-Aug-2013, 19:04:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 50PPB DWSTD06-61D Vial : 43
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:22:35 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

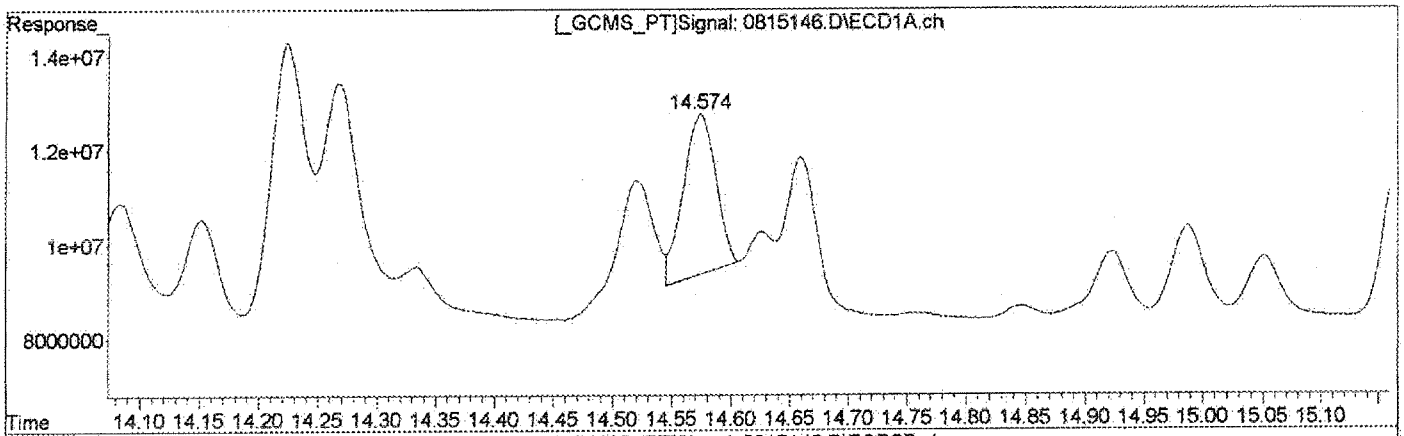


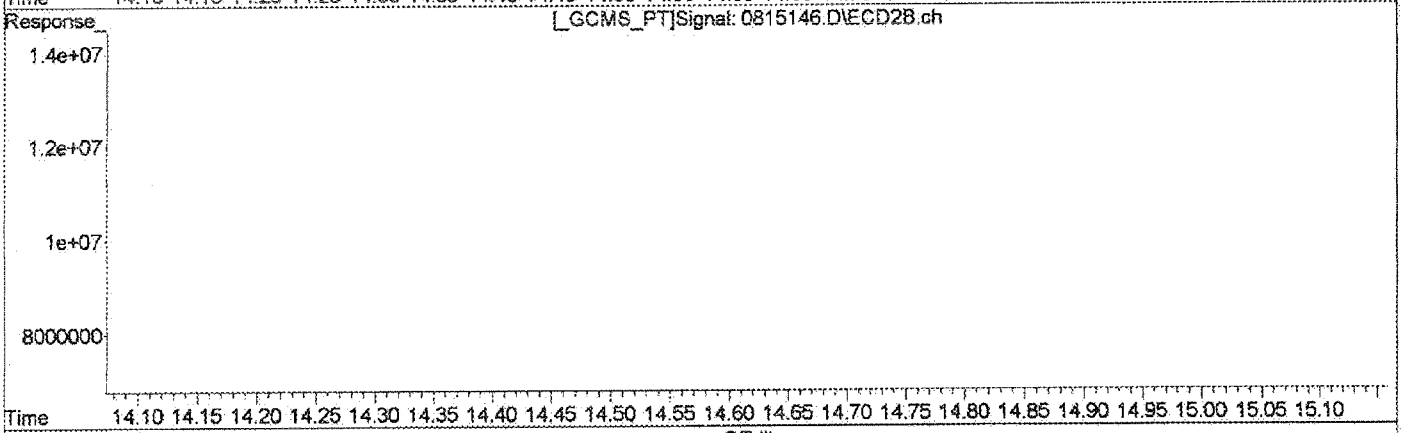
1033

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815146.D
Acq On : 16-Aug-2013, 19:04:01 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 50PPB DWSTD06-61D Vial : 43
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:18:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.50	11327978	-3.36
13.65	6374691	5.02
14.57	6522186	-5.73
15.17	6038962	5.81

Manual Integration:

Before

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	2911612	15.48
14.01	2976051	17.98
14.82	3228679	15.07
15.40	1593118	15.32

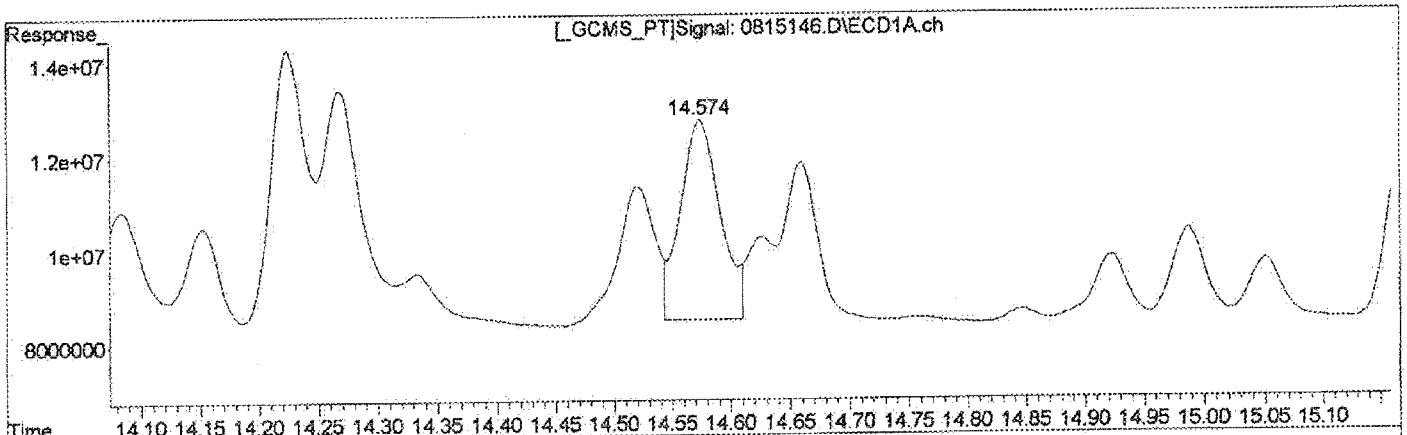
(+) = Expected Retention Time

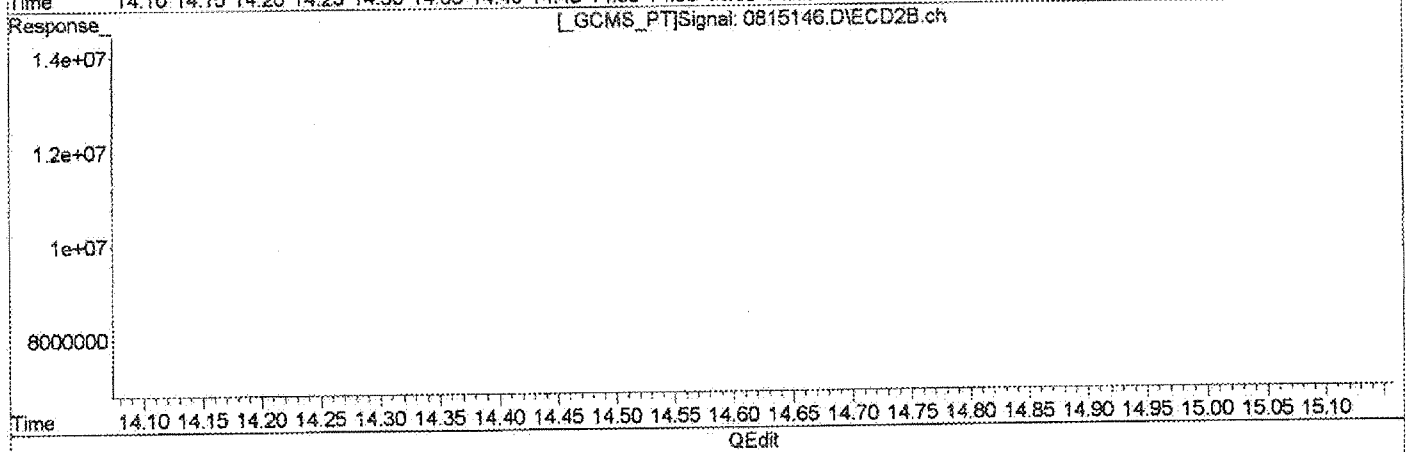
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815146.D
Acq On : 16-Aug-2013, 19:04:01
Acq Meth : 508.M
Sample : 1248 ICAL 50PPB DWSTD06-61D
Misc :
Quant Time : Aug 17 10:18:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 43
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.50	11327978	-3.36
13.65	6374691	5.02
14.57	10087696	1.14
15.17	6038962	5.81

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	2911612	15.48
14.01	2976051	17.98
14.82	3228679	15.07
15.40	1593118	15.32

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:19:19 2013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815147.D
Acq On : 16-Aug-2013, 19:30:09 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 100PPB DWSTD06-61E Vial : 44
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:22:46 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	Pentachloronitrob...	11.91	11.91	1314.4E6	317.0E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	Aroclor 1248	13.50	13.81	22231250	5787535	15.214	30.635 #
70)	Aroclor 1248 (2)	13.65	14.01	12716322	5903093	21.395	35.513 #
71)	Aroclor 1248 (3)	14.57	14.82	19641414	6517523	19.362	30.277 #
72)	Aroclor 1248 (4)	15.16	15.40	11740142	3160962	23.274	30.269 #
73)	Aroclor 1248 - TOTAL	0.00	0.00	66329128	21369113	19.159T	31.666T#

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

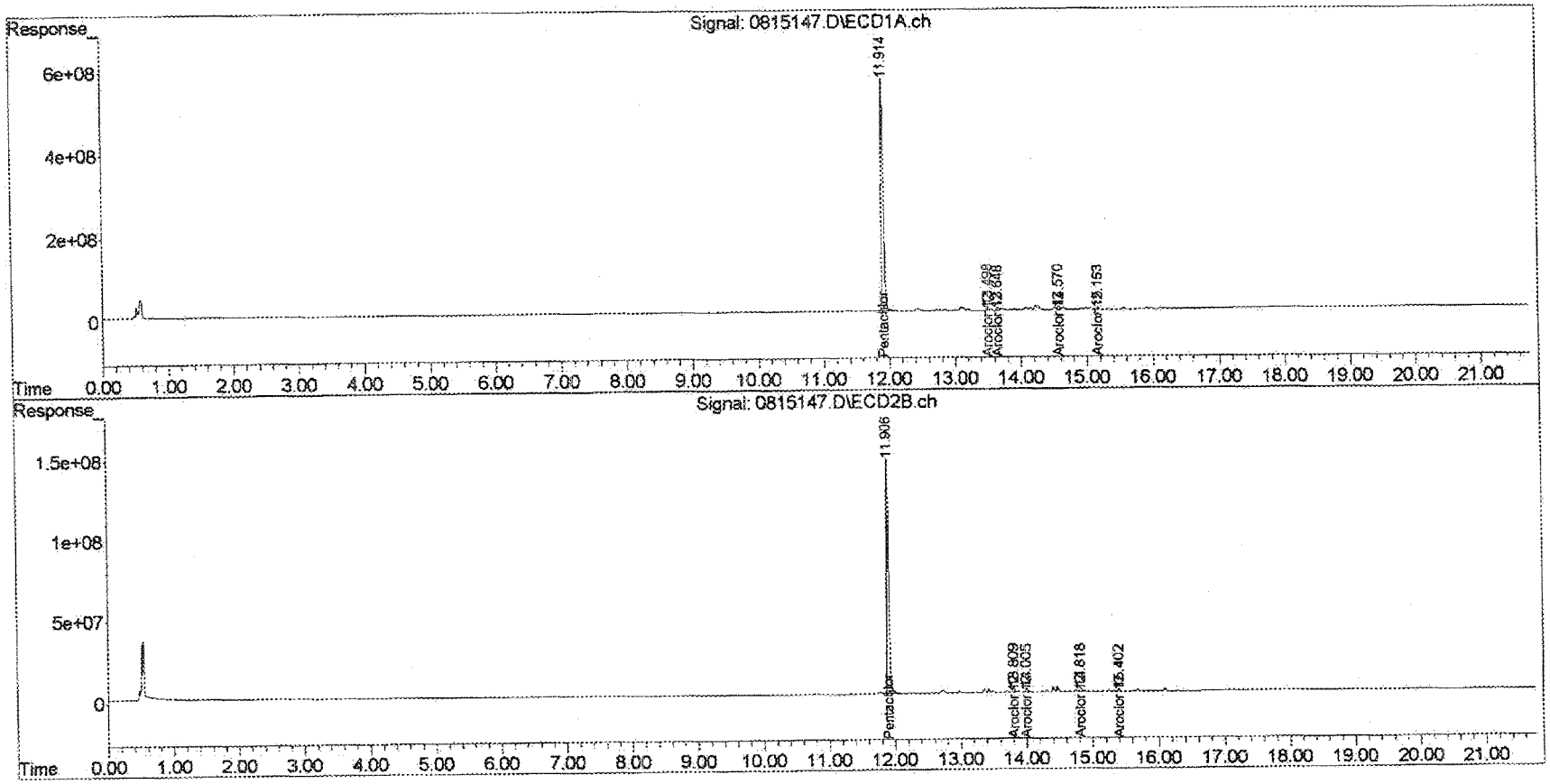
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815147.D
Acq On : 16-Aug-2013, 19:30:09
Acq Meth : 508.M
Sample : 1248 ICAL 100PPB DWSTD06-61E
Misc :
Quant Time : Aug 17 11:22:46 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 44
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1037

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815148.D
Acq On : 16-Aug-2013, 20:05:15 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 200PPB DWSTD06-61F Vial : 45
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:23:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	Pentachloronitrob...	11.92	11.91	1324.9E6	320.0E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	Aroclor 1248	13.50	13.81	43282946	11302856	50.663	59.273
70)	Aroclor 1248 (2)	13.65	14.01	25743776	11584016	54.658	69.041 #
71)	Aroclor 1248 (3)	14.57	14.82	37726369	12935301	53.463m	59.531
72)	Aroclor 1248 (4)	15.17	15.40	22774332	6194597	56.683	58.768
73)	Aroclor 1248 - TOTAL	0.00	0.00	129.5E6	42016770	53.392T	61.683T

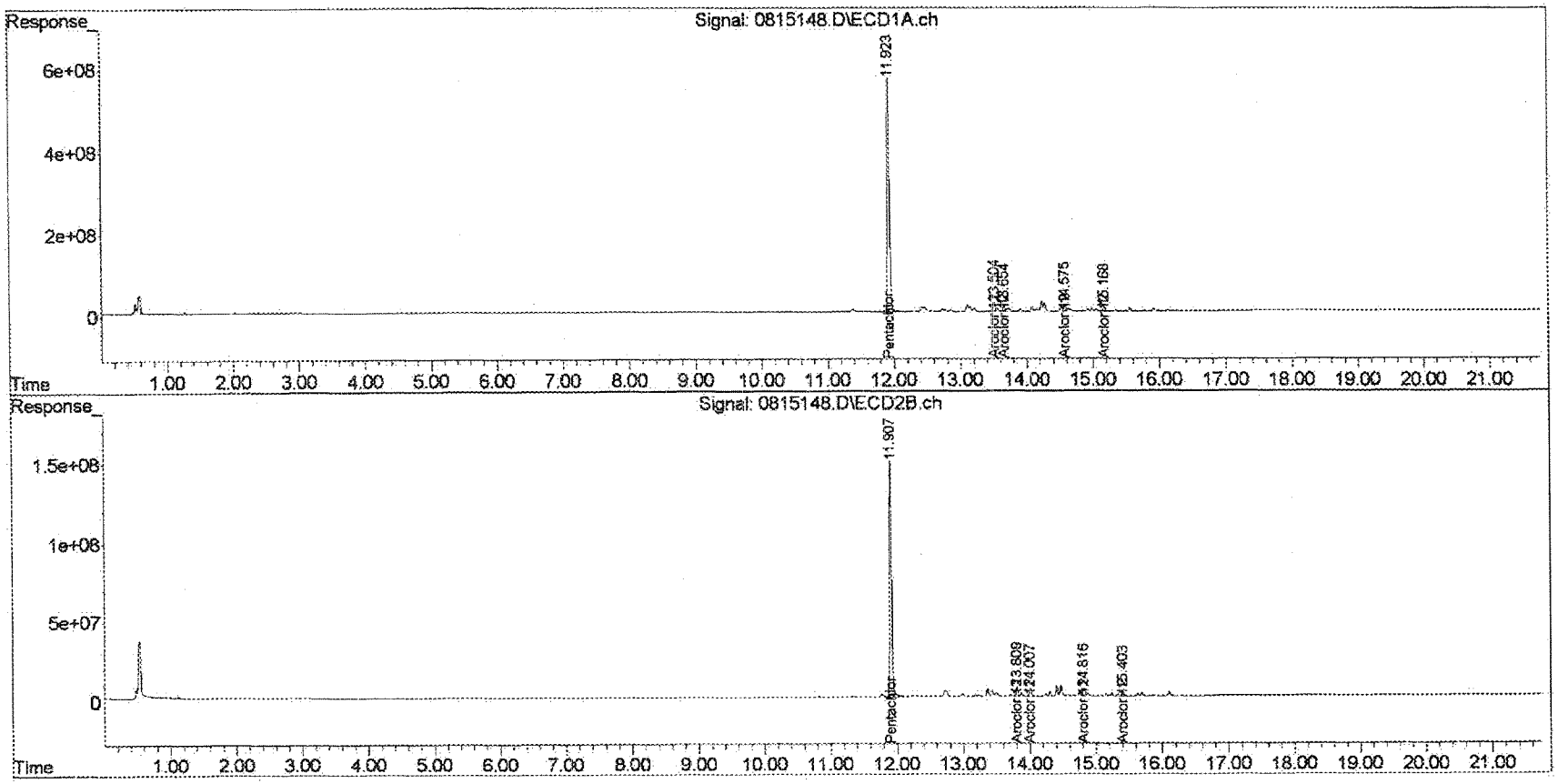
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815148.D
Acq On : 16-Aug-2013, 20:05:15 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 200PPB DWSTD06-61F Vial : 45
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:23:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

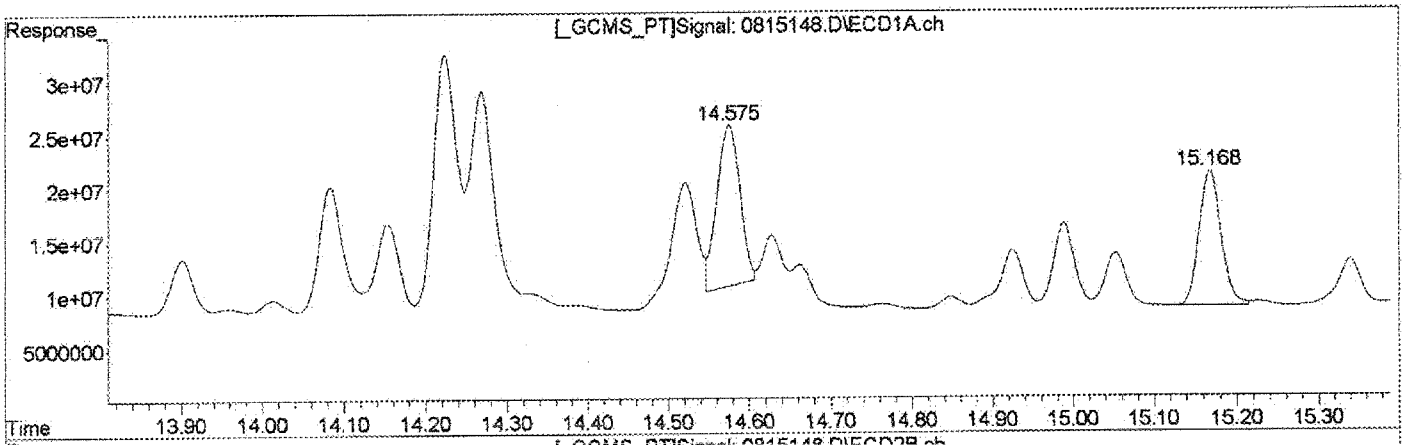


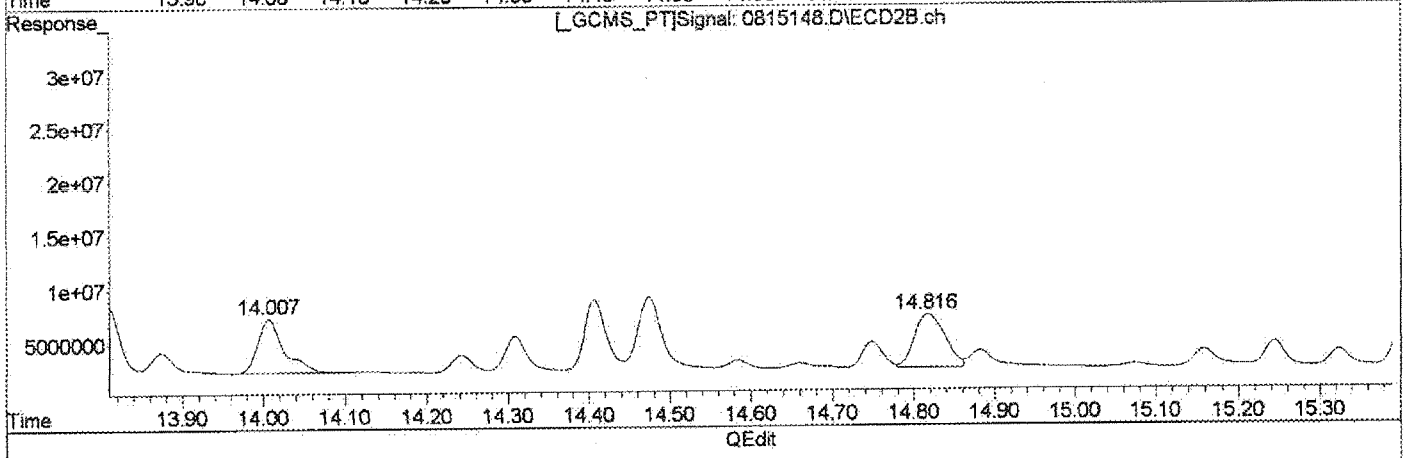
1039

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815148.D
Acq On : 16-Aug-2013, 20:05:15 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 200PPB DWSTD06-61F Vial : 45
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:19:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.50	43282946	50.66
13.65	25743776	54.66
14.57	29937223	38.65
15.17	22774332	56.68

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	11302856	59.27
14.01	11584016	69.04
14.82	12935301	59.53
15.40	6194597	58.77

Manual Integration:

Before

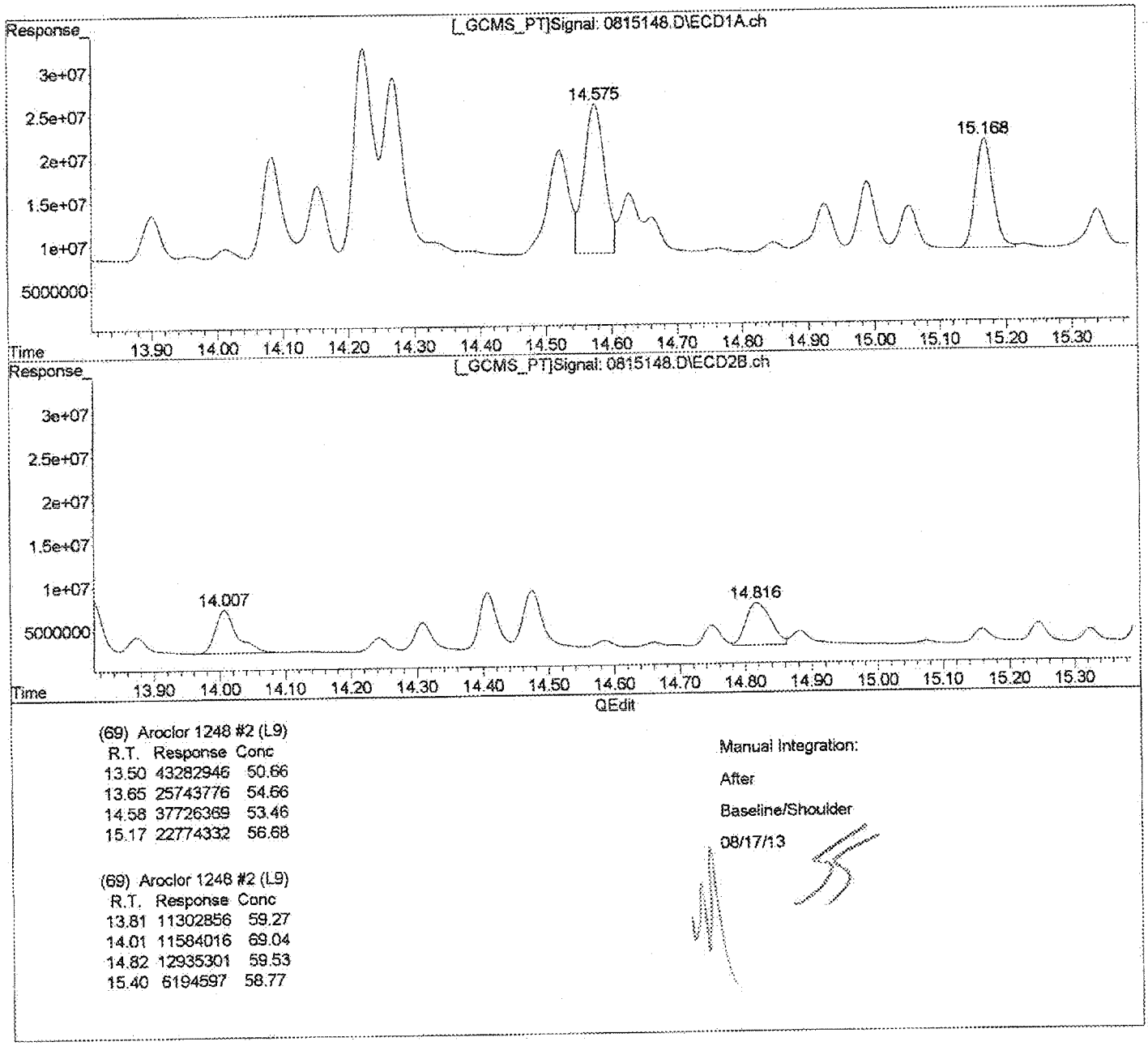
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815148.D
Acq On : 16-Aug-2013, 20:05:15
Acq Meth : 508.M
Sample : 1248 ICAL 200PPB DWSTD06-61F
Misc :
Quant Time : Aug 17 10:19:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 45
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.50	43282946	50.66
13.65	25743776	54.66
14.58	37726369	53.46
15.17	22774332	56.68

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	11302856	59.27
14.01	11584016	69.04
14.82	12935301	59.53
15.40	6194597	58.77

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:19:53 2013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815149.D
Acq On : 16-Aug-2013, 20:40:25
Acq Meth : 508.M
Sample : 1248 ICAL 500PPB DWSTD06-61G
Misc :
Quant Time : Aug 17 11:23:18 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 46
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	Pentachloronitrob...	11.93	11.91	1327.2E6	320.1E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	Aroclor 1248	13.51	13.81	105.4E6	27934307	155.793	146.448
70)	Aroclor 1248 (2)	13.65	14.01	65536996	29224338	156.766	174.127
71)	Aroclor 1248 (3)	14.58	14.82	91638337	32621757	155.703	150.090
72)	Aroclor 1248 (4)	15.17	15.40	54892540	15689702	154.471	148.805
73)	Aroclor 1248 - TOTAL	0.00	0.00	317.4E6	105.5E6	155.737T	154.792T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

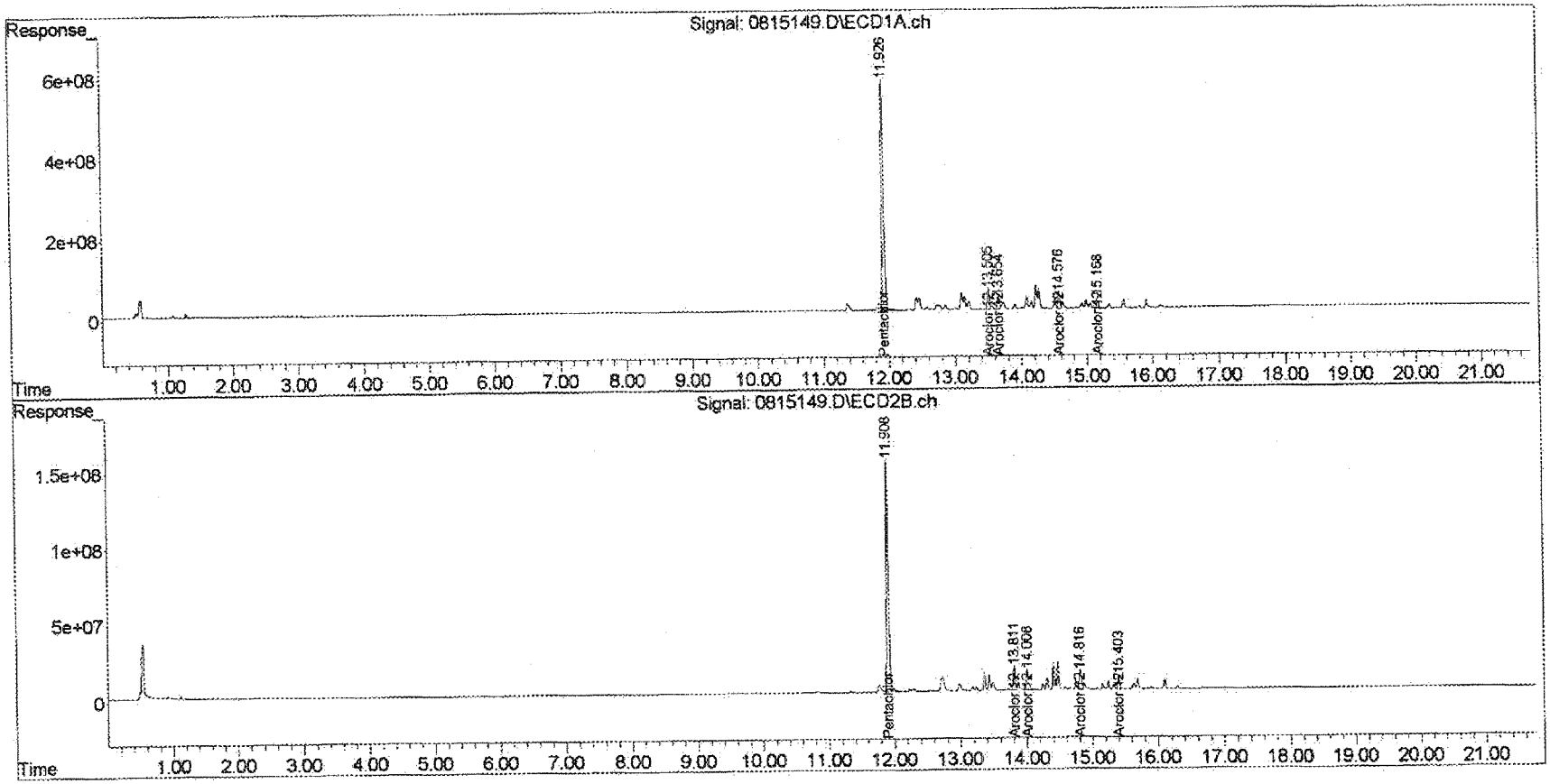
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815149.D
Acq On : 16-Aug-2013, 20:40:25
Acq Meth : 508.M
Sample : 1248 ICAL 500PPB DWSTD06-61G
Misc :
Quant Time : Aug 17 11:23:18 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 46
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1043

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815150.D
Acq On : 16-Aug-2013, 21:07:59
Acq Meth : 508.M
Sample : 1248 ICAL 1000PPB DWSTD06-61H
Misc :
Quant Time : Aug 17 11:23:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 47
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	Pentachloronitrob...	11.92	11.91	1327.3E6	316.8E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	Aroclor 1248	13.50	13.81	200.7E6	54805804	317.397	290.350
70)	Aroclor 1248 (2)	13.65	14.01	127.0E6	58234167	314.730	350.630
71)	Aroclor 1248 (3)	14.57	14.81	175.4E6	65958259	314.722	306.662
72)	Aroclor 1248 (4)	15.16	15.40	105.5E6	31106017	308.593	298.123
73)	Aroclor 1248 - TOTAL	0.00	0.00	608.6E6	210.1E6	314.488T	311.604T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

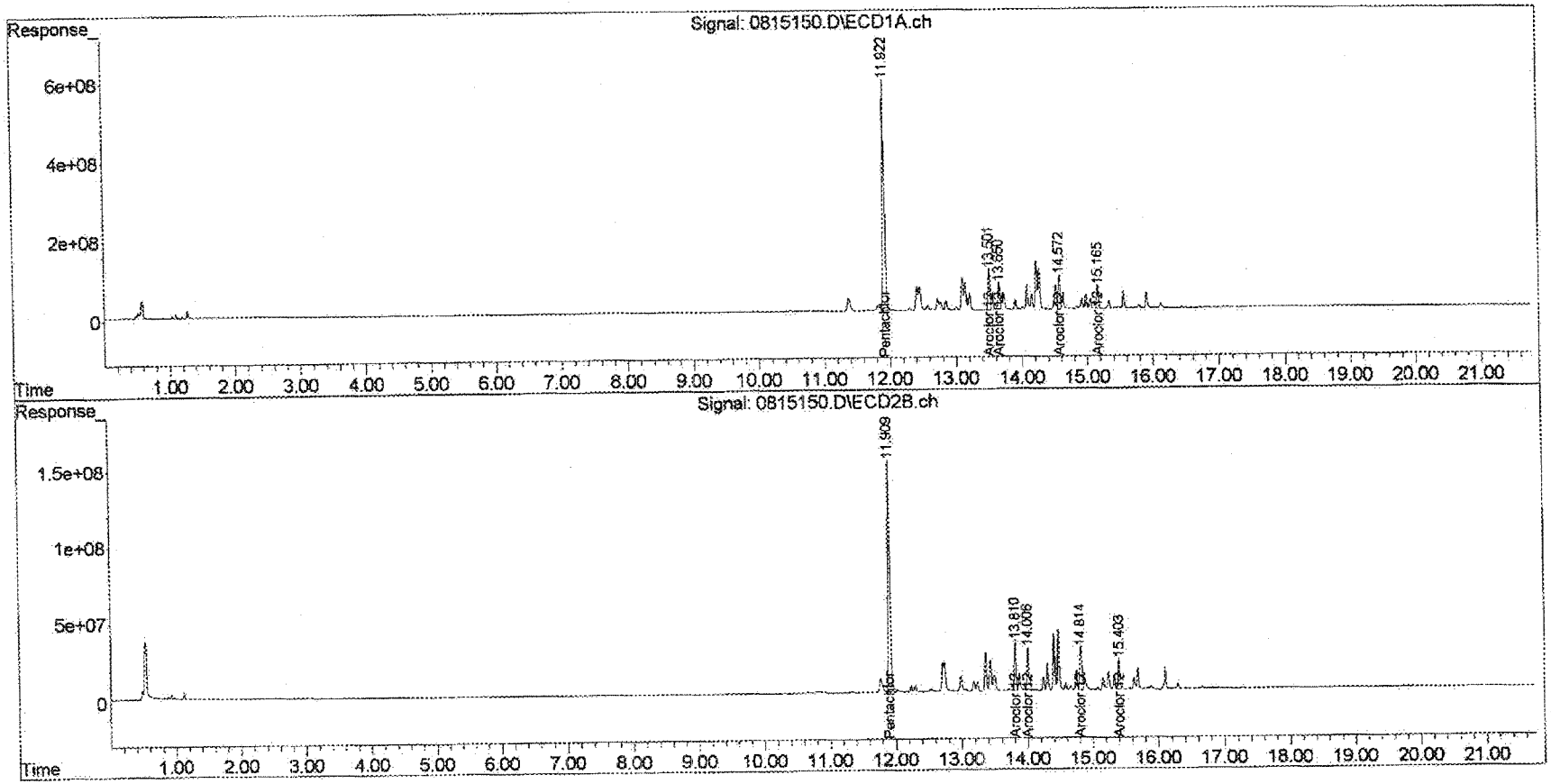
SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815150.D
Acq On : 16-Aug-2013, 21:07:59
Acq Meth : 508.M
Sample : 1248 ICAL 1000PPB DWSTD06-61H
Misc :
Quant Time : Aug 17 11:23:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 47
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



1045

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815151.D
Acq On : 16-Aug-2013, 21:35:08 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 2000PPB DWSTD06-61I Vial : 48
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:23:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

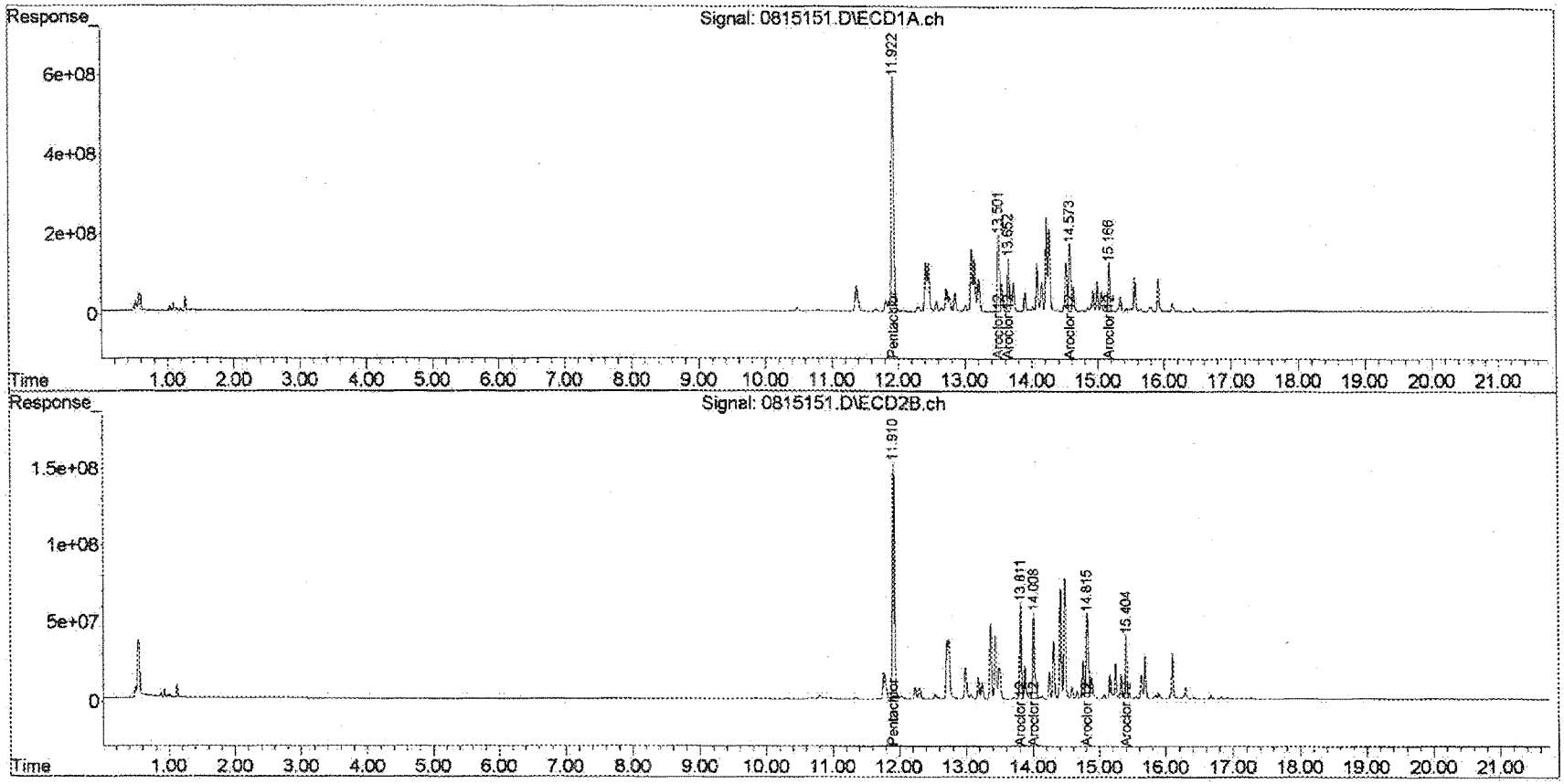
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
68) Pentachloronitrob...	11.92	11.91	1344.0E6	319.3E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
69) Aroclor 1248	13.50	13.81	385.1E6	107.6E6	621.853	565.596
70) Aroclor 1248 (2)	13.65	14.01	253.5E6	116.6E6	631.358	696.191m
71) Aroclor 1248 (3)	14.57	14.82	337.6E6	126.6E6	614.755	583.685
72) Aroclor 1248 (4)	15.17	15.40	208.5E6	61073006	614.668	580.583
73) Aroclor 1248 - TOTAL	0.00	0.00	1184.7E6	411.8E6	620.547T	605.853T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815151.D
Acq On : 16-Aug-2013, 21:35:08 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 2000PPB DWSTD06-61I Vial : 48
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:23:56 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

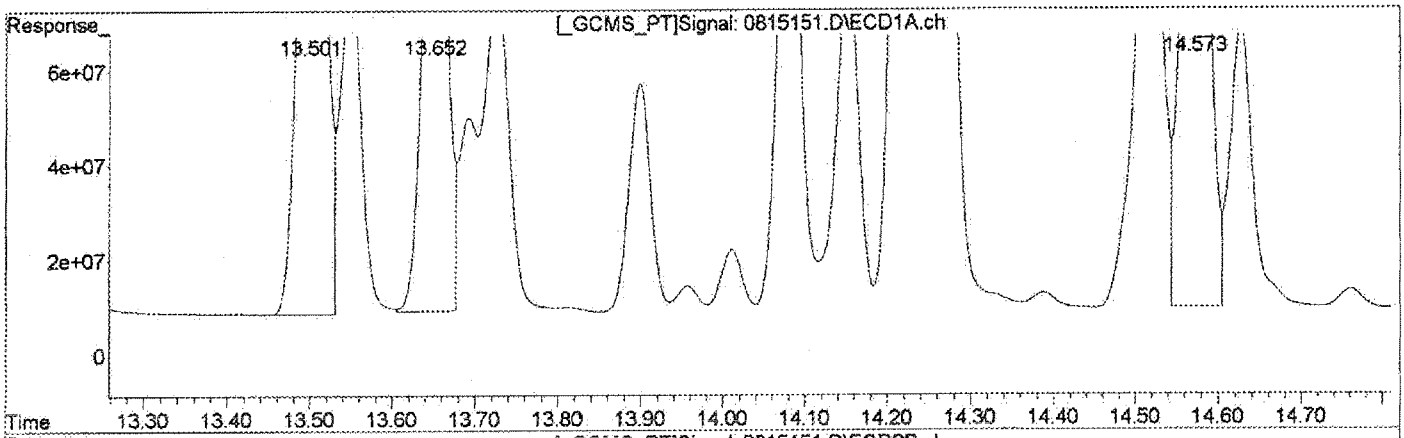


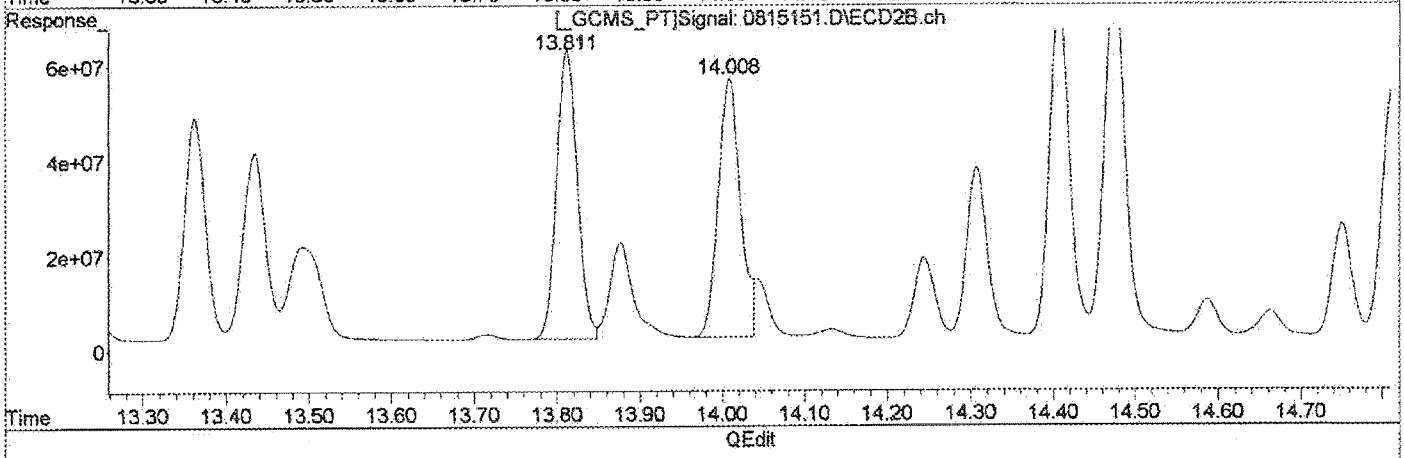
1047

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815151.D
Acq On : 16-Aug-2013, 21:35:08 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICAL 2000PPB DWSTD06-61I Vial : 48
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:23:05 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.50	385126002	621.85
13.65	253466240	631.36
14.57	337641000	614.76
15.17	208471367	614.67

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	107633427	565.60
14.01	101835721	608.18
14.82	126567821	583.69
15.40	61073006	580.58

Manual Integration:

Before

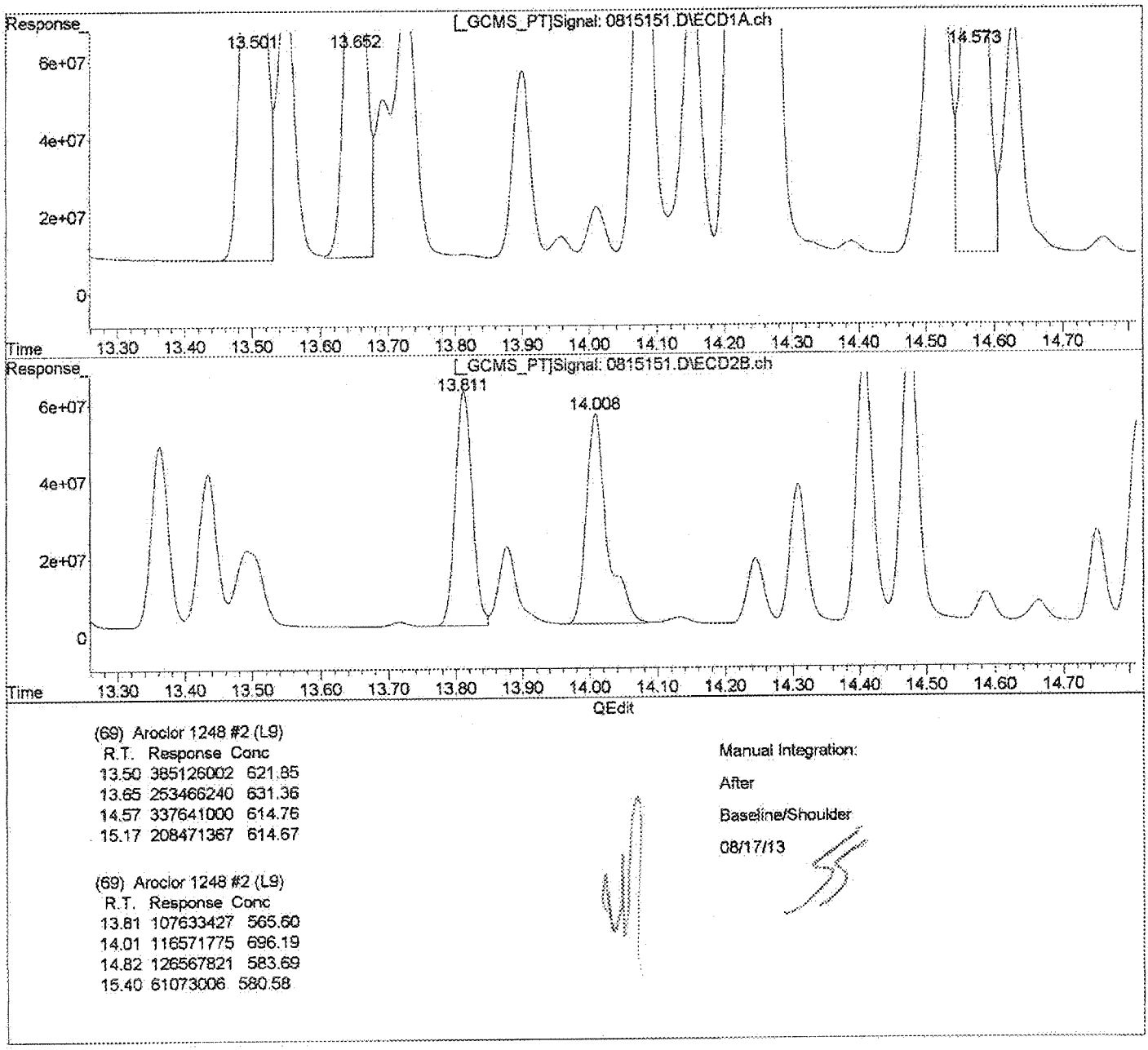
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815151.D
Acq On : 16-Aug-2013, 21:35:08
Acq Meth : 508.M
Sample : 1248 ICAL 2000PPB DWSTD06-61I
Misc :
Quant Time : Aug 17 10:23:05 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 48
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.50	385126002	621.85
13.65	253466240	631.36
14.57	337641000	614.76
15.17	208471367	614.67

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.81	107633427	565.60
14.01	116571775	696.19
14.82	126567821	583.69
15.40	61073006	580.58

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:20:38 2013

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A Vial : 50
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:25:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1266.7E6	306.5E6	50.000m	50.000
System Monitoring Compounds						
2) TCMX	9.39	9.41	13417503	3098230	0.605	0.527
4) 4,4'-Dibromooctaf...	11.41	10.43	16252426	3612257	0.659	0.618
25) Decachlorobiphenyl	18.28	18.59	8042245	2746104	0.682	0.739
Target Compounds						
3) alpha-BHC	10.93	11.12	16324450	3969607	0.537	1.231 #
5) gamma-BHC (Lindane)	11.74	11.99	14600847	5881603	0.535	0.753m#
7) delta-BHC	12.37	12.83	12467987	2886082	0.485	1.223 #
8) Heptachlor	12.81	12.88	14660545	3518352	0.555	0.579
9) Aldrin	13.38	13.47	13119613	3610337	0.564	0.567
10) Heptachlor Epoxid...	14.32	14.49	14540013	3650138	0.683	0.642
11) Heptachlor Epoxid...	14.46	14.45	12432031	3313205	0.616	0.586
12) gamma-Chlordane	14.66	14.74	12473344	3660393	0.613	0.634m
13) alpha-Chlordane	14.87	14.96	12178163	3434799	0.661	0.621
14) 4,4'-DDE	15.01	15.22	8790065	2702048	0.535	0.557
15) Endosulfan I	15.07	15.03	11173265	3181082	0.620	0.620
16) Dieldrin	15.43	15.43	11777448	3213336	0.654	0.592
17) Endrin	15.74	15.82	7526510	2274761	0.499	0.501
18) 4,4'-DDD	15.83	15.96	6893905	2108458	0.553	0.556
19) Endosulfan II	16.02	16.07	8624665	2757316	0.688	0.620
20) 4,4'-DDT	16.16	16.29	6876201	2199062	0.549	0.568
21) Endrin Aldehyde	16.49	16.44	7373955	2662461	0.627	0.733
22) Methoxychlor	16.65	16.97	3385980	1057015	0.577	0.575
23) Endosulfan Sulfate	16.94	16.71	7471308	2414581	0.630	0.641
24) Endrin Ketone	17.23	17.26	8932818	3118152	0.599	0.670

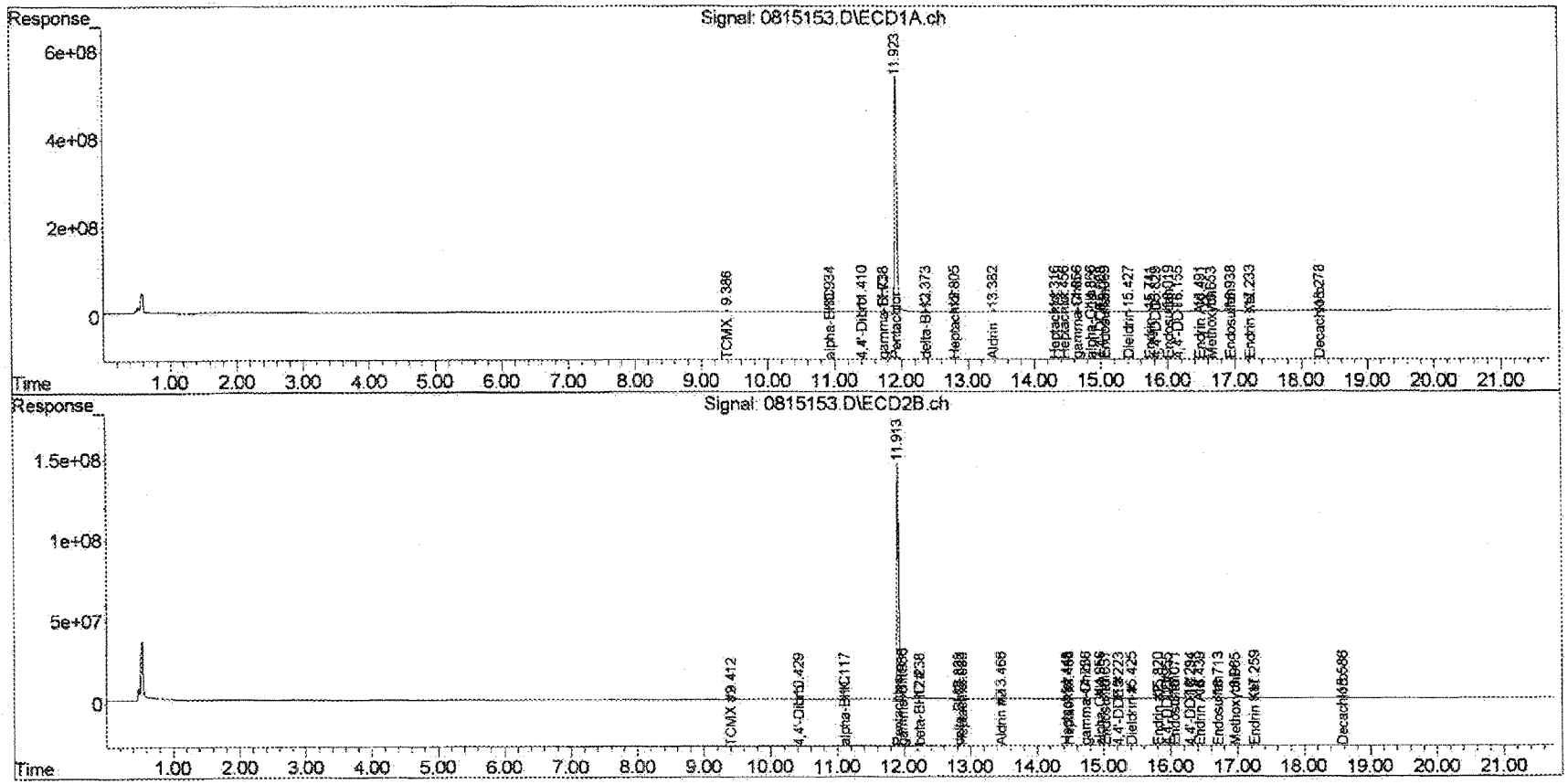
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A Vial : 50
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:25:40 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

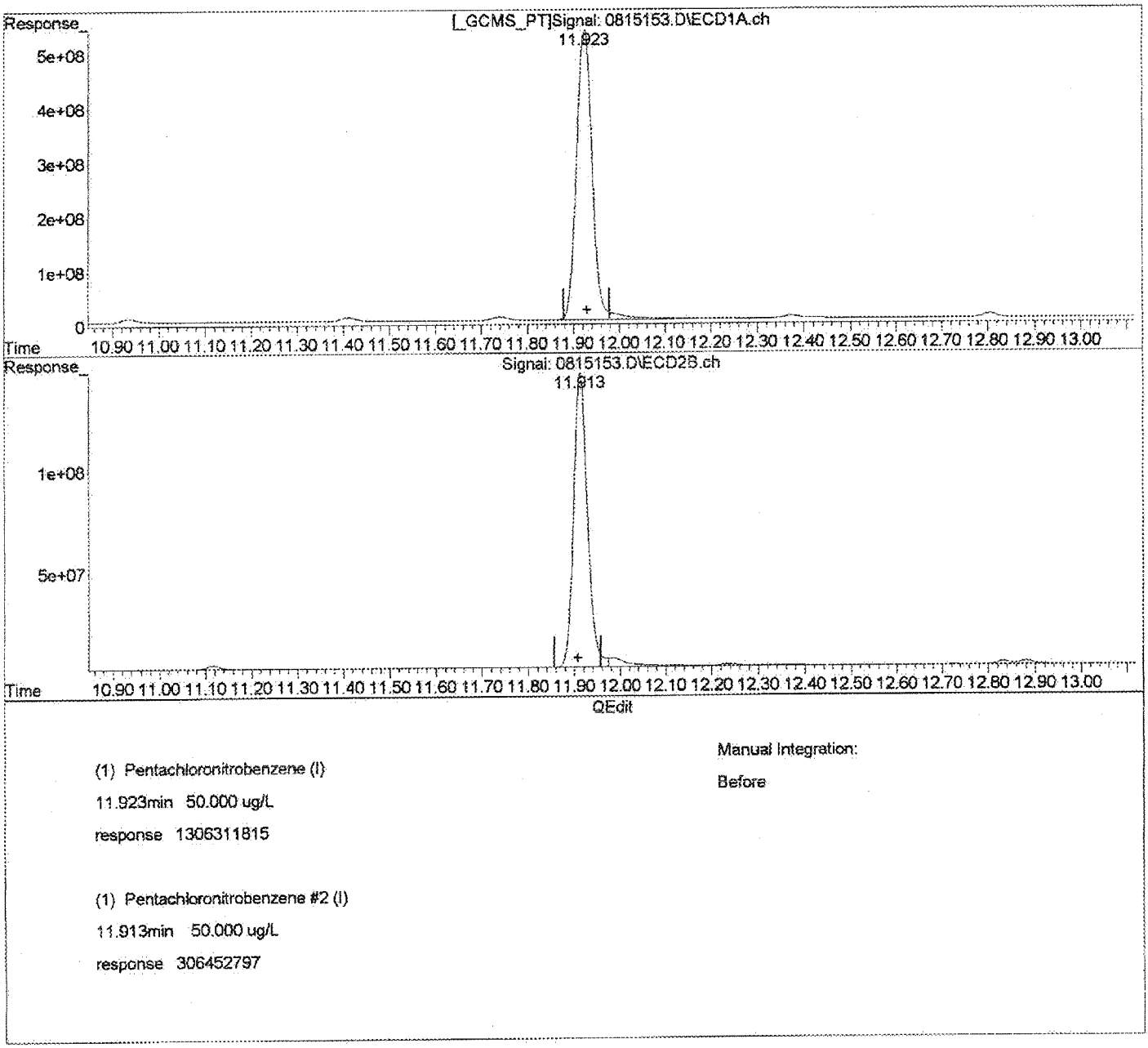


Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



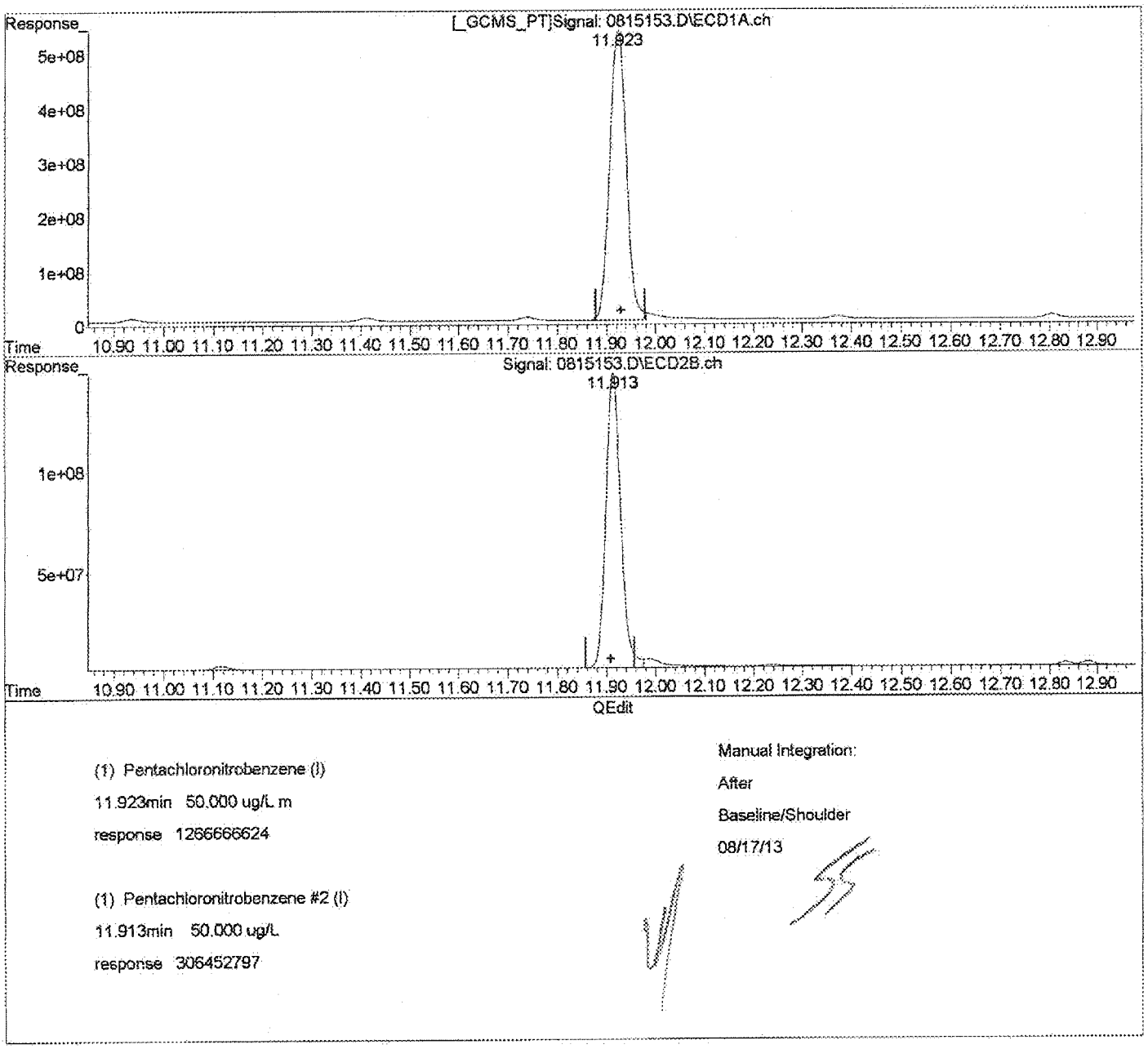
(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:20:55 2013

Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A Vial : 50
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



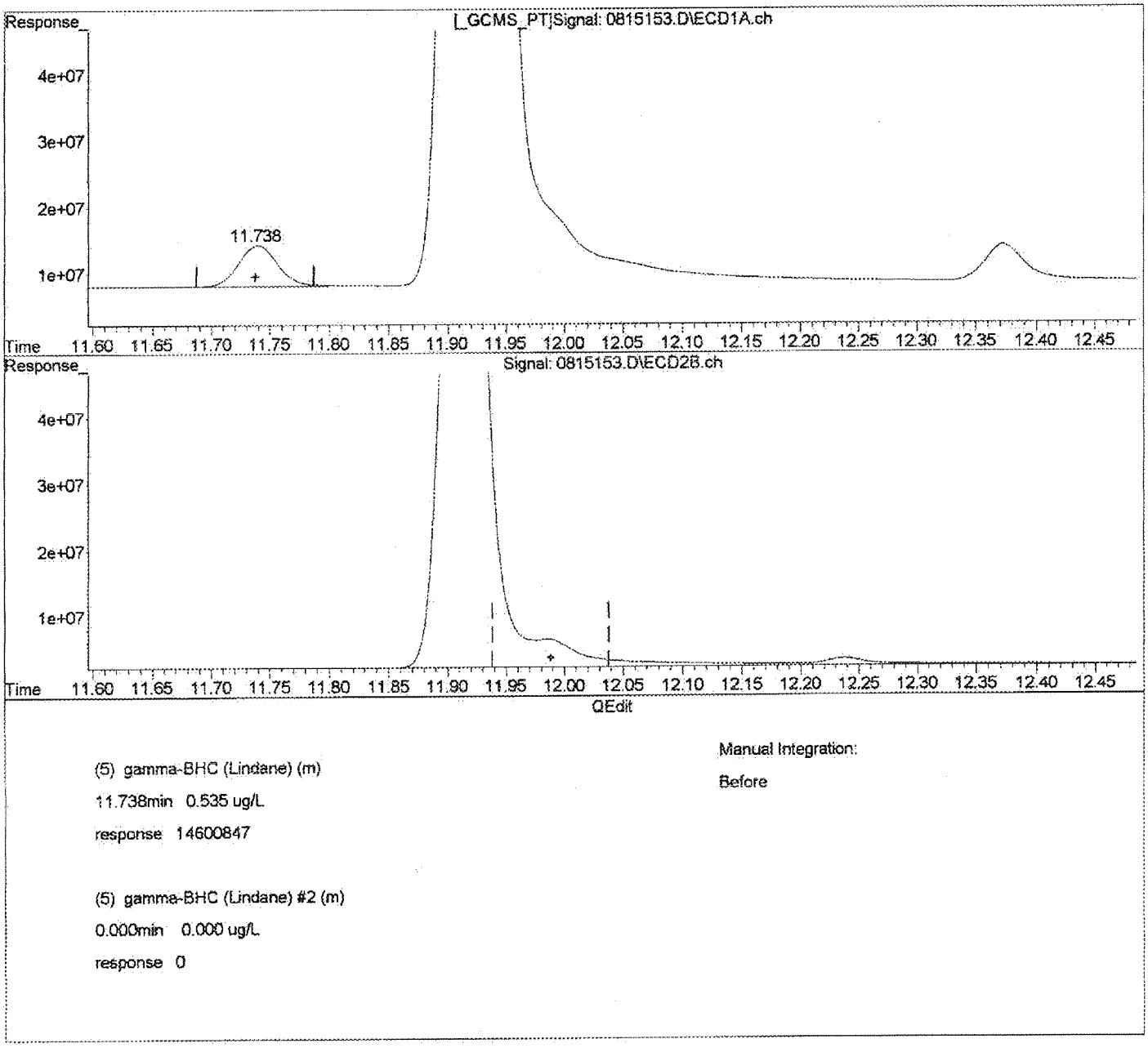
(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:21:07 2013 Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



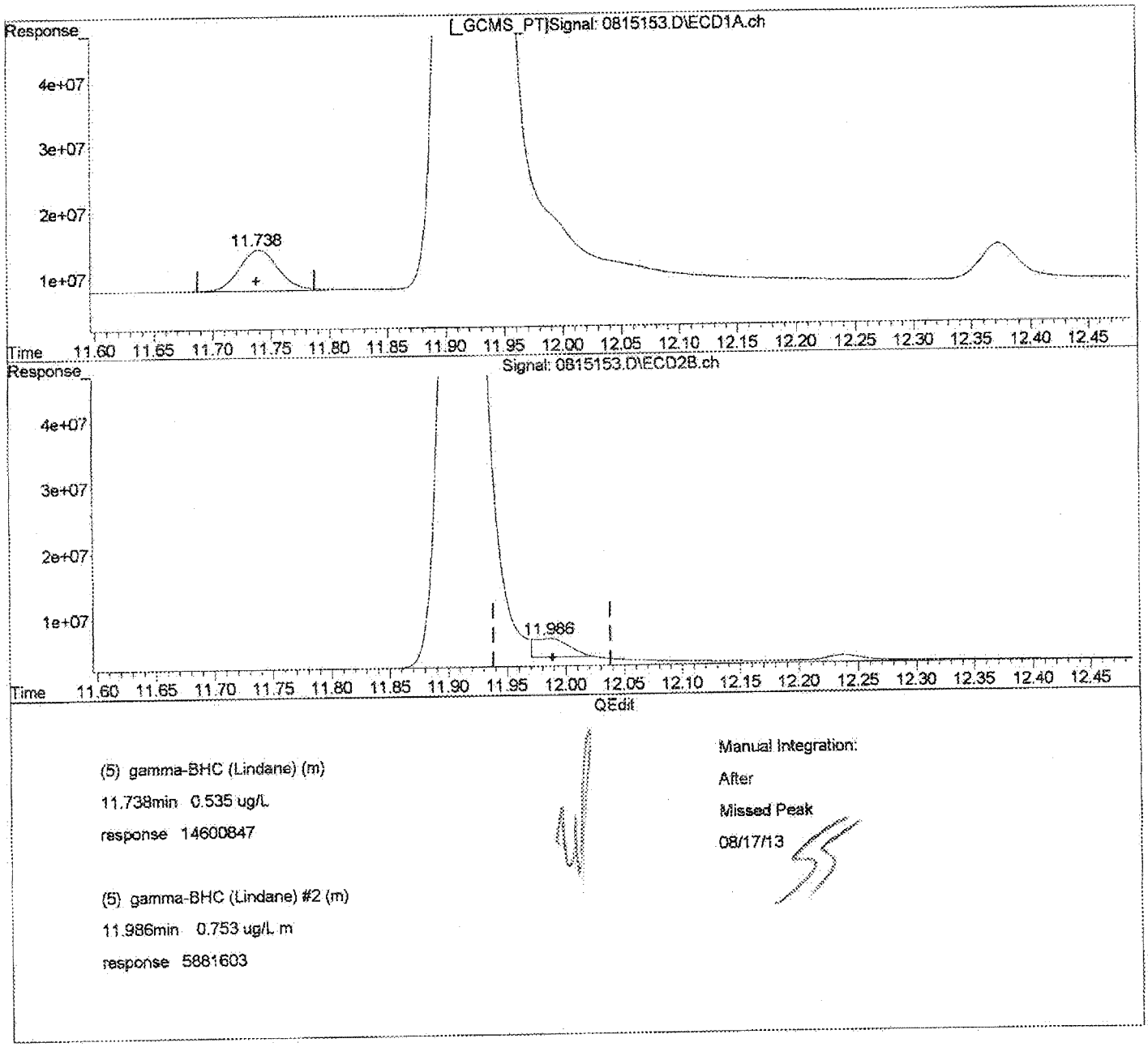
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:21:37 2013

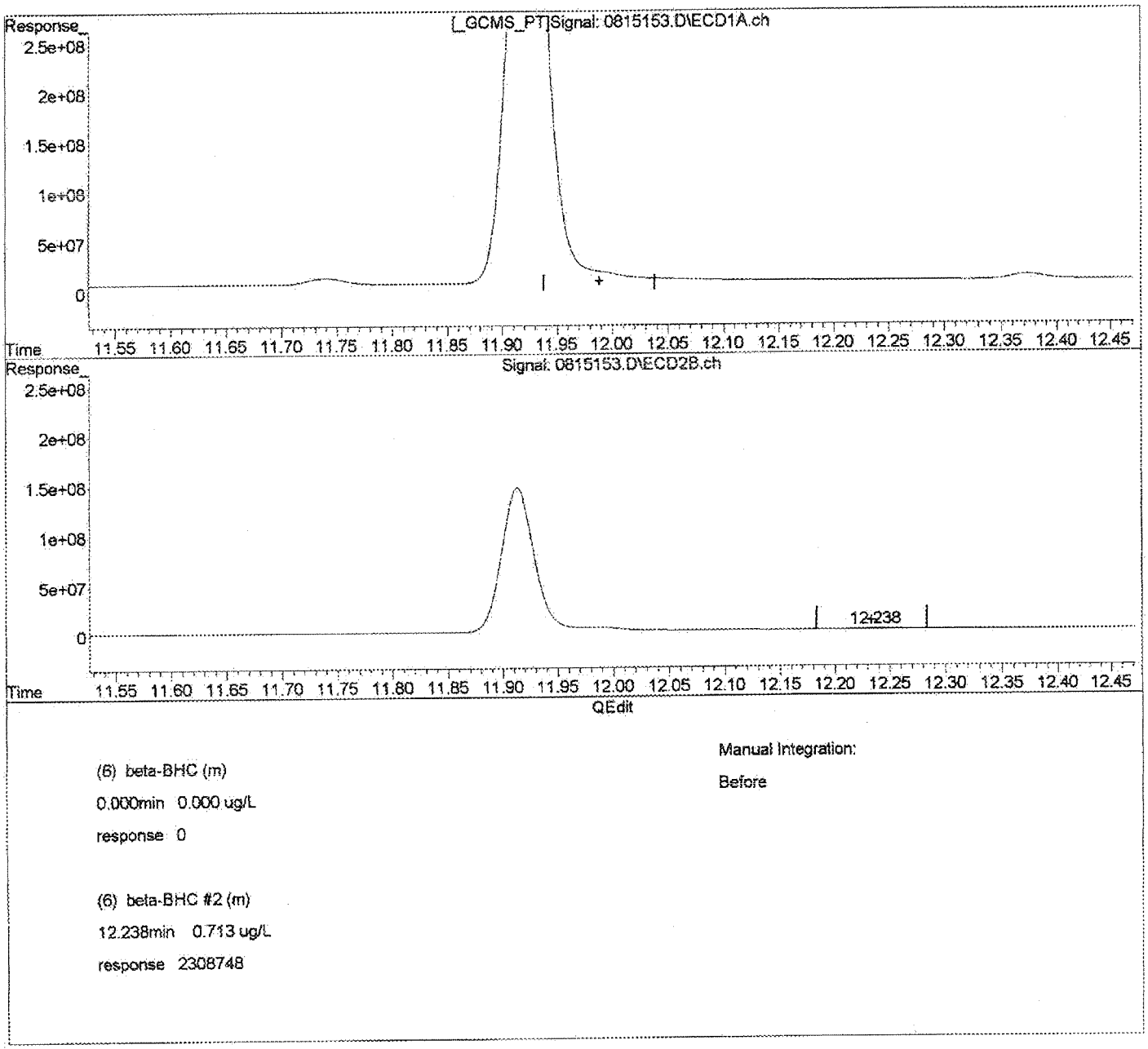
Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



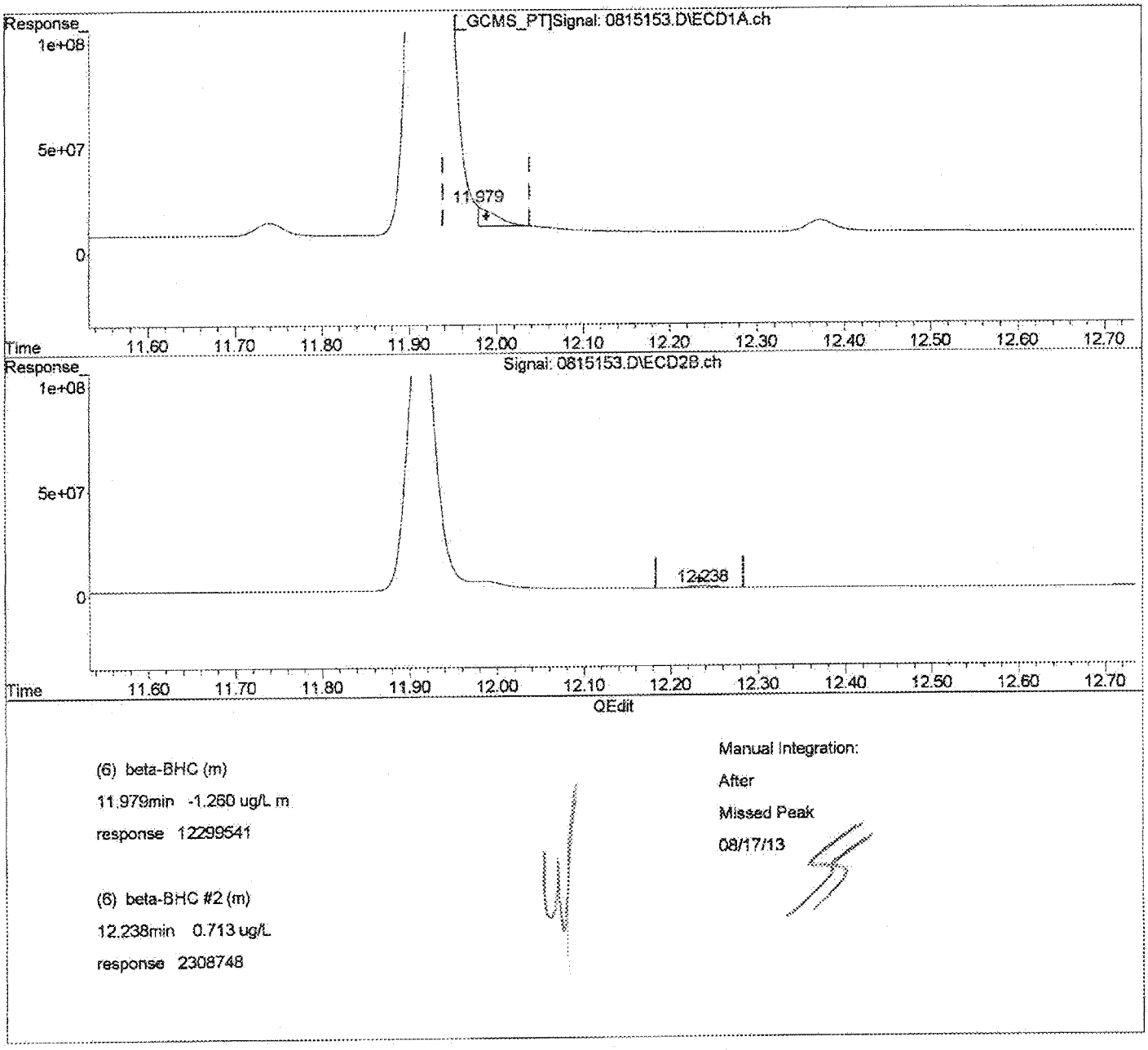
(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:21:42 2013

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



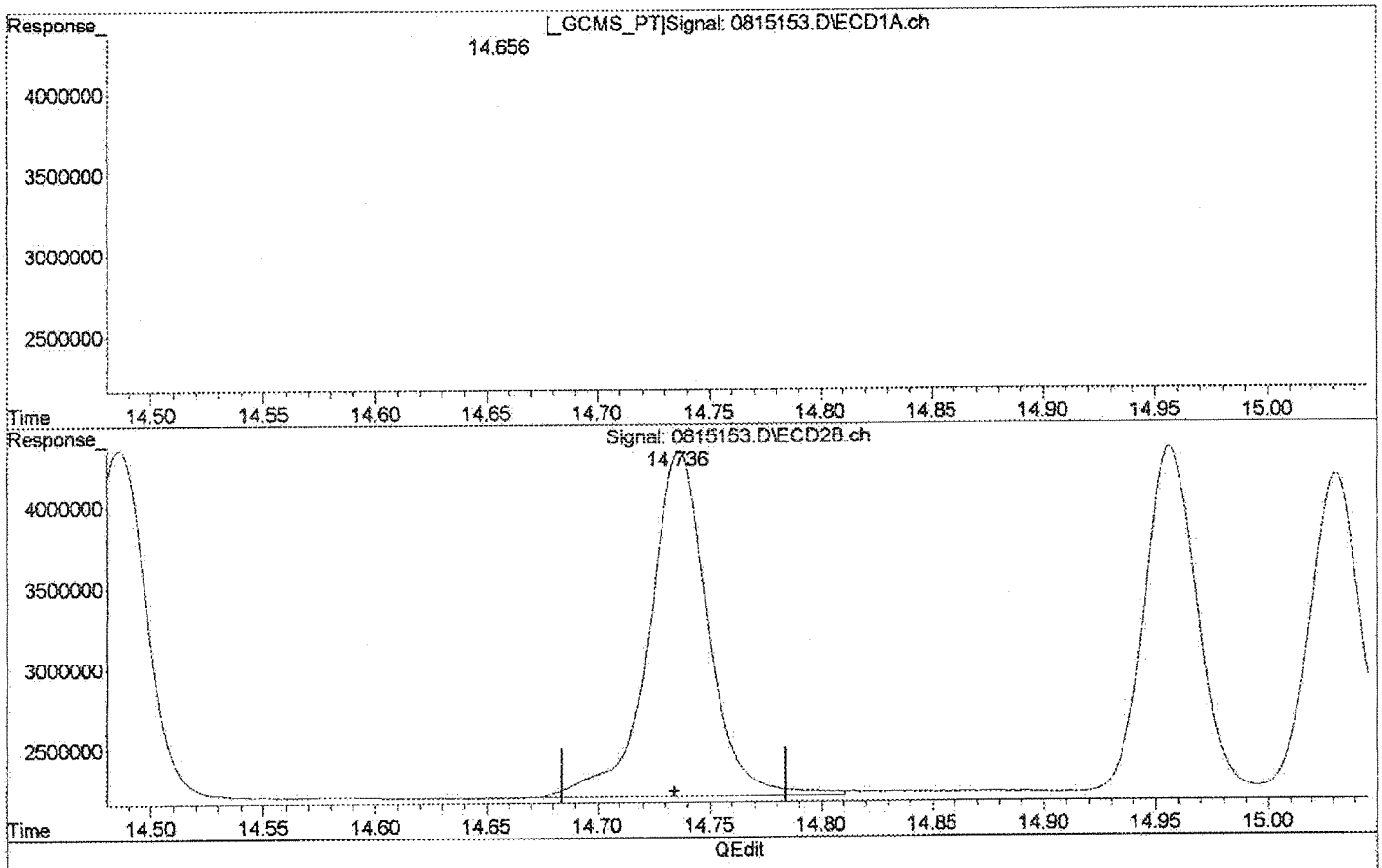
(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:21:53 2013

Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A Vial : 50
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Manual Integration:
Before

(12) gamma-Chlordane (m)
14.656min 0.613 ug/L
response 12473344

(12) gamma-Chlordane #2 (m)
14.736min 0.680 ug/L
response 3924901

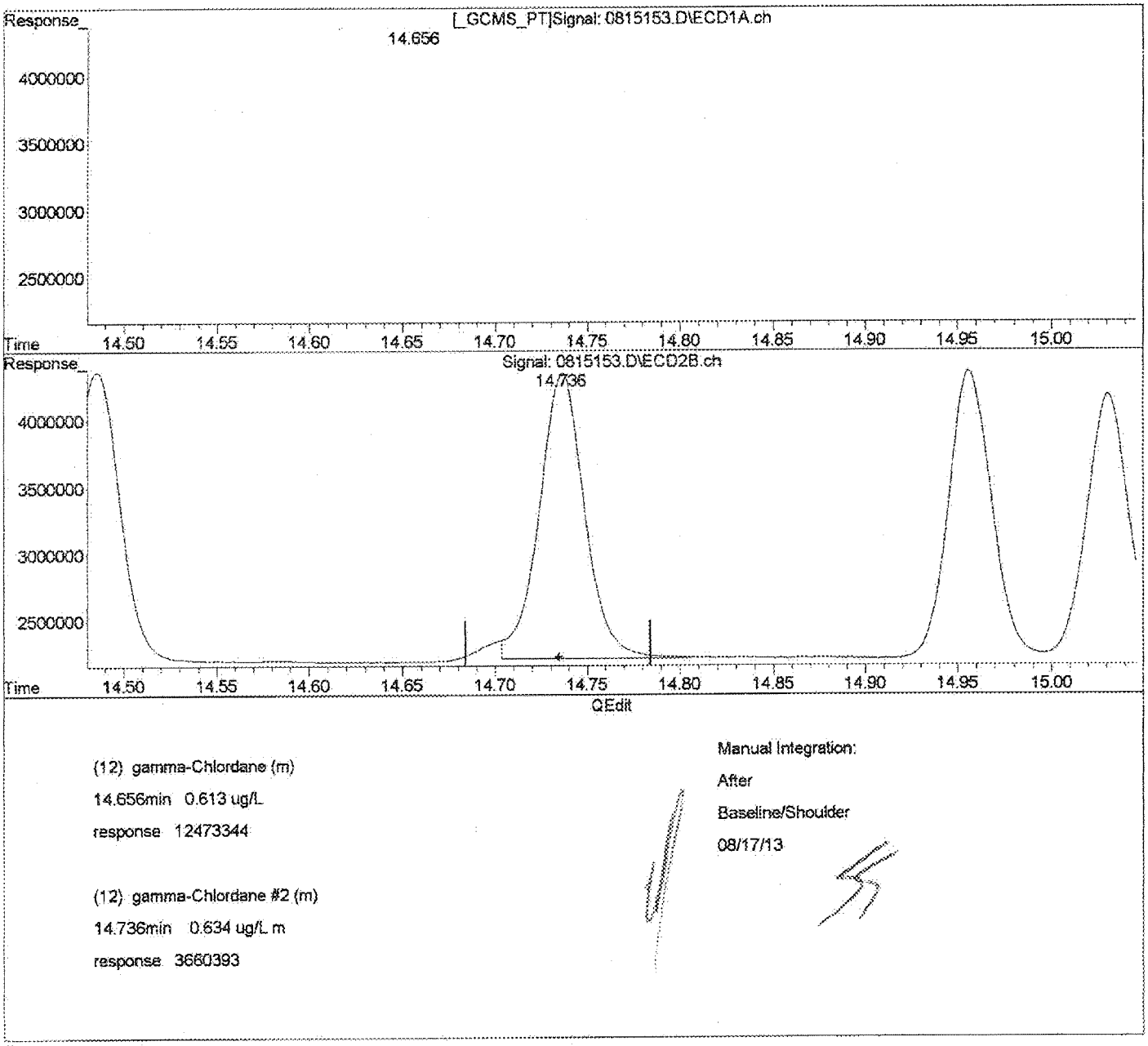
(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:22:04 2013 Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815153.D
Acq On : 16-Aug-2013, 22:29:50
Acq Meth : 508.M
Sample : PEST ICAL 2PPB DWSTD06-62A
Misc :
Quant Time : Aug 17 10:39:09 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 50
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:22:11 2013

Page: 1

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B
Misc :
Quant Time : Aug 17 11:26:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 51
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	Internal Standards							
1)	Pentachloronitrob...	11.92	11.91	1268.0E6	305.3E6	50.000m	50.000	
	System Monitoring Compounds							
2)	TCMX	9.38	9.41	35415249	8901744	1.595	1.520	
4)	4,4'-Dibromooctaf...	11.41	10.43	41567586	9267862	1.685	1.592	
25)	Decachlorobiphenyl	18.28	18.59	19835052	6876812	1.680	1.859	
	Target Compounds							
3)	alpha-BHC	10.93	11.11	44243162	11296887	1.453	2.063	#
5)	gamma-BHC (Lindane)	11.74	11.99	39369943	19393337	1.440	2.494	#
6)	beta-BHC	11.98	12.24	22034277	5235148	N.D. m	1.624	
7)	delta-BHC	12.37	12.83	33898933	8484658	1.317	1.984	#
8)	Heptachlor	12.80	12.88	37083989	9479495	1.403	1.567	
9)	Aldrin	13.38	13.47	34607839	9902474	1.486	1.560	
10)	Heptachlor Epoxid...	14.32	14.48	35475383	9433890	1.665	1.667	
11)	Heptachlor Epoxid...	14.46	14.45	32671081	9257163	1.618	1.643	
12)	gamma-Chlordane	14.66	14.73	31815500	9709664	1.562	1.688	
13)	alpha-Chlordane	14.87	14.96	31252973	9164185	1.695	1.663	
14)	4,4'-DDE	15.01	15.22	23126259	7443413	1.407	1.539	
15)	Endosulfan I	15.07	15.03	29192228	8549272	1.617	1.672	
16)	Dieldrin	15.43	15.42	29122516	8769255	1.616	1.622	
17)	Endrin	15.74	15.82	19790645	6218072	1.311	1.375	
18)	4,4'-DDD	15.83	15.95	17752378	5749191	1.423	1.521	
19)	Endosulfan II	16.02	16.07	22332325	7356891	1.780	1.662	
20)	4,4'-DDT	16.16	16.29	18242071	5954378	1.456	1.543	
21)	Endrin Aldehyde	16.49	16.44	19145539	6646071	1.626	1.837	
22)	Methoxychlor	16.65	16.96	9136601	2812547	1.555	1.537	
23)	Endosulfan Sulfate	16.94	16.71	19146772	6306890	1.613	1.681	
24)	Endrin Ketone	17.23	17.26	23714142	8180687	1.588	1.766	

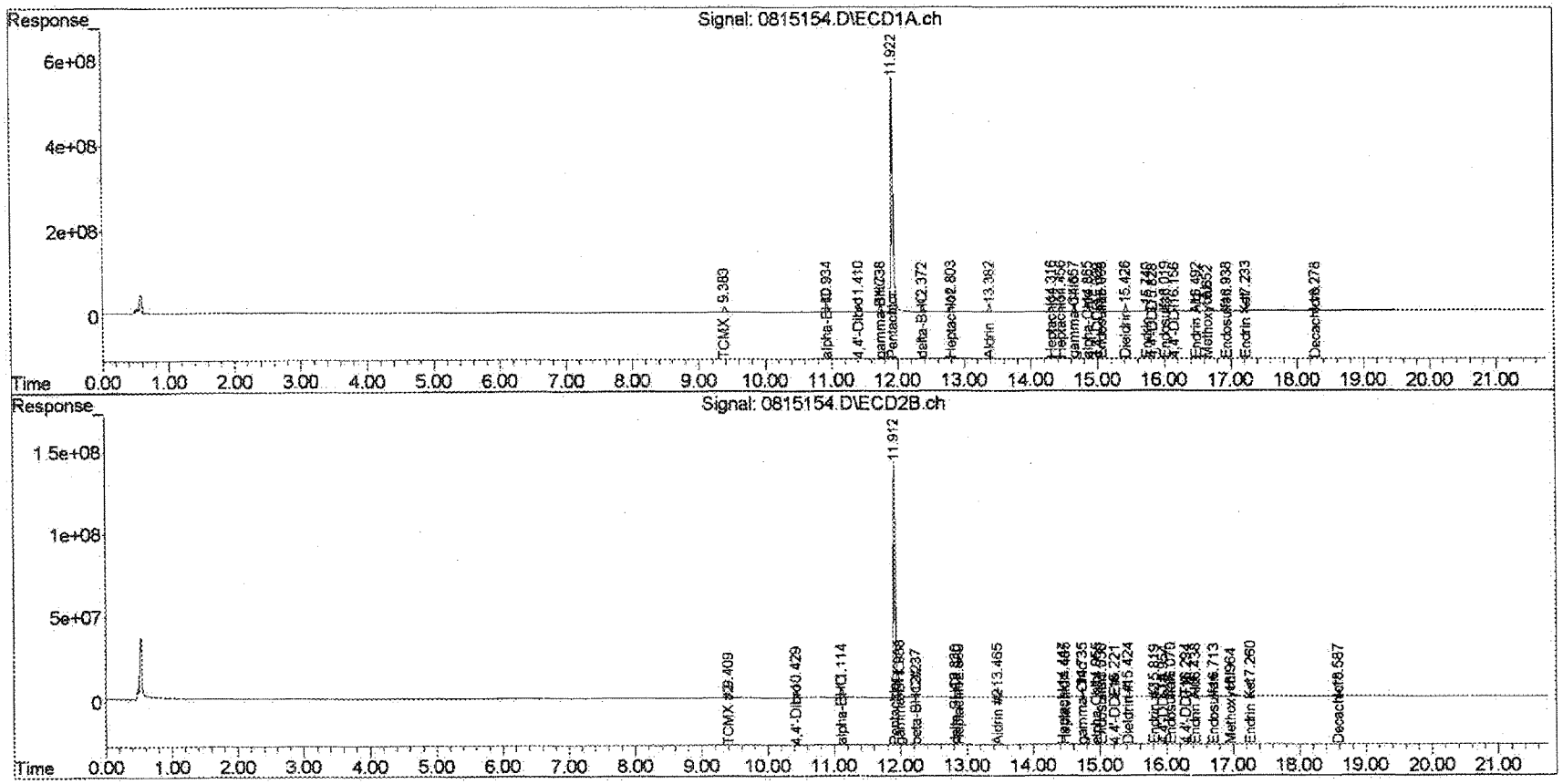
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B Vial : 51
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:26:37 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



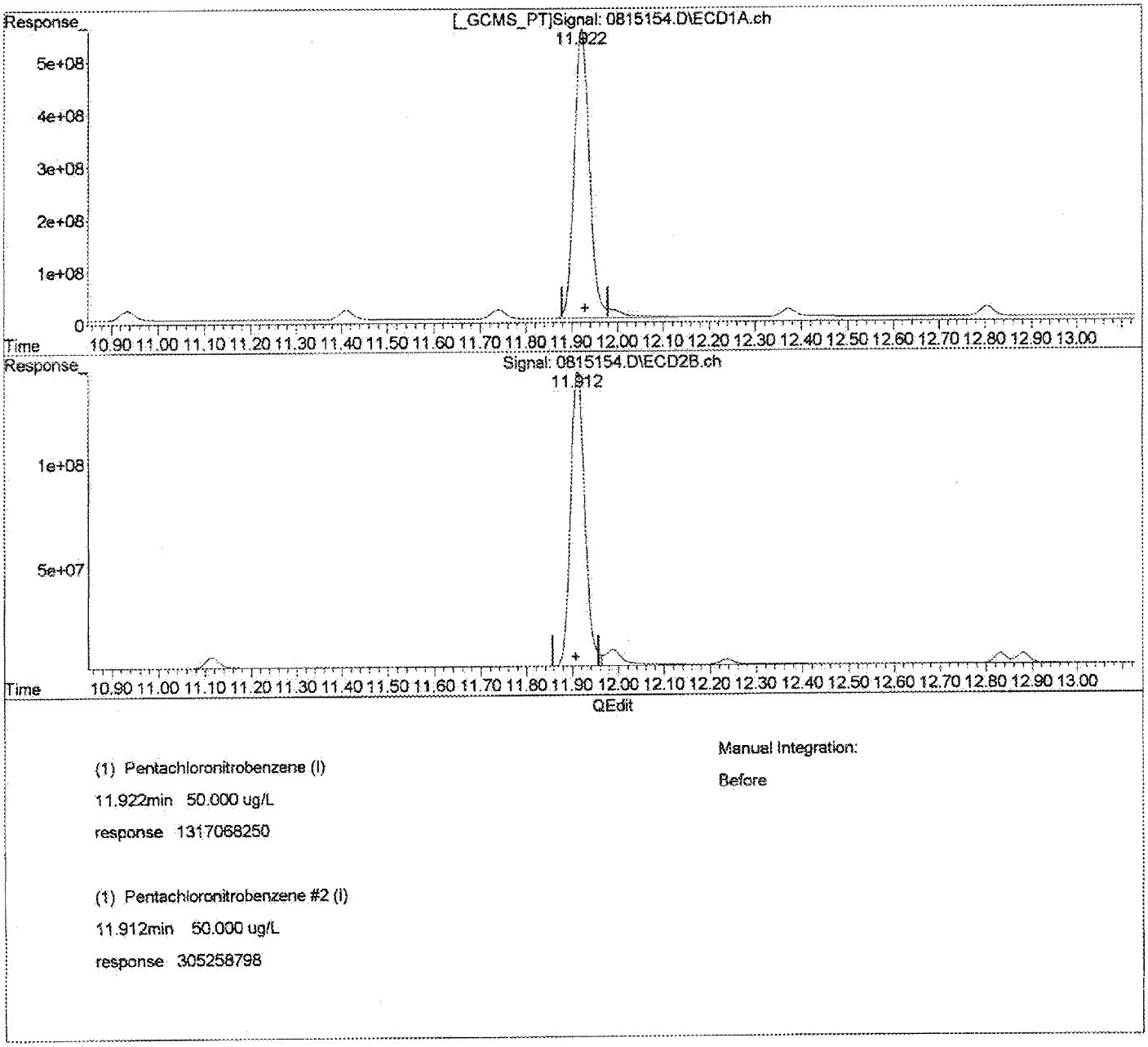
1061

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B
Misc :
Quant Time : Aug 17 10:39:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 51
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



Manual Integration:
Before

(1) Pentachloronitrobenzene (I)
11.922min 50.000 ug/L
response 1317068250

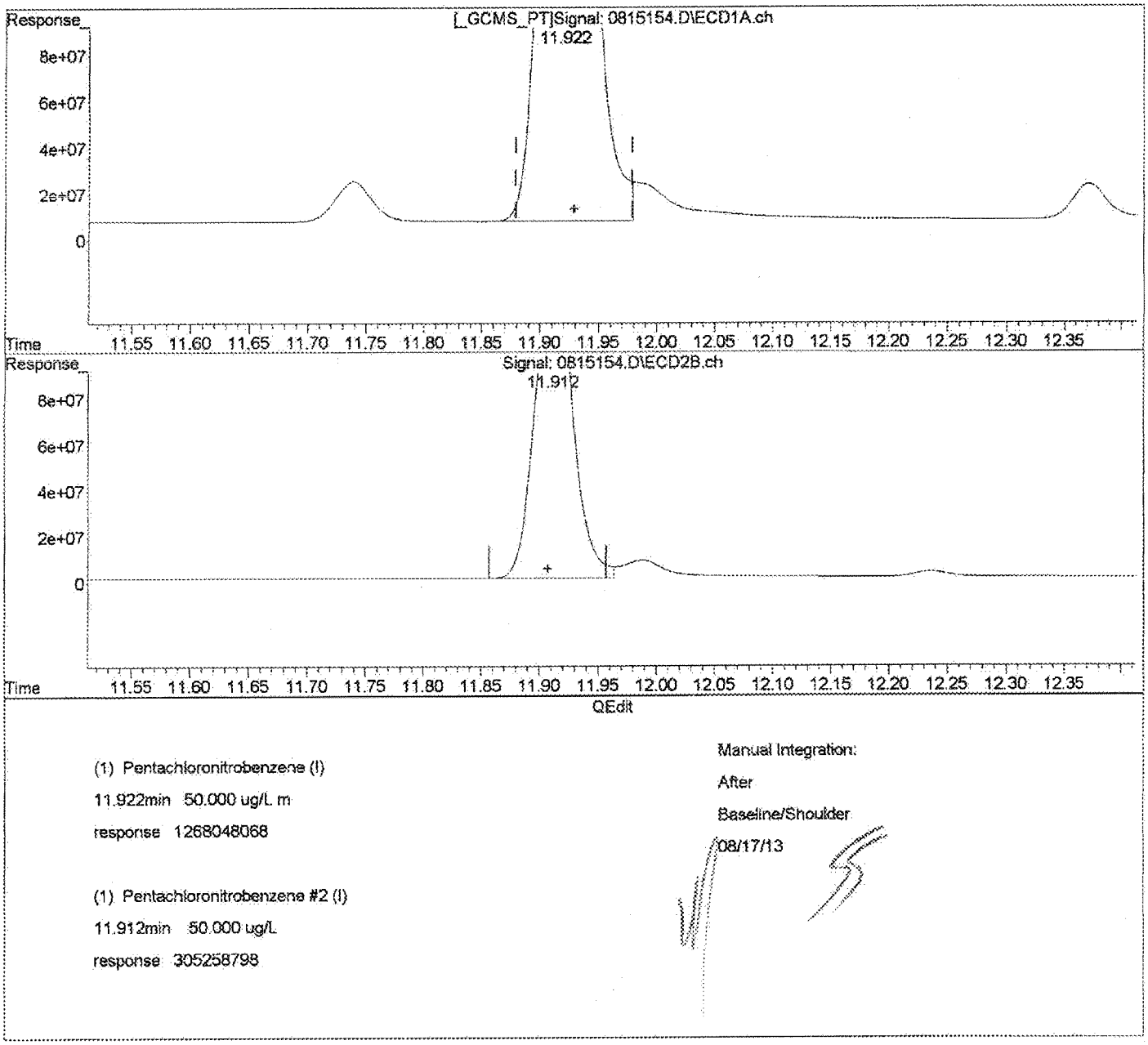
(1) Pentachloronitrobenzene #2 (I)
11.912min 50.000 ug/L
response 305258798

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B Vial : 51
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:39:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(1) Pentachloronitrobenzene (I)

11.922min 50.000 ug/L m

response 1268048068

(1) Pentachloronitrobenzene #2 (I)

11.912min 50.000 ug/L

response 305258798

Manual Integration:

After

Baseline/Shoulder

08/17/13

(+) = Expected Retention Time

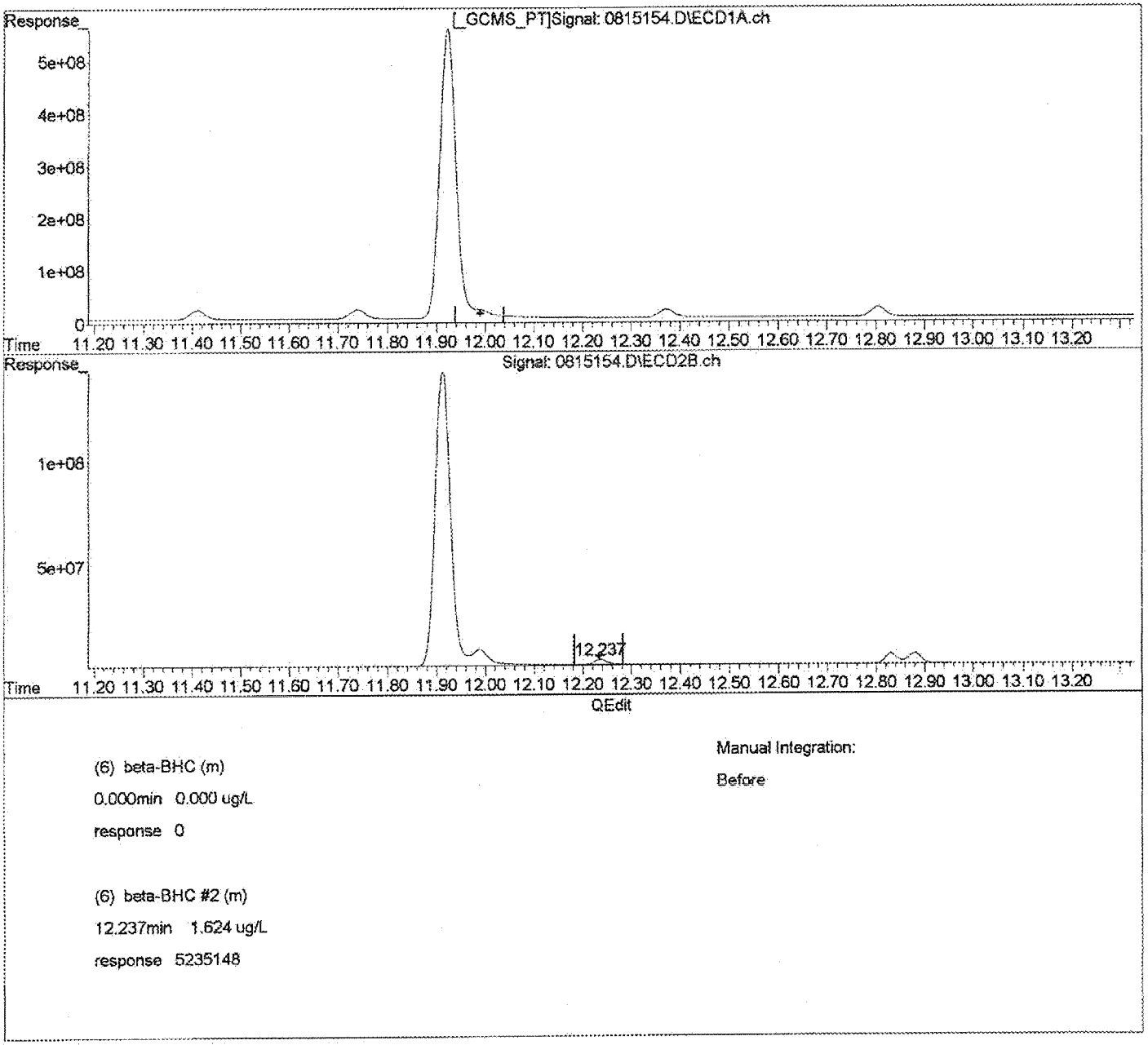
081513_508_608.M Sat Aug 17 11:22:48 2013 Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B
Misc :
Quant Time : Aug 17 10:39:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 51
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(6) beta-BHC (m)
0.000min 0.000 ug/L
response 0

(6) beta-BHC #2 (m)
12.237min 1.624 ug/L
response 5235148

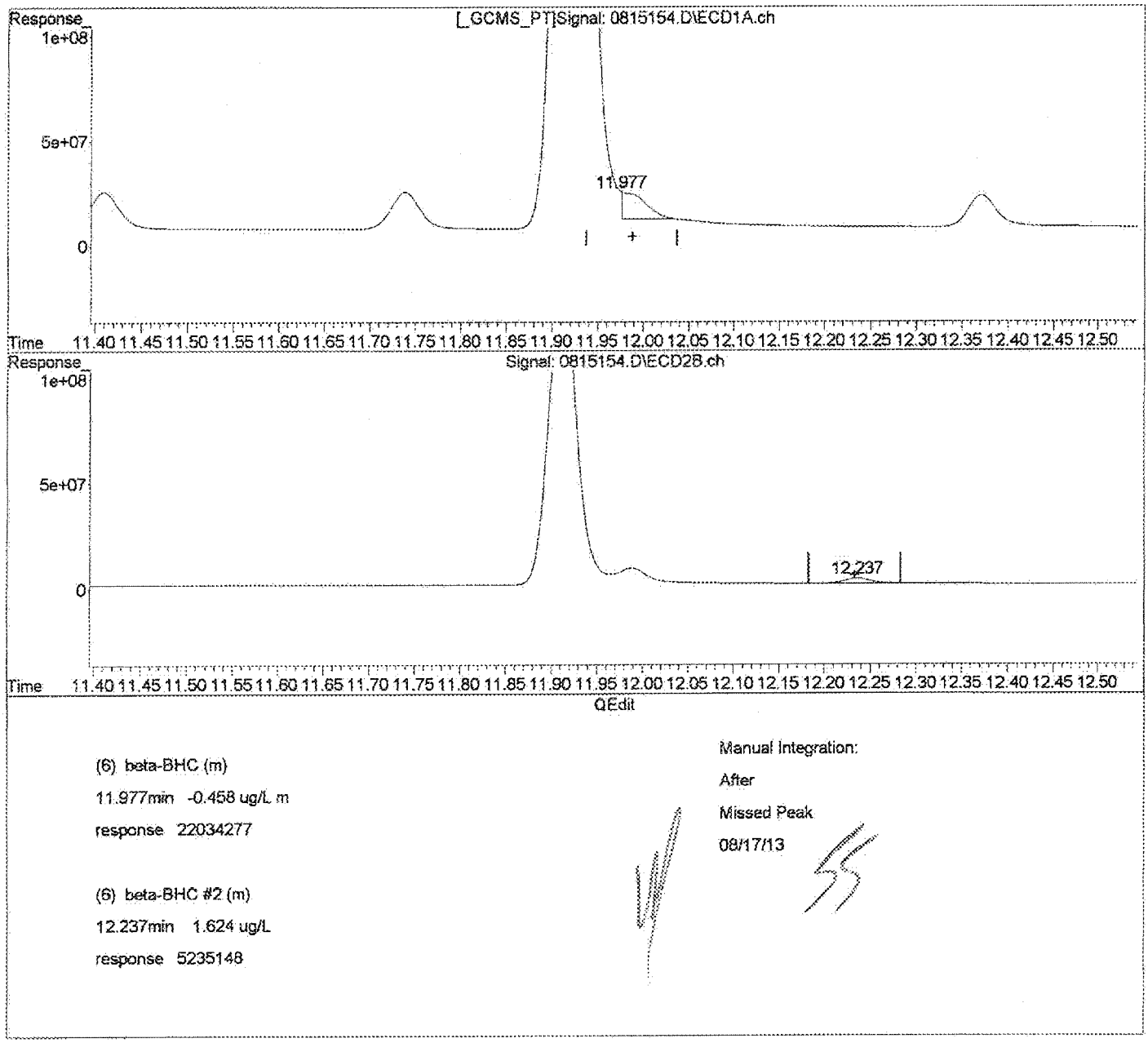
Manual Integration:
Before

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:22:58 2013 Page: 1

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815154.D
Acq On : 16-Aug-2013, 22:56:59 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 5PPB DWSTD06-62B Vial : 51
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:39:42 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(6) beta-BHC (m)
11.977min -0.458 ug/L m
response 22034277

(6) beta-BHC #2 (m)
12.237min 1.624 ug/L
response 5235148

Manual Integration:
After
Missed Peak
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815155.D
Acq On : 16-Aug-2013, 23:24:12 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 20PPB DWSTD06-62C Vial : 52
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:27:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1257.9E6	305.3E6	50.000	50.000
System Monitoring Compounds						
2) TCMX	9.38	9.41	147.9E6	37260089	6.716	6.363
4) 4,4'-Dibromooctaf...	11.41	10.43	162.3E6	39090618	6.632	6.716
25) Decachlorobiphenyl	18.28	18.59	73209195	25825090	6.252	6.981
Target Compounds						
3) alpha-BHC	10.94	11.11	200.5E6	53816814	6.639	6.877
5) gamma-BHC (Lindane)	11.74	11.99	176.6E6	62432575	6.512	8.029
6) beta-BHC	11.99	12.23	79679969	22060156	4.353m	6.842 #
7) delta-BHC	12.37	12.83	155.1E6	41502316	6.071	6.460
8) Heptachlor	12.80	12.88	157.0E6	41449564	5.989	6.851
9) Aldrin	13.38	13.47	150.1E6	45077496	6.495	7.102
10) Heptachlor Epoxid...	14.32	14.48	141.0E6	43029505	6.672	7.601
11) Heptachlor Epoxid...	14.46	14.45	134.0E6	40492817	6.689	7.188
12) gamma-Chlordane	14.66	14.73	130.4E6	41306903	6.454	7.180
13) alpha-Chlordane	14.87	14.95	124.4E6	39411706	6.804	7.149
14) 4,4'-DDE	15.01	15.22	98655222	33180775	6.051	6.862
15) Endosulfan I	15.07	15.03	118.4E6	36802959	6.611	7.196
16) Dieldrin	15.43	15.42	117.2E6	38937702	6.555	7.202
17) Endrin	15.74	15.82	81974253	27230238	5.474	6.023
18) 4,4'-DDD	15.83	15.95	73681577	25094841	5.952	6.637
19) Endosulfan II	16.02	16.07	91201227	31464853	7.327	7.108
20) 4,4'-DDT	16.15	16.29	76256786	25770933	6.134	6.678
21) Endrin Aldehyde	16.49	16.44	75526359	26611499	6.464	7.354
22) Methoxychlor	16.65	16.96	35404211	11594909	6.073	6.336
23) Endosulfan Sulfate	16.94	16.71	75301628	25955784	6.396	6.918
24) Endrin Ketone	17.23	17.26	94168658	33643461	6.358	7.261

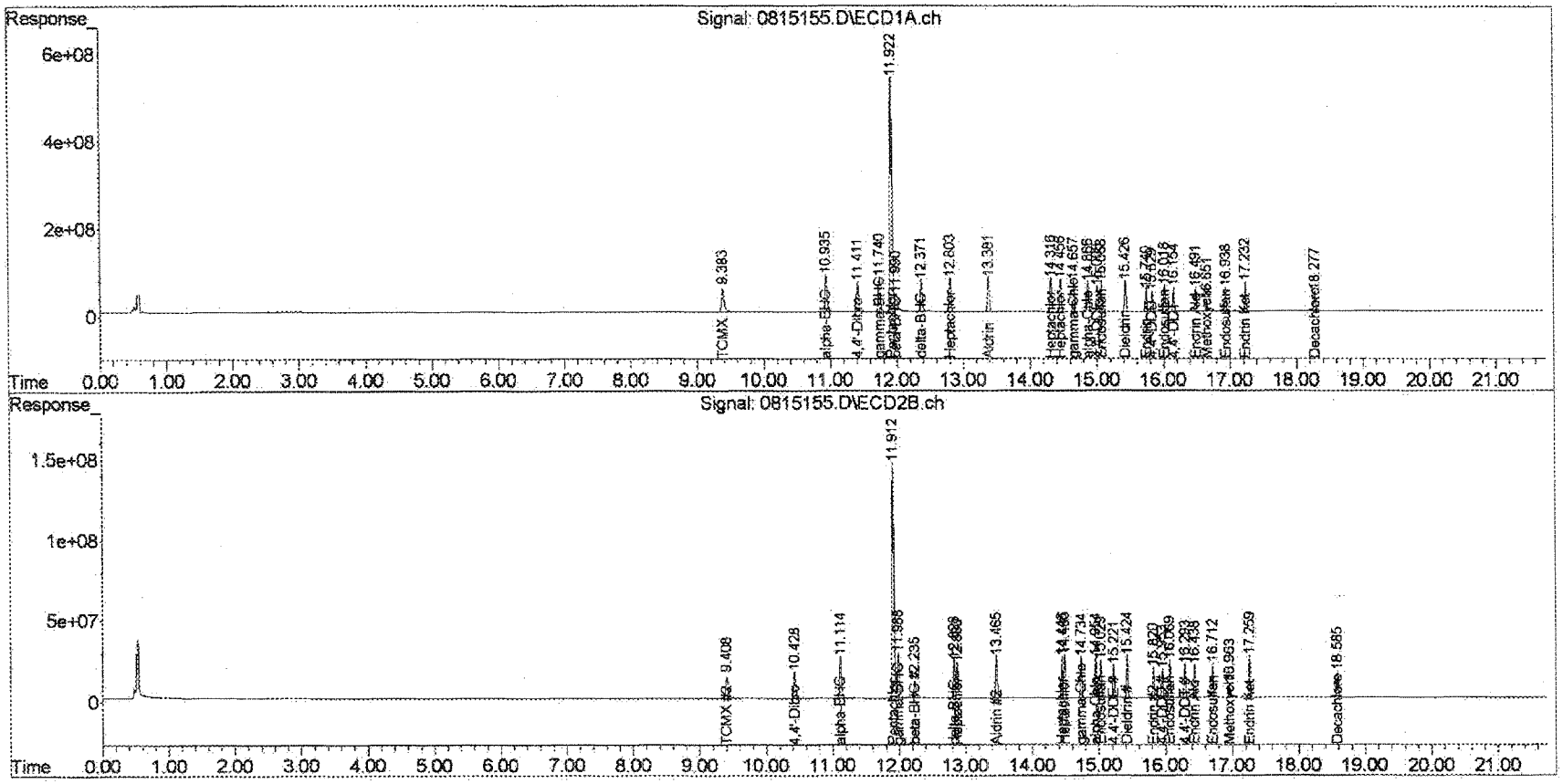
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

MJ 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815155.D
Acq On : 16-Aug-2013, 23:24:12 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 20PPB DWSTD06-62C Vial : 52
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:27:19 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



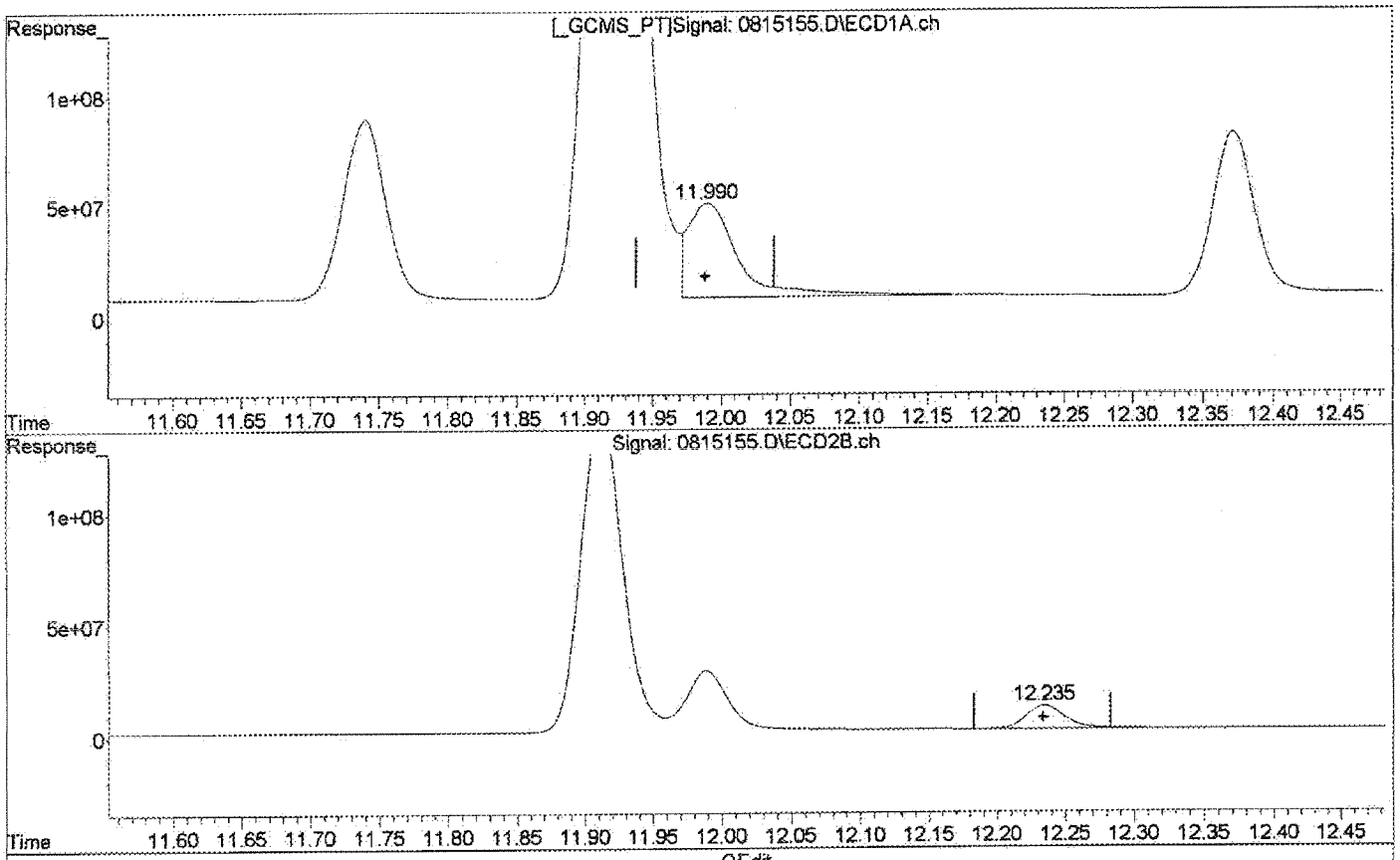
1067

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815155.D
Acq On : 16-Aug-2013, 23:24:12
Acq Meth : 508.M
Sample : PEST ICAL 20PPB DWSTD06-62C
Misc :
Quant Time : Aug 17 10:40:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 52
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(6) beta-BHC (m)
11.990min 6.543 ug/L
response 105990700

(6) beta-BHC #2 (m)
12.235min 6.842 ug/L
response 22060156

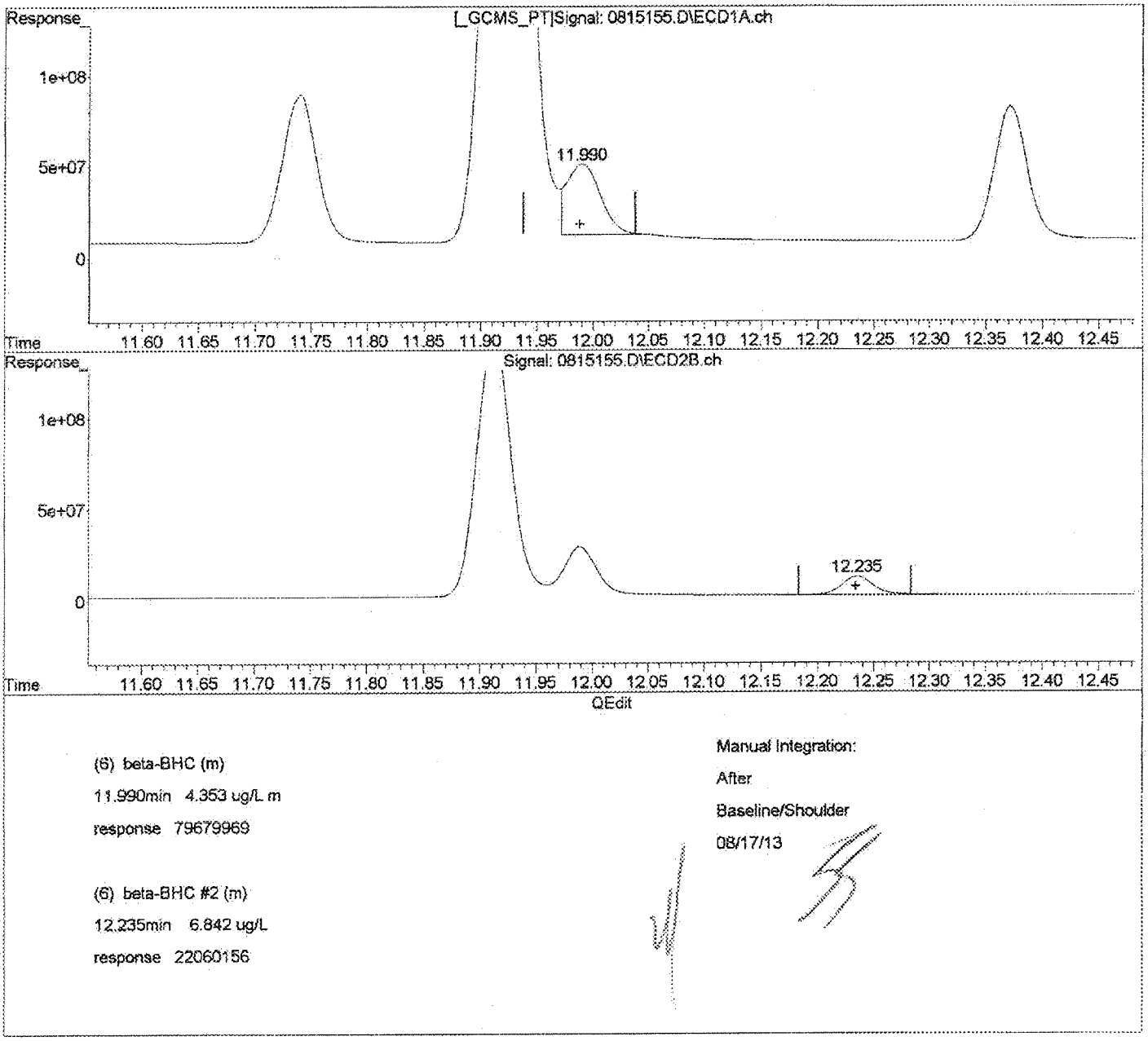
Manual Integration:
Before

(+) = Expected Retention Time
081513_508_608.M Sat Aug 17 11:23:40 2013

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815155.D
Acq On : 16-Aug-2013, 23:24:12 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 20PPB DWSTD06-62C Vial : 52
Misc : Multiplier : 1.00
Quant Time : Aug 17 10:40:12 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(6) beta-BHC (m)
11.990min 4.353 ug/L m
response 79679969

(6) beta-BHC #2 (m)
12.235min 6.842 ug/L
response 22060156

Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815156.D
Acq On : 16-Aug-2013, 23:50:18
Acq Meth : 508.M
Sample : PEST ICAL 50PPB DWSTD06-62D
Misc :
Quant Time : Aug 17 11:27:46 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 53
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1258.1E6	307.8E6	50.000	50.000
System Monitoring Compounds						
2) TCMX	9.38	9.41	373.3E6	95916472	16.951	16.243
4) 4,4'-Dibromooctaf...	11.41	10.43	409.7E6	97340212	16.734	16.585
25) Decachlorobiphenyl	18.28	18.59	175.5E6	62389494	14.985	16.725
Target Compounds						
3) alpha-BHC	10.93	11.11	545.8E6	144.9E6	18.063	17.057
5) gamma-BHC (Lindane)	11.74	11.99	478.5E6	142.7E6	17.645	18.197
6) beta-BHC	11.99	12.23	233.0E6	54186893	17.111	16.666
7) delta-BHC	12.37	12.83	427.5E6	115.3E6	16.734	16.336
8) Heptachlor	12.80	12.88	406.6E6	108.8E6	15.503	17.830
9) Aldrin	13.38	13.46	392.2E6	119.2E6	16.967	18.625
10) Heptachlor Epoxid...	14.31	14.48	354.2E6	109.1E6	16.760	19.103
11) Heptachlor Epoxid...	14.45	14.45	336.8E6	105.4E6	16.814	18.551
12) gamma-Chlordane	14.65	14.73	333.7E6	106.8E6	16.511	18.409
13) alpha-Chlordane	14.86	14.95	315.2E6	101.8E6	17.234	18.314
14) 4,4'-DDE	15.01	15.22	263.6E6	88290816	16.164	18.106
15) Endosulfan I	15.07	15.03	299.3E6	94833018	16.713	18.388
16) Dieldrin	15.42	15.42	302.2E6	101.6E6	16.900	18.643
17) Endrin	15.74	15.82	218.3E6	72846134	14.575	15.978
18) 4,4'-DDD	15.83	15.95	193.3E6	66551054	15.612	17.455
19) Endosulfan II	16.02	16.07	231.3E6	80446141	18.581	18.021
20) 4,4'-DDT	16.15	16.29	203.5E6	69092479	16.364	17.754
21) Endrin Aldehyde	16.49	16.44	189.9E6	66562111	16.253	18.242
22) Methoxychlor	16.65	16.96	88845012	29668661	15.237	16.077
23) Endosulfan Sulfate	16.94	16.71	190.2E6	66353063	16.154	17.538
24) Endrin Ketone	17.23	17.26	238.8E6	84579827	16.121	18.102

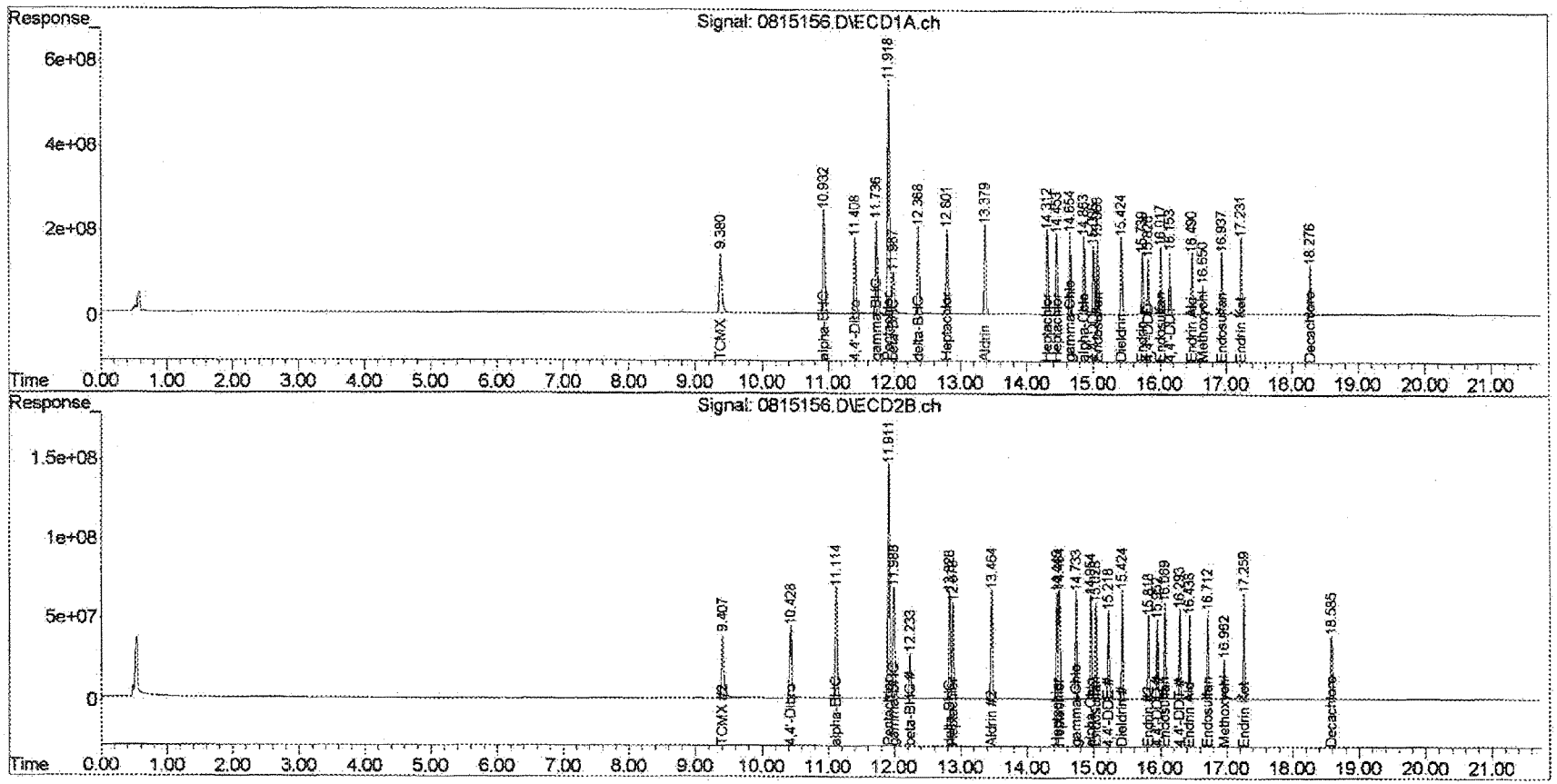
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

MJ 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815156.D
Acq On : 16-Aug-2013, 23:50:18 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 50PPB DWSTD06-62D Vial : 53
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:27:46 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



1071

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815157.D
Acq On : 17-Aug-2013, 00:17:25 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 75PPB DWSTD06-62E Vial : 54
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:28:07 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1267.9E6	305.6E6	50.000	50.000
System Monitoring Compounds						
2) TCMX	9.38	9.41	573.7E6	145.8E6	25.850	24.873
4) 4,4'-Dibromooctaf...	11.41	10.43	624.7E6	147.7E6	25.319	25.344
25) Decachlorobiphenyl	18.28	18.59	262.5E6	93242934	22.238	25.180
Target Compounds						
3) alpha-BHC	10.93	11.11	860.7E6	225.3E6	28.267	26.262
5) gamma-BHC (Lindane)	11.74	11.99	746.8E6	213.5E6	27.327	27.426
6) beta-BHC	11.99	12.23	344.2E6	82773354	26.142	25.646
7) delta-BHC	12.37	12.83	677.4E6	177.5E6	26.311	24.881
8) Heptachlor	12.80	12.88	625.8E6	164.4E6	23.677	27.140
9) Aldrin	13.38	13.47	606.5E6	181.9E6	26.038	28.630
10) Heptachlor Epoxid...	14.32	14.48	540.2E6	164.7E6	25.365	29.069
11) Heptachlor Epoxid...	14.46	14.45	512.9E6	158.7E6	25.405	28.148
12) gamma-Chlordane	14.66	14.73	515.1E6	163.0E6	25.289	28.297
13) alpha-Chlordane	14.87	14.96	485.2E6	155.0E6	26.324	28.087
14) 4,4'-DDE	15.01	15.22	412.4E6	135.8E6	25.094	28.056
15) Endosulfan I	15.07	15.03	457.6E6	142.5E6	25.354	27.840
16) Dieldrin	15.43	15.42	466.9E6	155.1E6	25.908	28.655
17) Endrin	15.74	15.82	341.3E6	111.9E6	22.616	24.726
18) 4,4'-DDD	15.83	15.95	301.1E6	102.6E6	24.131	27.107
19) Endosulfan II	16.02	16.07	356.1E6	122.1E6	28.387	27.563
20) 4,4'-DDT	16.15	16.29	317.8E6	106.7E6	25.368	27.608
21) Endrin Aldehyde	16.49	16.44	291.4E6	100.6E6	24.748	27.771
22) Methoxychlor	16.65	16.96	134.3E6	44674241	22.851	24.387
23) Endosulfan Sulfate	16.94	16.71	292.6E6	101.0E6	24.654	26.895
24) Endrin Ketone	17.23	17.26	366.7E6	127.4E6	24.563	27.462

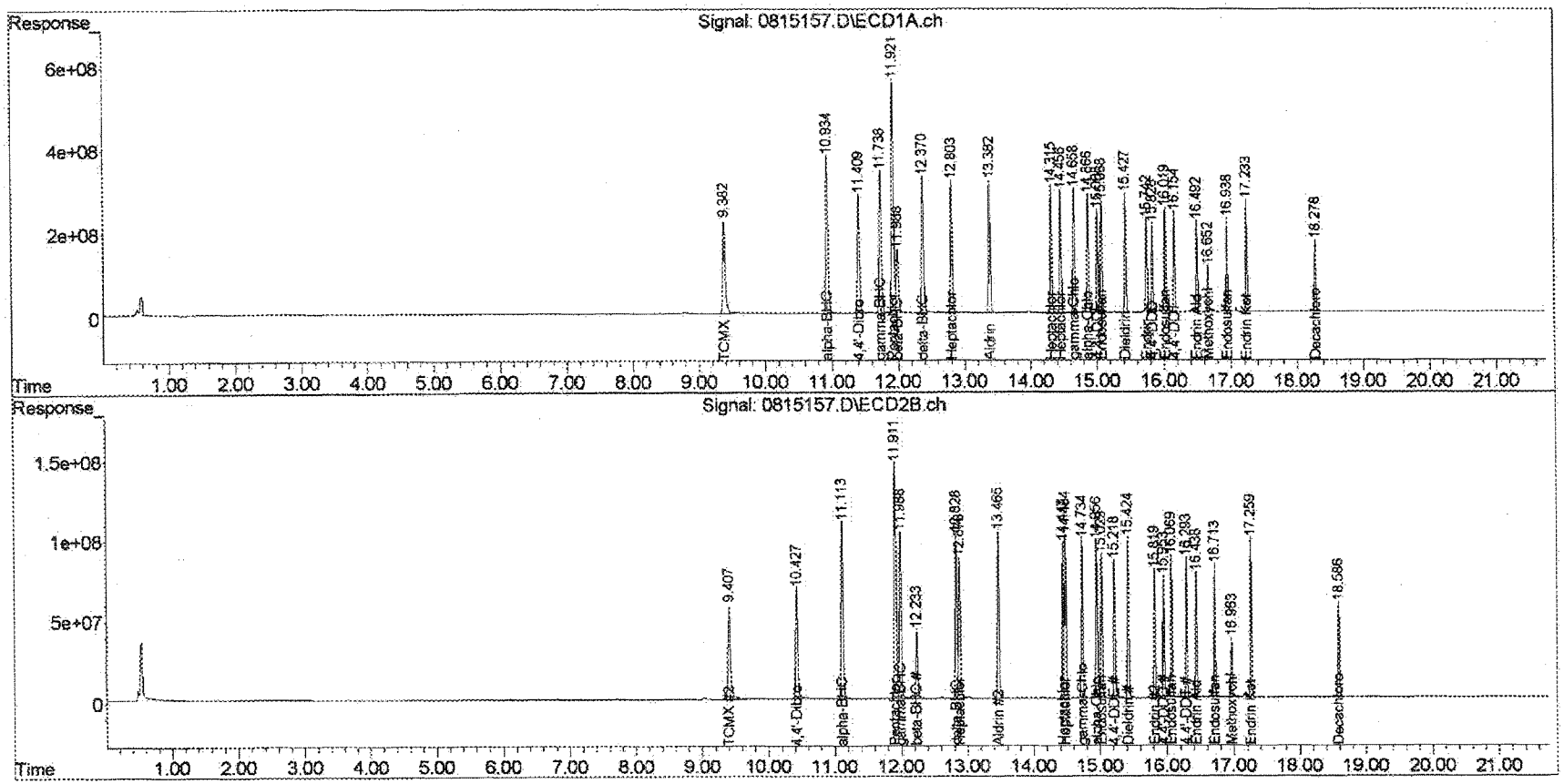
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815157.D
Acq On : 17-Aug-2013, 00:17:25 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 75PPB DWSTD06-62E Vial : 54
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:28:07 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



1073

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815158.D
Acq On : 17-Aug-2013, 00:44:56 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 100PPB DWSTD06-62F Vial : 55
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:28:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1285.5E6	309.9E6	50.000	50.000
System Monitoring Compounds						
2) TCMX	9.38	9.41	761.8E6	193.8E6	33.852	32.603
4) 4,4'-Dibromooctaf...	11.41	10.43	836.0E6	203.8E6	33.420	34.495
25) Decachlorobiphenyl	18.28	18.58	349.0E6	123.8E6	29.166	32.975
Target Compounds						
3) alpha-BHC	10.94	11.11	1171.4E6	304.4E6	37.942	34.732
5) gamma-BHC (Lindane)	11.74	11.99	1022.0E6	282.9E6	36.883	35.837
6) beta-BHC	11.99	12.23	450.2E6	111.3E6	34.381	34.011
7) delta-BHC	12.37	12.83	927.2E6	244.2E6	35.519	33.446
8) Heptachlor	12.81	12.88	835.0E6	221.8E6	31.157	36.103
9) Aldrin	13.38	13.47	809.4E6	243.5E6	34.273	37.789
10) Heptachlor Epoxid...	14.32	14.48	718.2E6	221.1E6	33.257	38.464
11) Heptachlor Epoxid...	14.46	14.45	684.5E6	208.4E6	33.438	36.444
12) gamma-Chlordane	14.66	14.73	687.9E6	218.5E6	33.309	37.408
13) alpha-Chlordane	14.87	14.96	647.5E6	207.9E6	34.646	37.141
14) 4,4'-DDE	15.01	15.22	553.9E6	183.5E6	33.242	37.387
15) Endosulfan I	15.07	15.03	612.0E6	191.3E6	33.440	36.849
16) Dieldrin	15.43	15.42	627.8E6	207.8E6	34.357	37.851
17) Endrin	15.74	15.82	475.6E6	155.1E6	31.079	33.782
18) 4,4'-DDD	15.83	15.95	409.5E6	139.4E6	32.367	36.304
19) Endosulfan II	16.02	16.07	476.6E6	163.8E6	37.461	36.447
20) 4,4'-DDT	16.16	16.29	435.4E6	145.4E6	34.270	37.104
21) Endrin Aldehyde	16.49	16.44	390.6E6	133.2E6	32.709	36.247
22) Methoxychlor	16.65	16.96	182.5E6	60476092	30.626	32.549
23) Endosulfan Sulfate	16.94	16.71	396.0E6	135.8E6	32.907	35.641
24) Endrin Ketone	17.23	17.26	490.8E6	168.9E6	32.430	35.898

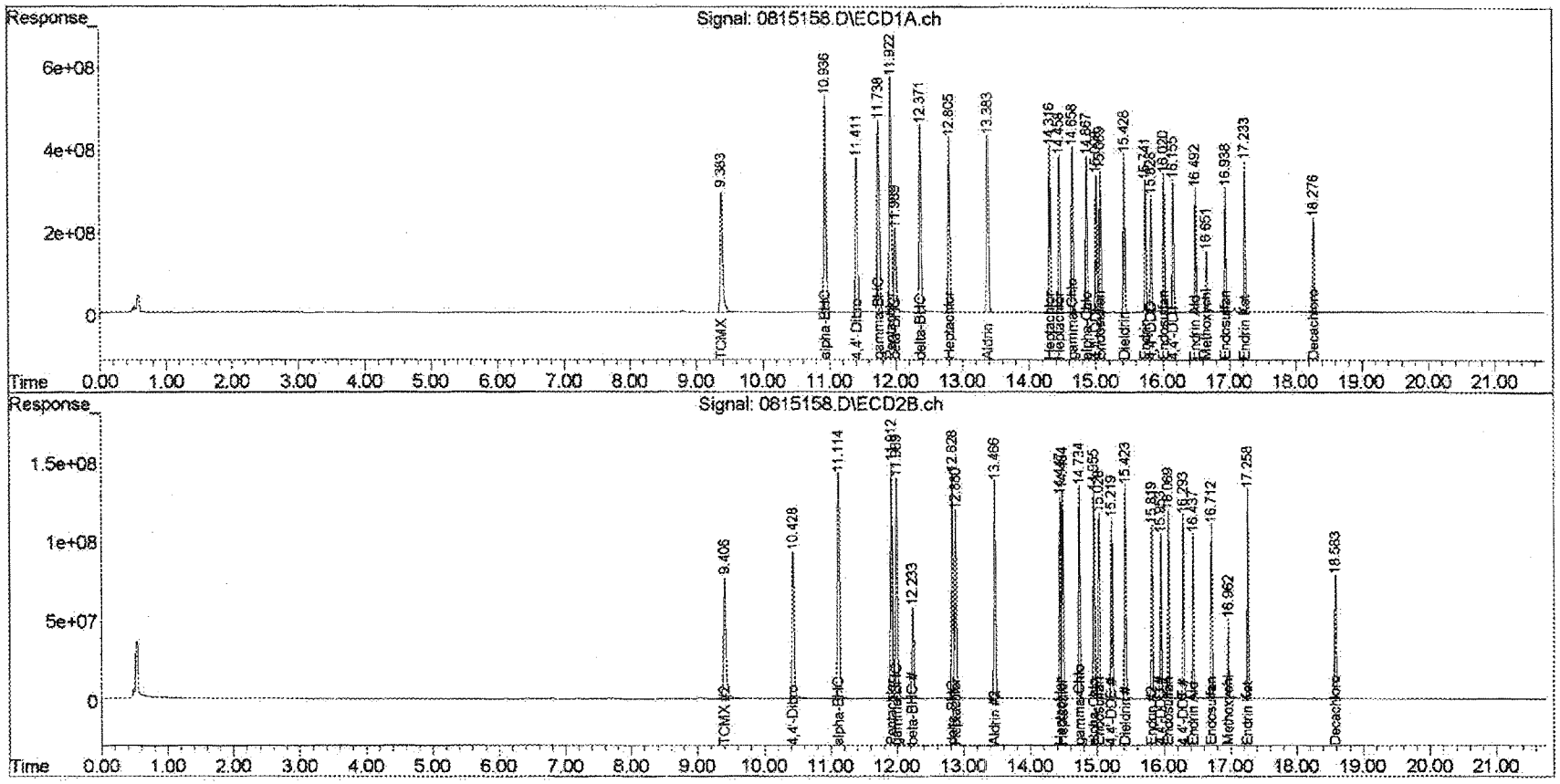
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815158.D
Acq On : 17-Aug-2013, 00:44:56 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 100PPB DWSTD06-62F Vial : 55
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:28:29 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815159.D
Acq On : 17-Aug-2013, 01:12:04
Acq Meth : 508.M
Sample : PEST ICAL 200PPB DWSTD06-62G
Misc :
Quant Time : Aug 17 11:28:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Operator : SSullivan
Vial : 56
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um

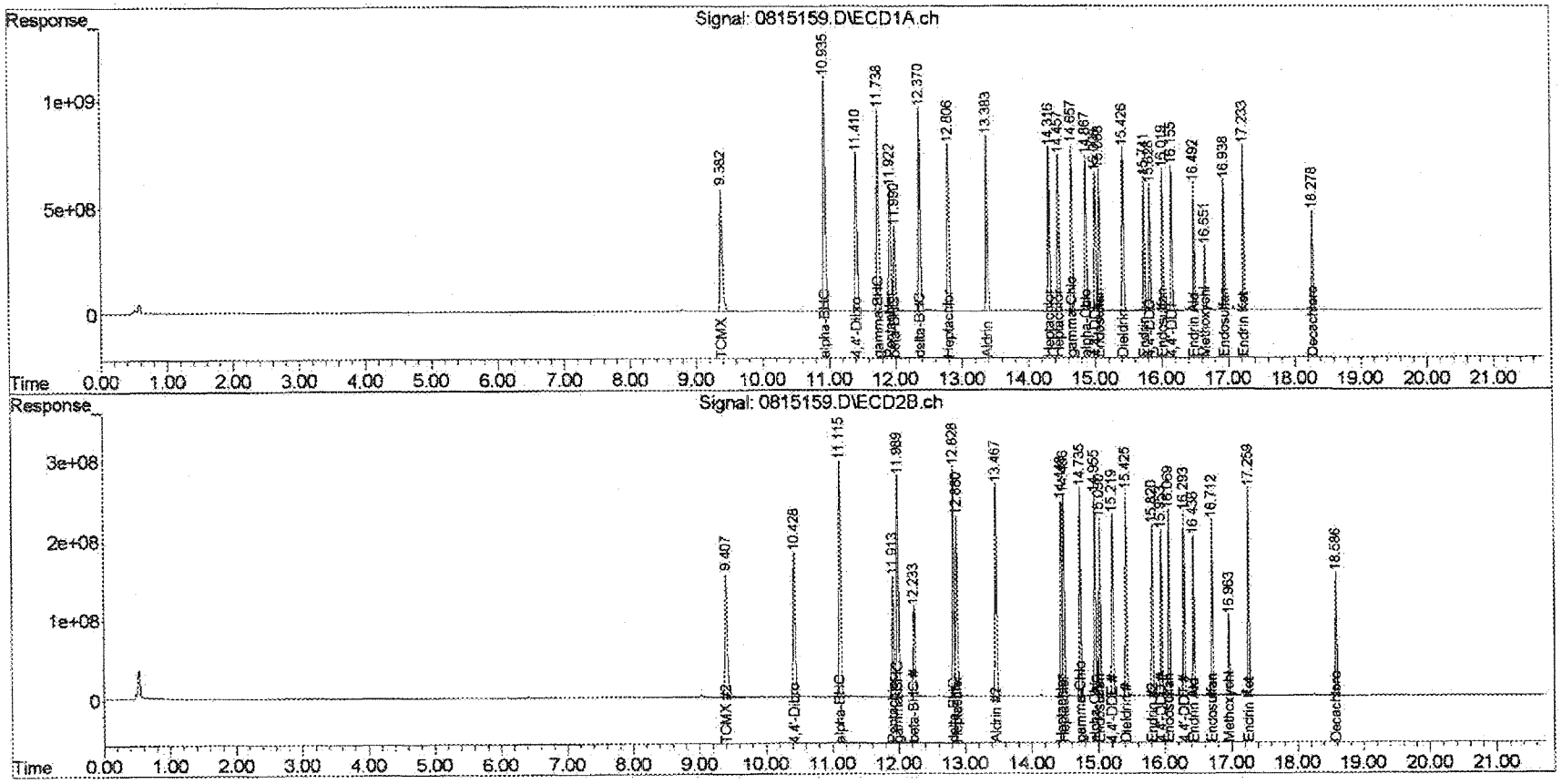
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
1)	Pentachloronitrob...	11.92	11.91	1312.4E6	316.5E6	50.000	50.000
	System Monitoring Compounds						
2)	TCMX	9.38	9.41	1485.0E6	385.1E6	64.638	63.426
4)	4,4'-Dibromooctaf...	11.41	10.43	1645.6E6	397.4E6	64.437	65.860
25)	Decachlorobiphenyl	18.28	18.59	695.9E6	244.8E6	56.956	63.815
	Target Compounds						
3)	alpha-BHC	10.94	11.12	2147.5E6	616.4E6	68.133	68.101
5)	gamma-BHC (Lindane)	11.74	11.99	2093.6E6	557.4E6	74.004	69.140
6)	beta-BHC	11.99	12.23	876.1E6	221.8E6	67.594	66.364
7)	delta-BHC	12.37	12.83	1917.5E6	496.9E6	71.952	65.814
8)	Heptachlor	12.81	12.88	1628.3E6	428.9E6	59.512	68.370
9)	Aldrin	13.38	13.47	1584.6E6	479.7E6	65.719	72.901
10)	Heptachlor Epoxid...	14.32	14.49	1394.1E6	414.6E6	63.233	70.635
11)	Heptachlor Epoxid...	14.46	14.45	1322.6E6	399.5E6	63.288	68.390
12)	gamma-Chlordane	14.66	14.73	1356.7E6	431.8E6	64.345	72.386
13)	alpha-Chlordane	14.87	14.96	1272.9E6	410.5E6	66.710	71.829
14)	4,4'-DDE	15.01	15.22	1104.2E6	365.2E6	64.911	72.854
15)	Endosulfan I	15.07	15.03	1188.5E6	371.3E6	63.615	70.032
16)	Dieldrin	15.43	15.43	1250.3E6	408.8E6	67.015	72.932
17)	Endrin	15.74	15.82	970.1E6	310.9E6	62.092	66.321
18)	4,4'-DDD	15.83	15.95	838.0E6	282.7E6	64.887	72.107
19)	Endosulfan II	16.02	16.07	950.6E6	321.1E6	73.192	69.960
20)	4,4'-DDT	16.16	16.29	900.1E6	297.5E6	69.397	74.340
21)	Endrin Aldehyde	16.49	16.44	783.3E6	261.2E6	64.252	69.622
22)	Methoxychlor	16.65	16.96	372.1E6	122.1E6	61.178	64.358
23)	Endosulfan Sulfate	16.94	16.71	803.5E6	270.6E6	65.403	69.577
24)	Endrin Ketone	17.23	17.26	998.9E6	332.9E6	64.646	69.302

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815159.D
Acq On : 17-Aug-2013, 01:12:04 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICAL 200PPB DWSTD06-62G Vial : 56
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:28:47 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 09:04:32 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



1077

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815160.D
Acq On : 17-Aug-2013, 01:38:30 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICV 50PPB DWSTD06-62H Vial : 57
Misc : Multiplier : 1.00
Quant Time : Aug 19 09:52:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Mon Aug 19 09:44:48 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
1) Pentachloronitrob...	11.92	11.91	1297.9E6	312.8E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
3) alpha-BHC	10.93	11.12	583.2E6	153.4E6	52.623	50.991
5) gamma-BHC (Lindane)	11.74	11.99	513.5E6	153.0E6	50.662	53.475
6) beta-BHC	11.99	12.23	245.5E6	56781516	54.540	50.742
7) delta-BHC	12.37	12.83	461.2E6	122.2E6	50.165	50.883
8) Heptachlor	12.80	12.88	425.0E6	110.8E6	52.547	52.836
9) Aldrin	13.38	13.47	426.2E6	127.4E6	55.325	53.036
10) Heptachlor Epoxid...	14.32	14.48	370.6E6	112.8E6	51.056	53.534
11) Heptachlor Epoxid...	14.46	14.45	355.3E6	109.2E6	52.505	54.394
12) gamma-Chlordane	14.65	14.73	351.9E6	111.2E6	52.178	52.940
13) alpha-Chlordane	14.87	14.96	333.1E6	106.1E6	51.795	53.212
14) 4,4'-DDE	15.01	15.22	274.8E6	91156530	52.779	50.418
15) Endosulfan I	15.07	15.03	310.5E6	97273352	51.406	52.779
16) Dieldrin	15.43	15.43	315.3E6	105.6E6	51.128	53.810
17) Endrin	15.74	15.82	233.5E6	77317332	52.891	50.871
18) 4,4'-DDD	15.83	15.95	196.4E6	69414206	50.290	53.412
19) Endosulfan II	16.02	16.07	237.7E6	82403534	50.674	52.106
20) 4,4'-DDT	16.15	16.29	217.9E6	73605282	53.373	50.944
21) Endrin Aldehyde	16.49	16.44	187.7E6	65728527	48.110	48.710
22) Methoxychlor	16.65	16.96	92240543	30711657	50.523	51.967
23) Endosulfan Sulfate	16.94	16.71	200.0E6	69420087	50.867	52.306
24) Endrin Ketone	17.23	17.26	237.9E6	83898299	48.813	49.771

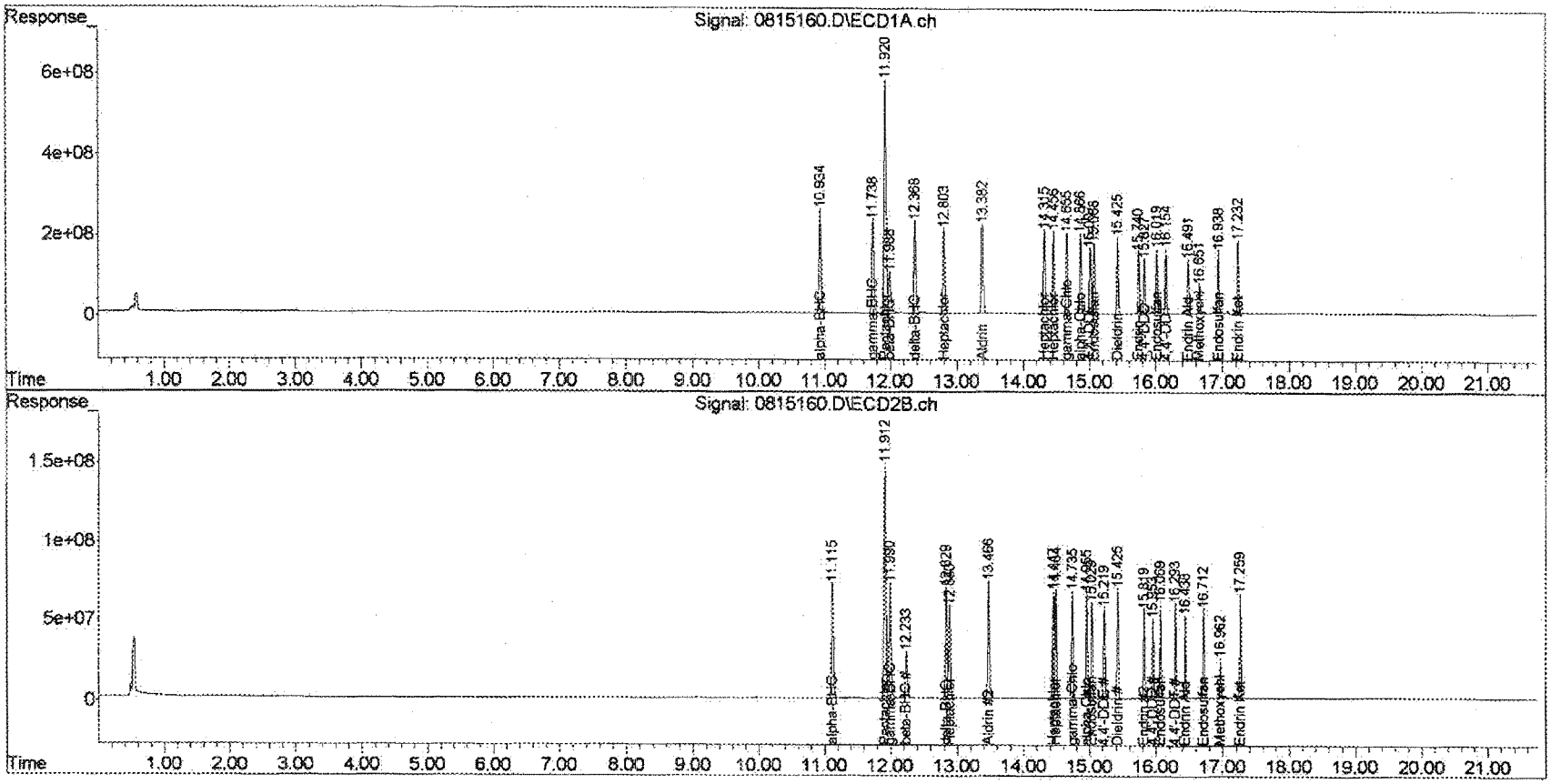
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815160.D
Acq On : 17-Aug-2013, 01:38:30 Operator : SSullivan
Acq Meth : 508.M
Sample : PEST ICV 50PPB DWSTD06-62H Vial : 57
Misc : Multiplier : 1.00
Quant Time : Aug 19 09:52:57 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Mon Aug 19 09:44:48 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



1079

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815164.D
Acq On : 17-Aug-2013, 10:58:43 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICV 500PPB DWSTD06-42A Vial : 1
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:48:01 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
57) Pentachloronitrob...	11.91	11.86f	1319.1E6	318.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
63) Aroclor 1242	10.46	10.76f	48171446	12648520	480.600	482.375
64) Aroclor 1242 {2}	13.49	12.94f	63541562	19682413	482.146	488.581m
65) Aroclor 1242 {3}	14.07	14.42f	31904747	18587022	451.356	482.780m
66) Aroclor 1242 {4}	14.51	14.76f	35090783	17222012	488.704	481.364m
67) Aroclor 1242 - TOTAL	0.00	0.00	178.7E6	68139967	477.178T	484.005T

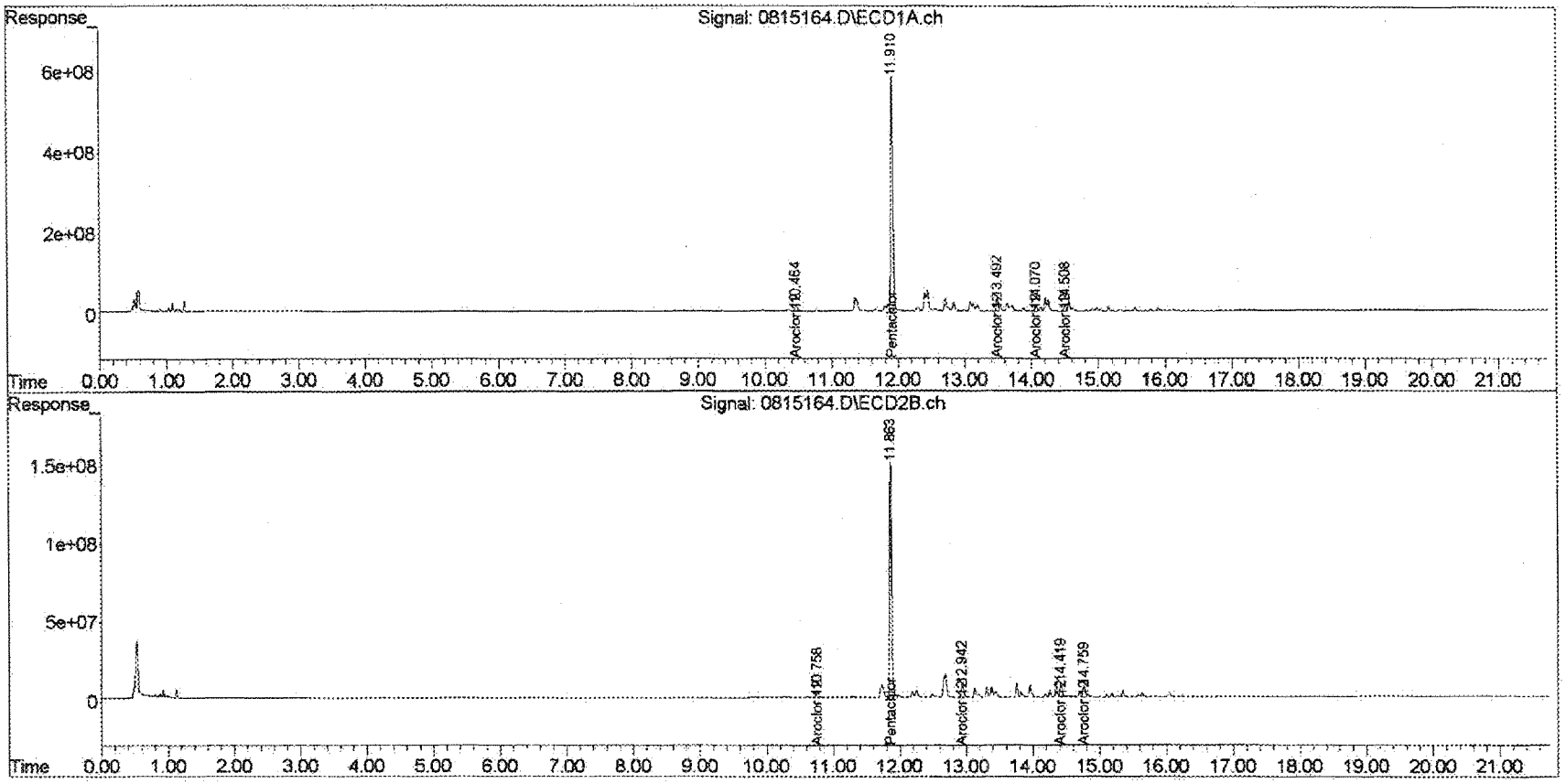
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815164.D
Acq On : 17-Aug-2013, 10:58:43 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICV 500PPB DWSTD06-42A Vial : 1
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:48:01 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

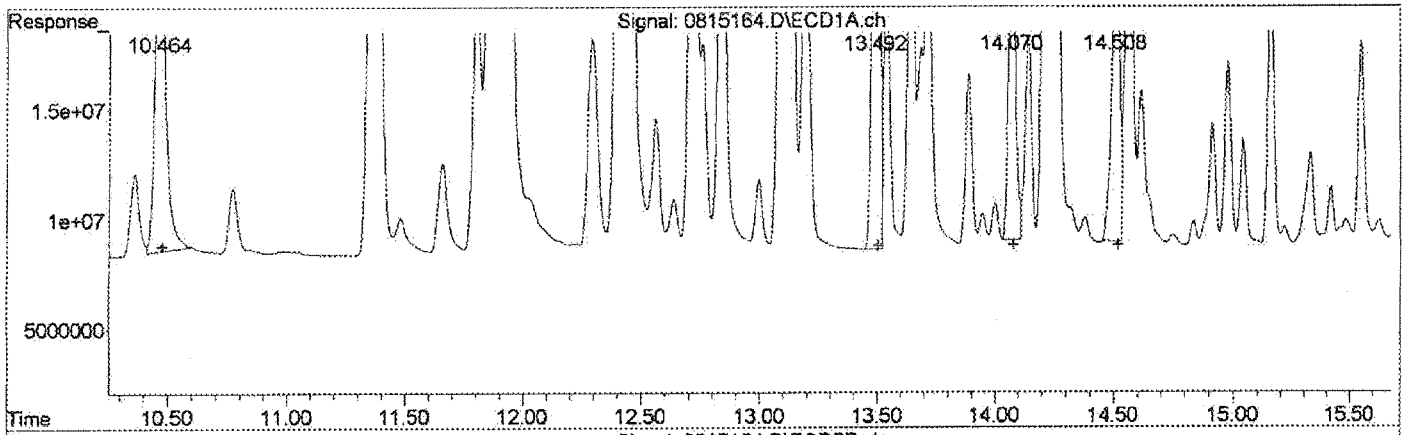


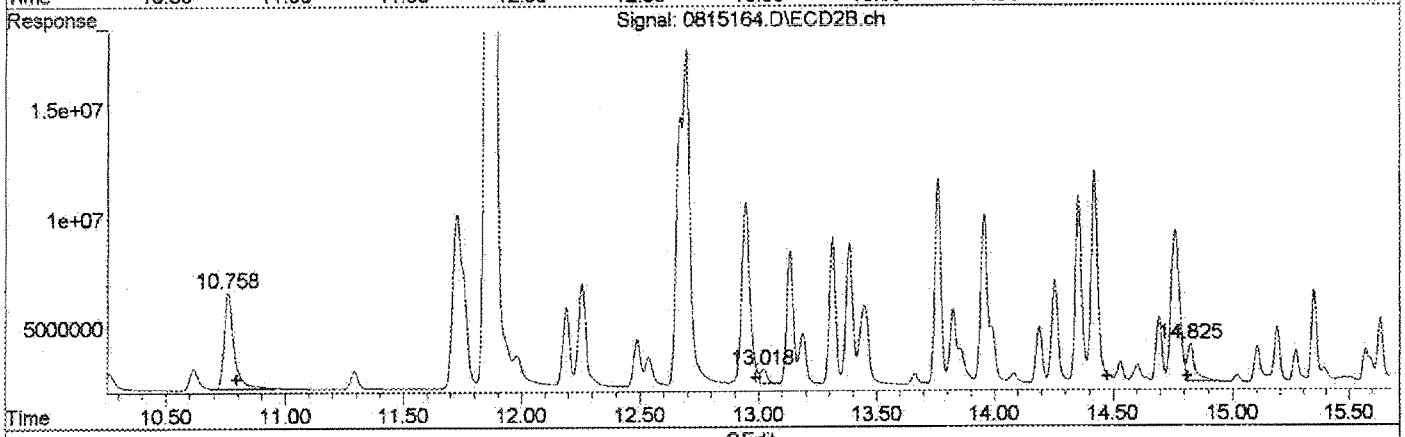
1081

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815164.D
Acq On : 17-Aug-2013, 10:58:43 Operator : SSullivan
Acq Meth : 508.M
Sample : 1242 ICV 500PPB DWSTD06-42A Vial : 1
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:52:25 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(63) Aroclor 1242 (L8)

R.T.	Response	Conc
10.46	48171446	480.60
13.49	63541562	482.15
14.07	31904747	451.36
14.51	35090783	488.70

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.76	12648520	482.37
13.02	1254285	31.14
0.00	0	0.00
14.82	3729983	104.26

Manual Integration:

Before

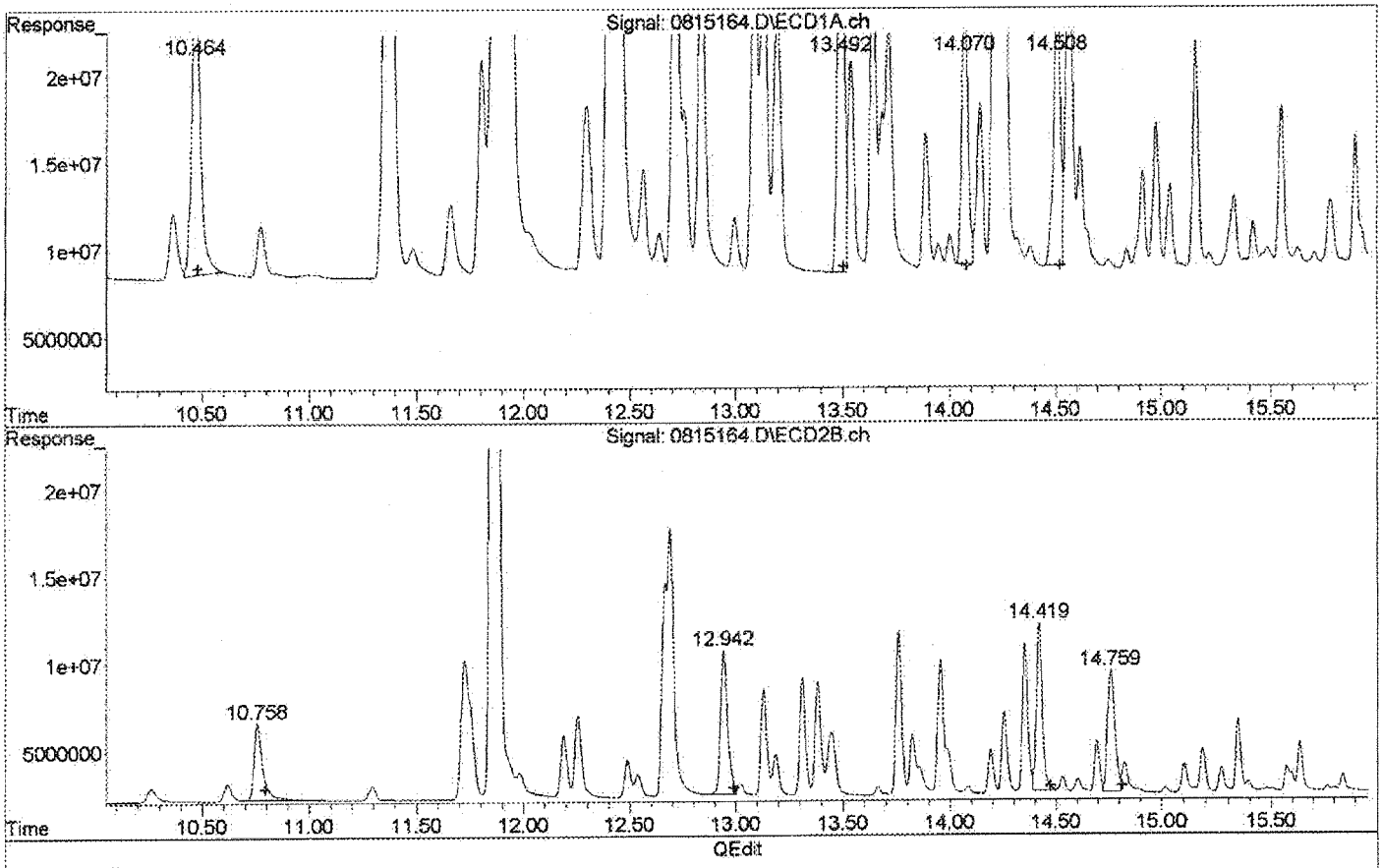
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815164.D
Acq On : 17-Aug-2013, 10:58:43
Acq Meth : 508.M
Sample : 1242 ICV 500PPB DWSTD06-42A
Misc :
Quant Time : Aug 17 11:52:25 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Operator : SSullivan
Vial : 1
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um



(63) Aroclor 1242 (L8)

R.T.	Response	Conc
10.46	48171446	480.60
13.49	63541562	482.15
14.07	31904747	451.36
14.51	35090783	488.70

(63) Aroclor 1242 #2 (L8)

R.T.	Response	Conc
10.76	12648520	482.37
12.94	19682413	488.58
14.42	18587022	482.78
14.76	17222012	481.36

Manual Integration:
After
Wrong Peak - Missed Peak
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815165.D
Acq On : 17-Aug-2013, 11:25:29 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICV 500PPB DWSTD06-58D Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:48:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
68) Pentachloronitrob...	11.91	11.86f	1287.2E6	319.1E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
69) Aroclor 1248	13.49	13.76f	96706389	26362906	470.063	467.753m
70) Aroclor 1248 (2)	13.64	13.95f	57354408	26639285	460.832	453.404m
71) Aroclor 1248 (3)	14.56	14.76f	79759188	28263320	441.598	434.705m
72) Aroclor 1248 (4)	15.15	15.35f	47003164	13956893	431.859	445.322m
73) Aroclor 1248 - TOTAL	0.00	0.00	280.8E6	95222404	453.201T	450.282T

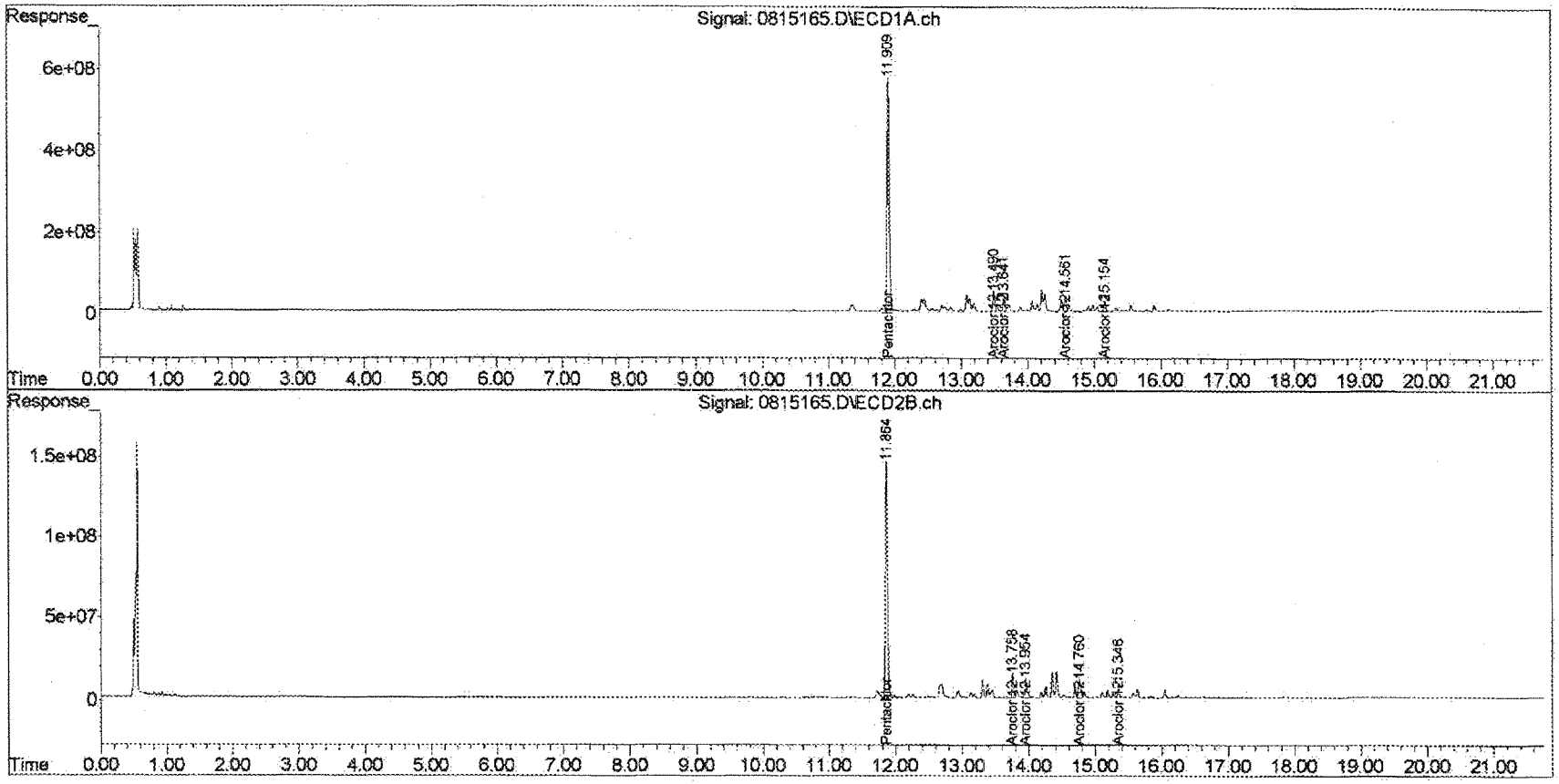
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

SS 8/19/13

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815165.D
Acq On : 17-Aug-2013, 11:25:29 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICV 500PPB DWSTD06-58D Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:48:48 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

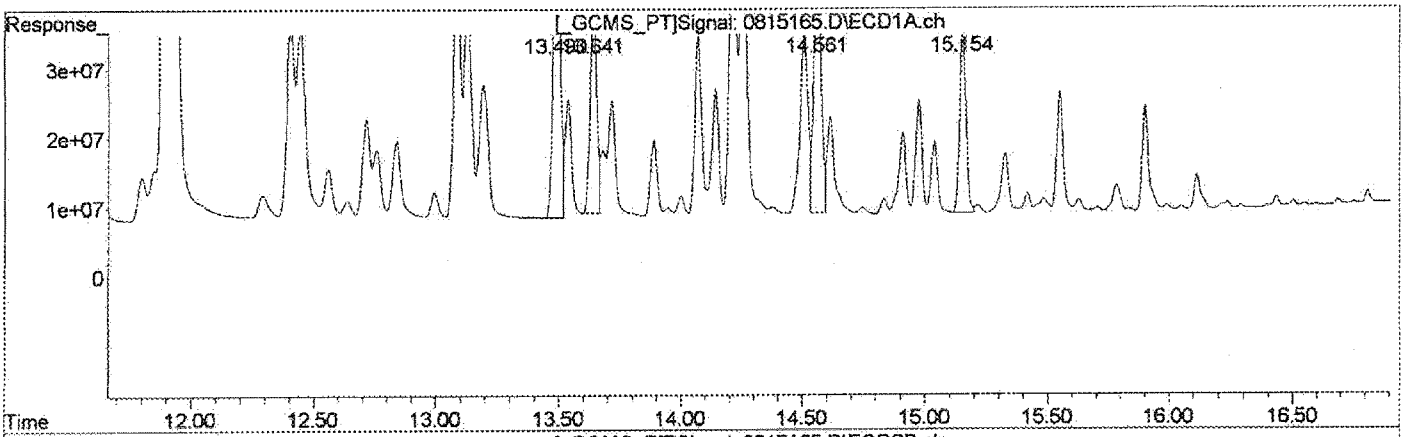


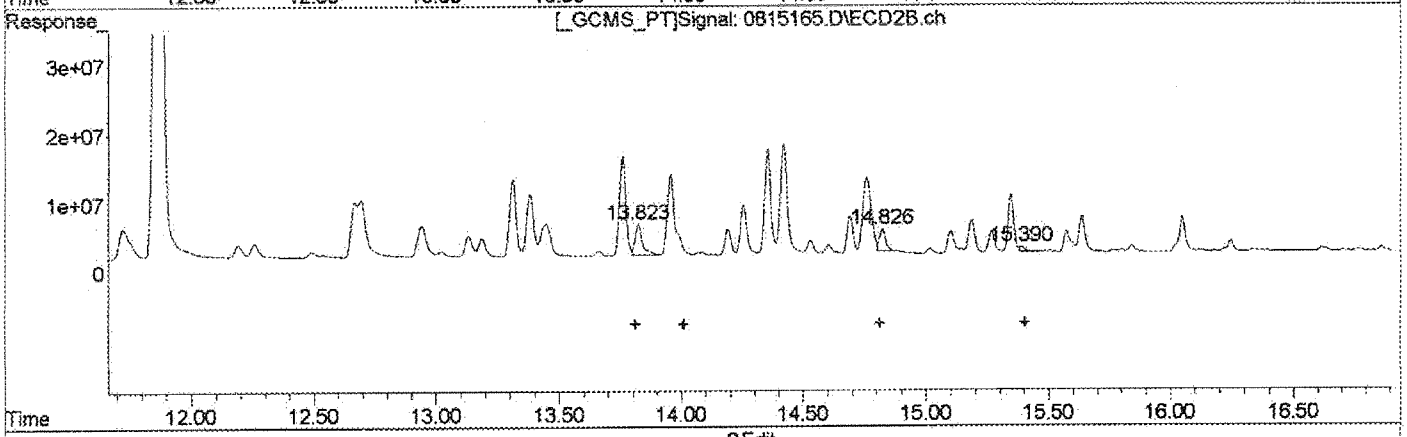
1085

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815165.D
Acq On : 17-Aug-2013, 11:25:29 Operator : SSullivan
Acq Meth : 508.M
Sample : 1248 ICV 500PPB DWSTD06-58D Vial : 2
Misc : Multiplier : 1.00
Quant Time : Aug 17 11:52:30 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.49	96706389	470.06
13.64	57354408	460.83
14.56	79759188	441.60
15.15	47003164	431.86

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.82	9465450	167.94
0.00	0	0.00
14.83	5795688	89.14
15.39	1200256	38.30

Manual Integration:

Before

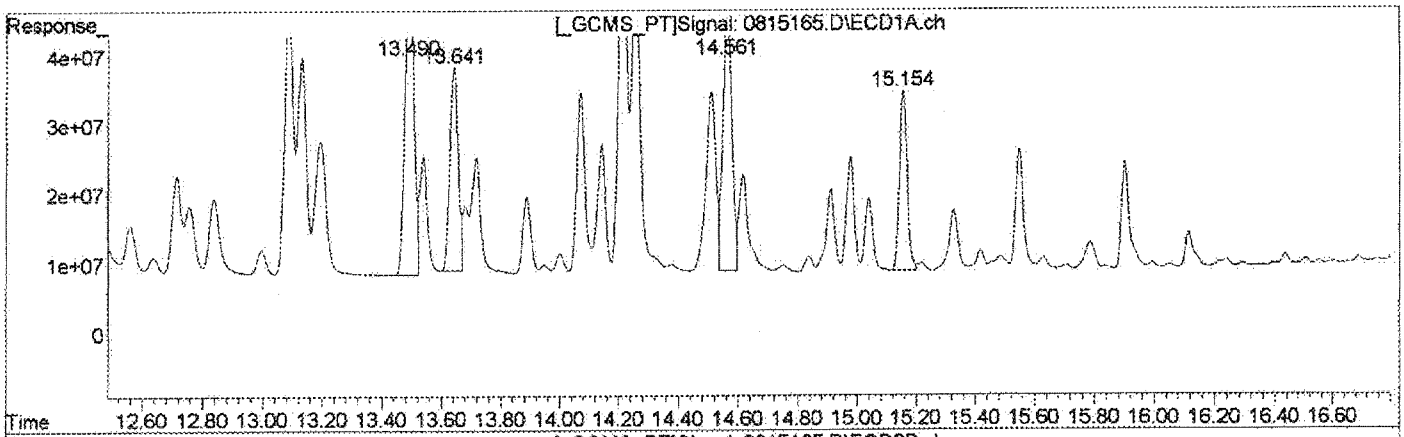
(+) = Expected Retention Time

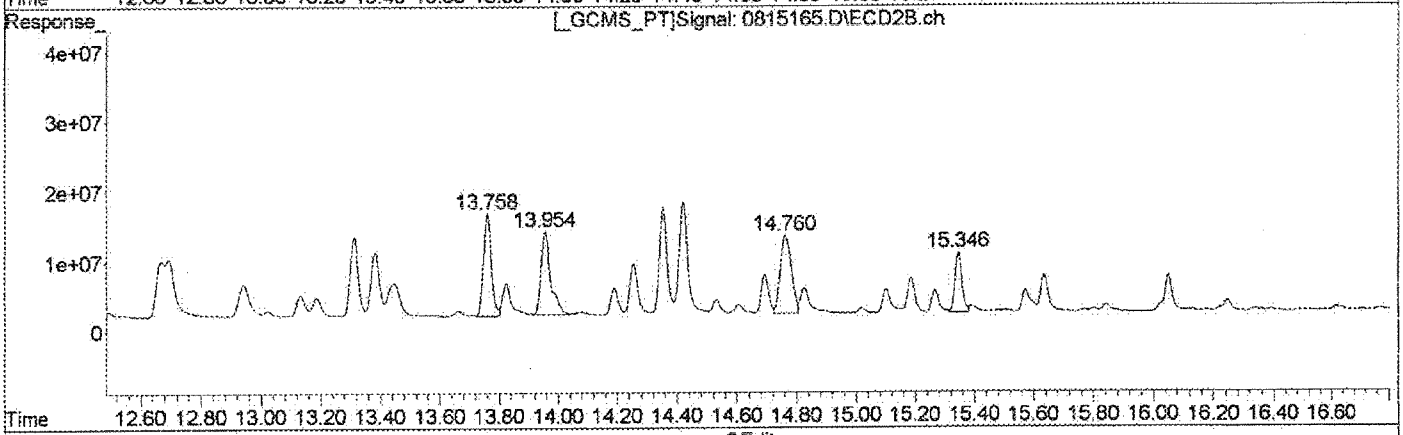
Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815165.D
Acq On : 17-Aug-2013, 11:25:29
Acq Meth : 508.M
Sample : 1248 ICV 500PPB DWSTD06-58D
Misc :
Quant Time : Aug 17 11:52:30 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Operator : SSullivan
Vial : 2
Multiplier : 1.00

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP
Signal #1 Info : 320 x 0.50 um
Signal #2 Phase: RTX-CLP2
Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.49	96706389	470.06
13.64	57354408	460.83
14.56	79759188	441.60
15.15	47003164	431.86

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.76	26362906	467.75
13.95	26639285	453.40
14.76	28263320	434.71
15.35	13956893	445.32

Manual Integration:
After
Wrong Peak - Missed Peak
08/17/13

(+) = Expected Retention Time

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:52:23 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

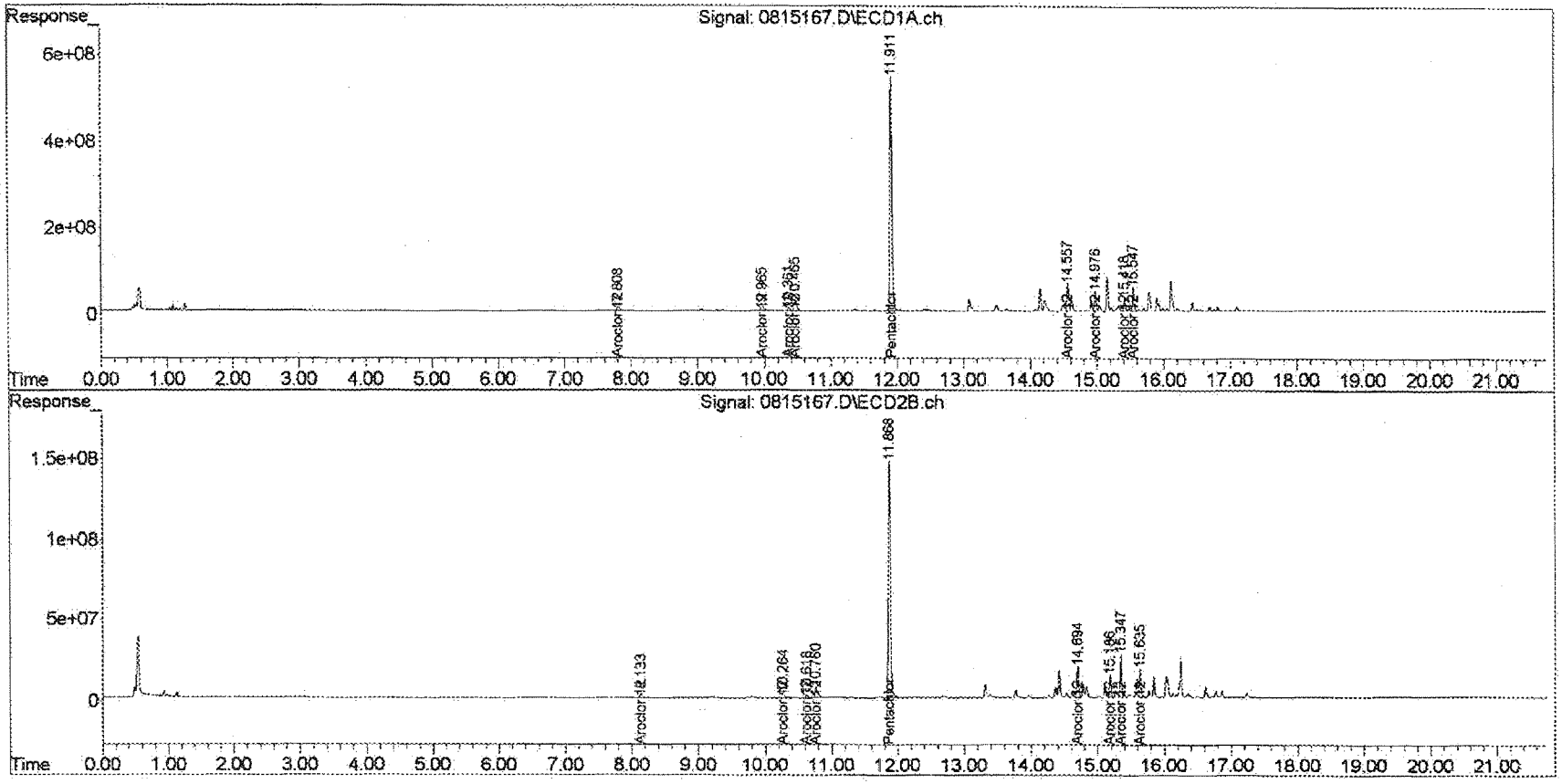
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
Internal Standards						
36) Pentachloronitrob...	11.91	11.87f	1266.5E6	313.6E6	50.000	50.000
System Monitoring Compounds						
Target Compounds						
47) Aroclor 1221	7.81	8.13	26548331	6750041	570.430	493.359
48) Aroclor 1221 (2)	9.96	10.26f	34458340	8504931	486.749	495.767
49) Aroclor 1221 (3)	10.36	10.62f	20587819	5486406	485.382	473.460
50) Aroclor 1221 (4)	10.47	10.76f	79864216	20318329	510.100m	474.525
51) Aroclor 1221 - TOTAL	0.00	0.00	161.5E6	41059707	510.030T	481.678T
52) Aroclor 1254	14.56	14.69f	122.8E6	33357738	511.649	493.560m
53) Aroclor 1254 (2)	14.98	15.19f	90595575	23372735	524.576	500.247m
54) Aroclor 1254 (3)	15.42	15.35f	50483306	43272759	514.287	485.745m
55) Aroclor 1254 (4)	15.55	15.64f	99276663	30091304	497.671	481.508m
56) Aroclor 1254 - TOTAL	0.00	0.00	363.2E6	130.1E6	511.206T	489.284T

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:52:23 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

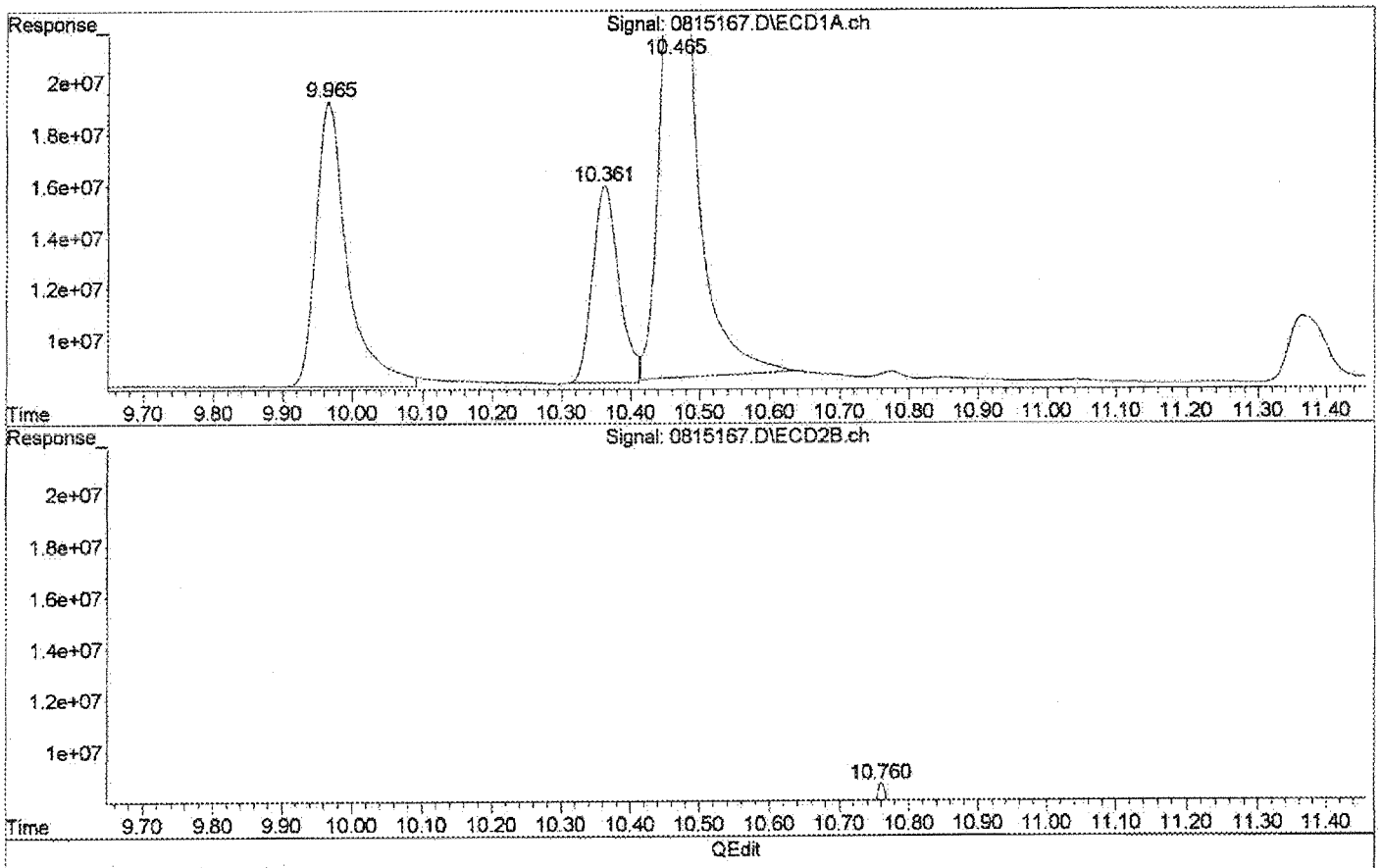


1089

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:49:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 (L5)

R.T.	Response	Conc
7.81	26548331	570.43
9.96	34458340	486.75
10.36	20587819	485.38
10.47	79559175	508.09

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.13	6750041	493.36
10.26	8504931	495.77
10.62	5486406	473.46
10.76	20318329	474.53

Manual Integration:

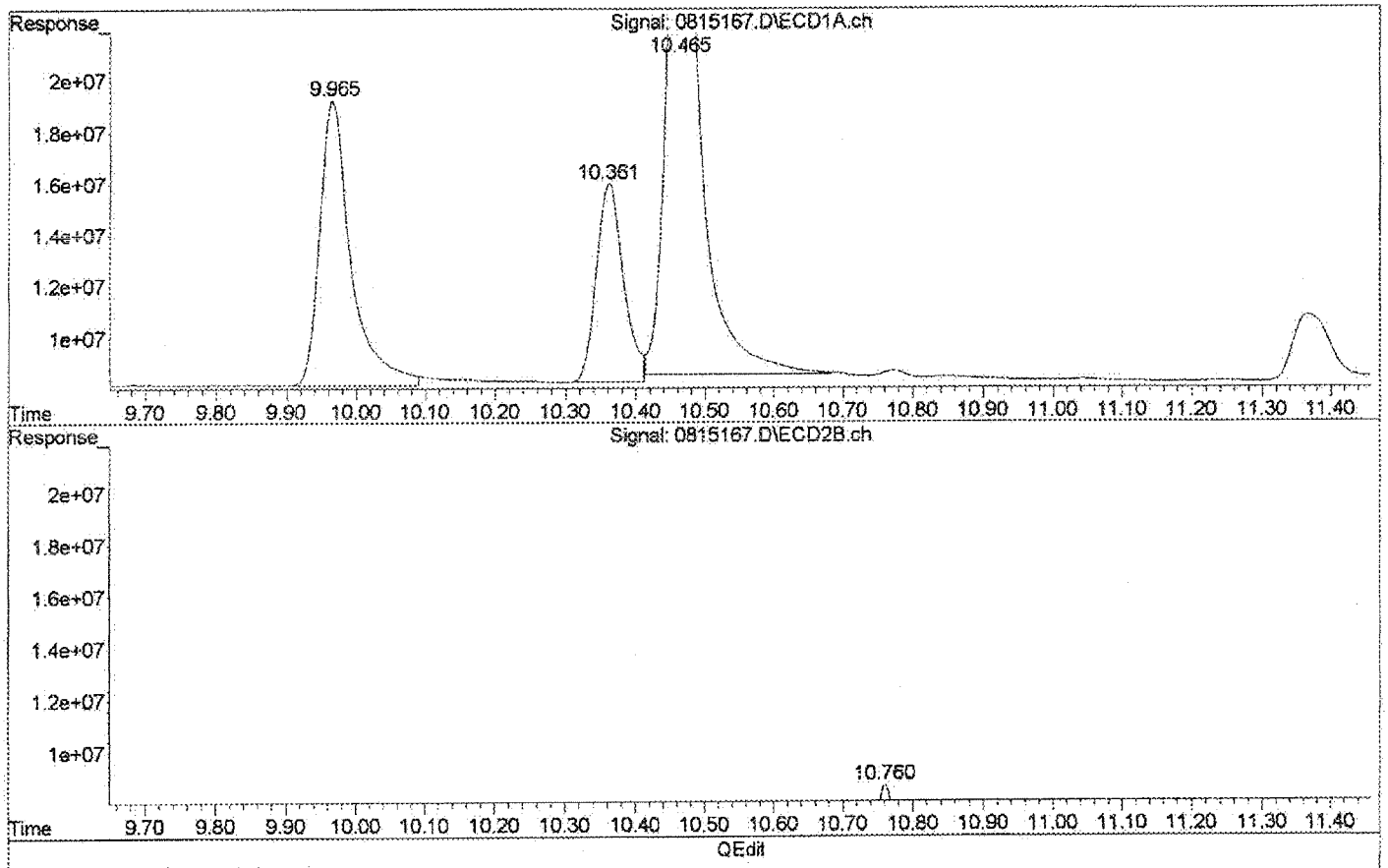
Before

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:49:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
7.81	26548331	570.43
9.96	34458340	486.75
10.36	20587819	485.38
10.47	79864216	510.10

(47) Aroclor 1221 #2 (L5)

R.T.	Response	Conc
8.13	6750041	493.36
10.26	8504931	495.77
10.62	5486406	473.46
10.76	20318329	474.53

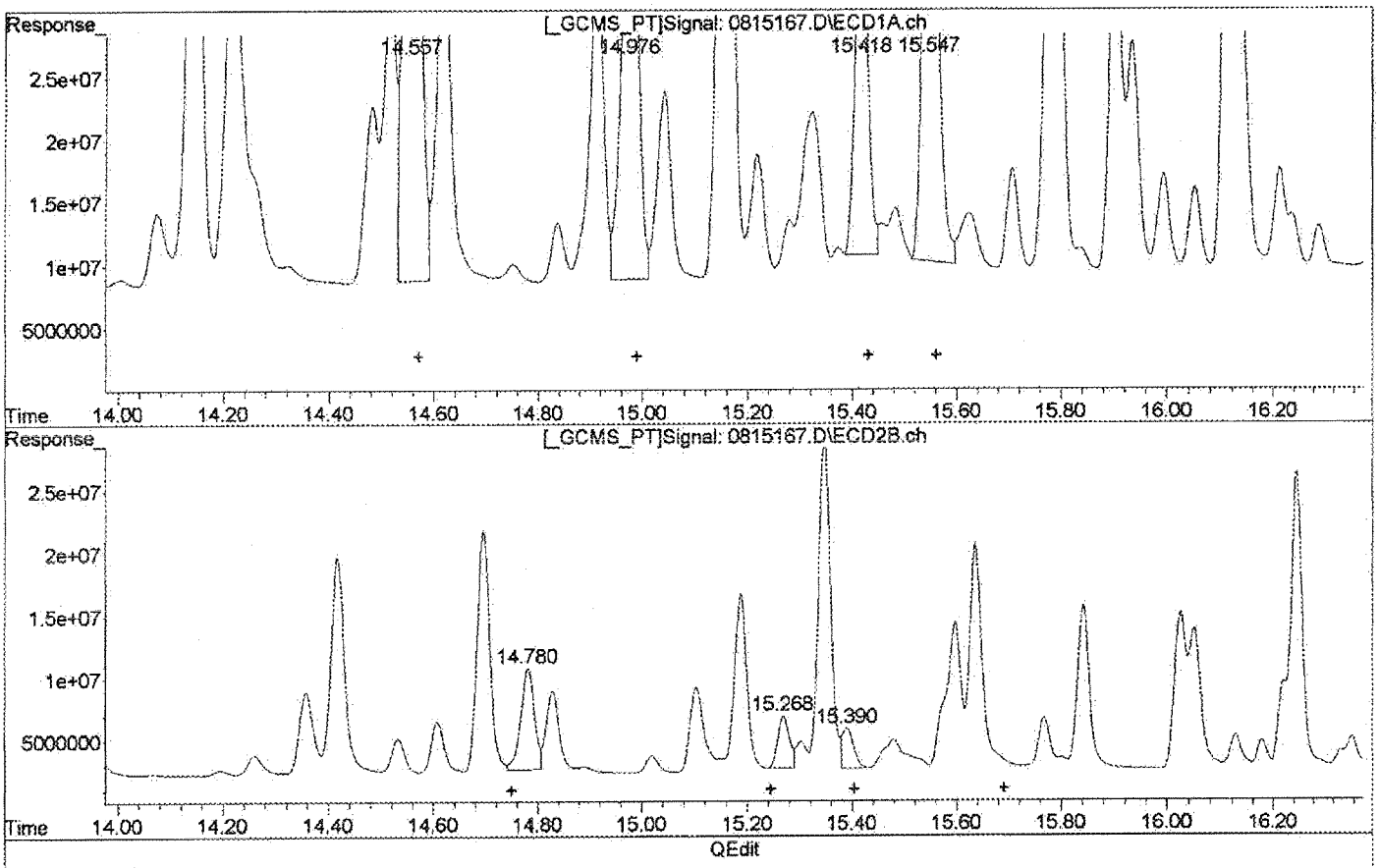
Manual Integration:
After
Baseline/Shoulder
08/17/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:49:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(52) Aroclor 1254 (L6)

R.T.	Response	Conc
14.56	122804250	511.65
14.98	90595575	524.58
15.42	50483306	514.29
15.55	99276663	497.67

(52) Aroclor 1254 #2 (L6)

R.T.	Response	Conc
14.78	14834608	219.49
15.27	6689095	143.17
15.39	4744443	53.26
0.00	0	0.00

Manual Integration:

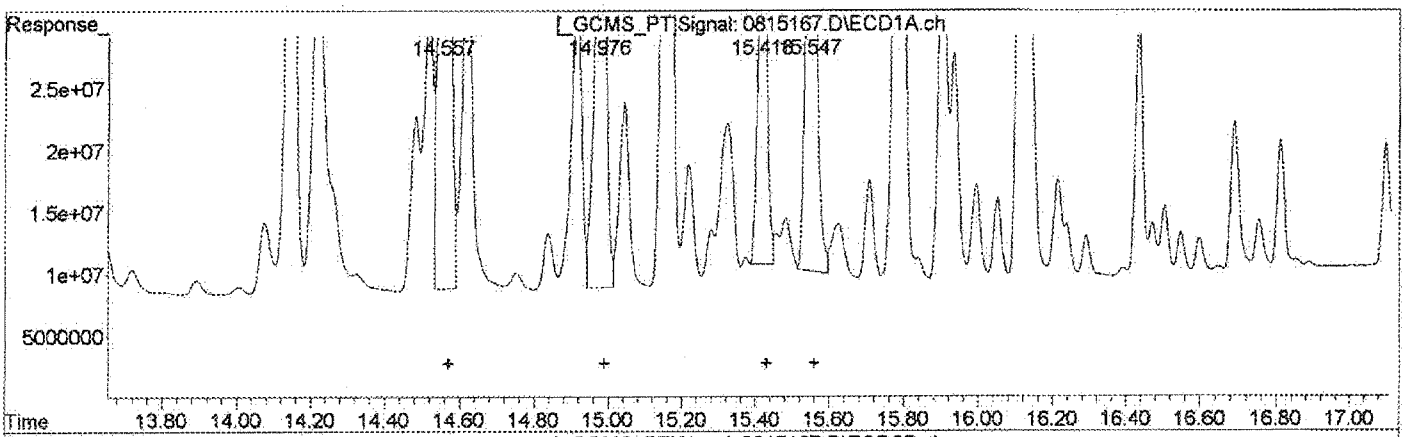
Before

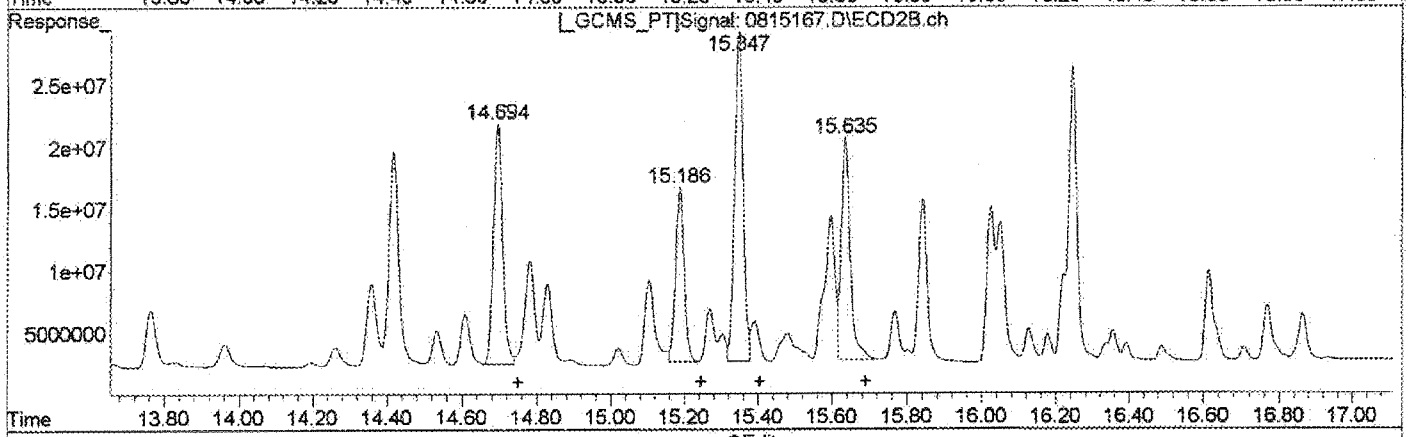
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : J:\GC33\Data\081513-ICAL2\0815167.D
Acq On : 17-Aug-2013, 12:19:42 Operator : SSullivan
Acq Meth : 508.M
Sample : 2154 ICV 500PPB DWSTD06-63K Vial : 3
Misc : Multiplier : 1.00
Quant Time : Aug 17 12:49:32 2013
Response via : Initial Calibration
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL127??
QLast Update : Sat Aug 17 11:37:54 2013

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(52) Aroclor 1254 (L6)

R.T.	Response	Conc
14.56	122804250	511.65
14.98	90595575	524.58
15.42	50483306	514.29
15.55	99276663	497.67

(52) Aroclor 1254 #2 (L6)

R.T.	Response	Conc
14.69	33357738	493.56
15.19	23372735	500.25
15.35	43272759	485.75
15.64	30091304	481.51

Manual Integration:
After
Wrong Peak / Missed Peak
08/17/13

(+) = Expected Retention Time

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/26/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L
Column ID: RTX-CLP

File ID: J:\GC33\DATA\092613-508\0926004.D
J:\GC33\DATA\092613-508\0926006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.329	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.360	0.366	NA	-6	± 30 %	Linear
Heptachlor	50	54		0.312	0.337	8	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	51		0.261	0.265	2	NA	± 30 %	AverageRF
gamma-Chlordane	50	53		0.260	0.274	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.248	0.258	4	NA	± 30 %	AverageRF
Endrin	50	52		0.170	0.178	5	NA	± 30 %	AverageRF
Methoxychlor	50	44		0.0703	0.0621	-12	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0241	0.0254	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/26/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L

File ID: J:\GC33\DATA\092613-508\0926004.D\0926004C.D
J:\GC33\DATA\092613-508\0926006.D\0926006C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	48		0.314	0.303	-4	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.493	0.451	NA	-5	± 30 %	Quadratic
Heptachlor	50	55		0.335	0.370	10	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	53		0.321	0.341	6	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.350	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.319	0.331	4	NA	± 30 %	AverageRF
Endrin	50	48		0.227	0.232	NA	-4	± 30 %	Linear
Methoxychlor	50	47		0.0945	0.0889	-6	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0345	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\092613-508\0926004.D
Lab ID: KWG1310845-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/26/2013 17:09
Date Quantitated: 09/30/2013 14:11
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926004.D\0926004C.D
Lab ID: KWG1310845-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/26/2013 17:09
Date Quantitated: 09/30/2013 14:11
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926004.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926004.D\0926004c.d			**Vial:**	98
Acqu Date:	09/26/2013 17:09	**Quant Date:**	09/30/2013 14:11	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/02/2013

Analysis Lot:	KWG1310845	**Prep Lot:**		**Report Group:**	
Analysis Method:	508.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.89? -0.03	11.90? -0.01	1456688562	318870321	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}			0d	0d	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.41	478584343	96530691	50.79	48.17			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	18.25?	18.57?	178716692	54175009	42.66	40.73			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91	11.10	641005543	147847096	51.55	48.25			
1	gamma-BHC (Lindane)	11.71	11.97	533155975	143652840	46.93	47.41			
1	beta-BHC	11.96	12.22	276446753	55720370	54.72	48.85			
1	delta-BHC	12.34	12.82	462416932	118145044	44.92	48.32			
1	Heptachlor	12.78	12.86	490923347	118034061	54.08	55.24			
1	Aldrin	13.36	13.45	463213532	119705911	53.57	48.95			
1	Heptachlor Epoxide (Isomer	14.29	14.47	424419898	111973897	52.10	52.15			
1	Heptachlor Epoxide	14.43	14.44	386535858	108614982	50.89	53.09			
1	gamma-Chlordane	14.63	14.72	398505054	111563496	52.66	52.09			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926004.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926004.D\0926004c.d			**Vial:**	98
Acqu Date:	09/26/2013 17:09	**Quant Date:**	09/30/2013 14:11	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane	14.84	14.94	375612498	105516203	52.04	51.90			
1	4,4'-DDE	14.99	15.21	332959249	94204862	56.98	51.11			
1	Endosulfan I	15.05	15.02	356603732	95294197	52.60	50.73			
1	Dieldrin	15.40	15.41	353434053	104307946	51.06	52.16			
1	Endrin	15.72	15.81	259361369	74020773	52.35	47.82			
1	4,4'-DDD	15.81	15.95	241440287	69758584	55.07	52.66			
1	Endosulfan II	16.00	16.06	277974928	82972502	52.79	51.48			
1	4,4'-DDT	16.14	16.29	242305575	71640397	52.89	48.68			
1	Endrin Aldehyde	16.47	16.43	216148468	70243893	49.37	51.07			
1	Methoxychlor	16.64	16.96	90420823	28343012	44.13	47.05			
1	Endosulfan Sulfate	16.92	16.70	190304452	66927829	43.13	49.48			
1	Endrin Ketone	17.22	17.25	229940676	78835890	42.04	45.88			
2	Toxaphene			0d	0d	0.0000	0.0000			
2	Chlordane			0d	0d	0.0000	0.0000			
3	Aroclor 1016			0d	0d	0.0000	0.0000			NR
3	Aroclor 1260			0d	0d	0.0000	0.0000			NR
3	Aroclor 1221			0d	0d	0.0000	0.0000			NR
3	Aroclor 1254			0d	0d	0.0000	0.0000			NR
4	Aroclor 1232			0d	0d	0.0000	0.0000			NR
4	Aroclor 1242			0d	0d	0.0000	0.0000			NR
5	Aroclor 1248			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 17:09:08
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:11:26 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Thu Sep 12 09:17:12 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.893	11.895	1456.7E6	318.9E6	50.000	50.000
		System Monitoring Compounds						
2)	s	TCMX	9.357	9.394	439.1E6	95634618	52.341	50.082
4)	S	4,4'-Dibr...	11.381	10.413	478.6E6	96530691	50.793	48.173
25)	S	Decachlor...	18.254	18.574	178.7E6	54175009	42.664	40.729
		Target Compounds						
3)	m	alpha-BHC	10.906	11.099	641.0E6	147.8E6	51.550	48.254
5)	m	gamma-BHC...	11.707	11.973	533.2E6	143.7E6	46.926	47.408
6)	m	beta-BHC	11.961	12.219	276.4E6	55720370	54.721	48.853
7)	m	delta-BHC	12.344	12.815	462.4E6	118.1E6	44.920	48.315
8)	m	Heptachlor	12.775	12.864	490.9E6	118.0E6	54.080	55.237
9)	m	Aldrin	13.356	13.451	463.2E6	119.7E6	53.574	48.952
10)	m	Heptachlo...	14.292	14.473	424.4E6	112.0E6	52.096	52.147
11)	m	Heptachlo...	14.432	14.435	386.5E6	108.6E6	50.893	53.090
12)	m	gamma-Chl...	14.633	14.723	398.5E6	111.6E6	52.656	52.088
13)	m	alpha-Chl...	14.843	14.944	375.6E6	105.5E6	52.043	51.898
14)	m	4,4'-DDE	14.988	15.210	333.0E6	94204862	56.978	51.112
15)	m	Endosulfan I	15.045	15.018	356.6E6	95294197	52.599	50.729
16)	m	Dieldrin	15.405	15.414	353.4E6	104.3E6	51.059	52.161
17)	m	Endrin	15.720	15.810	259.4E6	74020773	52.353	47.824
18)	m	4,4'-DDD	15.809	15.945	241.4E6	69758584	55.073	52.663
19)	m	Endosulfa...	16.001	16.061	278.0E6	82972502	52.791	51.475
20)	m	4,4'-DDT	16.137	16.286	242.3E6	71640397	52.890	48.678
21)	m	Endrin Al...	16.473	16.430	216.1E6	70243893	49.370	51.073
22)	m	Methoxychlor	16.636	16.957	90420823	28343012	44.129	47.053
23)	m	Endosulfa...	16.920	16.705	190.3E6	66927829	43.128	49.475
24)	m	Endrin Ke...	17.215	17.251	229.9E6	78835890	42.037	45.884
		SemiQuant Compounds - Not Calibrated on this Instrument						

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 17:09:08
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:11:26 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Thu Sep 12 09:17:12 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 17:09:08
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:11:26 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Thu Sep 12 09:17:12 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

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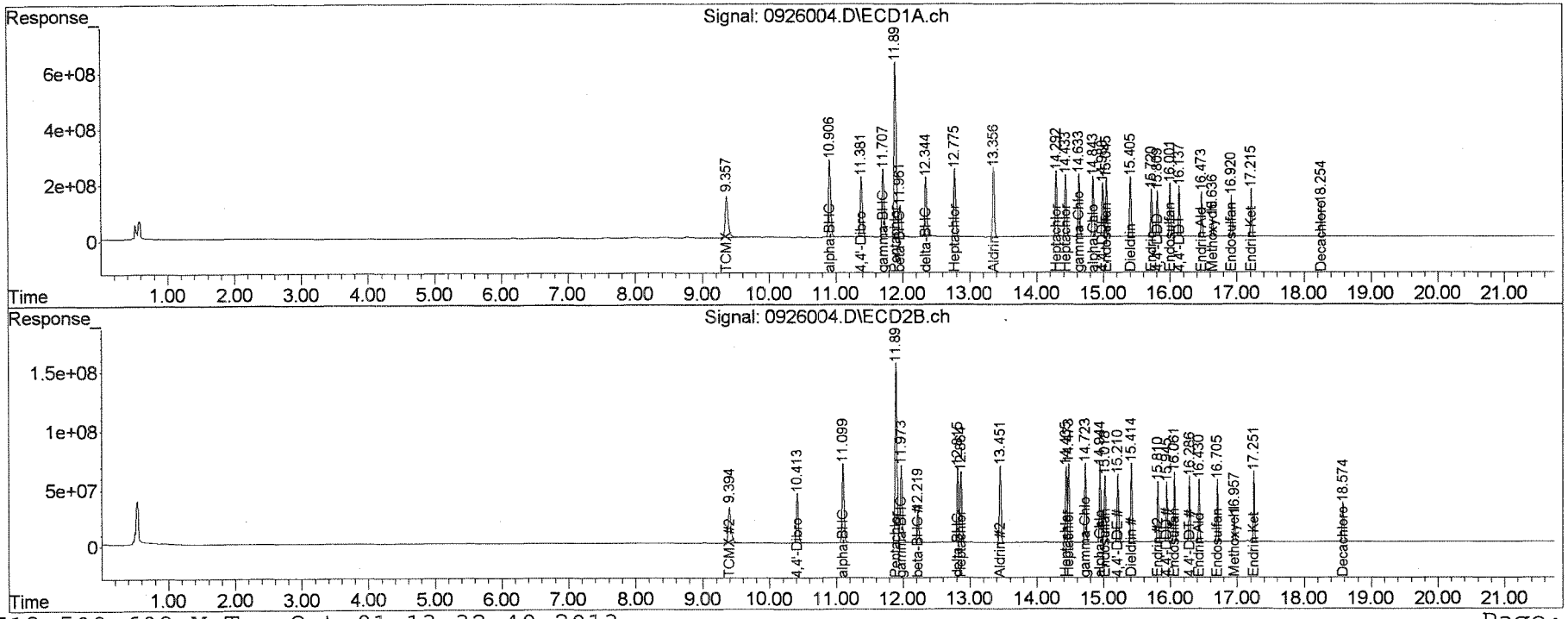

Exception Report

Data File: J:\GC33\DATA\092613-508\0926006.D
Lab ID: KWG1310845-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/26/2013 18:00
Date Quantitated: 09/30/2013 14:17
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926006.D\0926006C.D
Lab ID: KWG1310845-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/26/2013 18:00
Date Quantitated: 09/30/2013 14:17
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926006.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926006.D\0926006c.d			**Vial:**	100
Acqu Date:	09/26/2013 18:00	**Quant Date:**	09/30/2013 14:17	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/02/2013

Analysis Lot:	KWG1310845	**Prep Lot:**		**Report Group:**	
Analysis Method:	508.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN			0d	0d	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}	11.89? $^{-0.03}$	11.90? $^{-0.01}$	1483918033	331179852	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	0.00		0d	0d		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			
1	delta-BHC			0d	0d	0.0000	0.0000			
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926006.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926006.D\0926006c.d			**Vial:**	100
Acqu Date:	09/26/2013 18:00	**Quant Date:**	09/30/2013 14:17	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			
1	Endosulfan I			0d	0d	0.0000	0.0000			
1	Dieldrin			0d	0d	0.0000	0.0000			
1	Endrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			
1	Endosulfan II			0d	0d	0.0000	0.0000			
1	4,4'-DDT			0d	0d	0.0000	0.0000			
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			
1	Endrin Ketone			0d	0d	0.0000	0.0000			
2	Toxaphene			0d	0d	0.0000	0.0000			NR
2	Chlordane			0d	0d	0.0000	0.0000			NR
3	Aroclor 1016			0d	0d	0.0000	0.0000			
3	Aroclor 1260			0d	0d	0.0000	0.0000			
3	Aroclor 1221			0d	0d	0.0000	0.0000			
3	Aroclor 1254			0d	0d	0.0000	0.0000			
4	Aroclor 1232			0d	0d	0.0000	0.0000			
4	Aroclor 1242			0d	0d	0.0000	0.0000			
5	Aroclor 1248			150882148m	45691297m	211.22	208.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 18:00:55
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:17:16 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
68)	I	Pentachlo...	11.893	11.898	1483.9E6	331.2E6	50.000	50.000
		System Monitoring Compounds						
		Target Compounds						
69)	L9	Aroclor 1248	13.478	13.803	50090722	12281684	211.203	209.958
70)	L9	Aroclor 1...	13.629	13.998	29114209	12725527	202.919	208.685
71)	L9	Aroclor 1...	14.553	14.811	44647046	13872196	214.428	205.574
72)	L9	Aroclor 1...	15.148	15.397	27030171	6811890	215.430	209.414
73)	L9	Aroclor 1...	0.000	0.000	150.9E6	45691297	211.222m	208.176m
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 26-Sep-2013, 18:00:55
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:17:16 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

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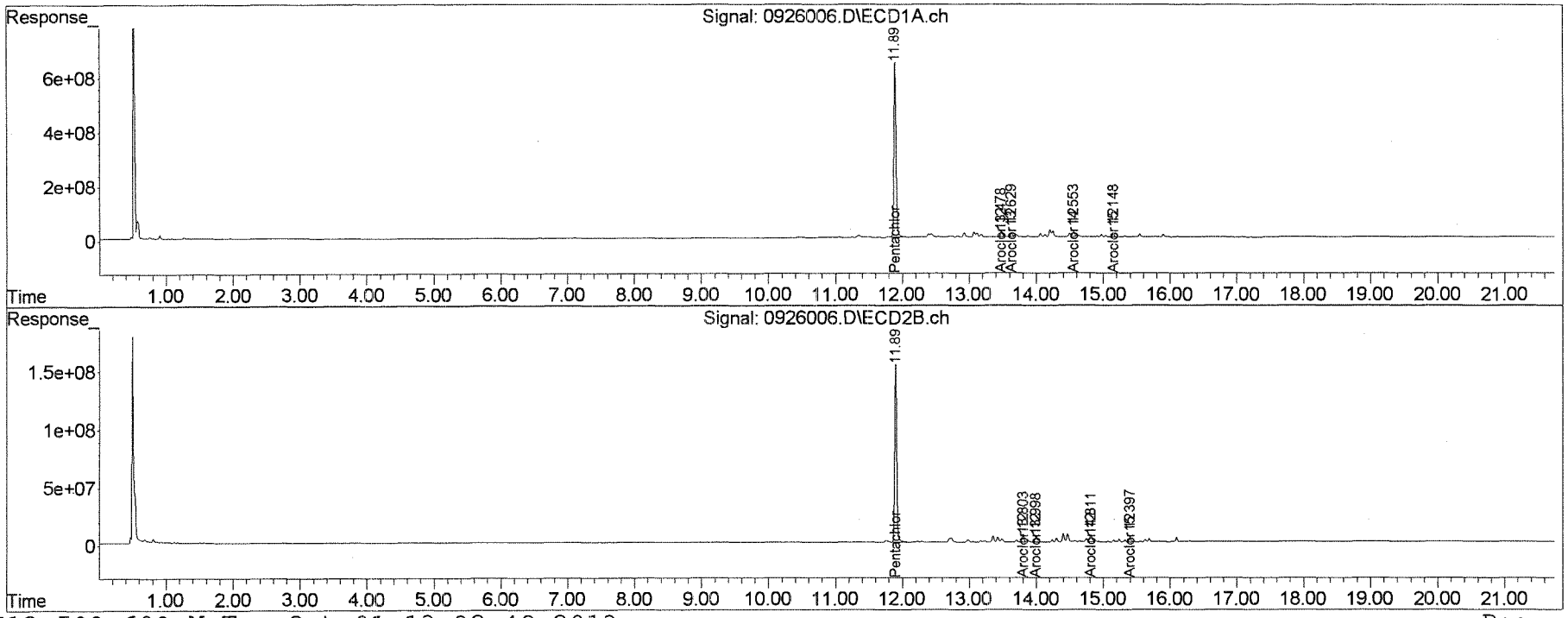

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/27/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L
Column ID: RTX-CLP

File ID: J:\GC33\DATA\092613-508\0926024.D
J:\GC33\DATA\092613-508\0926025.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.329	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.360	0.363	NA	-7	± 30 %	Linear
Heptachlor	50	54		0.312	0.338	8	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	51		0.261	0.265	2	NA	± 30 %	AverageRF
gamma-Chlordane	50	53		0.260	0.274	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.248	0.260	5	NA	± 30 %	AverageRF
Endrin	50	52		0.170	0.177	4	NA	± 30 %	AverageRF
Methoxychlor	50	48		0.0703	0.0674	-4	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0241	0.0256	7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/27/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1310845
Units: ug/L
Column ID: RTX-CLP2

File ID: J:\GC33\DATA\092613-508\0926024.D\0926024C.D
J:\GC33\DATA\092613-508\0926025.D\0926025C.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.314	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	47		0.493	0.451	NA	-5	± 30 %	Quadratic
Heptachlor	50	56		0.335	0.374	12	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.344	7	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.350	4	NA	± 30 %	AverageRF
alpha-Chlordane	50	52		0.319	0.334	5	NA	± 30 %	AverageRF
Endrin	50	47		0.227	0.228	NA	-6	± 30 %	Linear
Methoxychlor	50	53		0.0945	0.0993	5	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0348	5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\092613-508\0926024.D
Lab ID: KWG1310845-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/27/2013 02:05
Date Quantitated: 09/30/2013 14:29
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926024.D\0926024C.D
Lab ID: KWG1310845-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/27/2013 02:05
Date Quantitated: 09/30/2013 14:29
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926024.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926024.D\0926024c.d			**Vial:**	98
Acqu Date:	09/27/2013 02:05	**Quant Date:**	09/30/2013 14:29	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/02/2013

Analysis Lot:	KWG1310845	**Prep Lot:**		**Report Group:**	
Analysis Method:	508.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90? -0.02	11.90? -0.01	1470840797	331522066	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}			0d	0d	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.39	10.42	483459522	104223407	50.82	50.03			NA
					%Recovery =	NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	18.26?	18.58?	178782197	59122712	42.27	42.75			NA
					%Recovery =	NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91	11.10	644535835	153669936	51.34	48.24			
1	gamma-BHC (Lindane)	11.71	11.98	534421422	149519282	46.59	47.46			
1	beta-BHC	11.97	12.22	275863506	57703167	54.07	48.66			
1	delta-BHC	12.35	12.82	460398793	123243449	44.31	48.47			
1	Heptachlor	12.78	12.87	496980008	123946263	54.22	55.79			
1	Aldrin	13.36	13.46	468439234	125761783	53.66	49.46			
1	Heptachlor Epoxide (Isomer	14.30	14.48	425319021	116944799	51.70	52.38			
1	Heptachlor Epoxide	14.44	14.44	390014686	114135408	50.86	53.66			
1	gamma-Chlordane	14.64	14.73	402305880	116062402	52.65	52.12			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926024.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926024.D\0926024c.d			**Vial:**	98
Acqu Date:	09/27/2013 02:05	**Quant Date:**	09/30/2013 14:29	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane	14.85	14.95	382794546	110617654	52.53	52.33			
1	4,4'-DDE	14.99	15.21	341623518	98615985	57.90	51.46			
1	Endosulfan I	15.05	15.02	361440749	99456041	52.80	50.92			
1	Dieldrin	15.41	15.42	364416150	110403901	52.14	53.10			
1	Endrin	15.72	15.81	259608625	75599739	51.90	46.99			
1	4,4'-DDD	15.81	15.95	254653062	74537471	57.53	54.12			
1	Endosulfan II	16.00	16.06	286340539	87038722	53.86	51.94			
1	4,4'-DDT	16.14	16.29	253050925	76255928	54.70	49.82			
1	Endrin Aldehyde	16.48	16.43	223349896	74889547	50.52	52.37			
1	Methoxychlor	16.64	16.96	99070604	32918037	47.89	52.56			
1	Endosulfan Sulfate	16.92	16.71	183854160	69307594	41.27	49.28			
1	Endrin Ketone	17.22	17.25	230713449	88590273	41.77	49.59			
2	Toxaphene			0d	0d	0.0000	0.0000			
2	Chlordane			0d	0d	0.0000	0.0000			
3	Aroclor 1016			0d	0d	0.0000	0.0000			NR
3	Aroclor 1260			0d	0d	0.0000	0.0000			NR
3	Aroclor 1221			0d	0d	0.0000	0.0000			NR
3	Aroclor 1254			0d	0d	0.0000	0.0000			NR
4	Aroclor 1232			0d	0d	0.0000	0.0000			NR
4	Aroclor 1242			0d	0d	0.0000	0.0000			NR
5	Aroclor 1248			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926024.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:05:23
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:29:34 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.898	11.900	1470.8E6	331.5E6	50.000	50.000
		System Monitoring Compounds						
2)	s	TCMX	9.361	9.397	441.3E6	98476484	52.096	49.602
4)	S	4,4'-Dibr...	11.385	10.418	483.5E6	104.2E6	50.817	50.027
25)	S	Decachlor...	18.256	18.576	178.8E6	59122712	42.269	42.753
		Target Compounds						
3)	m	alpha-BHC	10.912	11.102	644.5E6	153.7E6	51.337	48.241
5)	m	gamma-BHC...	11.713	11.977	534.4E6	149.5E6	46.591	47.463
6)	m	beta-BHC	11.967	12.223	275.9E6	57703167	54.073	48.661
7)	m	delta-BHC	12.347	12.818	460.4E6	123.2E6	44.308	48.473
8)	m	Heptachlor	12.779	12.868	497.0E6	123.9E6	54.221	55.790
9)	m	Aldrin	13.359	13.455	468.4E6	125.8E6	53.657	49.460
10)	m	Heptachlo...	14.295	14.476	425.3E6	116.9E6	51.704	52.383
11)	m	Heptachlo...	14.436	14.438	390.0E6	114.1E6	50.857	53.660
12)	m	gamma-Chl...	14.637	14.727	402.3E6	116.1E6	52.647	52.120
13)	m	alpha-Chl...	14.847	14.948	382.8E6	110.6E6	52.528	52.331
14)	m	4,4'-DDE	14.990	15.213	341.6E6	98615985	57.898	51.459
15)	m	Endosulfan I	15.049	15.020	361.4E6	99456041	52.799	50.924
16)	m	Dieldrin	15.408	15.417	364.4E6	110.4E6	52.139	53.102
17)	m	Endrin	15.723	15.813	259.6E6	75599739	51.899	46.992
18)	m	4,4'-DDD	15.813	15.948	254.7E6	74537471	57.528	54.123
19)	m	Endosulfa...	16.003	16.063	286.3E6	87038722	53.857	51.937
20)	m	4,4'-DDT	16.140	16.288	253.1E6	76255928	54.704	49.820
21)	m	Endrin Al...	16.477	16.432	223.3E6	74889547	50.524	52.373
22)	m	Methoxychlor	16.637	16.958	99070604	32918037	47.885	52.563
23)	m	Endosulfa...	16.922	16.708	183.9E6	69307594	41.265	49.279
24)	m	Endrin Ke...	17.217	17.253	230.7E6	88590273	41.773	49.594
		SemiQuant Compounds - Not Calibrated on this Instrument						

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926024.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:05:23
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:29:34 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926024.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:05:23
Operator : JSCHWAB
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:29:34 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

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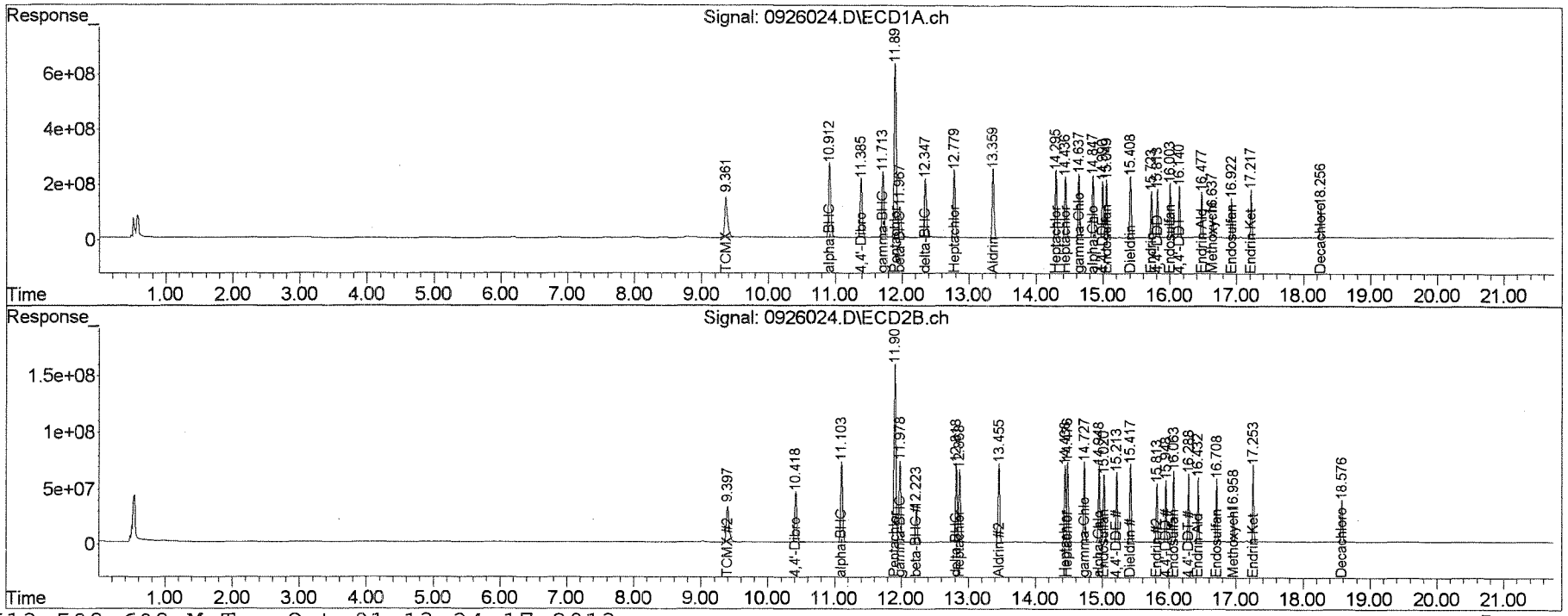

Exception Report

Data File: J:\GC33\DATA\092613-508\0926025.D
Lab ID: KWG1310845-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/27/2013 02:32
Date Quantitated: 09/30/2013 14:31
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/2/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\092613-508\0926025.D\0926025C.D
Lab ID: KWG1310845-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/27/2013 02:32
Date Quantitated: 09/30/2013 14:31
Batch ID: KWG1310845
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 10/2/13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC33\DATA\092613-508\0926025.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926025.D\0926025c.d			**Vial:**	100
Acqu Date:	09/27/2013 02:32	**Quant Date:**	09/30/2013 14:31	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/02/2013

Analysis Lot:	KWG1310845	**Prep Lot:**		**Report Group:**	
Analysis Method:	508.1	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN			0d	0d	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90? $^{-0.02}$	11.90? $^{-0.01}$	1494305937	343124467	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			
1	delta-BHC			0d	0d	0.0000	0.0000			
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR
1	gamma-Chlordane			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\092613-508\0926025.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\092613-508\0926025.D\0926025c.d			**Vial:**	100
Acqu Date:	09/27/2013 02:32	**Quant Date:**	09/30/2013 14:31	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1310845-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-Chlordane			0d	0d	0.0000	0.0000			NR
1	4,4'-DDE			0d	0d	0.0000	0.0000			
1	Endosulfan I			0d	0d	0.0000	0.0000			
1	Dieldrin			0d	0d	0.0000	0.0000			
1	Endrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			
1	Endosulfan II			0d	0d	0.0000	0.0000			
1	4,4'-DDT			0d	0d	0.0000	0.0000			
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			
1	Endrin Ketone			0d	0d	0.0000	0.0000			
2	Toxaphene			0d	0d	0.0000	0.0000			NR
2	Chlordane			0d	0d	0.0000	0.0000			NR
3	Aroclor 1016			0d	0d	0.0000	0.0000			
3	Aroclor 1260			0d	0d	0.0000	0.0000			
3	Aroclor 1221			0d	0d	0.0000	0.0000			
3	Aroclor 1254			0d	0d	0.0000	0.0000			
4	Aroclor 1232			0d	0d	0.0000	0.0000			
4	Aroclor 1242			0d	0d	0.0000	0.0000			
5	Aroclor 1248			153232404m	47796191m	213.02	210.19			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926025.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:32:38
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:31:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
68)	I	Pentachlo...	11.898	11.899	1494.3E6	343.1E6	50.000	50.000
		System Monitoring Compounds						
		Target Compounds						
69)	L9	Aroclor 1248	13.482	13.803	50208288	12764080	210.227	210.609
70)	L9	Aroclor 1...	13.634	14.000	30813244	13212444	213.268	209.127
71)	L9	Aroclor 1...	14.557	14.811	44705422	14663327	213.216m	209.734
72)	L9	Aroclor 1...	15.149	15.398	27505450	7156340	217.694	212.345
73)	L9	Aroclor 1...	0.000	0.000	153.2E6	47796191	213.021m	210.185m
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926025.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:32:38
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:31:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

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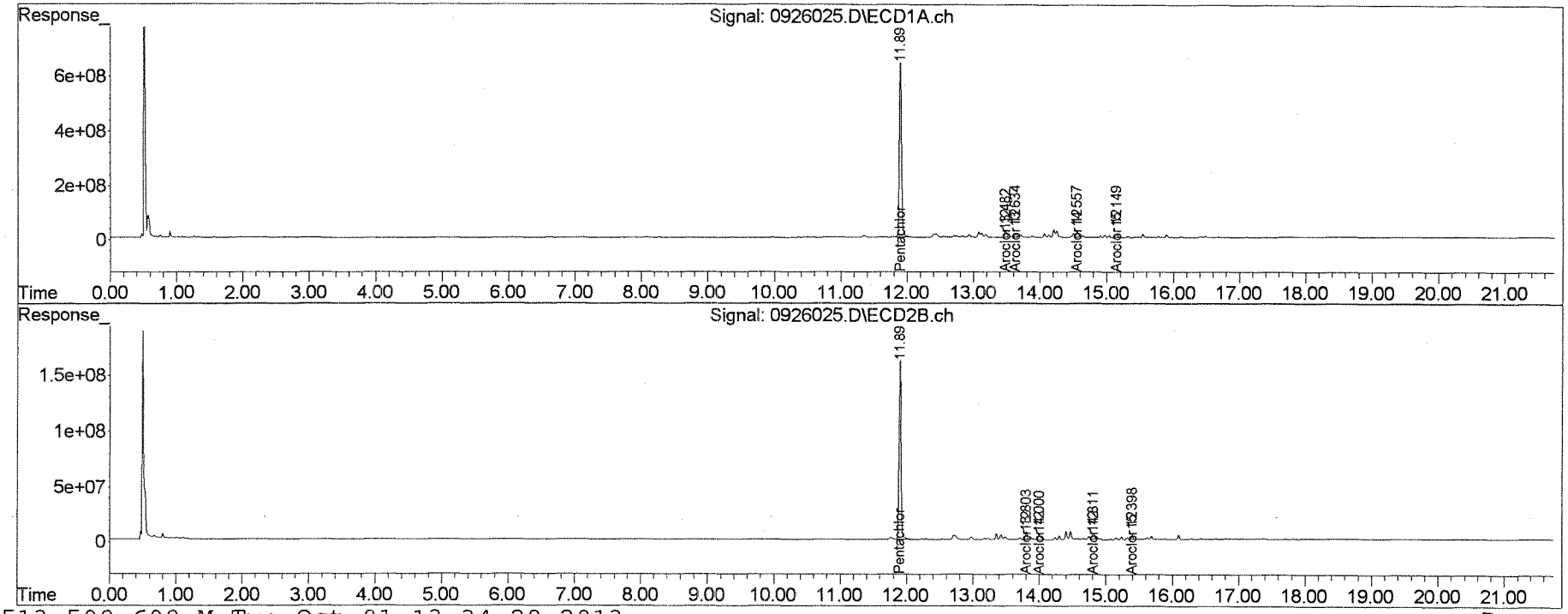
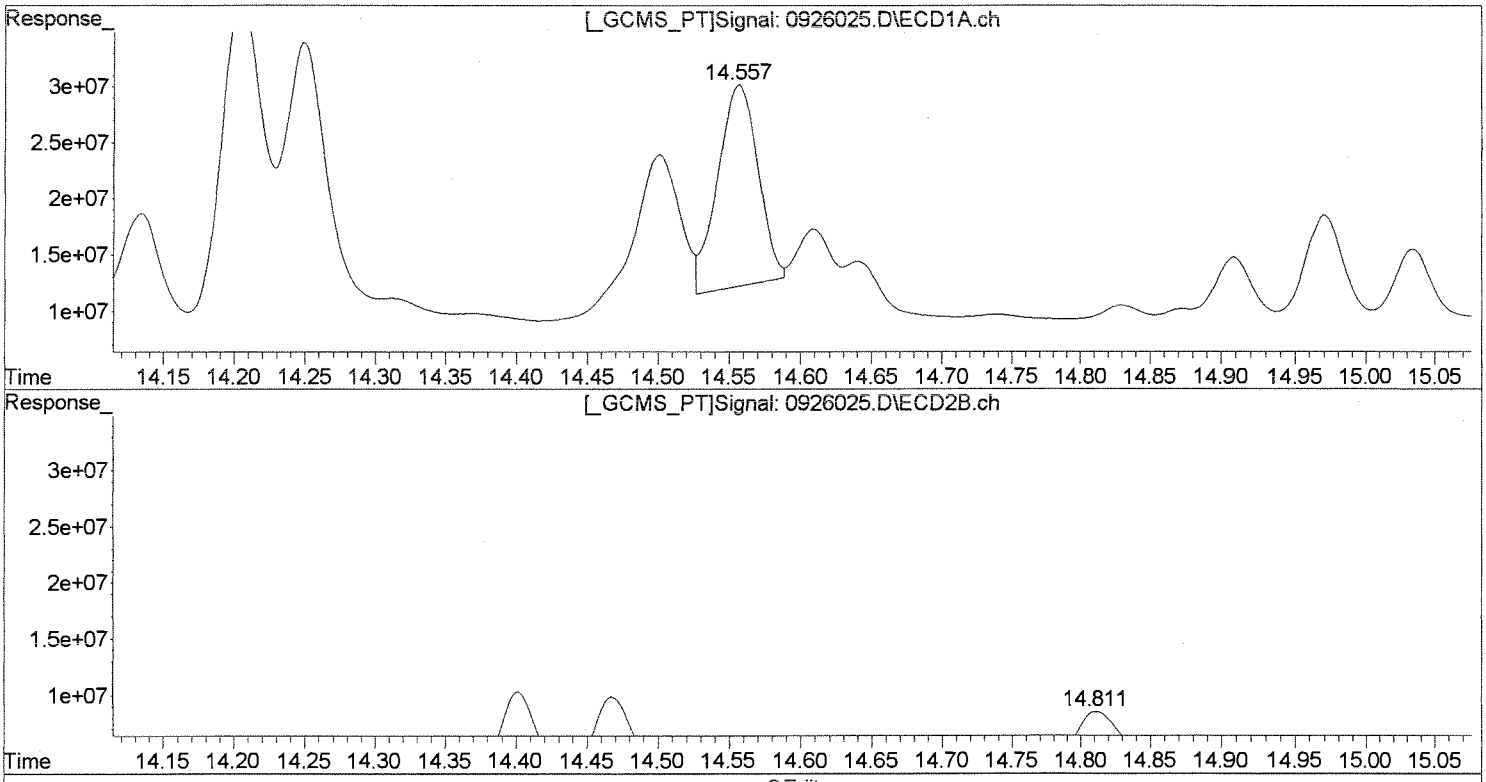


Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926025.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:32:38
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:40 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.48	50208288	210.23
13.63	30813244	213.27
14.56	35223545	167.99
15.15	27505450	217.69

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12764080	210.61
14.00	13212444	209.13
14.81	14663327	209.73
15.40	7156340	212.34

Manual Integration:
Before

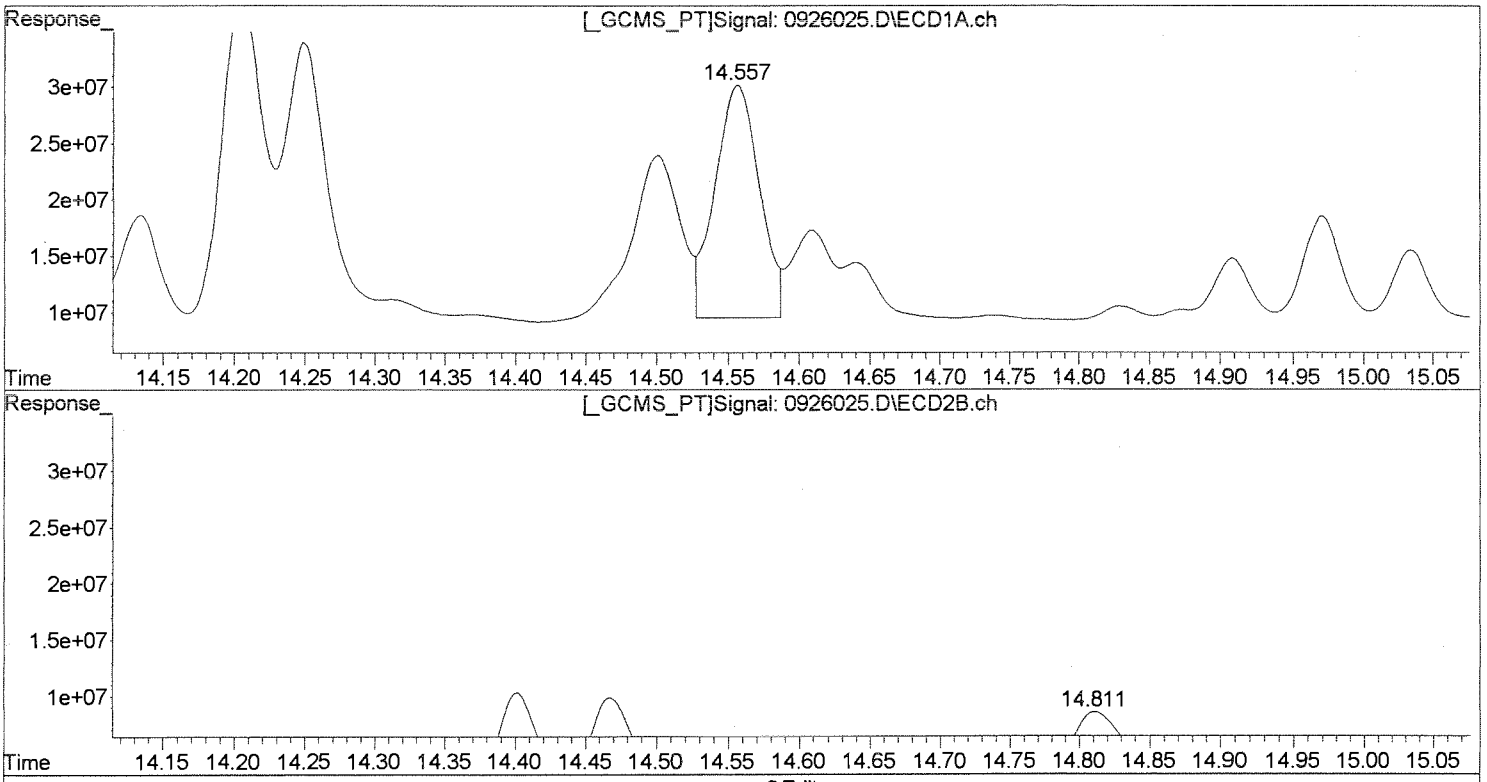
(+) = Expected Retention Time

Quantitation Report (Qedit)

Data Path : J:\GC33\Data\092613-508\
Data File : 0926025.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 27-Sep-2013, 02:32:38
Operator : JSCHWAB
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Sep 30 14:27:40 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um



QEdit

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.48	50208288	210.23
13.63	30813244	213.27
14.56	44705422	213.22
15.15	27505450	217.69

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12764080	210.61
14.00	13212444	209.13
14.81	14663327	209.73
15.40	7156340	212.34

Manual Integration:
After
Baseline/Shoulder
09/30/13

(+) = Expected Retention Time

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L
Column ID: RTX-CLP

File ID: J:\GC33\DATA\100813-508\1008004.D
J:\GC33\DATA\100813-508\1008006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	52		0.323	0.336	4	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	45		0.360	0.352	NA	-10	± 30 %	Linear
Heptachlor	50	50		0.312	0.311	0	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	47		0.261	0.244	-6	NA	± 30 %	AverageRF
gamma-Chlordane	50	48		0.260	0.249	-4	NA	± 30 %	AverageRF
alpha-Chlordane	50	47		0.248	0.234	-6	NA	± 30 %	AverageRF
Endrin	50	50		0.170	0.170	0	NA	± 30 %	AverageRF
Methoxychlor	50	46		0.0703	0.0652	-7	NA	± 30 %	AverageRF
Aroclor 1248	200	190		0.0241	0.0232	-3	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L

File ID: J:\GC33\DATA\100813-508\1008004.D\1008004C.D
J:\GC33\DATA\100813-508\1008006.D\1008006C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.315	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	49		0.493	0.465	NA	-2	± 30 %	Quadratic
Heptachlor	50	51		0.335	0.339	1	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.349	9	NA	± 30 %	AverageRF
gamma-Chlordane	50	54		0.336	0.360	7	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.319	0.339	6	NA	± 30 %	AverageRF
Endrin	50	50		0.227	0.244	NA	0	± 30 %	Linear
Methoxychlor	50	47		0.0945	0.0896	-5	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0345	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\100813-508\1008004.D
Lab ID: KWG1311188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 15:46
Date Quantitated: 10/09/2013 09:03
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 10/9/13

Secondary Review:

Exception Report

Data File: J:\GC33\DATA\100813-508\1008004.D\1008004C.D
Lab ID: KWG1311188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 15:46
Date Quantitated: 10/09/2013 09:03
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\100813-508\1008004.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008004.D\1008004c.d			**Vial:**	98
Acqu Date:	10/08/2013 15:46	**Quant Date:**	10/09/2013 09:03	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/09/2013

Analysis Lot:	KWG1311188	**Prep Lot:**		**Report Group:**
Analysis Method:	508.1	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90? -0.02	11.90? -0.01	1470517761	331980098	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}			0d	0d	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.42	494222685	104577232	51.96	50.13			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	18.25?	18.57?	225509604	70053034	53.33	50.59			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91	11.10	648890232	155342072	51.69	48.69			
1	gamma-BHC (Lindane)	11.71	11.98	518049776	154235704	45.20	48.94			
1	beta-BHC	11.96	12.22	290774380	59633679	57.04	50.22			
1	delta-BHC	12.35	12.82	430993210	122912100	41.55	48.28			
1	Heptachlor	12.78	12.87	457012538	112440260	49.87	50.54			
1	Aldrin	13.36	13.45	450349621	126817862	51.60	49.80			
1	Heptachlor Epoxide (Isomer	14.29	14.48	392408953	116490445	47.71	52.11			
1	Heptachlor Epoxide	14.44	14.44	358688447	115923423	46.78	54.43			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\100813-508\1008004.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008004.D\1008004c.d			**Vial:**	98
Acqu Date:	10/08/2013 15:46	**Quant Date:**	10/09/2013 09:03	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	14.64	14.72	365424742	119459022	47.83	53.57			
1	alpha-Chlordane	14.84	14.95	344228958	112687268	47.25	53.24			
1	4,4'-DDE	14.99	15.21	303775834	99900218	51.50	52.05			
1	Endosulfan I	15.05	15.02	330848969	99931006	48.34	51.10			
1	Dieldrin	15.41	15.41	332618476	112569220	47.60	54.07			
1	Endrin	15.72	15.81	249799529	80847716	49.95	50.14			
1	4,4'-DDD	15.81	15.95	227490405	73921985	51.40	53.60			
1	Endosulfan II	16.00	16.06	267661892	89233889	50.36	53.17			
1	4,4'-DDT	16.14	16.29	223681036	72347261	48.37	47.24			
1	Endrin Aldehyde	16.48	16.43	232671852	76385009	52.64	53.35			
1	Methoxychlor	16.64	16.96	95915662	29730189	46.37	47.41			
1	Endosulfan Sulfate	16.92	16.71	217064525	69317097	48.73	49.22			
1	Endrin Ketone	17.22	17.25	289779471	89612727	52.48	50.10			
2	Toxaphene			0d	0d	0.0000	0.0000			
2	Chlordane			0d	0d	0.0000	0.0000			
3	Aroclor 1016			0d	0d	0.0000	0.0000			NR
3	Aroclor 1260			0d	0d	0.0000	0.0000			NR
3	Aroclor 1221			0d	0d	0.0000	0.0000			NR
3	Aroclor 1254			0d	0d	0.0000	0.0000			NR
4	Aroclor 1232			0d	0d	0.0000	0.0000			NR
4	Aroclor 1242			0d	0d	0.0000	0.0000			NR
5	Aroclor 1248			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 15:46:46
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 09:03:43 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.897	11.898	1470.5E6	332.0E6	50.000	50.000
		System Monitoring Compounds						
2)	s	TCMX	9.360	9.396	456.8E6	101.2E6	53.942	50.883
4)	S	4,4'-Dibr...	11.383	10.416	494.2E6	104.6E6	51.960	50.128
25)	S	Decachlor...	18.255	18.573	225.5E6	70053034	53.328	50.587
		Target Compounds						
3)	m	alpha-BHC	10.910	11.102	648.9E6	155.3E6	51.691	48.690
5)	m	gamma-BHC...	11.712	11.976	518.0E6	154.2E6	45.199	48.941
6)	m	beta-BHC	11.964	12.221	290.8E6	59633679	57.041	50.220
7)	m	delta-BHC	12.346	12.818	431.0E6	122.9E6	41.550	48.280
8)	m	Heptachlor	12.778	12.867	457.0E6	112.4E6	49.871	50.541
9)	m	Aldrin	13.357	13.453	450.3E6	126.8E6	51.597	49.803
10)	m	Heptachlo...	14.293	14.475	392.4E6	116.5E6	47.714	52.108
11)	m	Heptachlo...	14.435	14.437	358.7E6	115.9E6	46.782	54.425
12)	m	gamma-Chl...	14.635	14.724	365.4E6	119.5E6	47.831	53.571
13)	m	alpha-Chl...	14.844	14.946	344.2E6	112.7E6	47.246	53.237
14)	m	4,4'-DDE	14.989	15.211	303.8E6	99900218	51.495	52.050
15)	m	Endosulfan I	15.047	15.019	330.8E6	99931006	48.341	51.096
16)	m	Dieldrin	15.406	15.415	332.6E6	112.6E6	47.600	54.069
17)	m	Endrin	15.722	15.811	249.8E6	80847716	49.949	50.139
18)	m	4,4'-DDD	15.812	15.946	227.5E6	73921985	51.403	53.602
19)	m	Endosulfa...	16.002	16.062	267.7E6	89233889	50.355	53.173
20)	m	4,4'-DDT	16.139	16.287	223.7E6	72347261	48.365	47.237
21)	m	Endrin Al...	16.475	16.431	232.7E6	76385009	52.644	53.345
22)	m	Methoxychlor	16.637	16.957	95915662	29730189	46.370	47.407
23)	m	Endosulfa...	16.921	16.706	217.1E6	69317097	48.730	49.218
24)	m	Endrin Ke...	17.215	17.251	289.8E6	89612727	52.479	50.097

SemiQuant Compounds - Not Calibrated on this Instrument

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 15:46:46
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 09:03:43 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

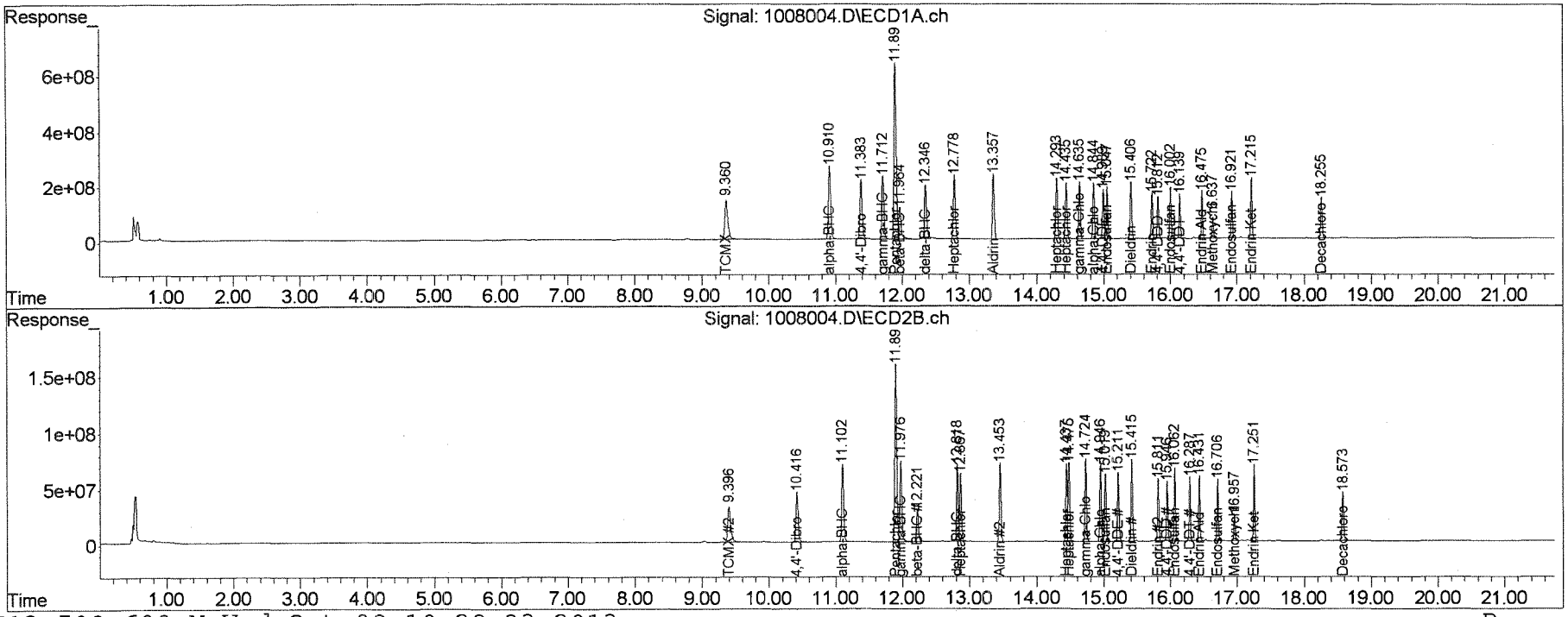
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008004.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 15:46:46
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 09:03:43 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

1134



Exception Report

Data File: J:\GC33\DATA\100813-508\1008006.D
Lab ID: KWG1311188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 16:40
Date Quantitated: 10/09/2013 09:55
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: N

Exception Report

Data File: J:\GC33\DATA\100813-508\1008006.D\1008006C.D
Lab ID: KWG1311188-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 16:40
Date Quantitated: 10/09/2013 09:55
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\100813-508\1008006.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008006.D\1008006c.d			**Vial:**	100
Acqu Date:	10/08/2013 16:40	**Quant Date:**	10/09/2013 09:55	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/09/2013

Analysis Lot:	KWG1311188	**Prep Lot:**	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN			0d	0d	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}	11.89? $^{-0.03}$	11.90? $^{-0.01}$	1486922492	334503155	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	0.00		0d	0d		0.0000			NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			
1	delta-BHC			0d	0d	0.0000	0.0000			
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\100813-508\1008006.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008006.D\1008006c.d			**Vial:**	100
Acqu Date:	10/08/2013 16:40	**Quant Date:**	10/09/2013 09:55	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-1				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			
1	alpha-Chlordane			0d	0d	0.0000	0.0000			
1	4,4'-DDE			0d	0d	0.0000	0.0000			
1	Endosulfan I			0d	0d	0.0000	0.0000			
1	Dieldrin			0d	0d	0.0000	0.0000			
1	Endrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			
1	Endosulfan II			0d	0d	0.0000	0.0000			
1	4,4'-DDT			0d	0d	0.0000	0.0000			
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			
1	Endrin Ketone			0d	0d	0.0000	0.0000			
2	Toxaphene			0d	0d	0.0000	0.0000			NR
2	Chlordane			0d	0d	0.0000	0.0000			NR
3	Aroclor 1016			0d	0d	0.0000	0.0000			
3	Aroclor 1260			0d	0d	0.0000	0.0000			
3	Aroclor 1221			0d	0d	0.0000	0.0000			
3	Aroclor 1254			0d	0d	0.0000	0.0000			
4	Aroclor 1232			0d	0d	0.0000	0.0000			
4	Aroclor 1242			0d	0d	0.0000	0.0000			
5	Aroclor 1248			138199893m	46221632m	193.08	208.50			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 16:40:33
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 09:55:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	Internal Standards						
68)	I Pentachlo...	11.892	11.897	1486.9E6	334.5E6	50.000	50.000
	System Monitoring Compounds						
	Target Compounds						
69)	L9 Aroclor 1248	13.479	13.801	46279874	12386533	194.741	209.647
70)	L9 Aroclor 1...	13.631	13.998	27410319	12661156	190.657	205.566
71)	L9 Aroclor 1...	14.553	14.809	39768799	14234334	190.613m	208.845
72)	L9 Aroclor 1...	15.148	15.396	24740901	6939609	196.786	211.221
73)	L9 Aroclor 1...	0.000	0.000	138.2E6	46221632	193.077m	208.500m
	SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

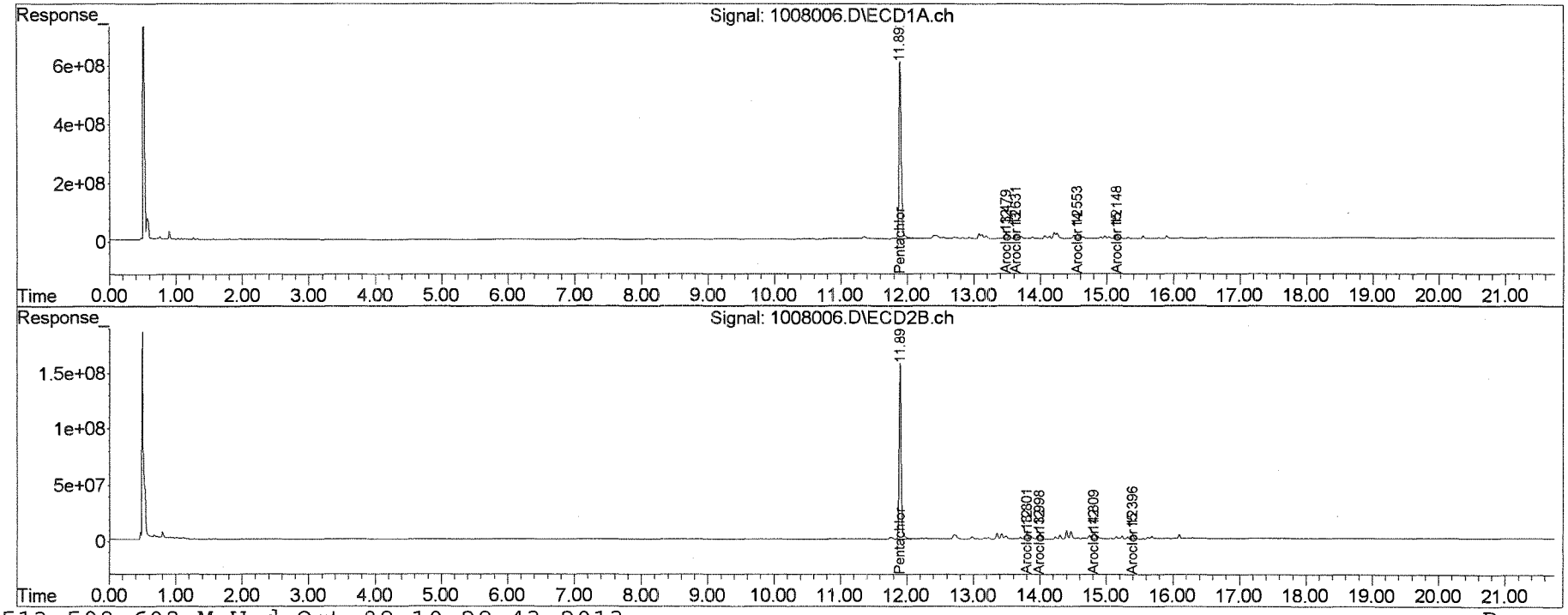
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 16:40:33
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 09:55:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

1140

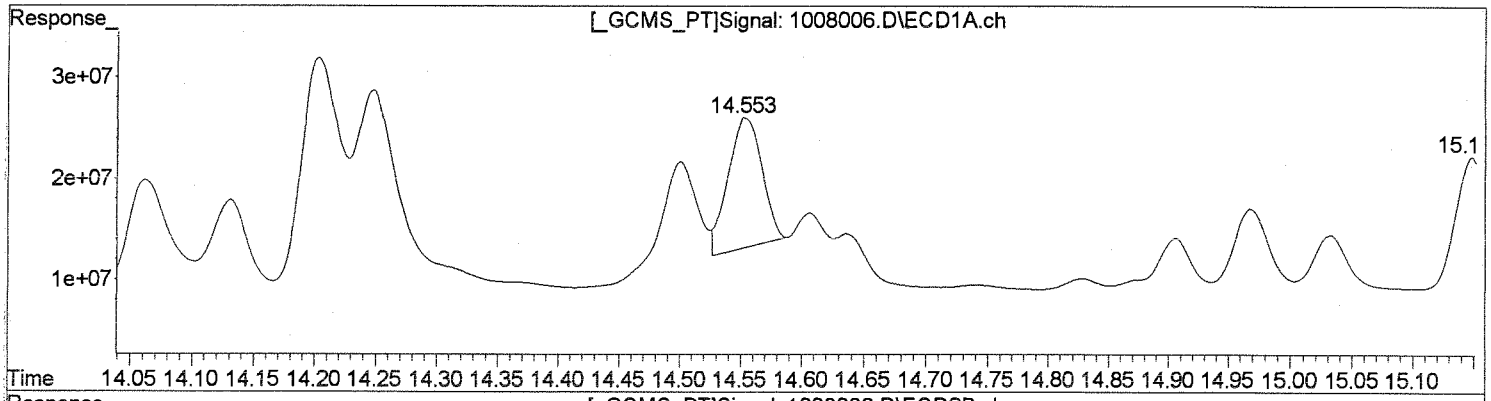


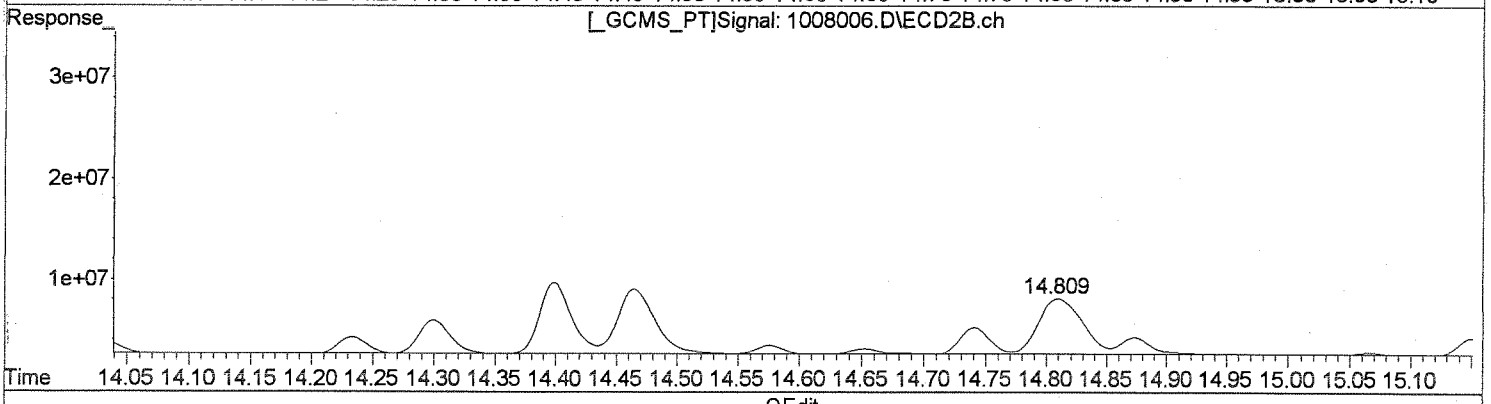
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 16:40:33
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:51:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.48	46279874	194.74
13.63	27410319	190.66
14.55	25010661	119.88
15.15	24740901	196.79

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12386533	209.65
14.00	12661156	205.57
14.81	14234334	208.85
15.40	6939609	211.22

Before 10/9/13

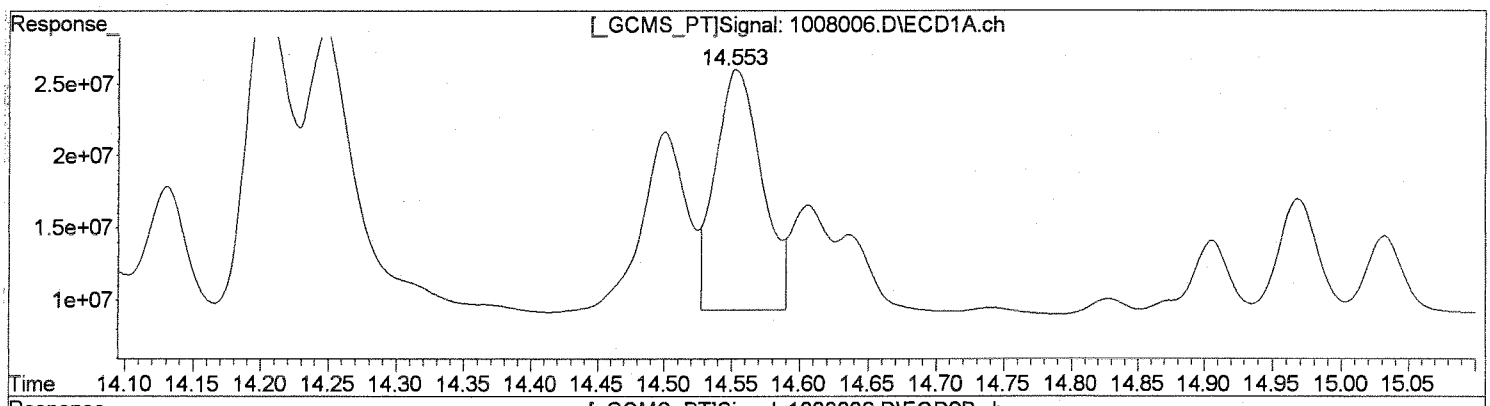
(+) = Expected Retention Time

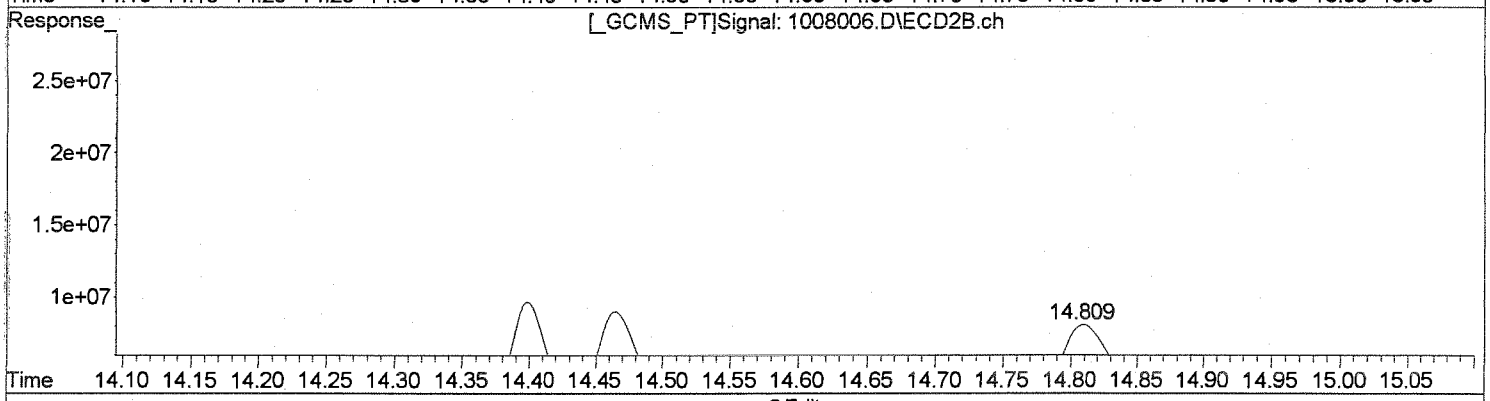
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008006.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 16:40:33
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:51:30 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.48	46279874	194.74
13.63	27410319	190.66
14.55	39768799	190.61
15.15	24740901	196.79

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12386533	209.65
14.00	12661156	205.57
14.81	14234334	208.85
15.40	6939609	211.22

After Baseline Shoulder
10/9/13 SS

(+) = Expected Retention Time

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013 - 10/09/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L

File ID: J:\GC33\DATA\100813-508\1008021.D
J:\GC33\DATA\100813-508\1008022.D

Column ID: RTX-CLP

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	51		0.323	0.331	2	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	44		0.360	0.344	NA	-12	± 30 %	Linear
Heptachlor	50	52		0.312	0.321	3	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	46		0.261	0.242	-7	NA	± 30 %	AverageRF
gamma-Chlordane	50	49		0.260	0.255	-2	NA	± 30 %	AverageRF
alpha-Chlordane	50	49		0.248	0.241	-3	NA	± 30 %	AverageRF
Endrin	50	55		0.170	0.185	9	NA	± 30 %	AverageRF
Methoxychlor	50	53		0.0703	0.0739	5	NA	± 30 %	AverageRF
Aroclor 1248	200	200		0.0241	0.0244	1	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/08/2013 - 10/09/2013

Continuing Calibration Verification Summary
Pesticides/PCBs by EPA method 508.1

Calibration Type: Internal Standard
Analysis Method: 508.1

Calibration Date: 08/15/2013
Calibration ID: CAL12714
Analysis Lot: KWG1311188
Units: ug/L

File ID: J:\GC33\DATA\100813-508\1008021.D\1008021C.D
J:\GC33\DATA\100813-508\1008022.D\1008022C.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
4,4'-Dibromooctafluorobiphenyl	50	50		0.314	0.314	0	NA	± 30 %	AverageRF
gamma-BHC (Lindane)	50	48		0.493	0.453	NA	-5	± 30 %	Quadratic
Heptachlor	50	52		0.335	0.348	4	NA	± 30 %	AverageRF
Heptachlor Epoxide	50	54		0.321	0.344	7	NA	± 30 %	AverageRF
gamma-Chlordane	50	52		0.336	0.353	5	NA	± 30 %	AverageRF
alpha-Chlordane	50	53		0.319	0.335	5	NA	± 30 %	AverageRF
Endrin	50	53		0.227	0.259	NA	6	± 30 %	Linear
Methoxychlor	50	54		0.0945	0.102	8	NA	± 30 %	AverageRF
Aroclor 1248	200	210		0.0331	0.0346	4	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC33\DATA\100813-508\1008021.D
Lab ID: KWG1311188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 23:30
Date Quantitated: 10/09/2013 10:30
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: AN

Exception Report

Data File: J:\GC33\DATA\100813-508\1008021.D\1008021C.D
Lab ID: KWG1311188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/08/2013 23:30
Date Quantitated: 10/09/2013 10:30
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\100813-508\1008021.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008021.D\1008021c.d			**Vial:**	98
Acqu Date:	10/08/2013 23:30	**Quant Date:**	10/09/2013 10:30	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/09/2013

Analysis Lot:	KWG1311188	**Prep Lot:**	**Report Group:**	
Analysis Method:	508.1	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN	11.90? [-0.02]	11.90? [-0.01]	1554885742	351740766	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}			0d	0d	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	11.38	10.42	515135394	110511659	51.22	50.00			NA
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	18.26?	18.57?	233765245	73532148	52.28	50.12			NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC	10.91	11.10	683767992	163743920	51.52	48.45			
1	gamma-BHC (Lindane)	11.71	11.98	534440177	159472633	44.12	47.72			
1	beta-BHC	11.97	12.22	289247295	61808157	53.63	49.13			
1	delta-BHC	12.35	12.82	454026693	132401132	41.40	49.07			
1	Heptachlor	12.78	12.87	499269386	122390610	51.53	51.92			
1	Aldrin	13.36	13.45	479847550	130726340	51.99	48.47			
1	Heptachlor Epoxide (Isomer	14.29	14.48	424921730	119682585	48.86	50.53			
1	Heptachlor Epoxide	14.43	14.44	375991741	121089202	46.38	53.66			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\100813-508\1008021.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008021.D\1008021c.d			**Vial:**	98
Acqu Date:	10/08/2013 23:30	**Quant Date:**	10/09/2013 10:30	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane	14.64	14.73	396387537	124009224	49.07	52.49			
1	alpha-Chlordane	14.85	14.95	374719425	117986016	48.64	52.61			
1	4,4'-DDE	14.99	15.21	335134206	104212456	53.73	51.26			
1	Endosulfan I	15.05	15.02	356457930	102829499	49.26	49.63			
1	Dieldrin	15.41	15.42	359092736	118429944	48.60	53.69			
1	Endrin	15.72	15.81	288319507	91017306	54.52	53.23			
1	4,4'-DDD	15.81	15.95	253540798	79476171	54.18	54.39			
1	Endosulfan II	16.00	16.06	284276242	93140609	50.58	52.38			
1	4,4'-DDT	16.14	16.29	246271295	80901705	50.36	49.82			
1	Endrin Aldehyde	16.48	16.43	239619966	77350664	51.27	50.98			
1	Methoxychlor	16.64	16.96	114830276	36010800	52.50	54.20			
1	Endosulfan Sulfate	16.92	16.71	228876147	74312992	48.59	49.80			
1	Endrin Ketone	17.22	17.25	304493495	94374129	52.15	49.80			
2	Toxaphene			0d	0d	0.0000	0.0000			
2	Chlordane			0d	0d	0.0000	0.0000			
3	Aroclor 1016			0d	0d	0.0000	0.0000			NR
3	Aroclor 1260			0d	0d	0.0000	0.0000			NR
3	Aroclor 1221			0d	0d	0.0000	0.0000			NR
3	Aroclor 1254			0d	0d	0.0000	0.0000			NR
4	Aroclor 1232			0d	0d	0.0000	0.0000			NR
4	Aroclor 1242			0d	0d	0.0000	0.0000			NR
5	Aroclor 1248			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 23:30:42
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 10:30:51 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
1)	I	Pentachlo...	11.896	11.898	1554.9E6	351.7E6	50.000	50.000
		System Monitoring Compounds						
2)	s	TCMX	9.357	9.395	472.5E6	105.7E6	52.764	50.163
4)	S	4,4'-Dibr...	11.383	10.416	515.1E6	110.5E6	51.220	49.996
25)	S	Decachlor...	18.256	18.575	233.8E6	73532148	52.281	50.116
		Target Compounds						
3)	m	alpha-BHC	10.910	11.102	683.8E6	163.7E6	51.516	48.445
5)	m	gamma-BHC...	11.708	11.975	534.4E6	159.5E6	44.118	47.721
6)	m	beta-BHC	11.966	12.222	289.2E6	61808157	53.627	49.127
7)	m	delta-BHC	12.345	12.817	454.0E6	132.4E6	41.399	49.067
8)	m	Heptachlor	12.778	12.867	499.3E6	122.4E6	51.526	51.923
9)	m	Aldrin	13.358	13.453	479.8E6	130.7E6	51.993	48.469
10)	m	Heptachlo...	14.293	14.475	424.9E6	119.7E6	48.864	50.528
11)	m	Heptachlo...	14.434	14.438	376.0E6	121.1E6	46.378	53.656
12)	m	gamma-Chl...	14.635	14.726	396.4E6	124.0E6	49.069	52.488
13)	m	alpha-Chl...	14.845	14.947	374.7E6	118.0E6	48.640	52.609
14)	m	4,4'-DDE	14.989	15.212	335.1E6	104.2E6	53.728	51.256
15)	m	Endosulfan I	15.047	15.019	356.5E6	102.8E6	49.257	49.625
16)	m	Dieldrin	15.406	15.416	359.1E6	118.4E6	48.600	53.688
17)	m	Endrin	15.723	15.813	288.3E6	91017306	54.523	53.231
18)	m	4,4'-DDD	15.812	15.947	253.5E6	79476171	54.181	54.392
19)	m	Endosulfa...	16.002	16.063	284.3E6	93140609	50.578	52.383
20)	m	4,4'-DDT	16.139	16.288	246.3E6	80901705	50.361	49.817
21)	m	Endrin Al...	16.475	16.433	239.6E6	77350664	51.274	50.984
22)	m	Methoxychlor	16.637	16.958	114.8E6	36010800	52.502	54.196
23)	m	Endosulfa...	16.922	16.707	228.9E6	74312992	48.594	49.801
24)	m	Endrin Ke...	17.216	17.253	304.5E6	94374129	52.151	49.795
		SemiQuant Compounds - Not Calibrated on this Instrument						

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 23:30:42
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 10:30:51 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

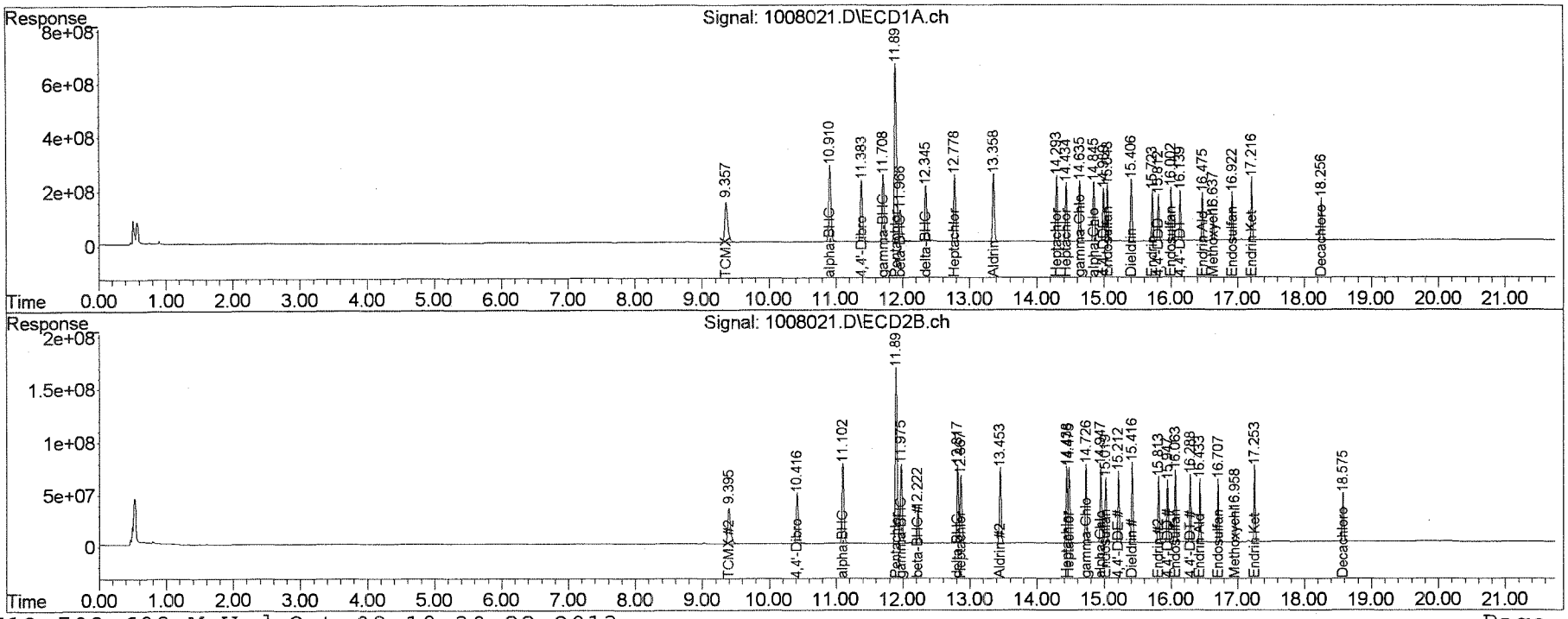
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008021.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 08-Oct-2013, 23:30:42
Operator : SSullivan
Sample : PEST CCV 50PPB DWSTD06-66B
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 10:30:51 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

[151]



Exception Report

Data File: J:\GC33\DATA\100813-508\1008022.D
Lab ID: KWG1311188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/09/2013 00:01
Date Quantitated: 10/09/2013 10:32
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: _____

Exception Report

Data File: J:\GC33\DATA\100813-508\1008022.D\1008022C.D
Lab ID: KWG1311188-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/09/2013 00:01
Date Quantitated: 10/09/2013 10:32
Batch ID: KWG1311188
Analysis Method: 508.1
MethodJoinID: MJ492

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: SS 10/9/13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC33\DATA\100813-508\1008022.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008022.D\1008022c.d			**Vial:**	100
Acqu Date:	10/09/2013 00:01	**Quant Date:**	10/09/2013 10:32	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	508.1 PEST_CL	**Collect Date:**		**Receive Date:**	10/09/2013

Analysis Lot:	KWG1311188	**Prep Lot:**		**Report Group:**
Analysis Method:	508.1	**Prep Method:**		
Prep Ref:		**Prep Date:**		

Quant Method:	J:\GC33\METHODS\081513_508_6	**Calibration ID:**	CAL12714
Title:			
MB Ref:		**Method ID:**	MJ492
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2
1	Pentachloronitrobenzene (PCN			0d	0d	50.00	50.00
2	Pentachloronitrobenzene {2}			0d	0d	50.00	50.00
3	Pentachloronitrobenzene {3}			0d	0d	50.00	50.00
4	Pentachloronitrobenzene{4}			0d	0d	50.00	50.00
5	Pentachloronitrobenzene{5}	11.90? $^{-0.02}$	11.90? $^{-0.01}$	1521691000	346835383	50.00	50.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ug/L #1	ug/L #2			Rpt
1	4,4'-Dibromooctafluorobipheny	0.00		0d	0d	0.0000				NR
				%Recovery =		NA	NA	Limits =	70-130	
1	Decachlorobiphenyl	0.00		0d	0d	0.0000				NA
				%Recovery =		NA	NA	Limits =	10-133	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	alpha-BHC			0d	0d	0.0000	0.0000			
1	gamma-BHC (Lindane)			0d	0d	0.0000	0.0000			NR
1	beta-BHC			0d	0d	0.0000	0.0000			
1	delta-BHC			0d	0d	0.0000	0.0000			
1	Heptachlor			0d	0d	0.0000	0.0000			NR
1	Aldrin			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide (Isomer			0d	0d	0.0000	0.0000			
1	Heptachlor Epoxide			0d	0d	0.0000	0.0000			NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC33\DATA\100813-508\1008022.D			**Instrument:**	GC33
Data File #2:	J:\GC33\Data\100813-508\1008022.D\1008022c.d			**Vial:**	100
Acqu Date:	10/09/2013 00:01	**Quant Date:**	10/09/2013 10:32	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ug/L
Lab ID:	KWG1311188-2				
Signal #1:	RTX-CLP	**Signal #2:**	RTX-CLP2		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ug/L #1	ug/L #2	ug/L #1	ug/L #2	Rpt
1	gamma-Chlordane			0d	0d	0.0000	0.0000			
1	alpha-Chlordane			0d	0d	0.0000	0.0000			
1	4,4'-DDE			0d	0d	0.0000	0.0000			
1	Endosulfan I			0d	0d	0.0000	0.0000			
1	Dieldrin			0d	0d	0.0000	0.0000			
1	Endrin			0d	0d	0.0000	0.0000			NR
1	4,4'-DDD			0d	0d	0.0000	0.0000			
1	Endosulfan II			0d	0d	0.0000	0.0000			
1	4,4'-DDT			0d	0d	0.0000	0.0000			
1	Endrin Aldehyde			0d	0d	0.0000	0.0000			
1	Methoxychlor			0d	0d	0.0000	0.0000			NR
1	Endosulfan Sulfate			0d	0d	0.0000	0.0000			
1	Endrin Ketone			0d	0d	0.0000	0.0000			
2	Toxaphene			0d	0d	0.0000	0.0000			NR
2	Chlordane			0d	0d	0.0000	0.0000			NR
3	Aroclor 1016			0d	0d	0.0000	0.0000			
3	Aroclor 1260			0d	0d	0.0000	0.0000			
3	Aroclor 1221			0d	0d	0.0000	0.0000			
3	Aroclor 1254			0d	0d	0.0000	0.0000			
4	Aroclor 1232			0d	0d	0.0000	0.0000			
4	Aroclor 1242			0d	0d	0.0000	0.0000			
5	Aroclor 1248			148420983m	48007432m	202.62	208.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 09-Oct-2013, 00:01:05
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 10:32:14 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Internal Standards						
68)	I	Pentachlo...	11.898	11.898	1521.7E6	346.8E6	50.000	50.000
		System Monitoring Compounds						
		Target Compounds						
69)	L9	Aroclor 1248	13.483	13.802	49146601	12777850	202.079	208.580
70)	L9	Aroclor 1...	13.633	13.998	28972573	13215745	196.919	206.941
71)	L9	Aroclor 1...	14.557	14.809	44255819	14786109	207.273m	209.227
72)	L9	Aroclor 1...	15.150	15.396	26045990	7227728	202.433	212.168
73)	L9	Aroclor 1...	0.000	0.000	148.4E6	48007432	202.619m	208.856m
		SemiQuant Compounds - Not Calibrated on this Instrument						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

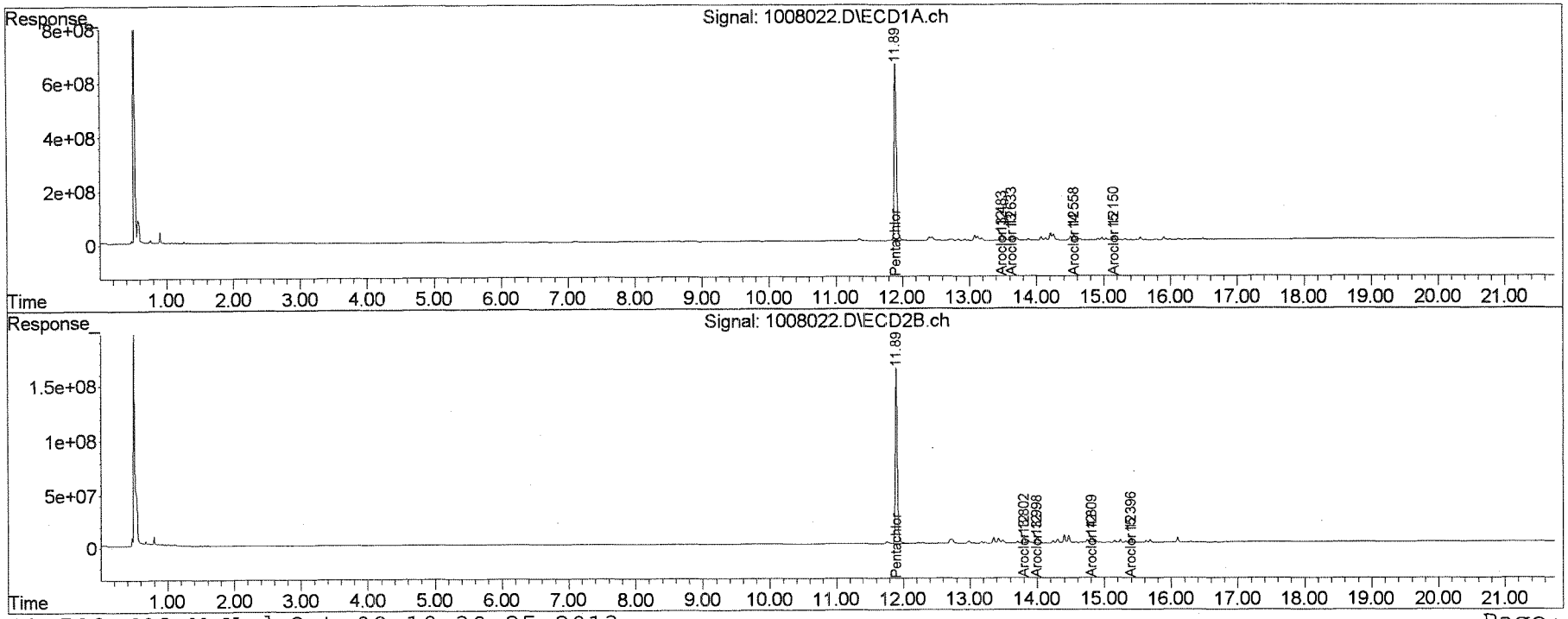
Quantitation Report (QT Reviewed)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 09-Oct-2013, 00:01:05
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 10:32:14 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um

1157

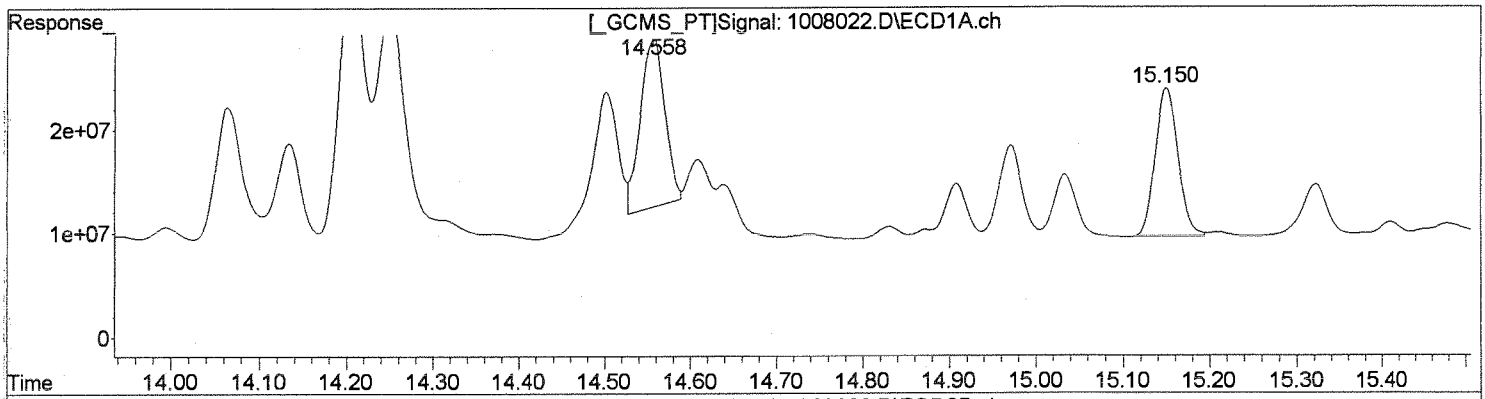


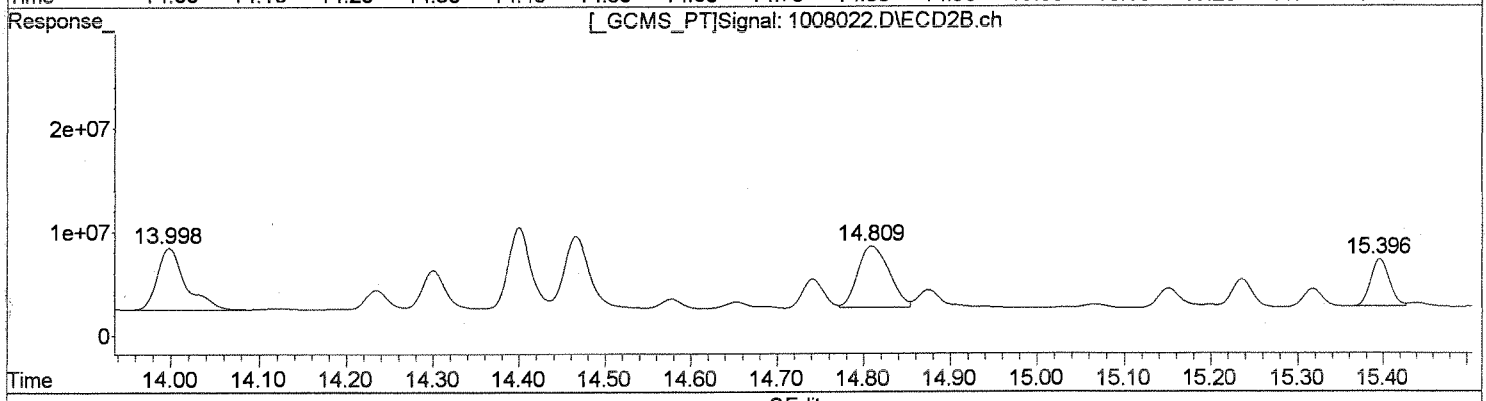
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 09-Oct-2013, 00:01:05
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:52:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 (L9)

R.T.	Response	Conc
13.48	49146601	202.08
13.63	28972573	196.92
14.56	32298431	151.27
15.15	26045990	202.43

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12777850	208.58
14.00	13215745	206.94
14.81	14786109	209.23
15.40	7227728	212.17

Before
10/9/13

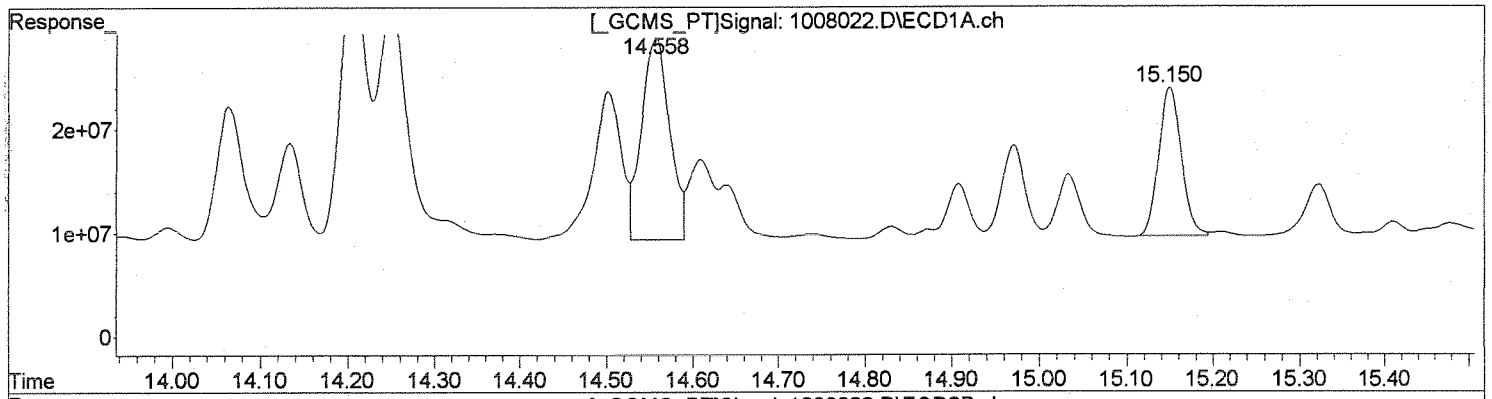
(+) = Expected Retention Time

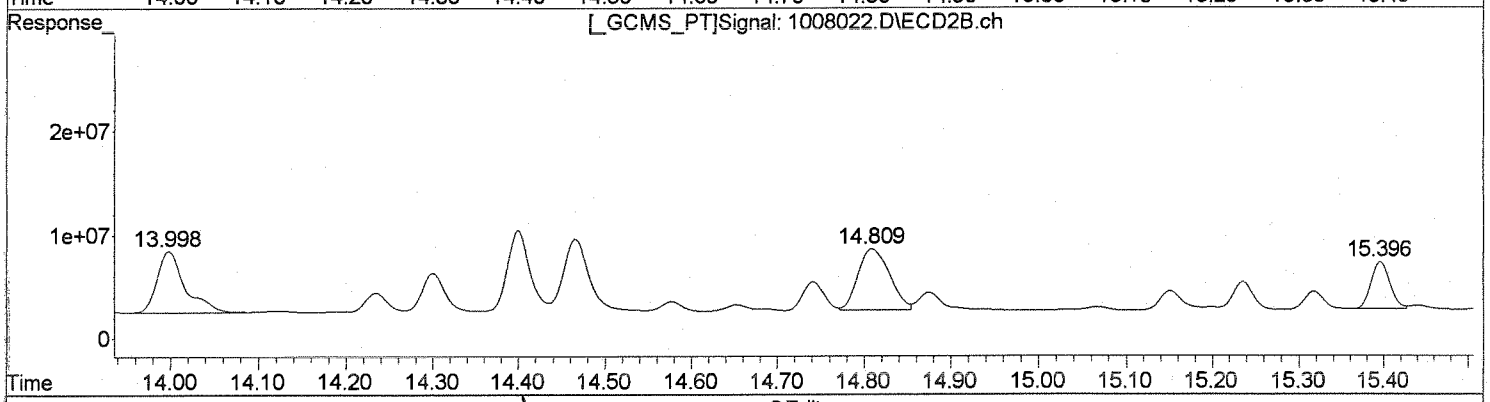
Quantitation Report (Qedit)

Data Path : J:\GC33\Data\100813-508\
Data File : 1008022.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 09-Oct-2013, 00:01:05
Operator : SSullivan
Sample : 1248 200PPB DWSTD06-61F
Misc :
ALS Vial : 100 Sample Multiplier: 1

Integration File signal 1: rteint.p
Integration File signal 2: rteint2.p
Quant Time: Oct 09 08:52:45 2013
Quant Method : J:\GC33\Methods\081513_508_608.M
Quant Title : 081513_508_608.M | MJ492 | CAL12714
QLast Update : Mon Aug 19 11:01:15 2013
Response via : Initial Calibration
Integrator: RTE

Volume Inj. : 1 uL
Signal #1 Phase : RTX-CLP Signal #2 Phase: RTX-CLP2
Signal #1 Info : 320 x 0.50 um Signal #2 Info : 320 x 0.25 um





QEdit

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.48	49146601	202.08
13.63	28972573	196.92
14.56	44255819	207.27
15.15	26045990	202.43

(69) Aroclor 1248 #2 (L9)

R.T.	Response	Conc
13.80	12777850	208.58
14.00	13215745	206.94
14.81	14786109	209.23
15.40	7227728	212.17

After Baseline 10/9/13 SS

(+) = Expected Retention Time

Organic Analysis:
Pesticides/PCBs by EPA method 508.1

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1310289	**Prep Method:**	METHOD	**Prep Date:**	09/20/13 05:30
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1309458-001	Entry Point A	508.1 PEST_CL	DRINKING WATER	1020ml	2ml
K1309638-001	13254-BW-4	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-002	13254-BW-2	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-004	13253-BW-3	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-005	13253-Well D	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-008	13255-BW-1	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-010	13255-DUP	508.1 PEST_CL	WATER	1030ml	2ml
K1309638-011	13255-Rinse	508.1 PEST_CL	WATER	1030ml	2ml
KWG1310289-1	Matrix Spike	508.1 PEST_CL	WATER	1030ml	2ml
KWG1310289-2	Matrix Spike	508.1 PEST_CL	WATER	1030ml	2ml
KWG1310289-3	Lab Control Sample	508.1 PEST_CL	WATER	1000ml	2ml
KWG1310289-4	Lab Control Sample	508.1 PEST_CL	WATER	1000ml	2ml
KWG1310289-5	Method Blank	508.1 PEST_CL	WATER	1000ml	2ml

Lab Code	Parent Lab Code	Comments
KWG1310289-1	K1309638-001	PEST
KWG1310289-2	K1309638-001	PCB
KWG1310289-3		PEST
KWG1310289-4		PCB

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1309458-001	1284676	DWSTD06-63 M	20uL			
K1309638-001	1284677	DWSTD06-63 M	20uL			
K1309638-002	1284678	DWSTD06-63 M	20uL			
K1309638-004	1284679	DWSTD06-63 M	20uL			
K1309638-005	1284680	DWSTD06-63 M	20uL			
K1309638-008	1284681	DWSTD06-63 M	20uL			
K1309638-010	1284682	DWSTD06-63 M	20uL			
K1309638-011	1284675	DWSTD06-63 M	20uL			
KWG1310289-1	1284683	DWSTD06-63 M	20uL	DWSTD06-65 G	20uL	
KWG1310289-2	1284684	DWSTD06-63 M	20uL	DWSTD06-64 A	100uL	
KWG1310289-3	1284685	DWSTD06-63 M	20uL	DWSTD06-65 G	20uL	
KWG1310289-4	1284686	DWSTD06-63 M	20uL	DWSTD06-64 A	100uL	
KWG1310289-5	1284687	DWSTD06-63 M	20uL			

Comments:

Started By: RHayes Assisted By: —

Completed By: RHayes Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Reviewed By: [signature] Date: 09-30-13 Storage: 215A-R-05

Chain of Custody

Relinquished By: [signature] Date: 9/20/13

Received By: [signature] Date: 9/20/13

Extracts Examined: Yes / No

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request No.: As Listed **Date Extracted:** 9-20-13

Analyst: Rob Hayes **Method:** 508.1

Workgroup#:

Semivolatile Compounds in Water

Lab ID	Client ID	Sample Volume (mL)	pH	Surr (uL)	MS (uL)	ISTD (uL)	Res. Cl2 (ppm)	Final Volume (mL)	
K1309458-001		1020	2	20		5	<0.1	2	
K1309638-001 *		1030	2	20		5	<0.1	2	
-002		1030	2	20		5	<0.1	2	
-004		1030	2	20		5	<0.1	2	
-005		1050	2	20		5	<0.1	2	
-008		1050	2	20		5	<0.1	2	
-010		1050	2	20		5	<0.1	2	
-011		1030	2	20		5	<0.1	2	
MB		1000	2	20		5	<0.1	2	
LCS Pest	(1)	1000	2	20	20	5	<0.1	2	
K1309638-001	MS Pest (1) *	1030	2	20	20	5	<0.1	2	
MRL Pest	(1)	1000	2	20	2	5	<0.1	2	
LCS PCB	(2)	1000	2	20	100	5	<0.1	2	
K1309638-001	MS PCB (2) *	1030	2	20	100	5	<0.1	2	
MRL PCB	(2)	1000	2	20	20	5	<0.1	2	

Comments: * Particulate matter noted on extraction disk

DCM Lot # DI297 **Speedisk Lot#** 9261 **Sulfate Lot #** 8/16/13 - 132070

Ethyl Acetate Lot # 11473 **Methanol Lot#** 41907 **1/1 Ethyl Acetate/DCM** SDS01-71H

Surrogate ID/Conc: DCSTD616-63m 5ppm XP 2-20-14 **N-evap temp** 34°C

Spike ID/Conc: (1) DCSTD616-65G 5ppm XP 10-9-13 / (2) DCSTD616-64A 5ppm XP 2-20-14

ISTD ID/Conc: DWSTD06-57J 500/600 XP 11-19-13

Vial: Amber **Extract Storage:** 250-R-05S **Extracts Received:** 55 9/20/13

Reviewed By:	Date: 09-30-13

Preparation Information Benchsheet

Prep Run#: 192212 **Prep WorkFlow:** OrgExtDW(14/30) **Status:** Draft
Team: Semivoa GC **Prep Method:** Method **Prep Date/Time:** 9/20/13 05:57 AM
Number of Copies to make: 2

#	Lab Code	Client ID	B#	√	Test	Matrix	Amt Ext.	pH	Int Vol	Final Vol	Surr Added	Spike Added
1	K1309458-001	Entry Point A	.21	/	525.2/SVO	Drinking Water						
2	K1309458-001	Entry Point A	.21	/	508.1/PEST_CL	Drinking Water						
3	K1309638-001	13254-BW-4	.26	/	508.1/PEST_CL	Water						
4	K1309638-001	13254-BW-4	.26	/	525.2/SVO	Water						
5	K1309638-002	13254-BW-2	.26	/	508.1/PEST_CL	Water						
6	K1309638-002	13254-BW-2	.26	/	525.2/SVO	Water						
7	K1309638-004	13253-BW-3	.27	/	508.1/PEST_CL	Water						
8	K1309638-004	13253-BW-3	.27	/	525.2/SVO	Water						
9	K1309638-005	13253-Well D	.26	/	525.2/SVO	Water						
10	K1309638-005	13253-Well D	.26	/	508.1/PEST_CL	Water						
11	K1309638-008	13255-BW-1	.26	/	525.2/SVO	Water						
12	K1309638-008	13255-BW-1	.26	/	508.1/PEST_CL	Water						
13	K1309638-010	13255-DUP	.26	/	525.2/SVO	Water						
14	K1309638-010	13255-DUP	.26	/	508.1/PEST_CL	Water						
15	K1309638-011	13255-Rinse	.26	/	508.1/PEST_CL	Water						
16	K1309638-011	13255-Rinse	.26	/	525.2/SVO	Water						

Comments: used Sa ID only

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Sel	Run	Location	Method / Sample Name	Datafile	SeqTable	Calib:RF:RT	
No	1	Vial 95	508 PRIMER BLANK	0926001	F:01:01		
No	2	Vial 96	508 IPC DWSTD06-62J	0926002	F:02:01		
No	3	Vial 97	508 DEG 508/608 DWSTD06-6	0926003	F:03:01		
No	4	Vial 98	508 PEST CCV 50PPB DWSTD0	0926004	F:04:01	OK,OK	
No	5	Vial 99	508 1248 50PPB DWSTD06-61	0926005	F:05:01	OK,OK	
No	6	Vial 100	508 1248 200PPB DWSTD06-6	0926006	F:06:01	OK,OK	
No	7	Vial 95	508 IB	0926007	F:07:01		
No	8	Vial 1	508 092013 PEST MRL	0926008	F:08:01	OK,OK	
No	9	Vial 2	508 092013 PCB MRL	0926009	F:09:01	OK,OK	
No	10	Vial 3	508 KWG1310289-3 LCS PEST	0926010	F:10:01		
No	11	Vial 4	508 KWG1310289-4 LCS PCB	0926011	F:11:01		
No	12	Vial 5	508 KWG1310289-5 MB	0926012	F:12:01		
No	13	Vial 6	508 K1309458-001	0926013	F:13:01		
No	14	Vial 7	508 K1309638-001	0926014	F:14:01		
No	15	Vial 8	508 K1309638-001 MS PEST	0926015	F:15:01		
No	16	Vial 9	508 K1309638-001 MS PCB	0926016	F:16:01		
No	17	Vial 10	508 K1309638-002	0926017	F:17:01	~~10X DIL~~ Not needed.	
No	18	Vial 11	508 K1309638-004	0926018	F:18:01		
No	19	Vial 12	508 K1309638-005	0926019	F:19:01		
No	20	Vial 13	508 K1309638-008	0926020	F:20:01		
No	21	Vial 14	508 K1309638-010	0926021	F:21:01		
No	22	Vial 15	508 K1309638-011	0926022	F:22:01		
No	23	Vial 95	508 IB	0926023	F:23:01		
No	24	Vial 98	508 PEST CCV 50PPB DWSTD0	0926024	F:24:01	OK,OK	

Analysis: KWG1310845
CAL 12714
Run # 361370

Sel	Run	Location	Method Sample Name	Datafile	SeqTable Calib:RF:RT
No	25	Vial 100	508 1248 200PPB DWSTD06-6	0926025	F:25:01 OK, OK
No	26	Vial 94	508 IB	0926026	F:26:01

Sel	Run	Location	Method / Sample Name	Datafile	SeqTable	Calib:RF:RT
No	1	Vial 95	508 PRIMER BLANK	1008001	F:01:01	
No	2	Vial 96	508 IPC DWSTD06-62J	1008002	F:02:01	
No	3	Vial 97	508 DEG 508/608 DWSTD06-6	1008003	F:03:01	
No	4	Vial 98	508 PEST CCV 50PPB DWSTD0	1008004	F:04:01	
No	5	Vial 99	508 1248 50PPB DWSTD06-61	1008005	F:05:01	
No	6	Vial 100	508 1248 200PPB DWSTD06-6	1008006	F:06:01	
No	7	Vial 95	508 IB	1008007	F:07:01	
No	8	Vial 2	508 100413 PEST MRL	1008008	F:08:01	
No	9	Vial 3	508 100413 PCB MRL	1008009	F:09:01	
No	10	Vial 1	508 K1309638-002 5X	1008010	F:10:01	
No	11	Vial 4	508 KWG1310983-1 LCS PEST	1008011	F:11:01	
No	12	Vial 5	508 KWG1310983-2 DLCS PES	1008012	F:12:01	
No	13	Vial 6	508 KWG1310983-3 LCS PCB	1008013	F:13:01	
No	14	Vial 7	508 KWG1310983-4 DLCS PCB	1008014	F:14:01	
No	15	Vial 8	508 KWG1310983-5 MB	1008015	F:15:01	
No	16	Vial 9	508 J1305570-001	1008016	F:16:01	
No	17	Vial 10	508 J1305570-002	1008017	F:17:01	
No	18	Vial 11	508 J1305570-003	1008018	F:18:01	
No	19	Vial 12	508 K1310193-001	1008019	F:19:01	
No	20	Vial 95	508 IB	1008020	F:20:01	
No	21	Vial 98	508 PEST CCV 50PPB DWSTD0	1008021	F:21:01	
No	22	Vial 100	508 1248 200PPB DWSTD06-6	1008022	F:22:01	
No	23	Vial 95	508 IB	1008023	F:23:01	
No	24	Vial 16	508 K1309946-001	1008024	F:24:01	

Analysis: KWG1311188
CAL 12714
Run # 3, 2489

Sel	Run	Location	Method Sample Name	Datafile	SeqTable	Calib:RF:RT
No	25	Vial 95	508 IB	1008025	F:25:01	
No	26	Vial 98	508 PEST CCV 50PPB DWSTD0	1008026	F:26:01	
No	27	Vial 95	508 IB	1008027	F:27:01	
No	28	none	PARK PARK	1008028	F:28:01	

Chlorinated Acids

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Validation Package

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Validation Package

QC Reports

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Chlorinated Acids by EPA Method 515.4

Extraction Method: METHOD
Analysis Method: 515.4

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1
13254-BW-4	K1309638-001	110
13254-BW-2	K1309638-002	94
13253-BW-3	K1309638-004	108
13253-Well D	K1309638-005	120
13255-BW-1	K1309638-008	107
13255-DUP	K1309638-010	102
13255-Rinse	K1309638-011	105
Method Blank	KWG1310098-4	101
13254-BW-4MS	KWG1310098-1	111
13254-BW-4DMS	KWG1310098-2	109
Lab Control Sample	KWG1310098-3	107

Surrogate Recovery Control Limits (%)

Sur1 = 2,4-Dichlorophenylacetic Acid 70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 23:03

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200015.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-1
Analysis Lot: KWG1310789
Column : RTX-CLP2

		4'-Dibromooctafluorobiphen	
		Area	**RT**
	ICAL Average ==>	1,192,736	14.74
	Upper Limit ==>	1,789,104	15.24
	Lower Limit ==>	596,368	14.24
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-1	1,183,245	14.74
Lab Control Sample	KWG1310098-3	1,132,578	14.74
Method Blank	KWG1310098-4	1,172,353	14.74
13254-BW-4	K1309638-001	1,154,499	14.74
13254-BW-4MS	KWG1310098-1	1,143,301	14.74
13254-BW-4DMS	KWG1310098-2	1,154,787	14.74
13254-BW-2	K1309638-002	1,183,413	14.74
13253-BW-3	K1309638-004	1,152,905	14.74
13253-Well D	K1309638-005	1,174,957	14.74
13255-BW-1	K1309638-008	1,151,344	14.74
13255-DUP	K1309638-010	1,153,395	14.74
13255-Rinse	K1309638-011	1,142,108	14.74

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 23:03

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200015.D\09200015C.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-1
Analysis Lot: KWG1310789
Column : ZB-XLB-HT

		4'-Dibromooctafluorobiphen	
		Area	**RT**
	ICAL Average ==>	1,146,157	15.13
	Upper Limit ==>	1,719,236	15.63
	Lower Limit ==>	573,079	14.63
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-1	1,154,917	15.13
Lab Control Sample	KWG1310098-3	1,099,330	15.13
Method Blank	KWG1310098-4	1,125,568	15.13
13254-BW-4	K1309638-001	1,094,325	15.13
13254-BW-4MS	KWG1310098-1	1,074,530	15.13
13254-BW-4DMS	KWG1310098-2	1,107,971	15.13
13254-BW-2	K1309638-002	1,127,754	15.13
13253-BW-3	K1309638-004	1,096,659	15.12
13253-Well D	K1309638-005	1,120,435	15.13
13255-BW-1	K1309638-008	1,088,225	15.13
13255-DUP	K1309638-010	1,076,029	15.12
13255-Rinse	K1309638-011	1,077,972	15.13

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013
Time Analyzed: 06:02

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200029.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-3
Analysis Lot: KWG1310789
Column : RTX-CLP2

		4'-Dibromooctafluorobiphen	
		Area	**RT**
ICAL Average ==>		1,192,736	14.74
Upper Limit ==>		1,789,104	15.24
Lower Limit ==>		596,368	14.24
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-3	1,167,725	14.74

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013
Time Analyzed: 06:02

Internal Standard Area and RT Summary
Chlorinated Acids by EPA Method 515.4

File ID: J:\GC24\DATA\092013.515\09200029.D\09200029C.D
Instrument ID: GC24
Analysis Method: 515.4

Lab Code: KWG1310789-3
Analysis Lot: KWG1310789
Column : ZB-XLB-HT

		4'-Dibromooctafluorobiphen	
		Area	**RT**
ICAL Average ==>		1,146,157	15.13
Upper Limit ==>		1,719,236	15.63
Lower Limit ==>		573,079	14.63
Associated Analyses			
Continuing Calibration Verificatior	KWG1310789-3	1,113,285	15.13

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/21/2013

Matrix Spike/Duplicate Matrix Spike Summary
Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310098

		13254-BW-4MS KWG1310098-1 Matrix Spike			13254-BW-4DMS KWG1310098-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dalapon	ND	4.86	4.97	98	4.85	4.96	98	70-130	0	30
2,4-D	ND	4.70	4.97	95	4.61	4.96	93	70-130	2	30
Pentachlorophenol	ND	4.84	4.97	97	4.76	4.96	96	70-130	2	30
2,4,5-TP (Silvex)	ND	3.98	4.97	80	3.86	4.96	78	70-130	3	30
Dinoseb	ND	4.13	4.97	83	4.08	4.96	82	70-130	1	30
Picloram	ND	4.46	4.97	90	4.42	4.96	89	70-130	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/21/2013

Lab Control Spike Summary
Chlorinated Acids by EPA Method 515.4

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310098

Analyte Name	Lab Control Sample KWG1310098-3 Lab Control Spike Result	Spike Amount	%Rec	%Rec Limits
Dalapon	4.87	5.00	97	70-130
2,4-D	4.89	5.00	98	70-130
Pentachlorophenol	4.81	5.00	96	70-130
2,4,5-TP (Silvex)	4.15	5.00	83	70-130
Dinoseb	4.26	5.00	85	70-130
Picloram	4.46	5.00	89	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/21/2013
Time Analyzed: 00:33

Method Blank Summary
Chlorinated Acids by EPA Method 515.4

Sample Name: Method Blank
Lab Code: KWG1310098-4

Extraction Method: METHOD
Analysis Method: 515.4

Instrument ID: GC24
File ID: J:\GC24\DATA\092013.515\09200018.D

Level: Low
Extraction Lot: KWG1310098

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310098-3	J:\GC24\DATA\092013.515\09200017.D	09/21/13	00:03
13254-BW-4	K1309638-001	J:\GC24\DATA\092013.515\09200020.D	09/21/13	01:33
13254-BW-4MS	KWG1310098-1	J:\GC24\DATA\092013.515\09200021.D	09/21/13	02:03
13254-BW-4DMS	KWG1310098-2	J:\GC24\DATA\092013.515\09200022.D	09/21/13	02:33
13254-BW-2	K1309638-002	J:\GC24\DATA\092013.515\09200023.D	09/21/13	03:03
13253-BW-3	K1309638-004	J:\GC24\DATA\092013.515\09200024.D	09/21/13	03:33
13253-Well D	K1309638-005	J:\GC24\DATA\092013.515\09200025.D	09/21/13	04:02
13255-BW-1	K1309638-008	J:\GC24\DATA\092013.515\09200026.D	09/21/13	04:32
13255-DUP	K1309638-010	J:\GC24\DATA\092013.515\09200027.D	09/21/13	05:02
13255-Rinse	K1309638-011	J:\GC24\DATA\092013.515\09200028.D	09/21/13	05:32

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	09/21/2013
		Time Analyzed:	00:03

Lab Control Sample Summary
Chlorinated Acids by EPA Method 515.4

Sample Name:	Lab Control Sample	**Instrument ID:**	GC24
Lab Code:	KWG1310098-3	**File ID:**	J:\GC24\DATA\092013.515\09200017.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	515.4	**Extraction Lot:**	KWG1310098

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310098-4	J:\GC24\DATA\092013.515\09200018.D	09/21/13	00:33
13254-BW-4	K1309638-001	J:\GC24\DATA\092013.515\09200020.D	09/21/13	01:33
13254-BW-4MS	KWG1310098-1	J:\GC24\DATA\092013.515\09200021.D	09/21/13	02:03
13254-BW-4DMS	KWG1310098-2	J:\GC24\DATA\092013.515\09200022.D	09/21/13	02:33
13254-BW-2	K1309638-002	J:\GC24\DATA\092013.515\09200023.D	09/21/13	03:03
13253-BW-3	K1309638-004	J:\GC24\DATA\092013.515\09200024.D	09/21/13	03:33
13253-Well D	K1309638-005	J:\GC24\DATA\092013.515\09200025.D	09/21/13	04:02
13255-BW-1	K1309638-008	J:\GC24\DATA\092013.515\09200026.D	09/21/13	04:32
13255-DUP	K1309638-010	J:\GC24\DATA\092013.515\09200027.D	09/21/13	05:02
13255-Rinse	K1309638-011	J:\GC24\DATA\092013.515\09200028.D	09/21/13	05:32

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Validation Package

Raw Data

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name:	13254-BW-4	**Units:**	ug/L
Lab Code:	K1309638-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	515.4		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	110	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200020.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 01:33
Date Quantitated: 10/01/2013 13:26
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Qual ECV

Primary Review: JRB 10-04-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200020.D\09200020C.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 01:33
Date Quantitated: 10/01/2013 13:26
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JBS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200020.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200020.D\09200020c.d			**Vial:**	15
Acqu Date:	09/21/2013 01:33	**Quant Date:**	10/01/2013 13:26	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-001				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282805	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1154499	1094325	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	805694m	781046m	95.54	109.93			110OK
				%Recovery =		96 OK	110 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	114472m	0.0000	7.17	0.040U	0.71J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol			4379	0	0.0000	0.0000	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)			0	1089m	0.0000	0.0000	0.020U	0.020U	0.020U
1	Dinoseb		17.67 -0.05	1984m	6973	0.0000	0.3450	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.26 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:36 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1154499	1094325	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	805694	781046	95.544m	109.925m
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	114472	N.D.	7.170m#
3)	m	3,5-Dichlorobenz	11.06	0.00	23744	0	1.698m	N.D. #
4)	m	4-Nitrophenol	12.11f	11.90f	74064	432624	19.964m	119.971 #
6)	m	Dicamba	13.29	13.20f	5640	28171	0.173m	0.901 #
7)	m	Dichloroprop	14.40f	14.41f	13826	6407	1.472	N.D. m#
9)	m	Trichlopyr	15.53f	0.00	4379	0	0.033	N.D. #
13)	m	Chloramben	0.00	16.61	0	7430	N.D.	0.375 #
19)	m	Acifluorfen	20.94	20.85	10417	5349	0.466	0.277 #

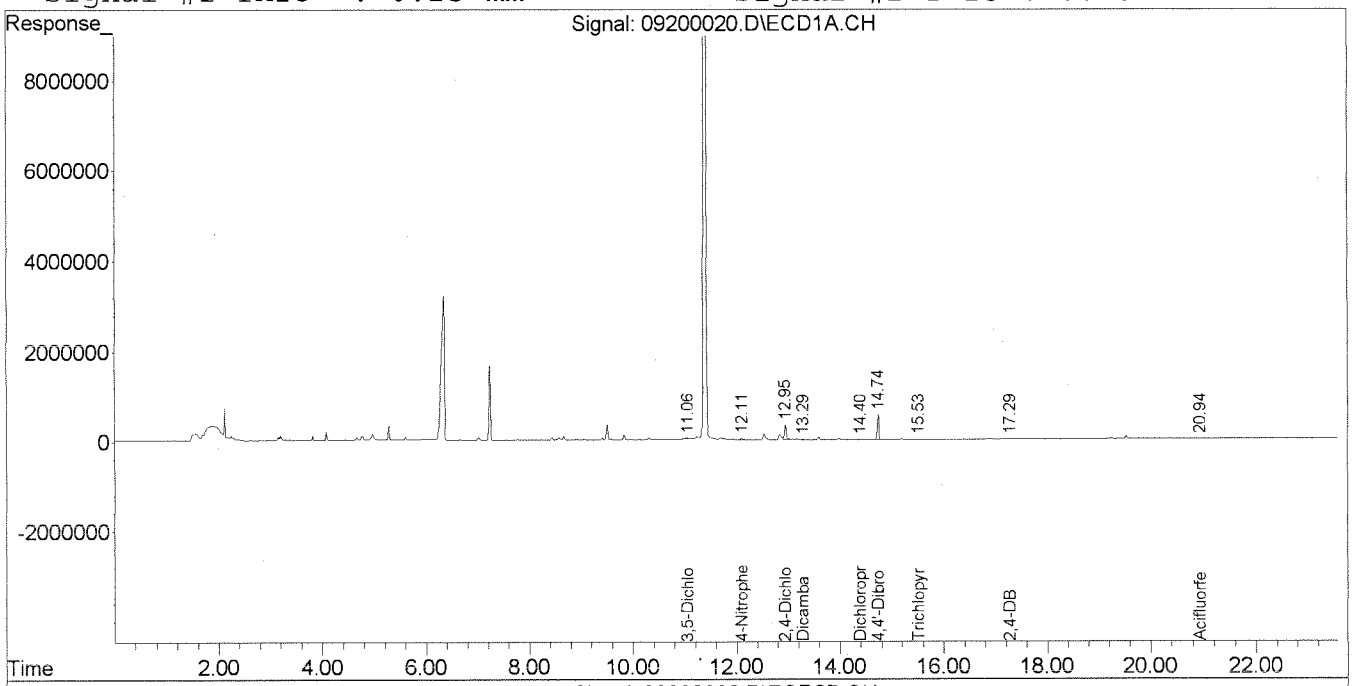
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

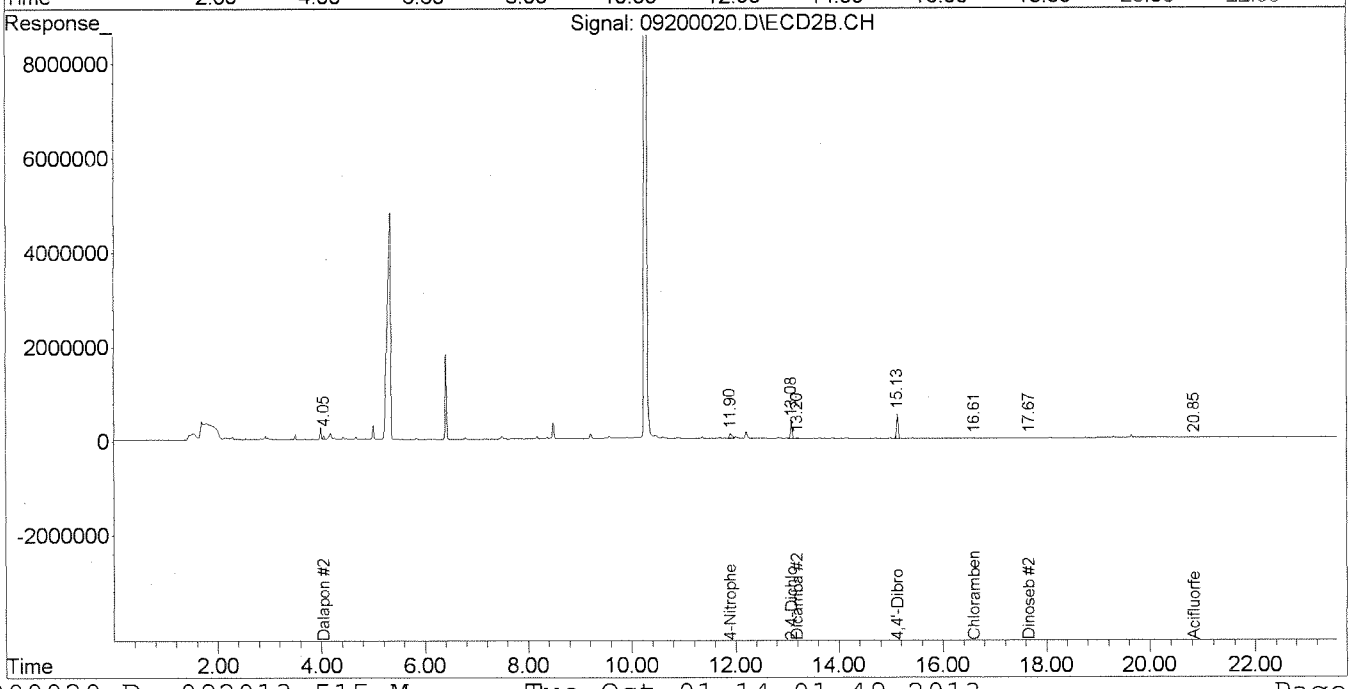
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:26 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

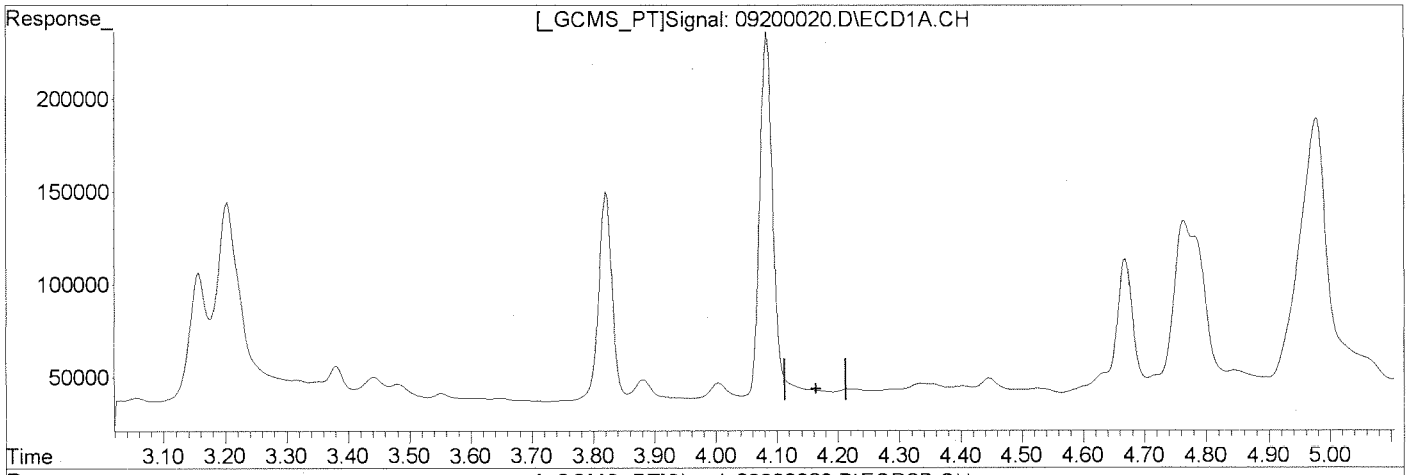


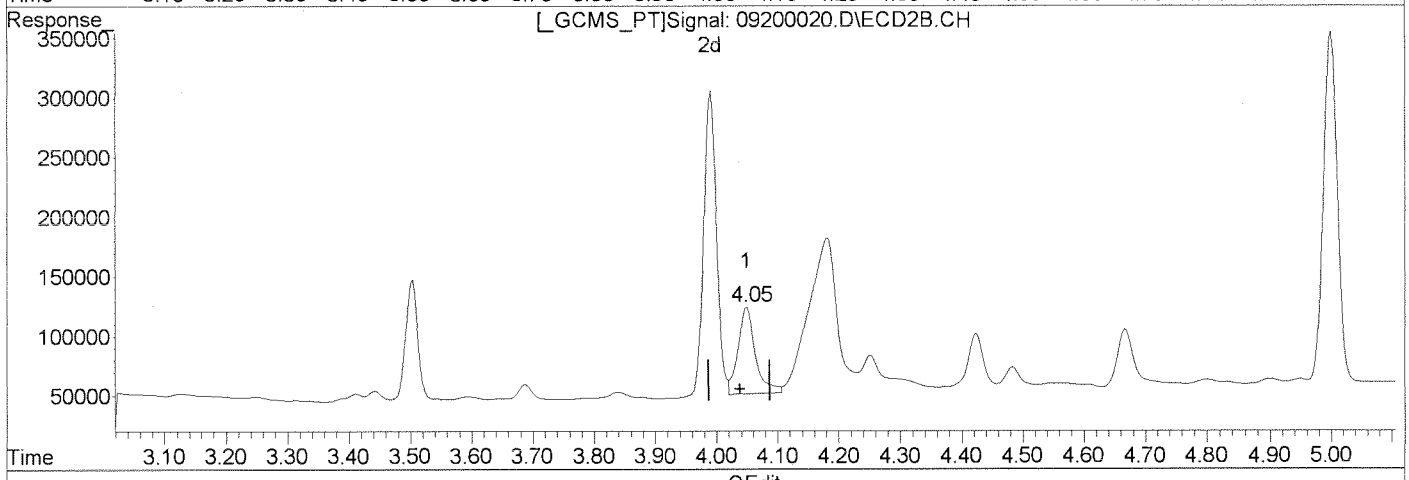


Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 9.545ppb

response 144640

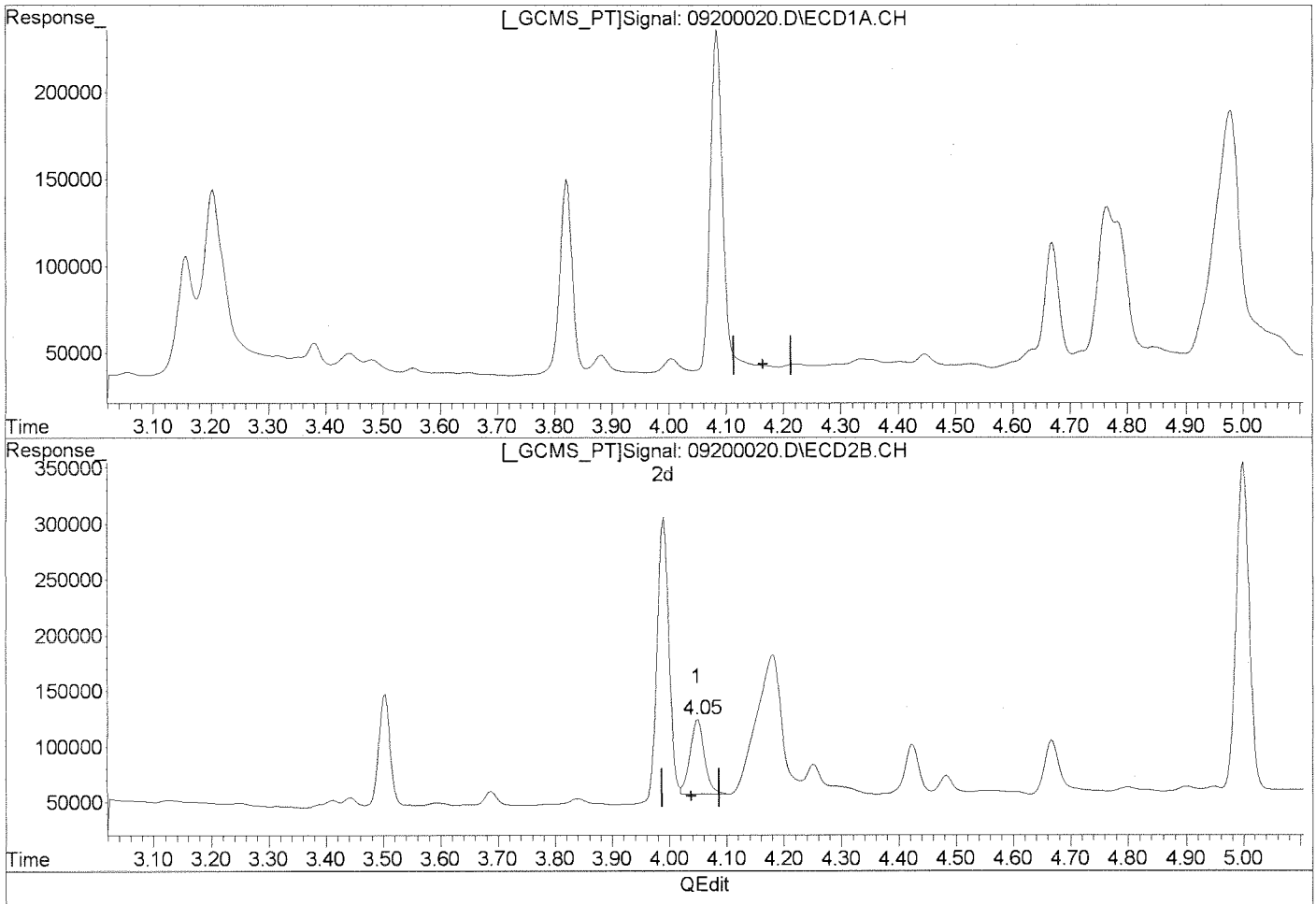
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:18:42 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 7.170ppb m

response 114472

Manual Integration:

After

Baseline/Shoulder

10/01/13

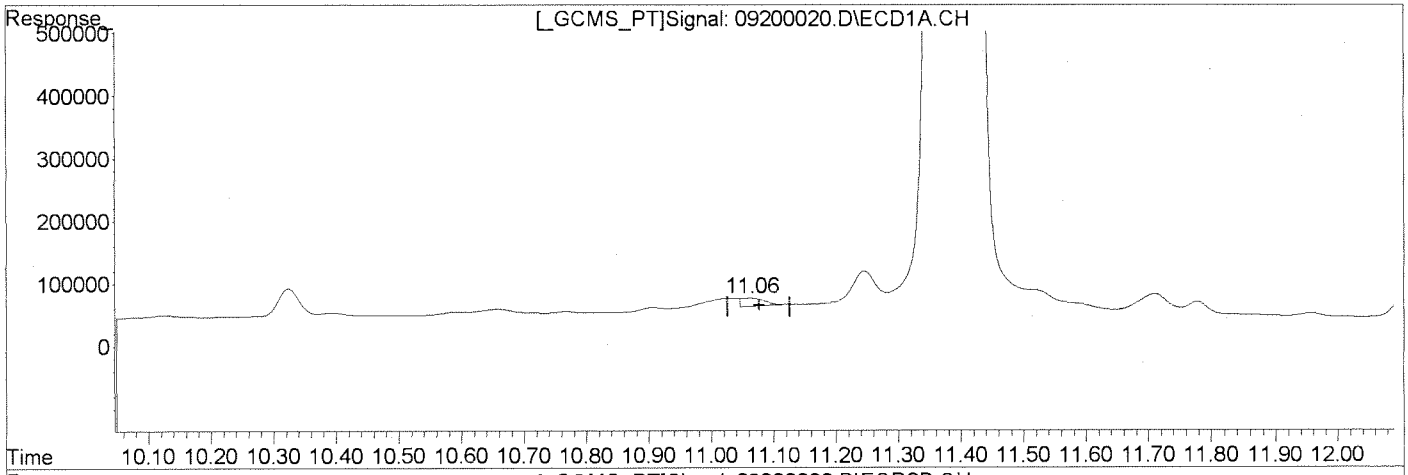
(+) = Expected Retention Time

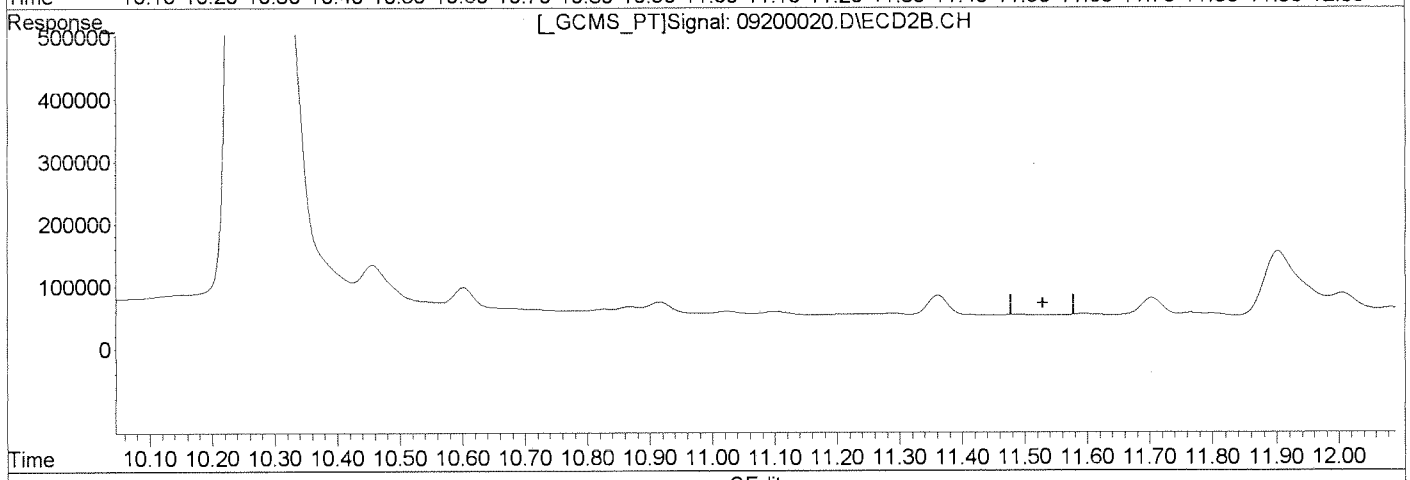
09200020.D 092013_515.M Tue Oct 01 13:18:51 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(3) 3,5-Dichlorobenzoic Acid (m)

11.06min 2.250ppb

response 31461

Manual Integration:

Before

(3) 3,5-Dichlorobenzoic Acid #2 (m)

0.00min 0.000ppb

response 0

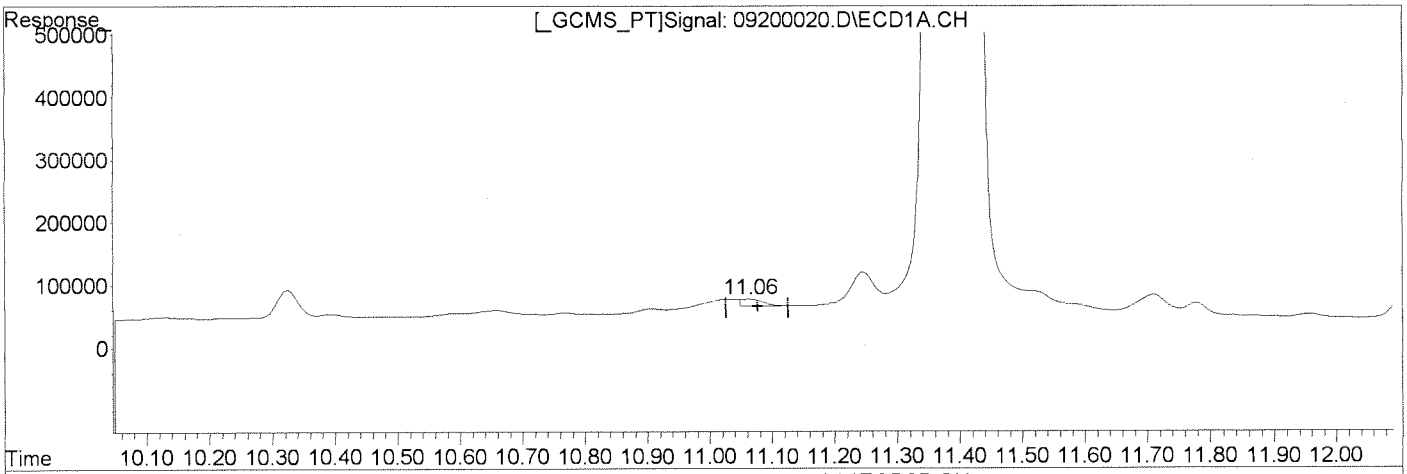
(+) = Expected Retention Time

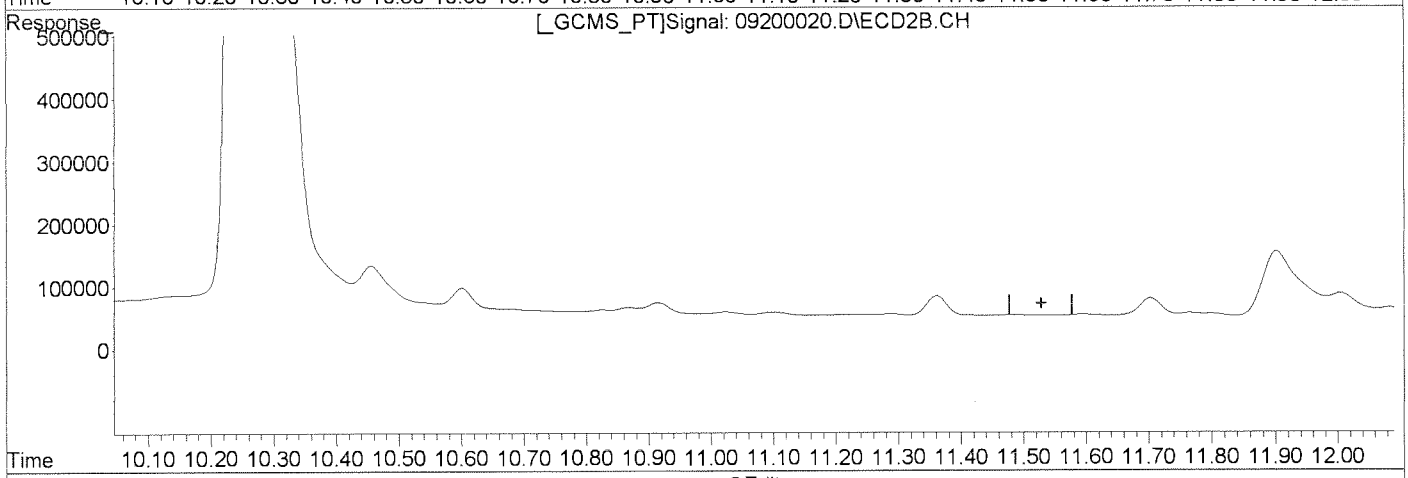
09200020.D 092013_515.M Tue Oct 01 13:19:16 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(3) 3,5-Dichlorobenzoic Acid (m)

11.06min 1.698ppb m

response 23744

(3) 3,5-Dichlorobenzoic Acid #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Baseline/Shoulder

10/01/13

JPT

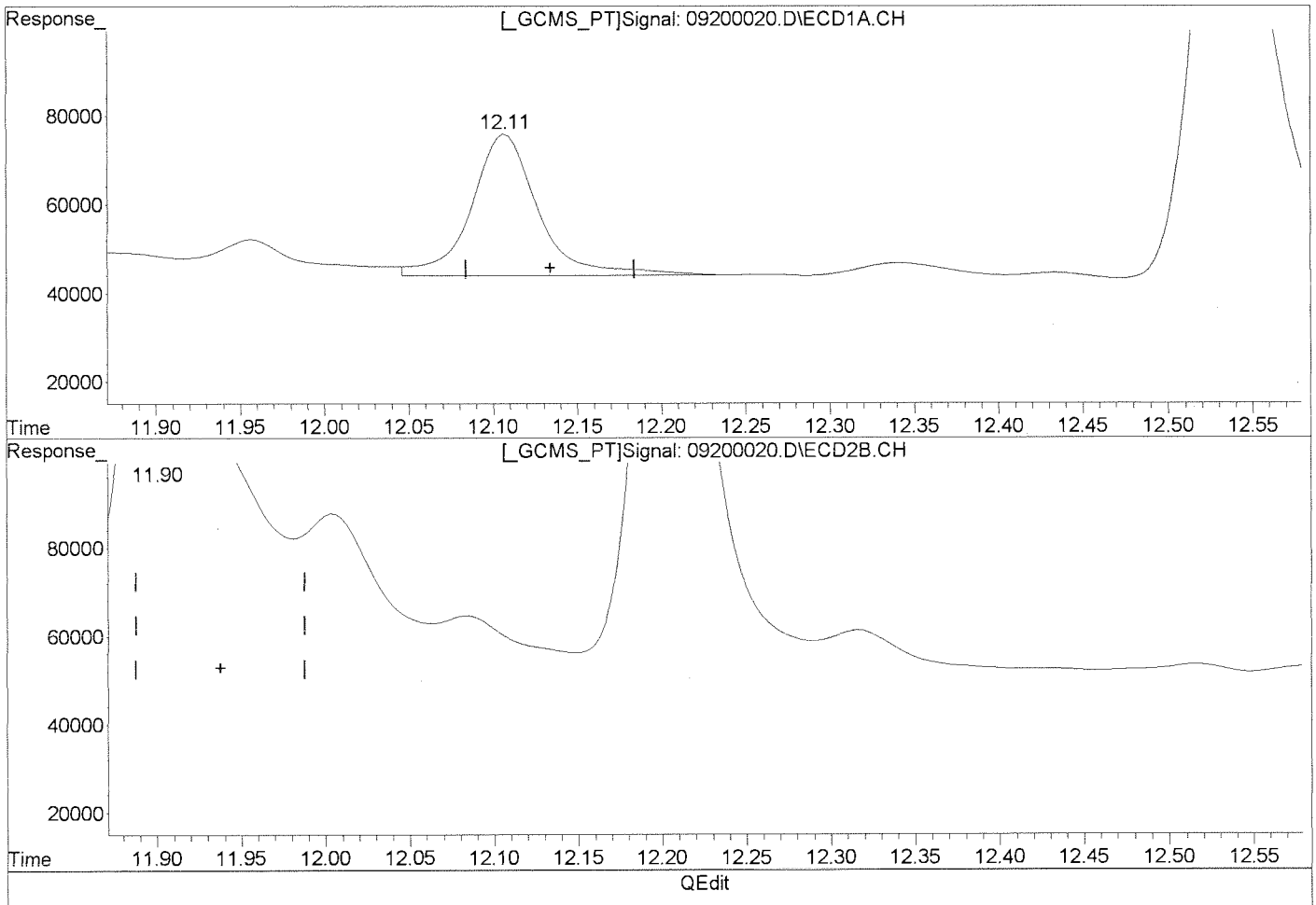
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:19:25 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.11min 23.621ppb

response 87631

(4) 4-Nitrophenol #2 (m)

11.90min 119.971ppb

response 432624

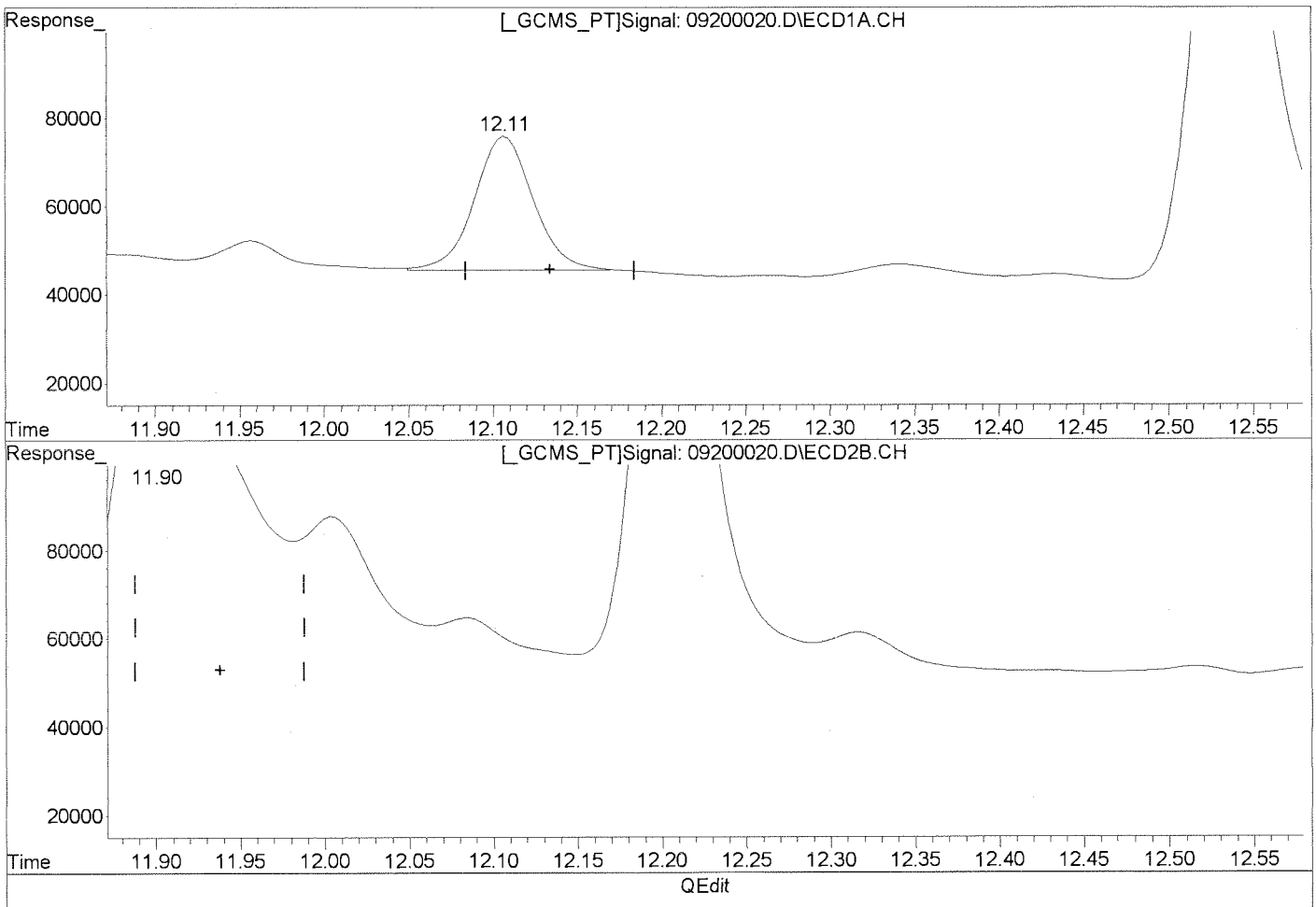
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:19:36 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.11min 19.964ppb m

response 74064

Manual Integration:

After

Baseline/Shoulder

10/01/13

(4) 4-Nitrophenol #2 (m)

11.90min 119.971ppb

response 432624

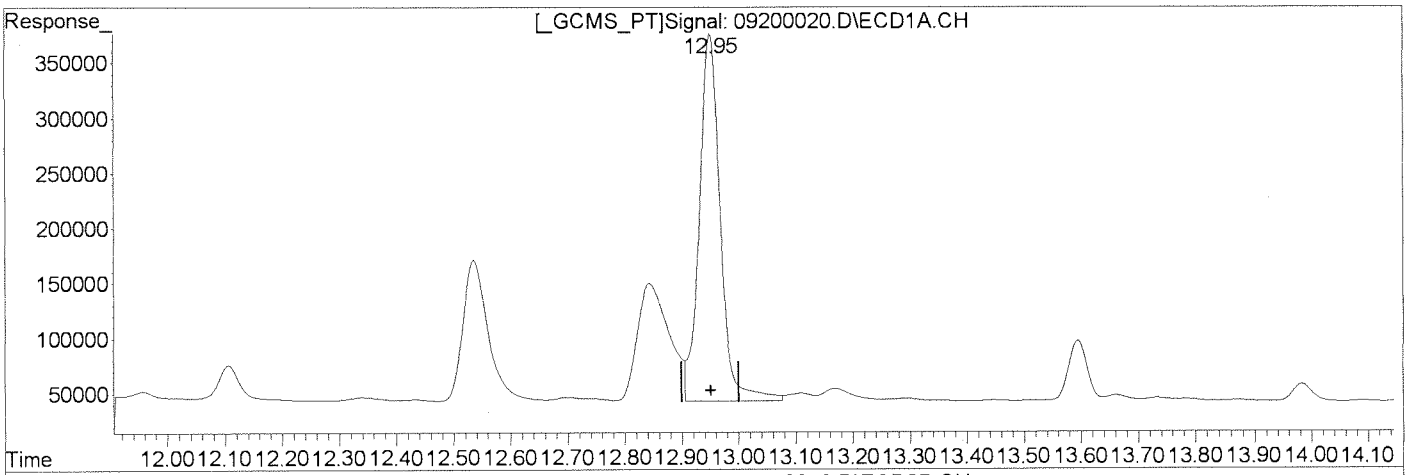
(+) = Expected Retention Time

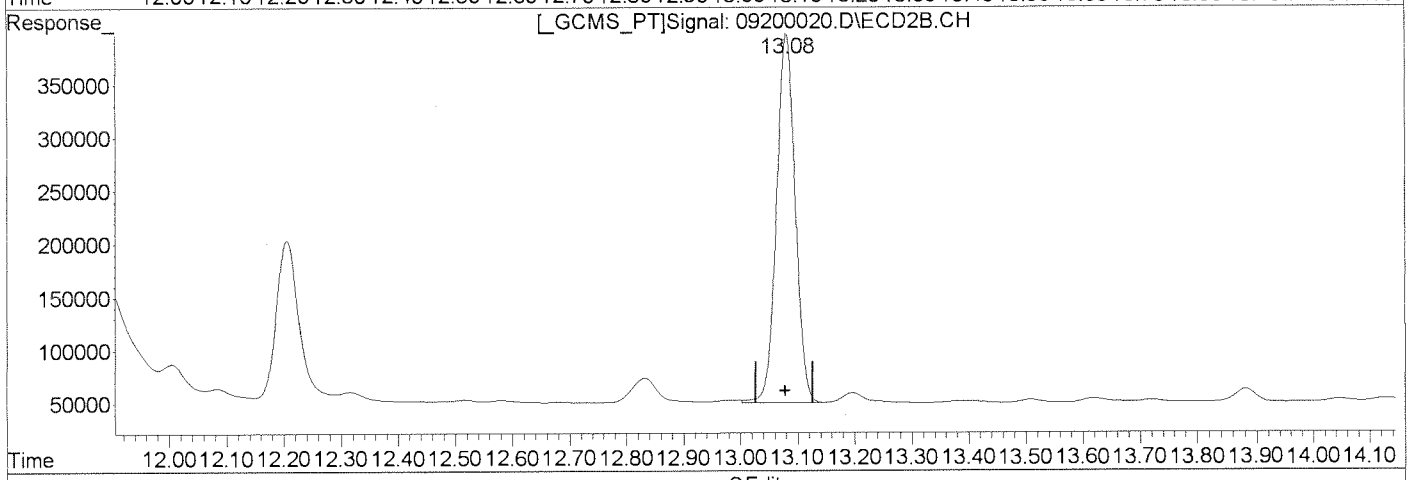
09200020.D 092013_515.M Tue Oct 01 13:19:49 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 100.708ppb

response 849240

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 111.171ppb

response 789616

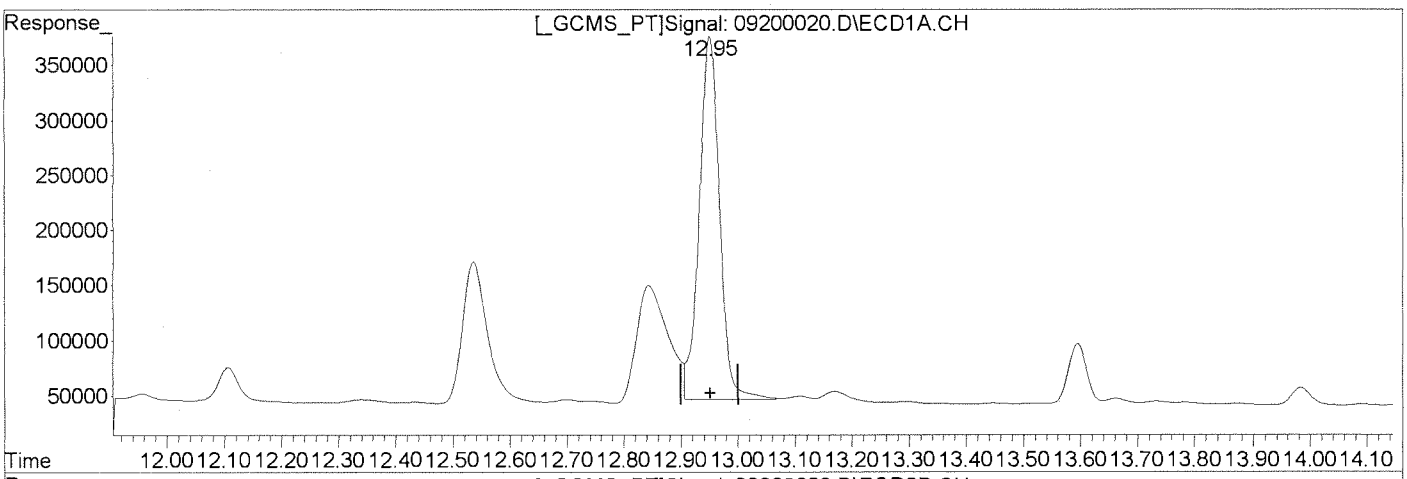
(+) = Expected Retention Time

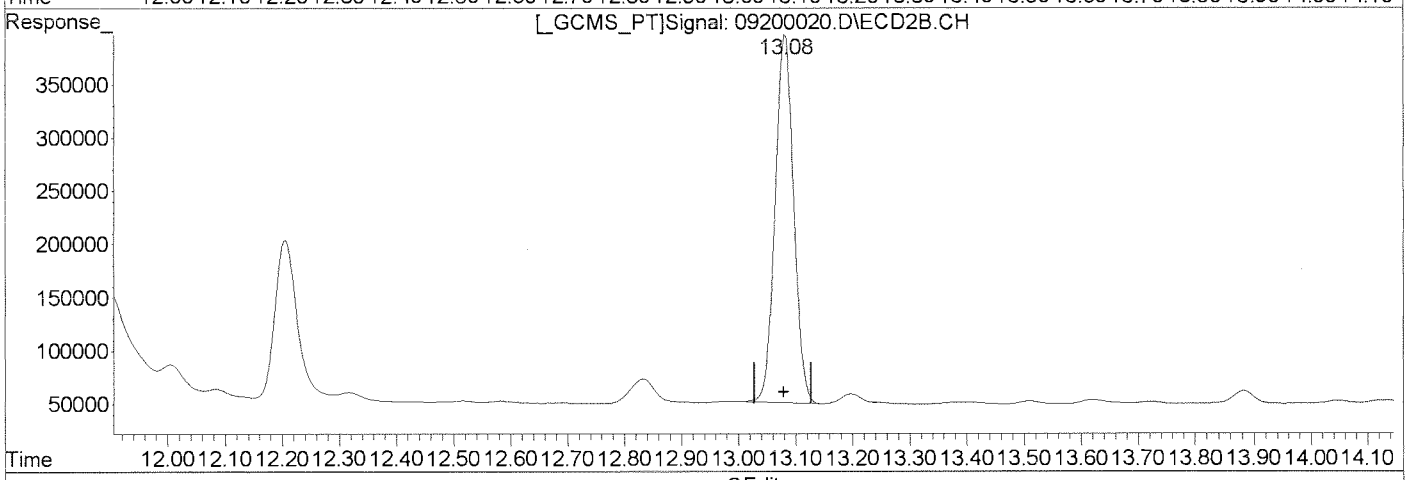
09200020.D 092013_515.M Tue Oct 01 13:19:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 95.544ppb m

response 805694

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 109.925ppb m

response 781046

Manual Integration:

After

Baseline/Shoulder

10/01/13

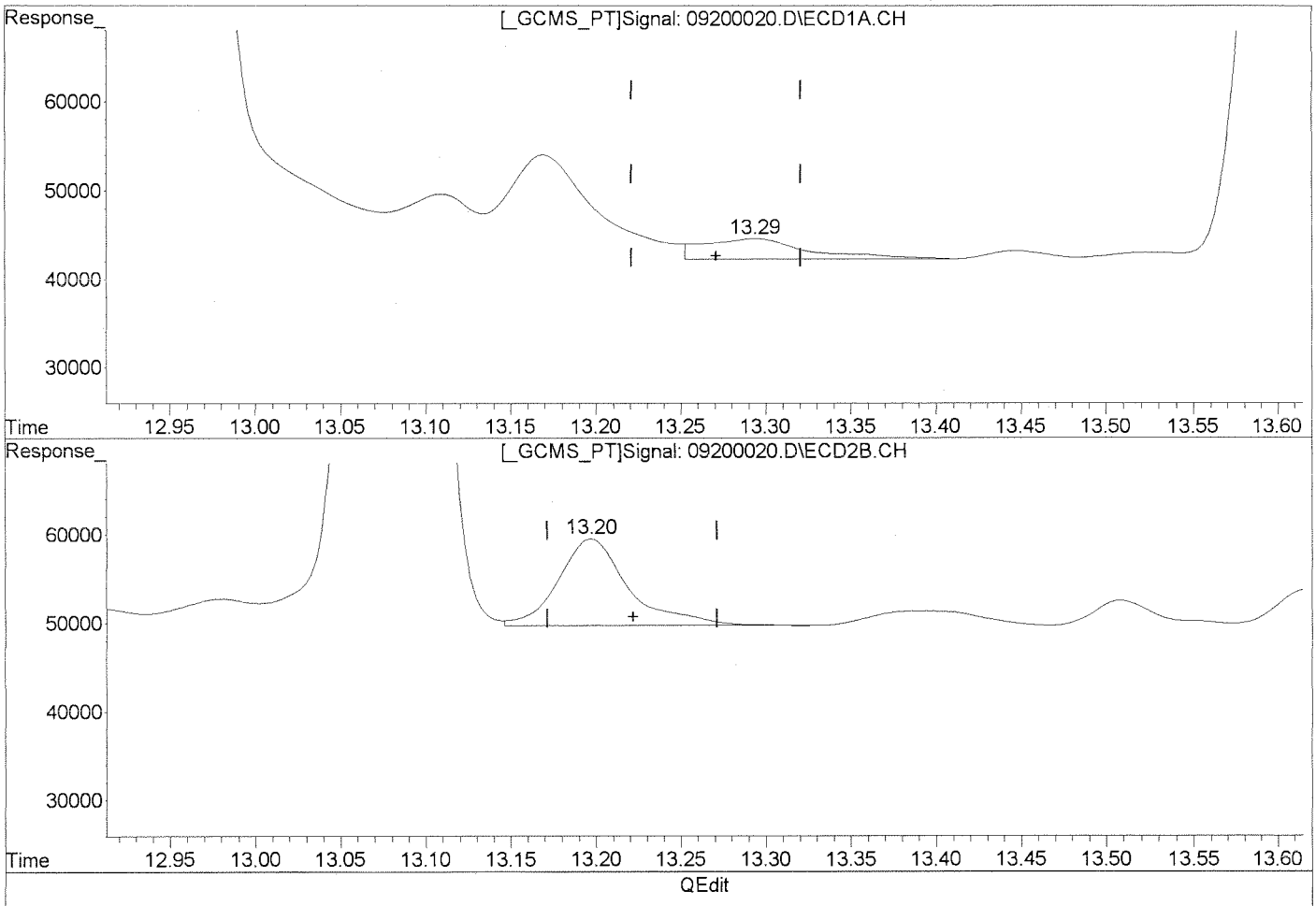
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:20:09 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.29min 0.297ppb

response 9697

Manual Integration:

Before

(6) Dicamba #2 (m)

13.20min 0.901ppb

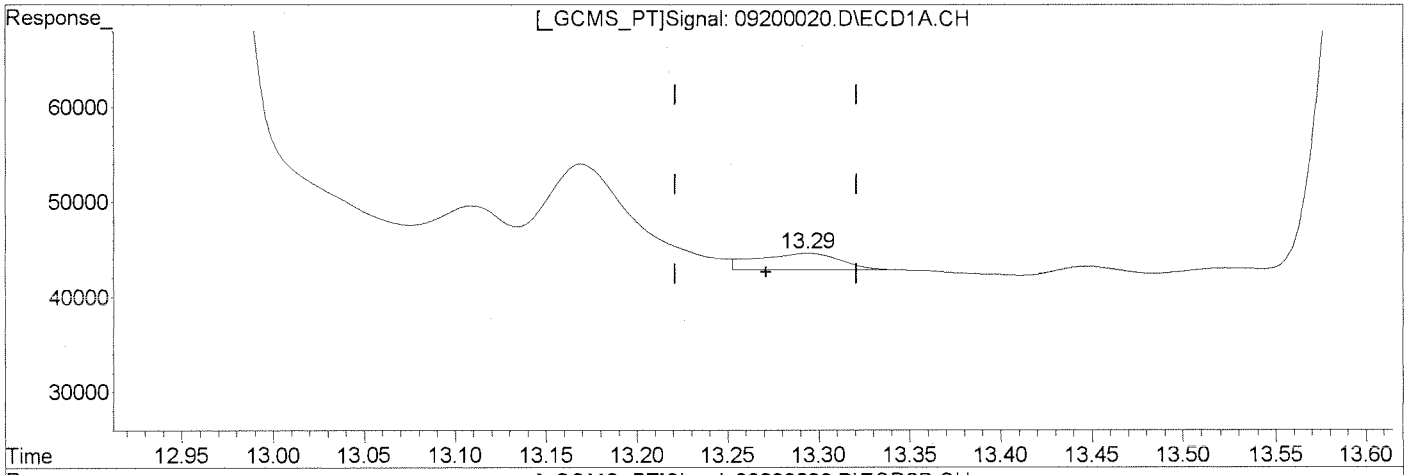
response 28171

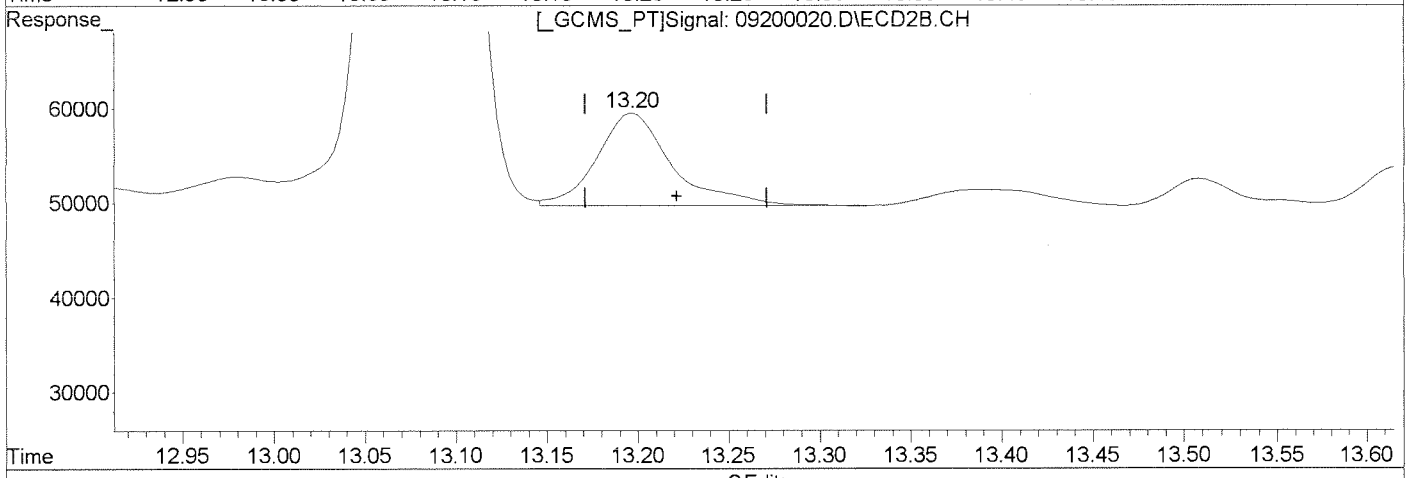
(+) = Expected Retention Time
09200020.D 092013_515.M Tue Oct 01 13:20:18 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(6) Dicamba (m)

13.29min 0.173ppb m

response 5640

Manual Integration:

After

Baseline/Shoulder

10/01/13

(6) Dicamba #2 (m)

13.20min 0.901ppb

response 28171

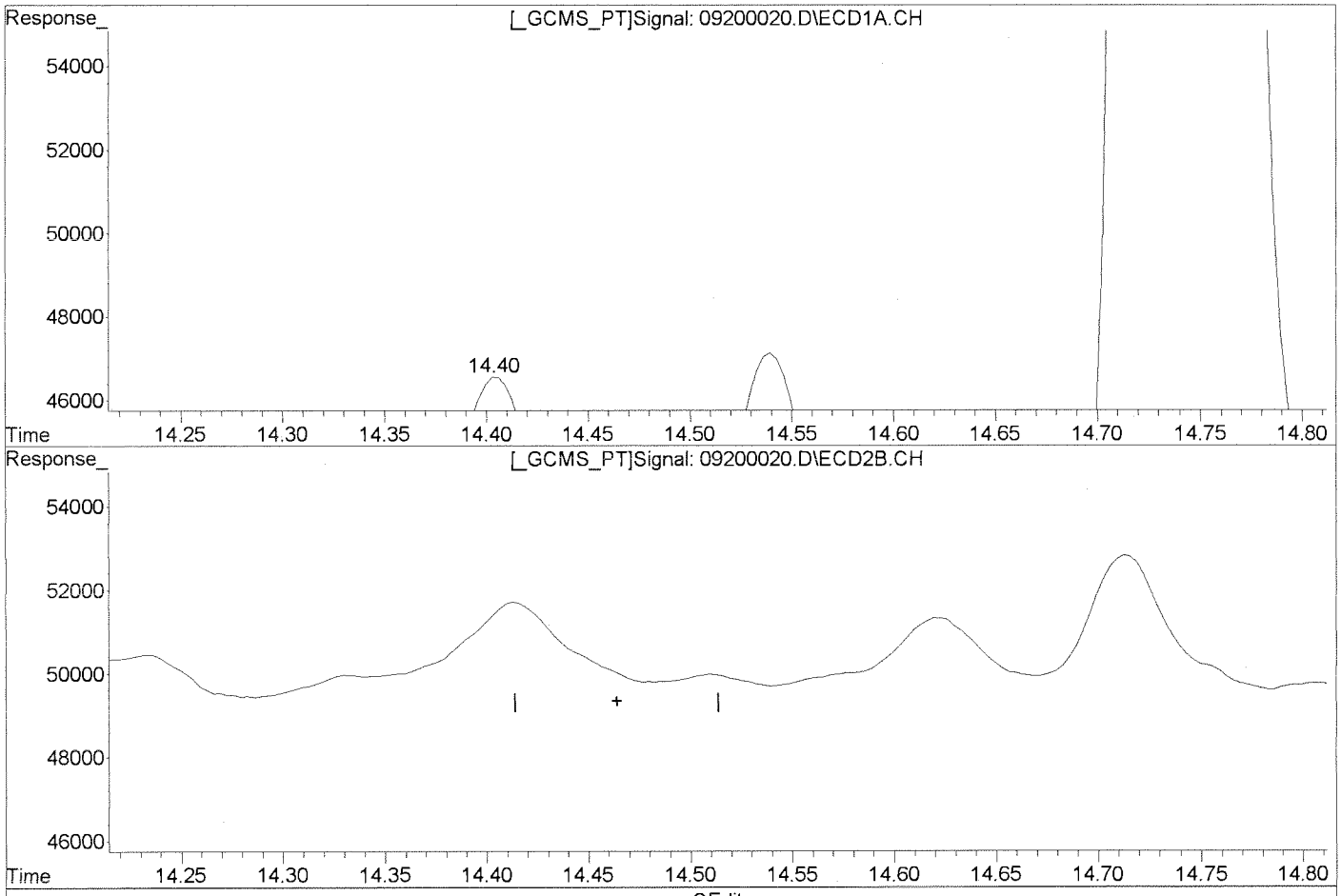
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:20:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(7) Dichloroprop (m)

14.40min 1.472ppb

response 13826

Manual Integration:

Before

(7) Dichloroprop #2 (m)

0.00min 0.000ppb

response 0

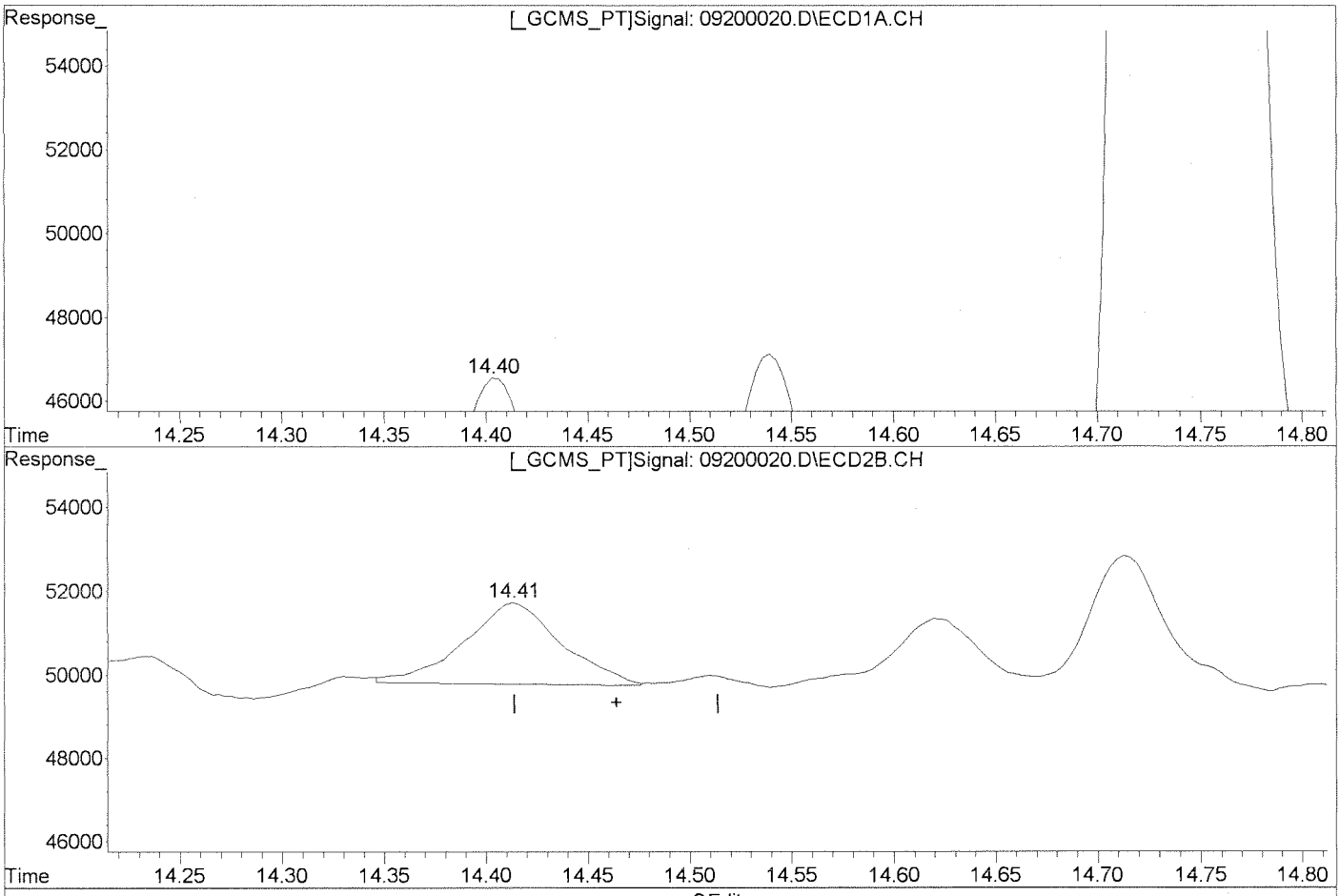
(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:20:45 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(7) Dichloroprop (m)

14.40min 1.472ppb

response 13826

(7) Dichloroprop #2 (m)

14.41min -1.184ppb m

response 6407

Manual Integration:

After

Missed Peak

10/01/13

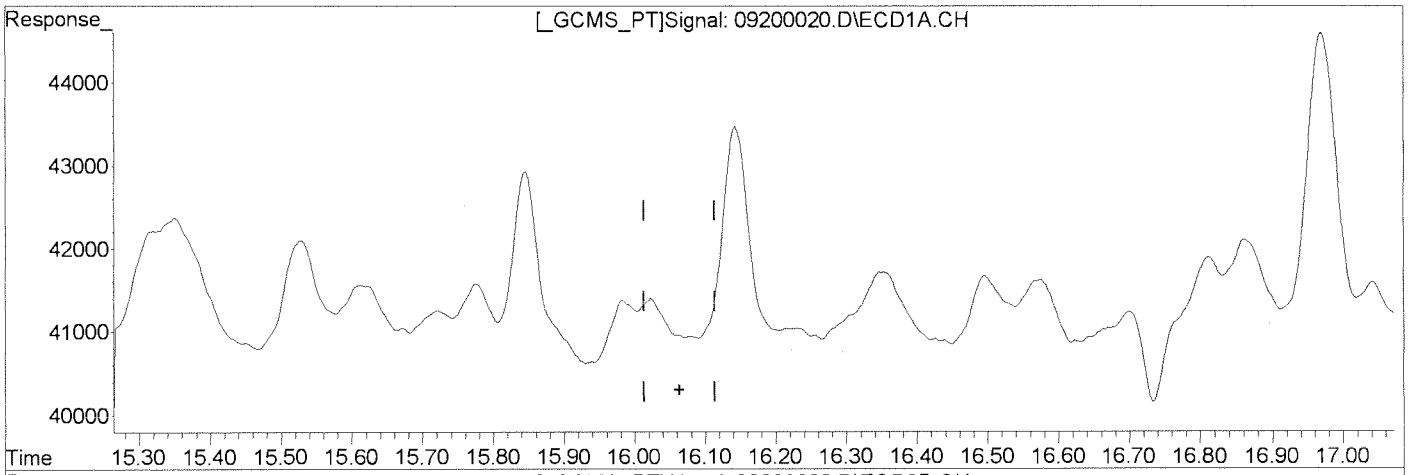
(+) = Expected Retention Time

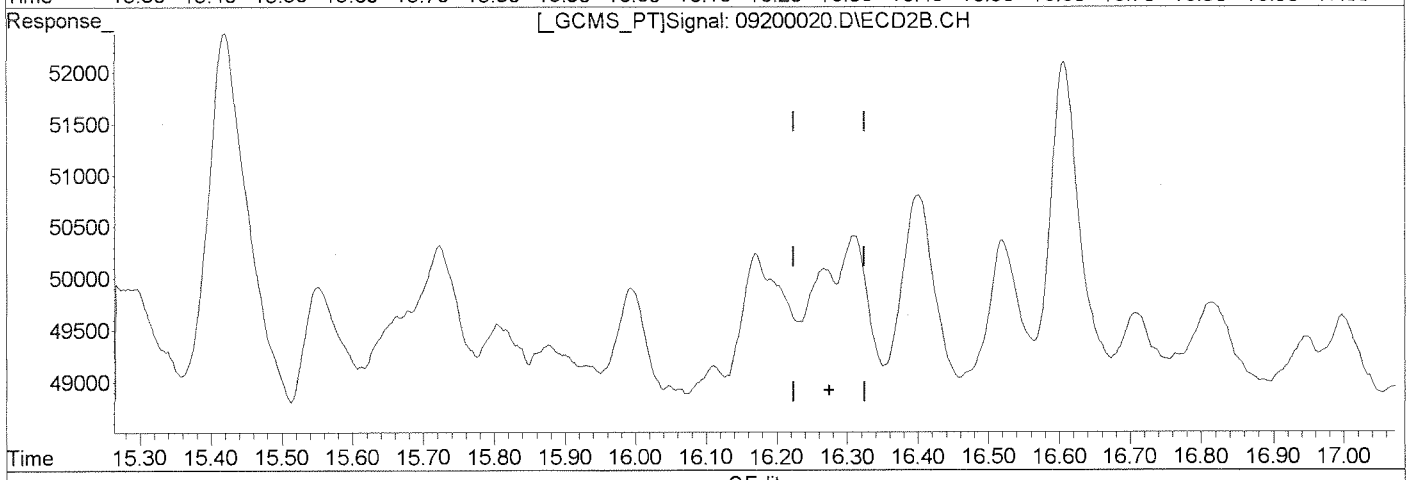
09200020.D 092013_515.M Tue Oct 01 13:20:52 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

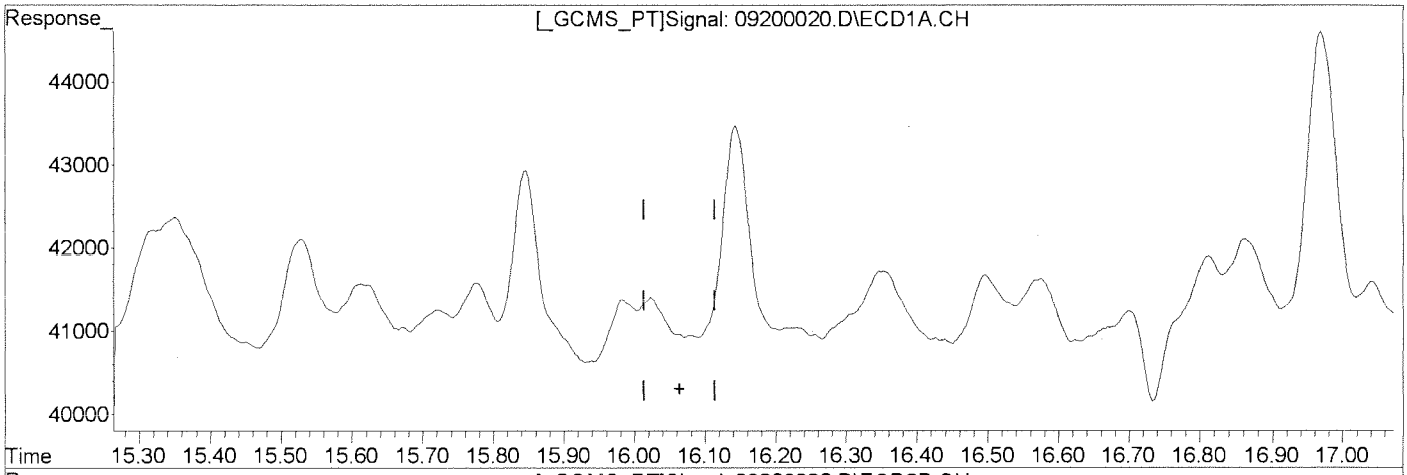
(+) = Expected Retention Time

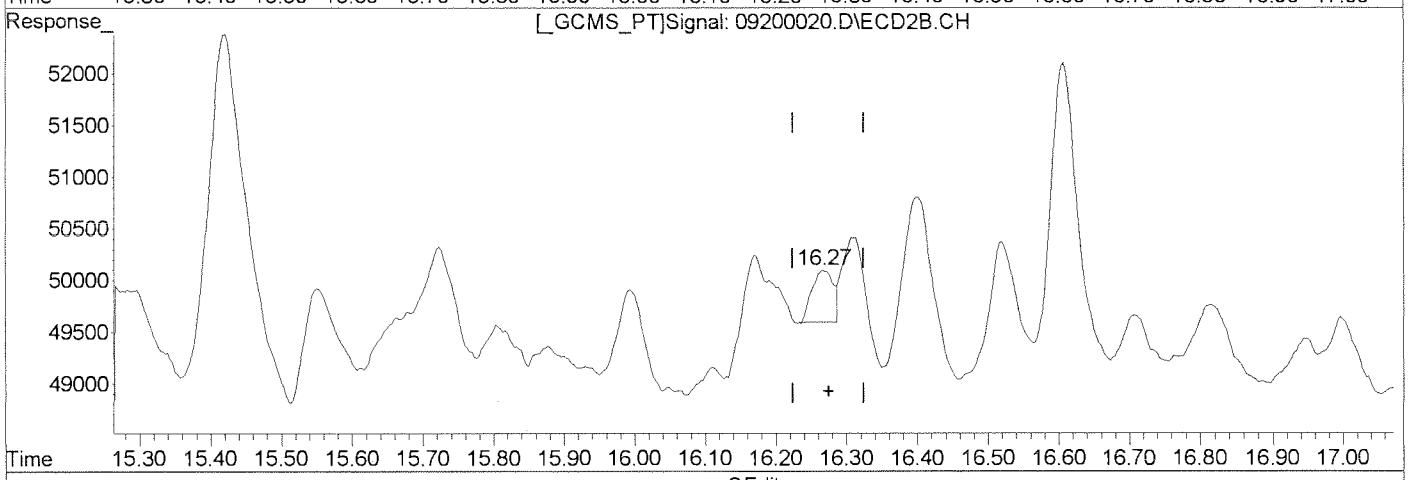
09200020.D 092013_515.M Tue Oct 01 13:21:19 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

16.27min -0.544ppb m

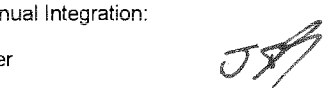
response 1089

Manual Integration:

After

Missed Peak

10/01/13



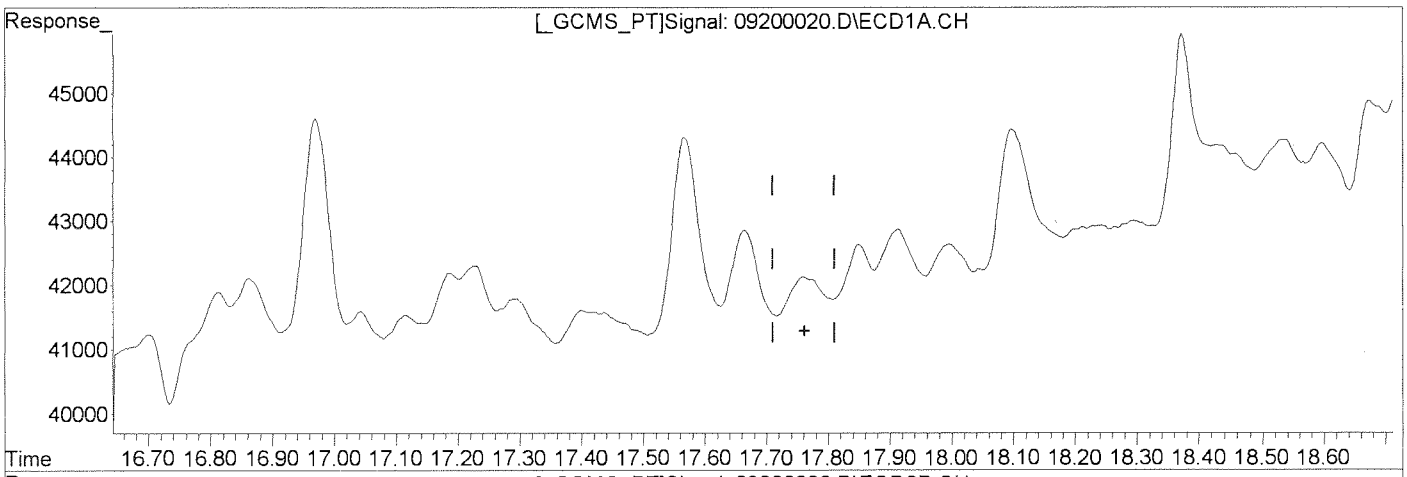
(+) = Expected Retention Time

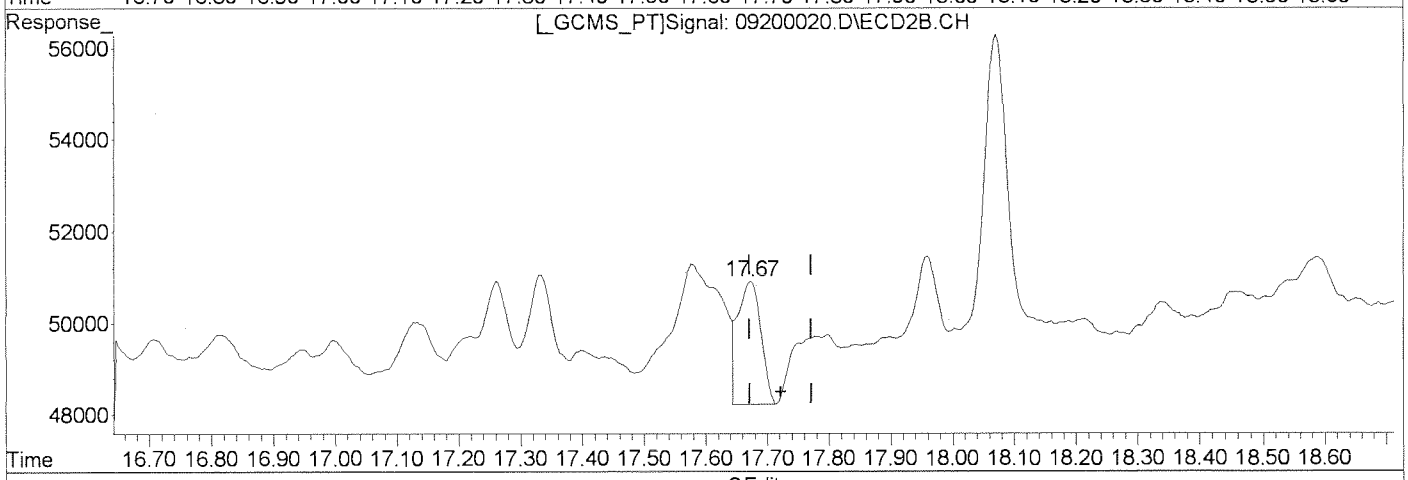
09200020.D 092013_515.M Tue Oct 01 13:21:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(14) Dinoseb #2 (m)

17.67min 0.345ppb

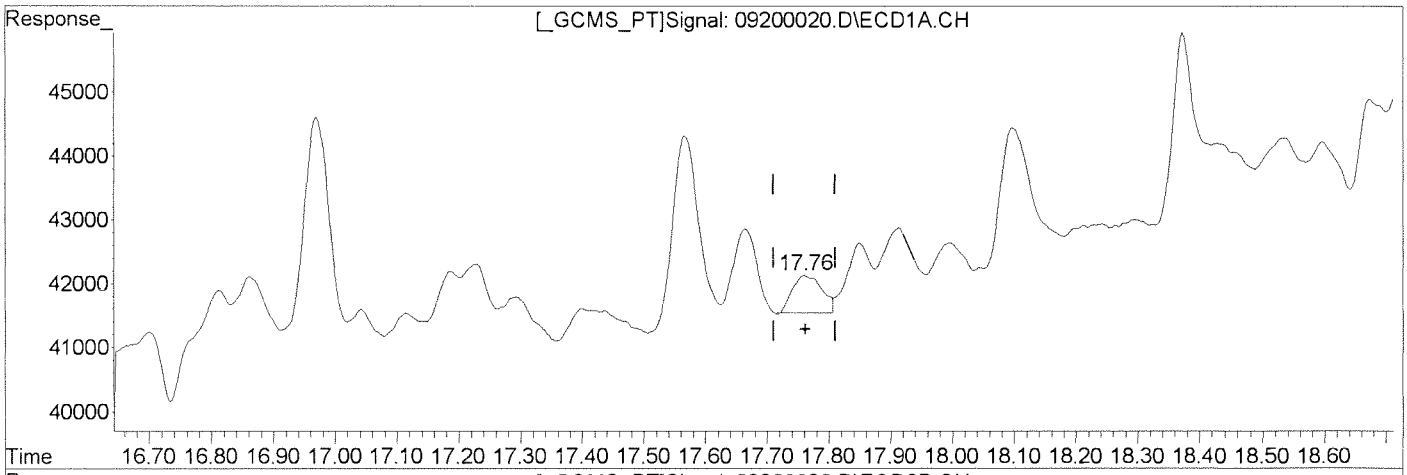
response 6973

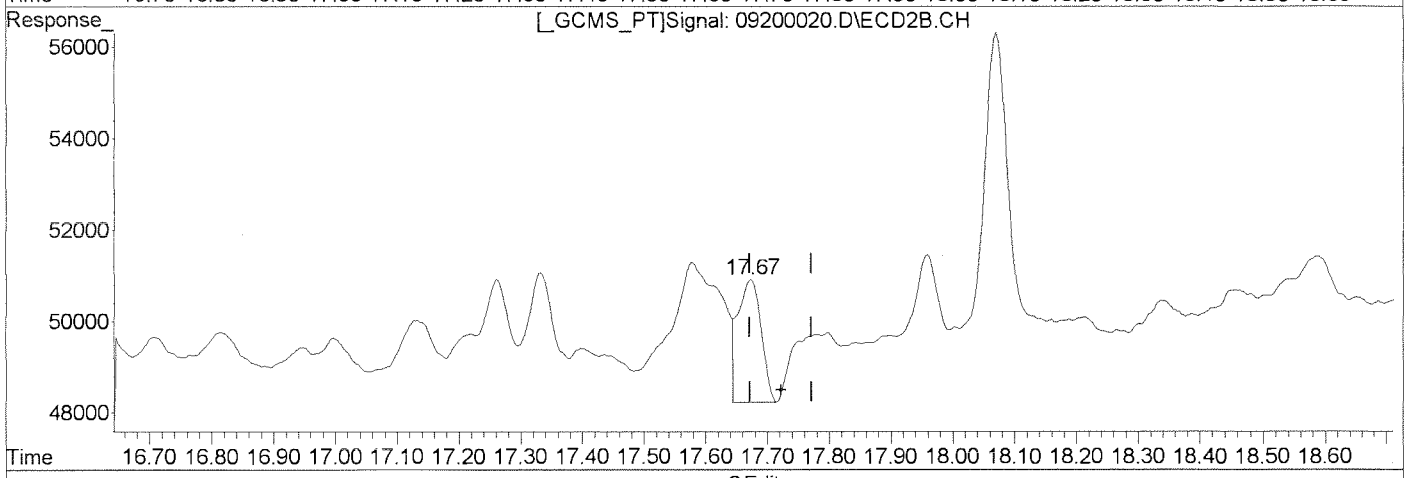
(+) = Expected Retention Time
09200020.D 092013_515.M Tue Oct 01 13:21:45 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

17.76min -3.851ppb m

response 1984

(14) Dinoseb #2 (m)

17.67min 0.345ppb

response 6973

Manual Integration:

After JPS 10-01-13

~~Baseline/Shoulder~~ missed peak

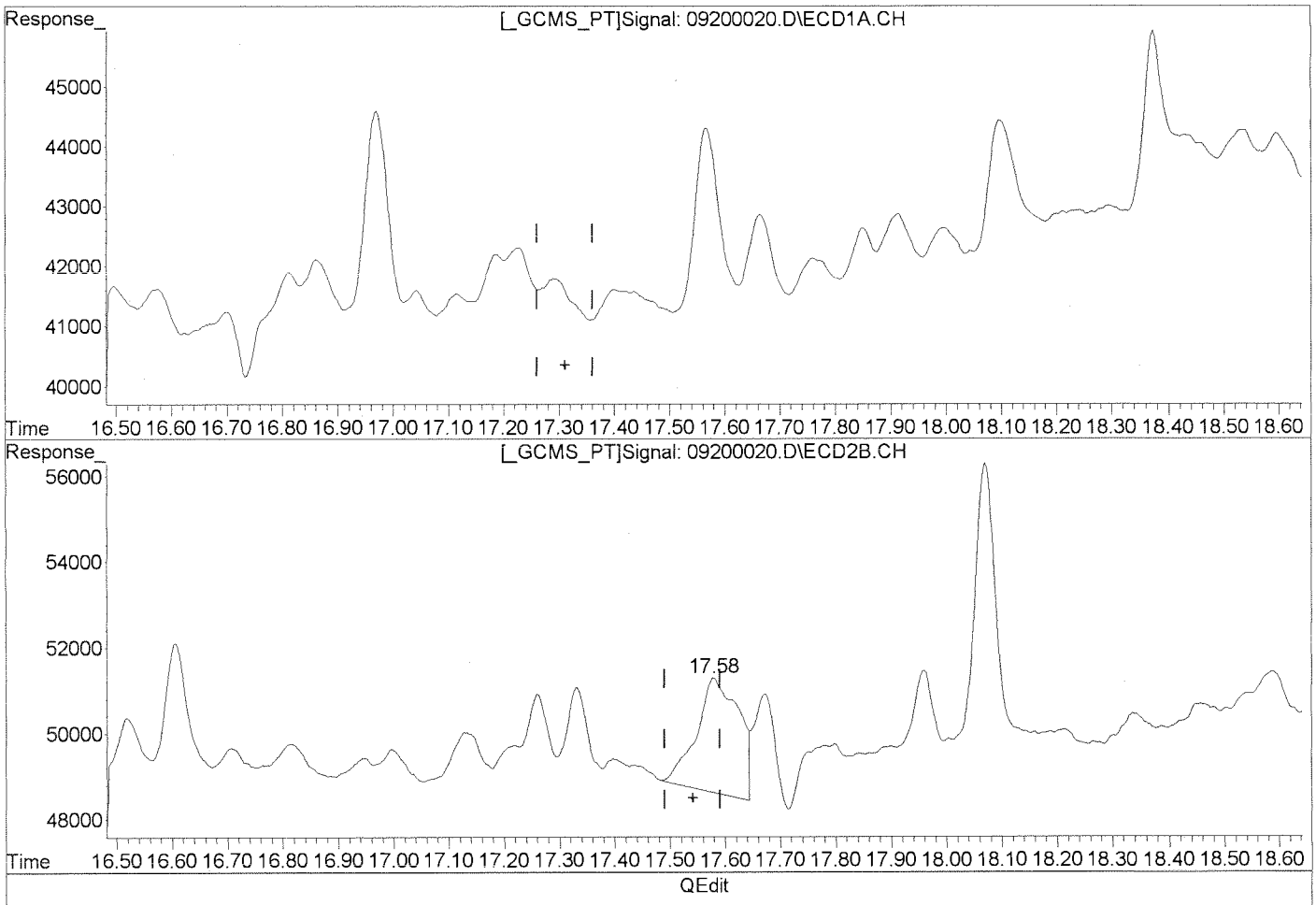
10/01/13

(+) = Expected Retention Time
09200020.D 092013_515.M Tue Oct 01 13:21:55 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(15) 2,4-DB #2 (m)

17.58min -1.276ppb

response 14352

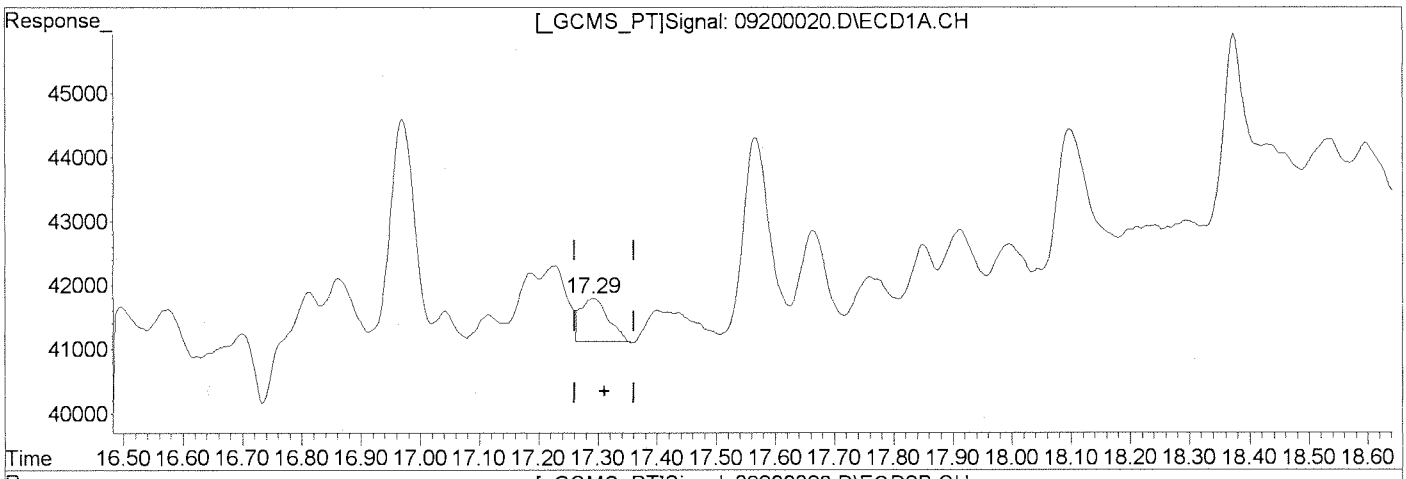
(+) = Expected Retention Time

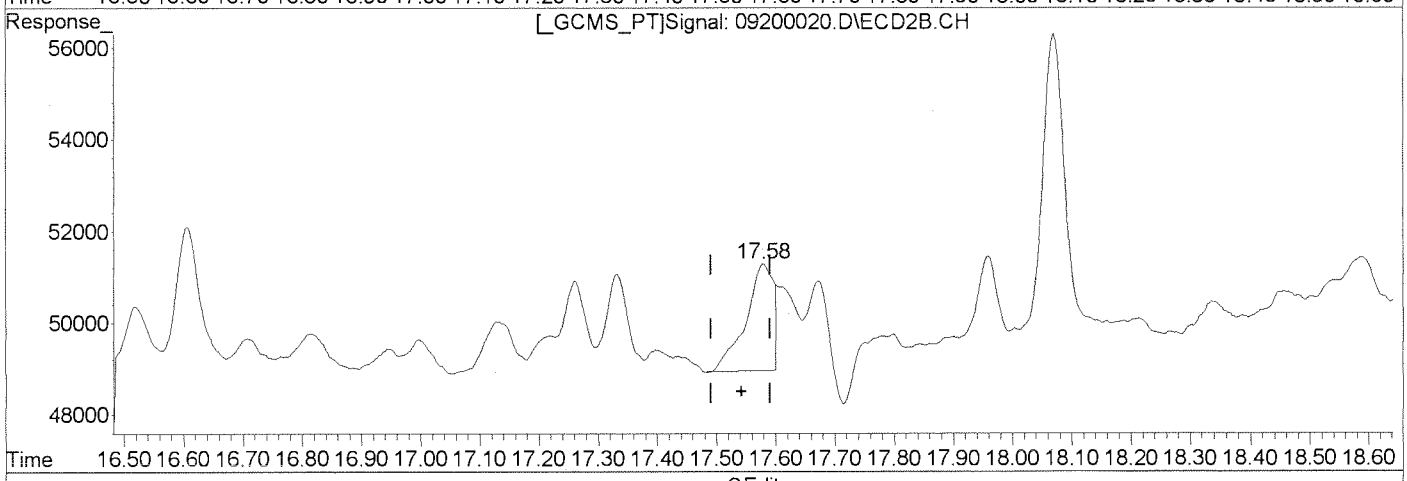
09200020.D 092013_515.M Tue Oct 01 13:22:31 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200020.D\ECD1A.CH Vial: 15
Signal #2 : J:\GC24\DATA\092013.515\09200020.D\ECD2B.CH
Acq On : 09-21-2013 01:33:21 AM Operator: JSCHWAB
Sample : K1309638-001 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

17.29min 0.480ppb m

response 2196

(15) 2,4-DB #2 (m)

17.58min -3.225ppb m

response 7592

Manual Integration:

After

Missed peak / Baseline

10/01/13

(+) = Expected Retention Time

09200020.D 092013_515.M Tue Oct 01 13:23:00 2013

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	94	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200023.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:03
Date Quantitated: 10/01/2013 13:35
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Qualified

Primary Review: JJS 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200023.D\09200023C.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:03
Date Quantitated: 10/01/2013 13:35
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200023.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200023.D\09200023c.d			**Vial:**	18
Acqu Date:	09/21/2013 03:03	**Quant Date:**	10/01/2013 13:35	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-002				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282806	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1183413	1127754	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	687227m	695433m	79.50	94.47			94OK
				%Recovery =		80 OK	94 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	128772m	0.0000	8.00	0.040U	0.80J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol			4437	0	0.0000	0.0000	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)			0	1746m	0.0000	0.0000	0.020U	0.020U	0.020U
1	Dinoseb		17.76 +0.04	0	6154	0.0000	0.2950	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.13 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:39 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1183413	1127754	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	687227	695433	79.504m	94.472m
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	128772	N.D.	7.995m#
4)	m	4-Nitrophenol	12.11	11.91f	69564	452949	18.293m	121.884 #
6)	m	Dicamba	13.29	13.20	8645	22228	0.258m	0.690m#
7)	m	Dichloroprop	14.41f	0.00	12698	0	1.319	N.D. #
9)	m	Trichlopyr	15.53	0.00	4437	0	0.033	N.D. #
13)	m	Chloramben	16.68f	16.61	5191	9073	0.265	0.444 #
14)	m	Dinoseb	0.00	17.76f	0	6154	N.D.	0.295 #
17)	m	DCPA (Dacthal)	18.88	18.77f	44215	21292	0.427	0.048 #
19)	m	Acifluorfen	20.94	20.85	17669	4833	0.770m	0.243m#

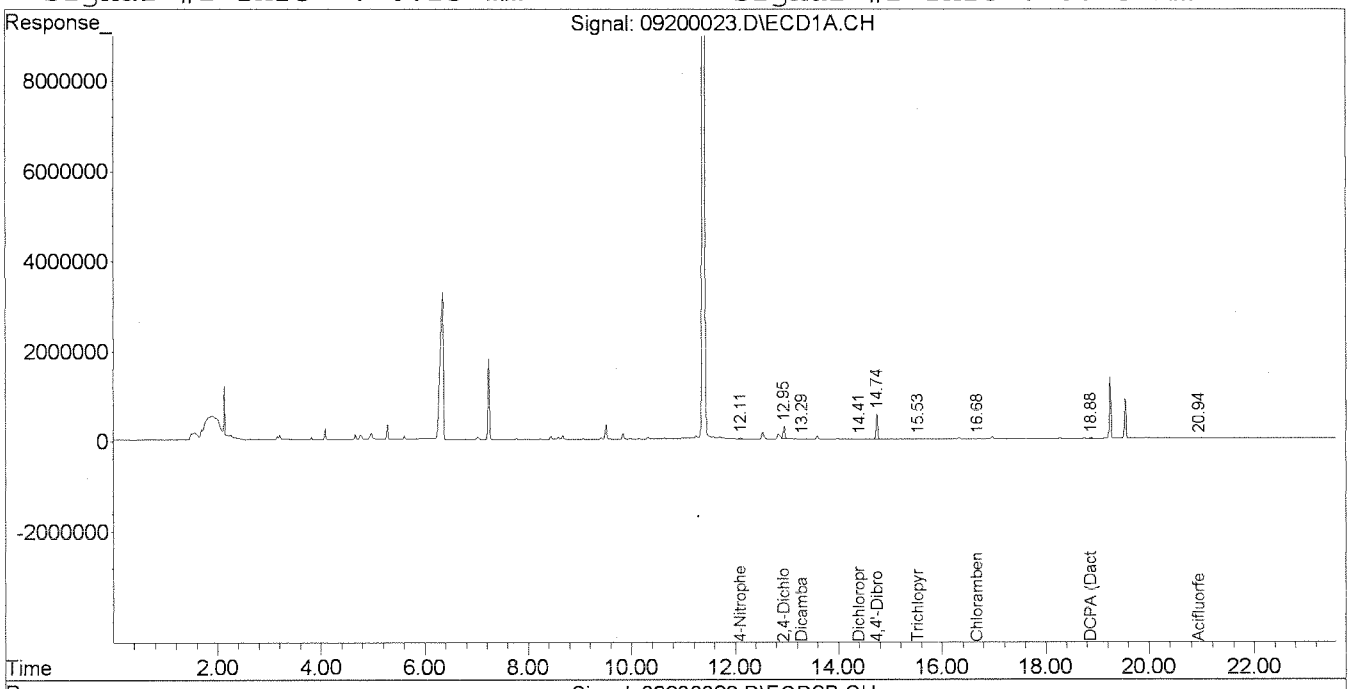
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

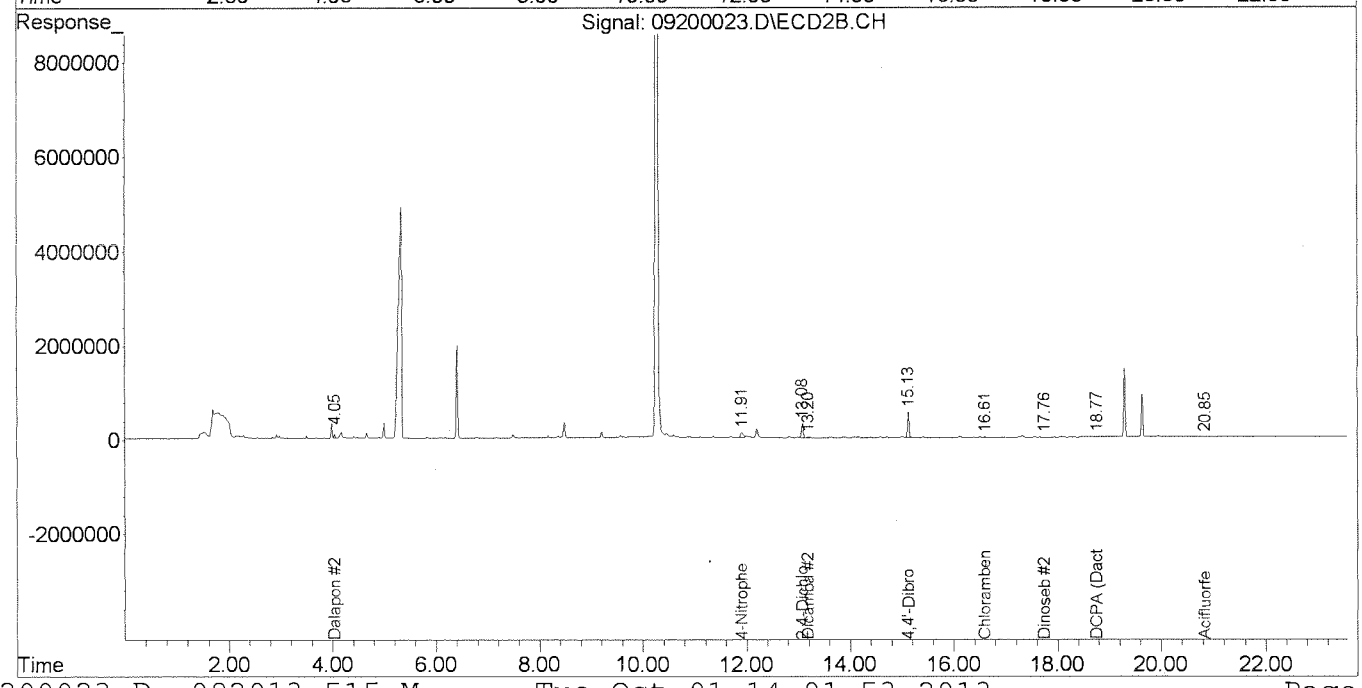
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:35 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

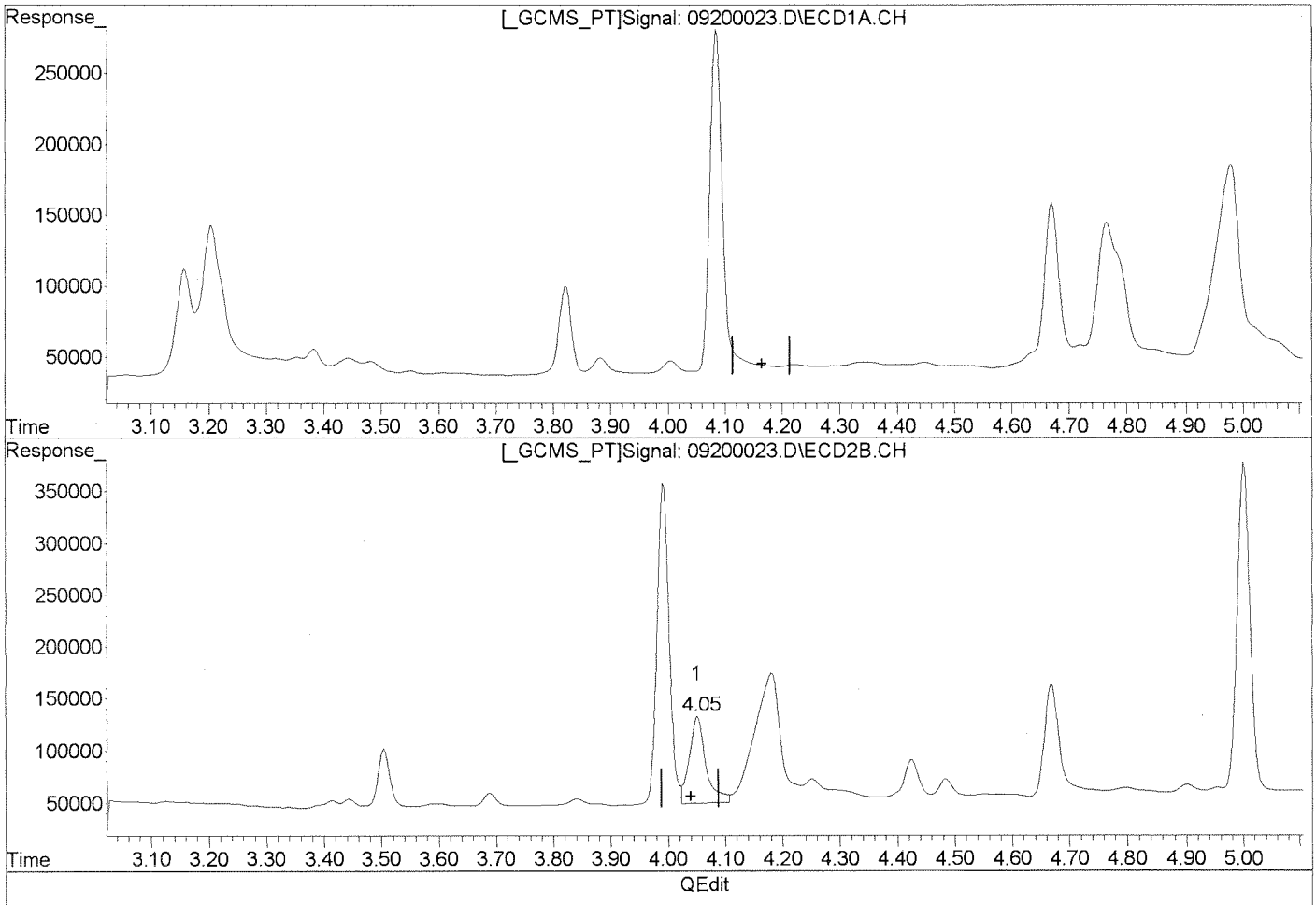




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(2) Dalapon #2 (m)

4.05min 10.949ppb

response 167442

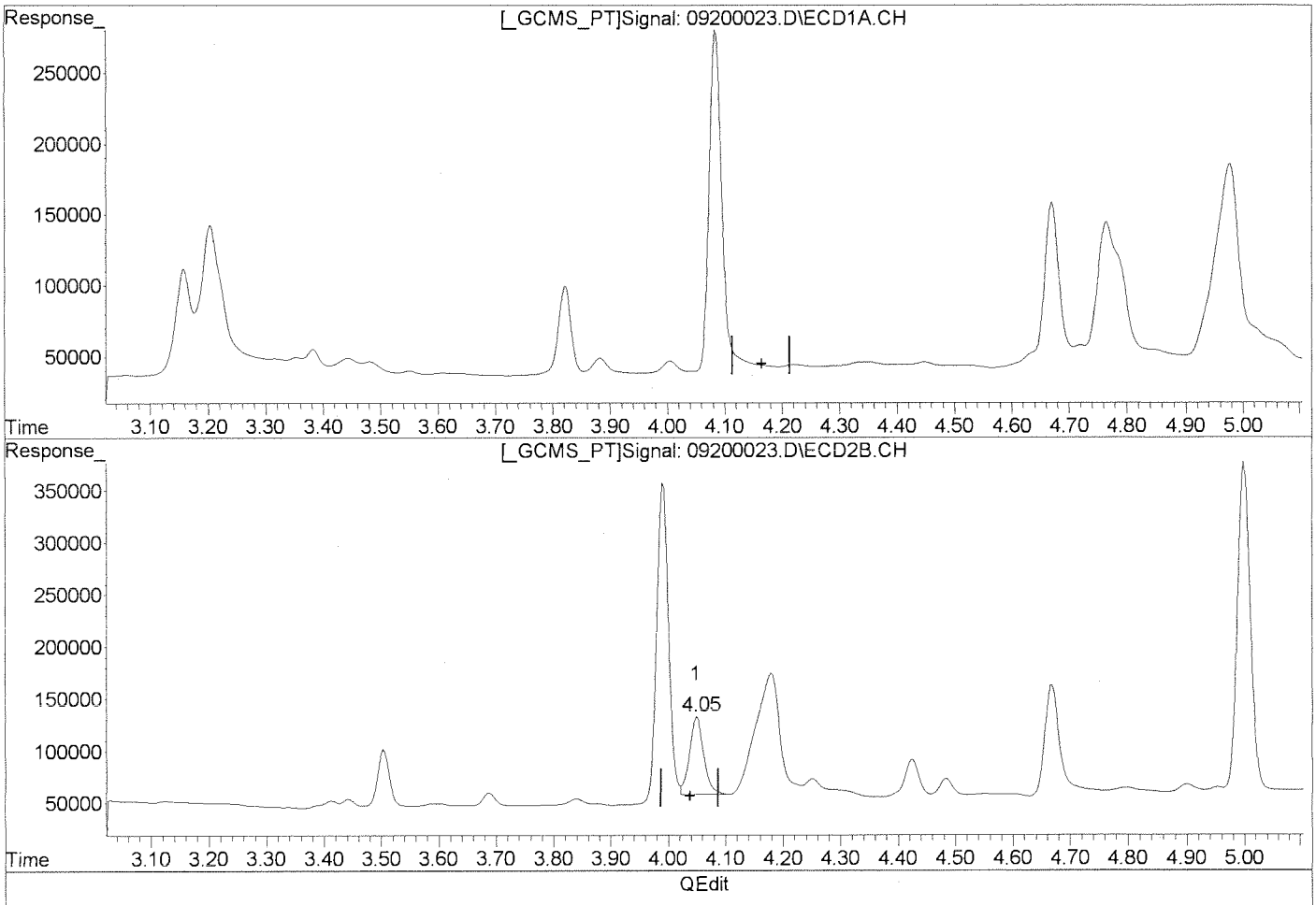
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:27:19 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 7.995ppb m

response 128772

Manual Integration:

After

Baseline/Shoulder

10/01/13

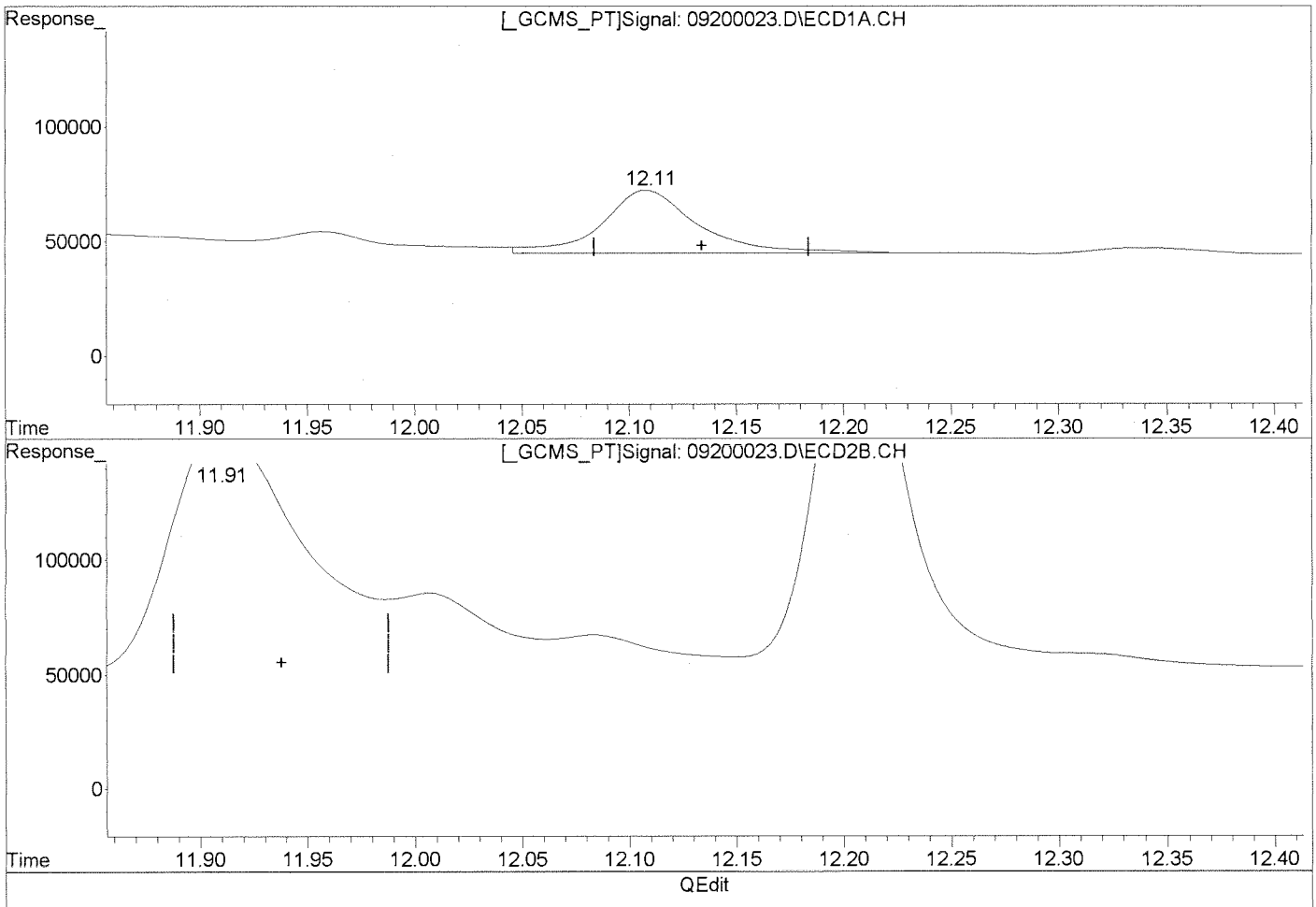
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:27:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.11min 22.817ppb

response 86769

(4) 4-Nitrophenol #2 (m)

11.91min 121.884ppb

response 452949

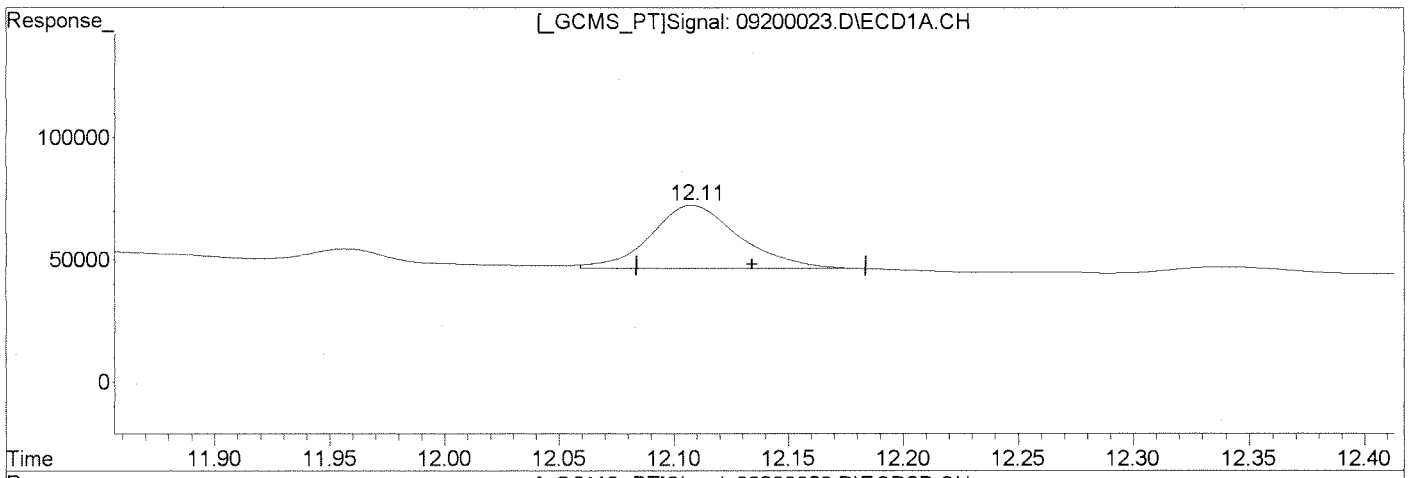
(+) = Expected Retention Time

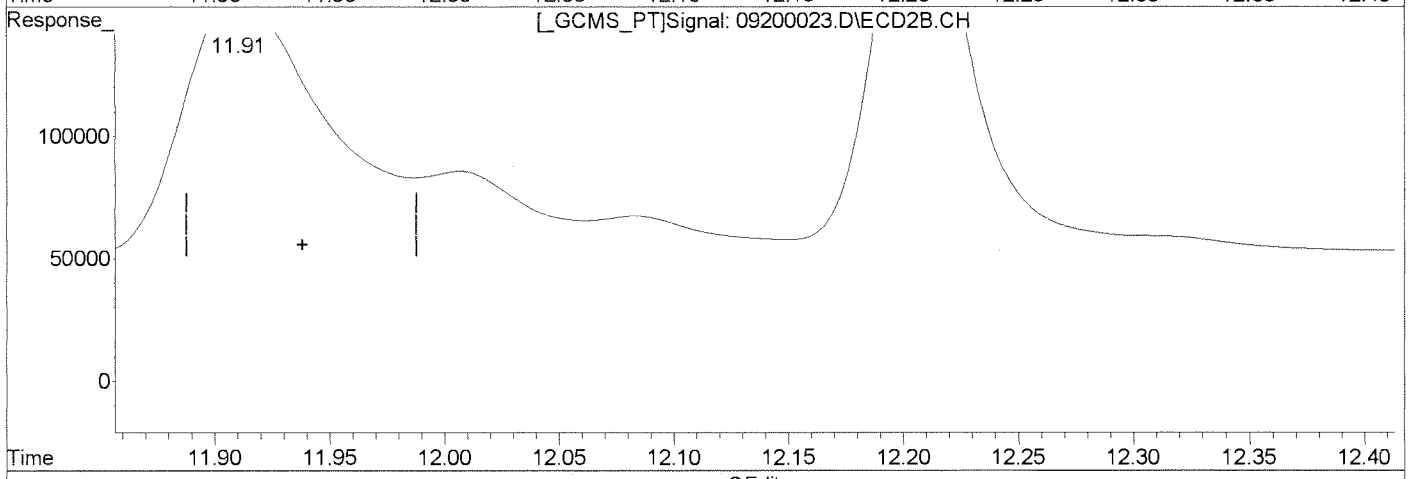
09200023.D 092013_515.M Tue Oct 01 13:27:43 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.11min 18.293ppb m

response 69564

Manual Integration:

After

Baseline/Shoulder

10/01/13

(4) 4-Nitrophenol #2 (m)

11.91min 121.884ppb

response 452949

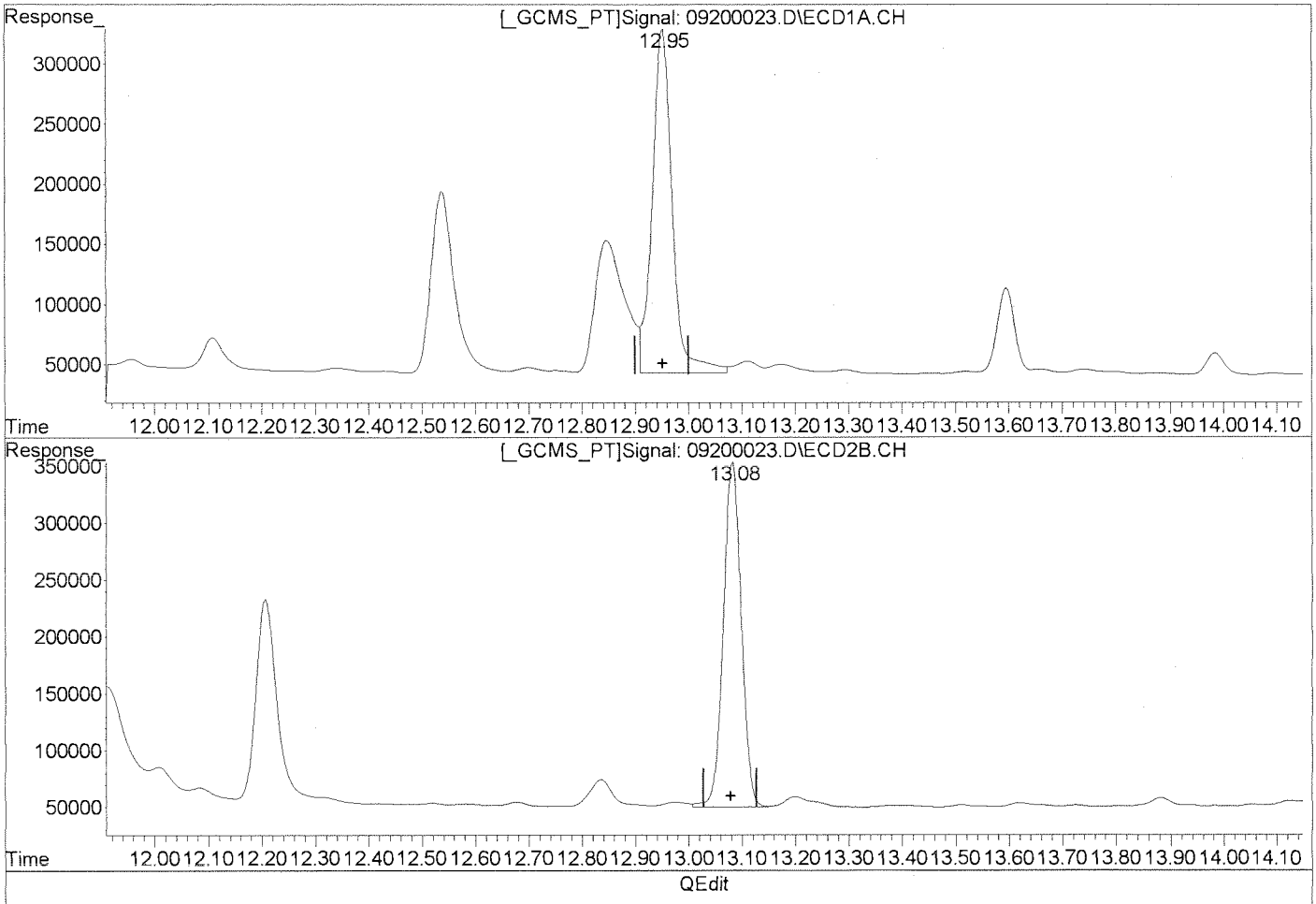
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:27:53 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 85.580ppb

response 739745

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 96.390ppb

response 709021

Manual Integration:

Before

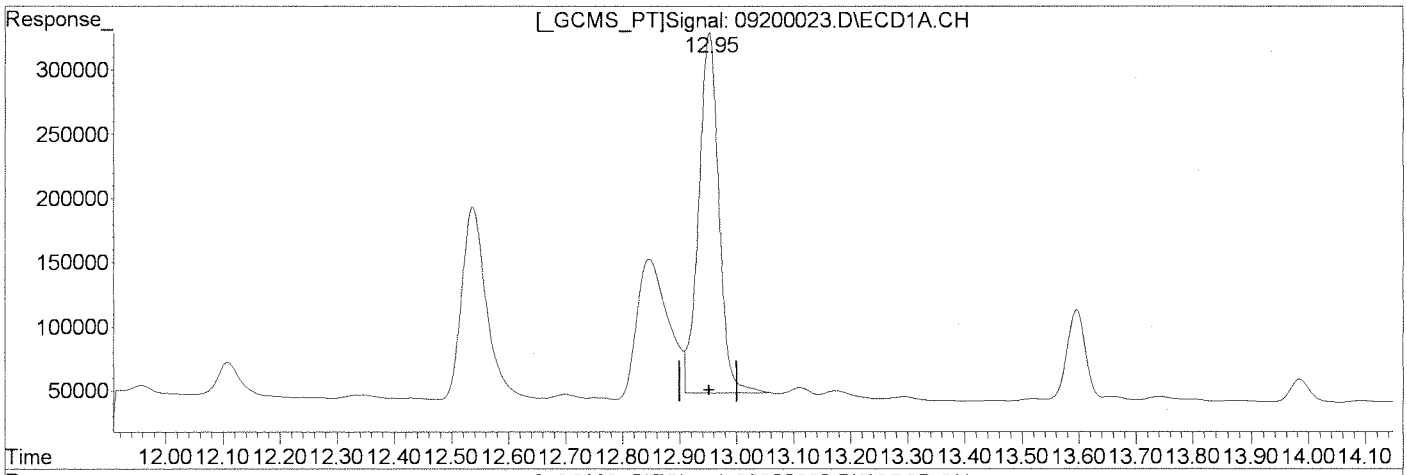
(+) = Expected Retention Time

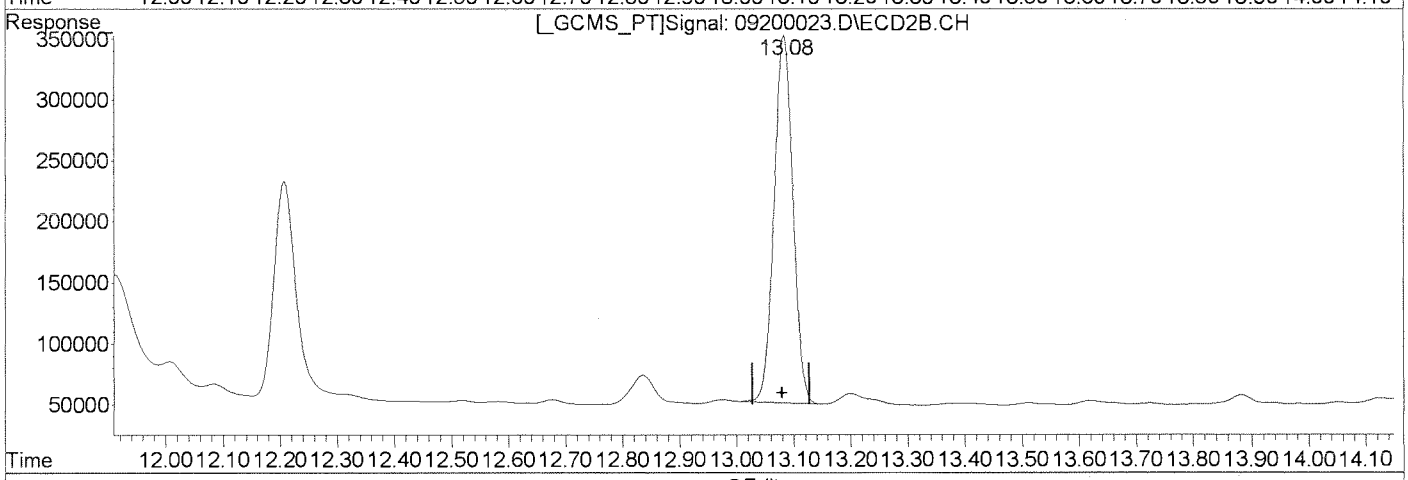
09200023.D 092013_515.M Tue Oct 01 13:27:59 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 79.504ppb m

response 687227

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 94.472ppb m

response 695433

Manual Integration:

After

Baseline/Shoulder

10/01/13

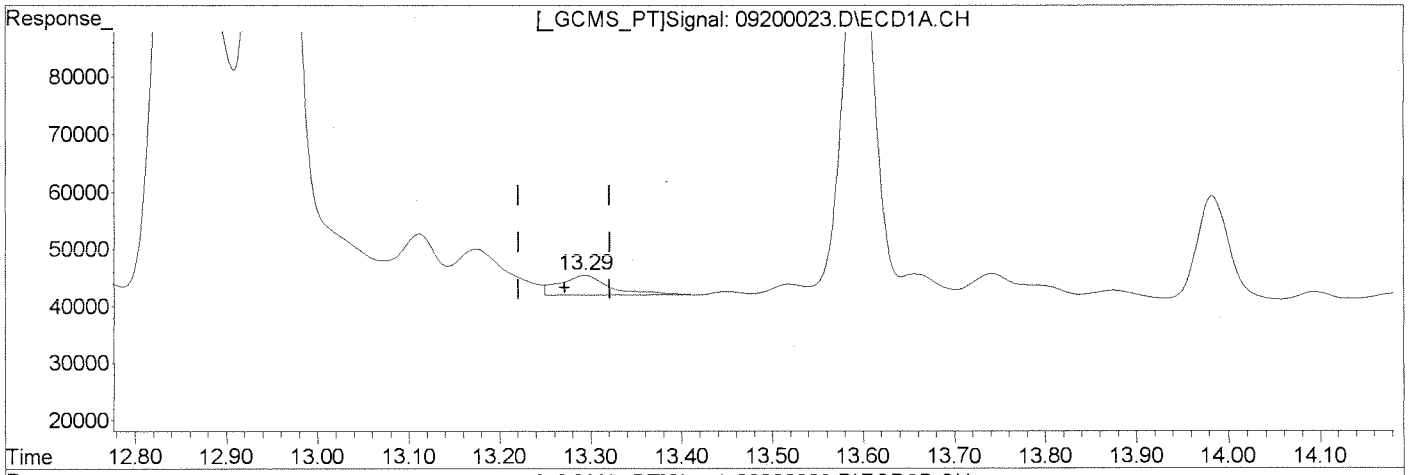
(+) = Expected Retention Time

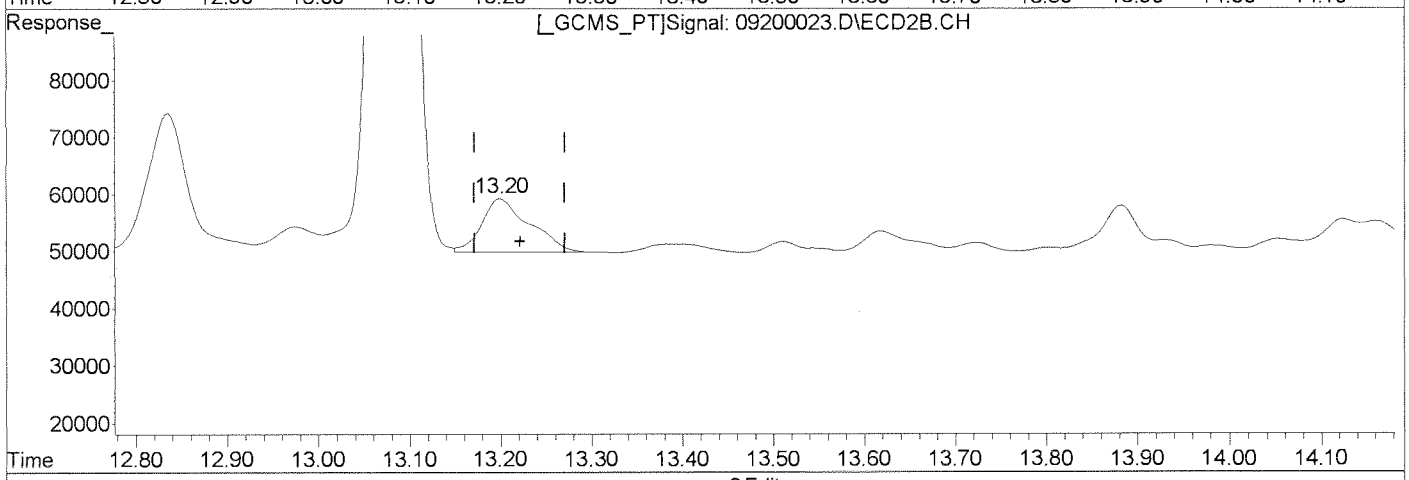
09200023.D 092013_515.M Tue Oct 01 13:28:17 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(6) Dicamba (m)

13.29min 0.400ppb

response 13378

Manual Integration:

Before

(6) Dicamba #2 (m)

13.20min 1.065ppb

response 34318

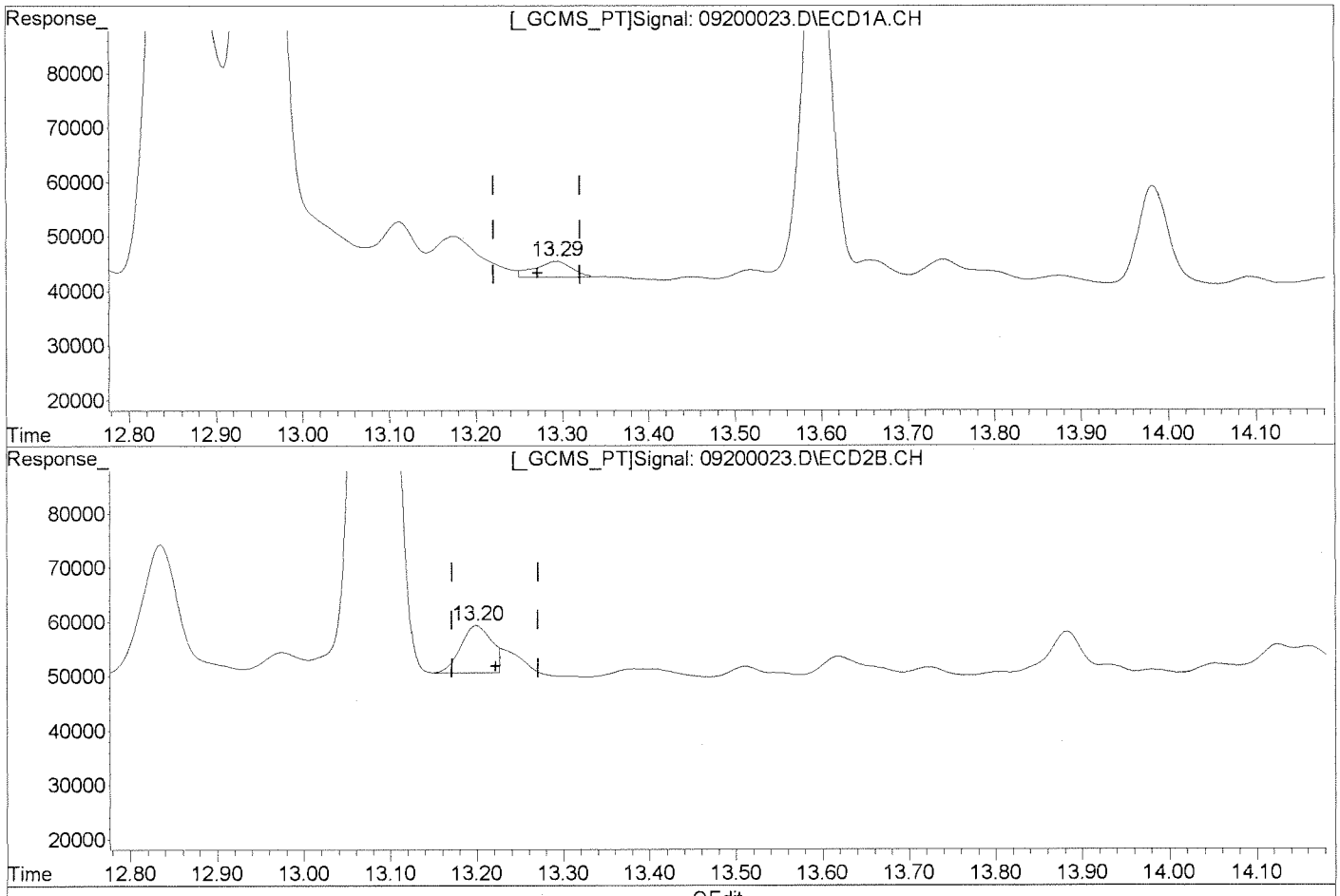
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:28:26 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.29min 0.258ppb m

response 8645

(6) Dicamba #2 (m)

13.20min 0.690ppb m

response 22228

Manual Integration:

After

Baseline/Shoulder

10/01/13

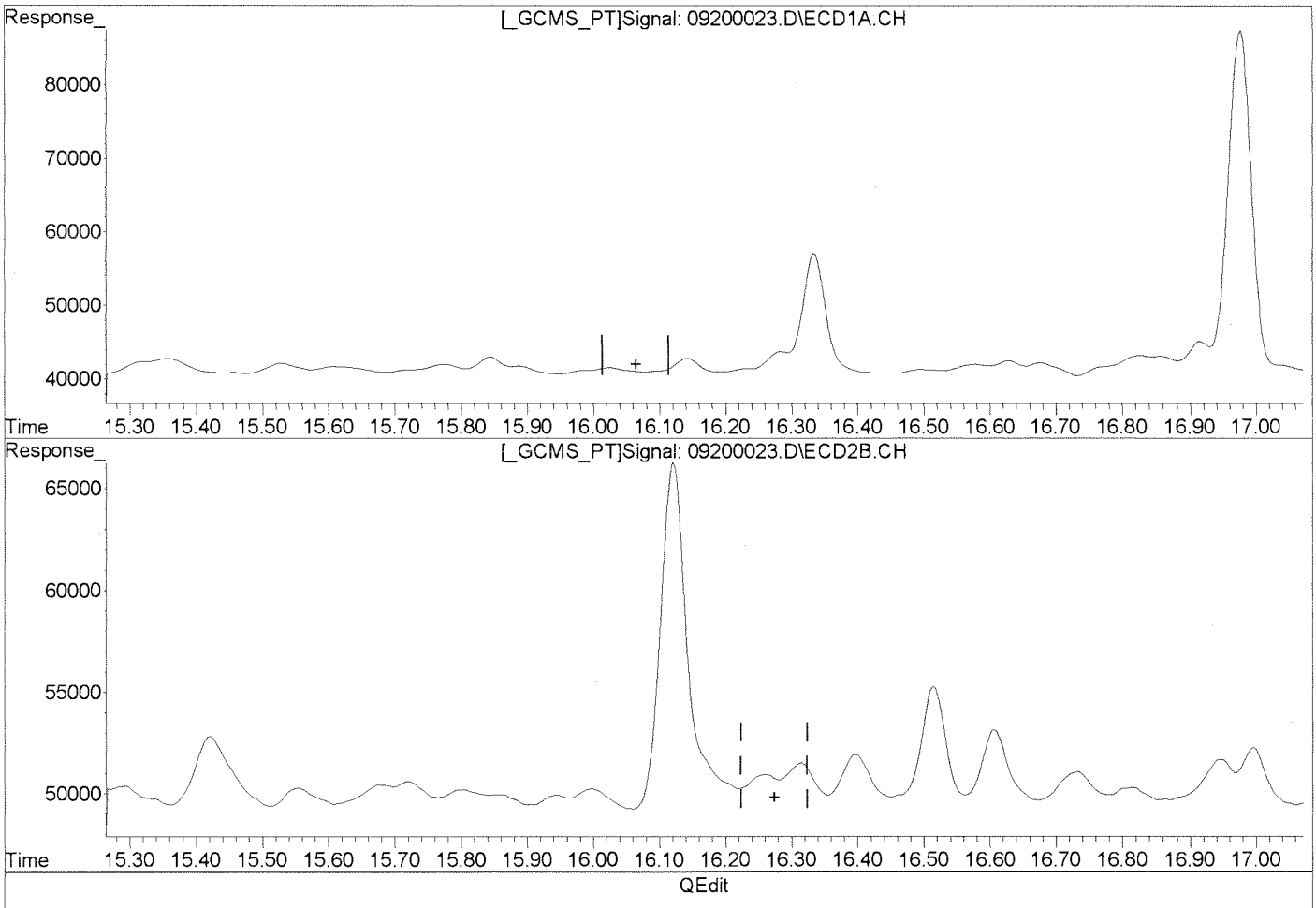
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:28:39 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

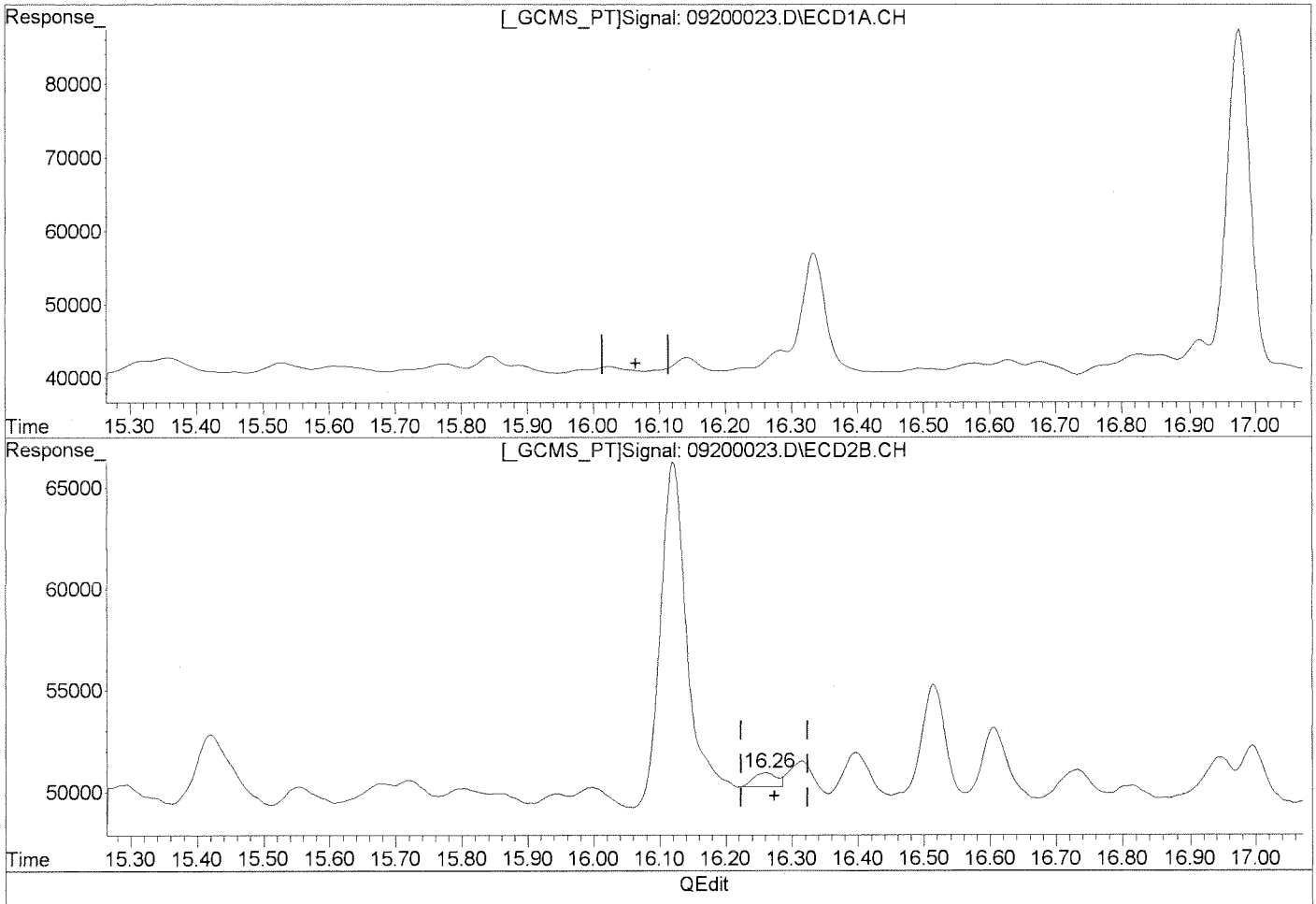
(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:29:20 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

16.26min -0.525ppb m

response 1746

Manual Integration:

After

Missed Peak

10/01/13

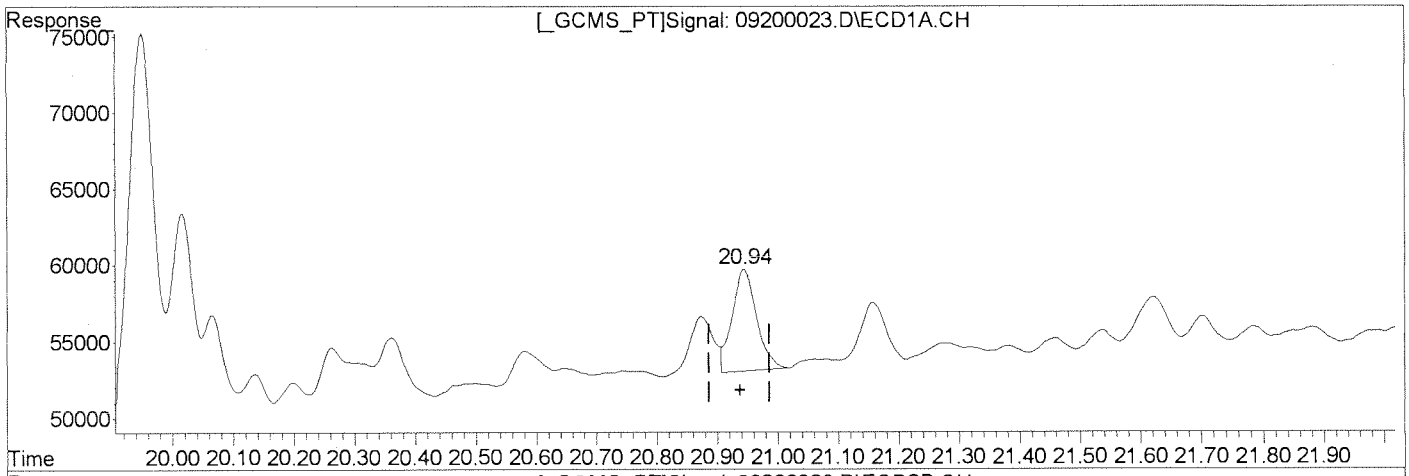
(+) = Expected Retention Time

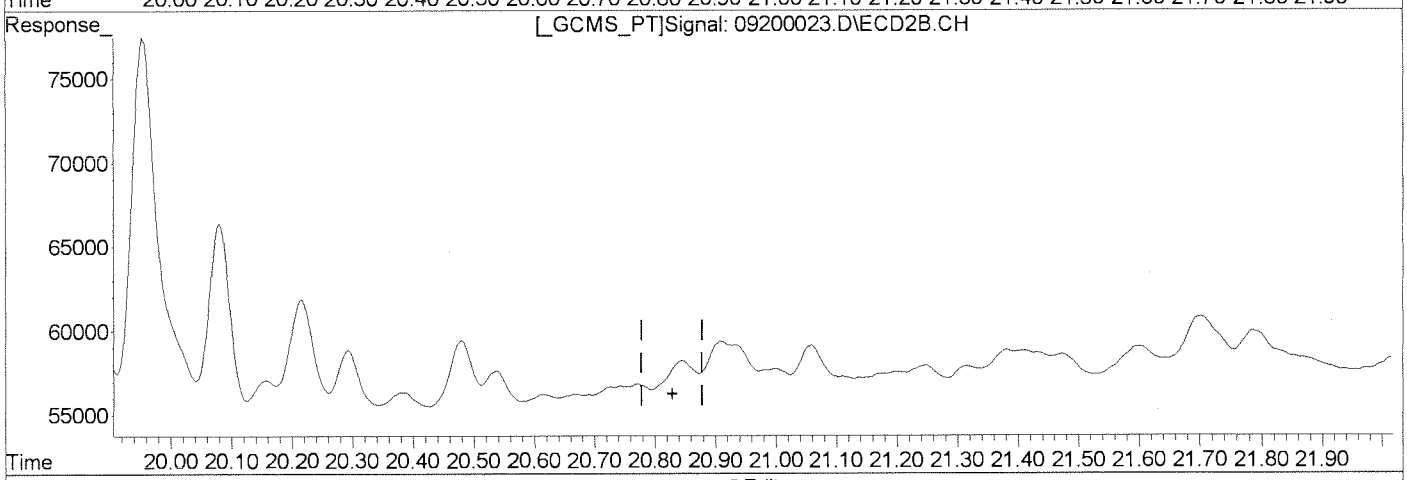
09200023.D 092013_515.M Tue Oct 01 13:29:32 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.94min 0.812ppb

response 18621

Manual Integration:

Before

(19) Acifluorfen #2 (m)

0.00min 0.000ppb

response 0

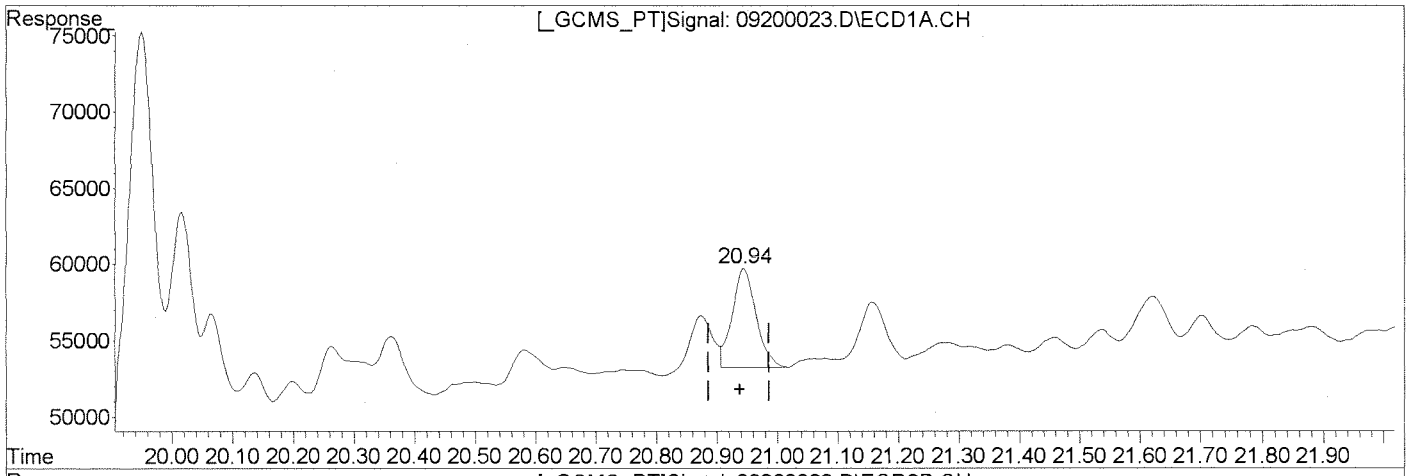
(+) = Expected Retention Time

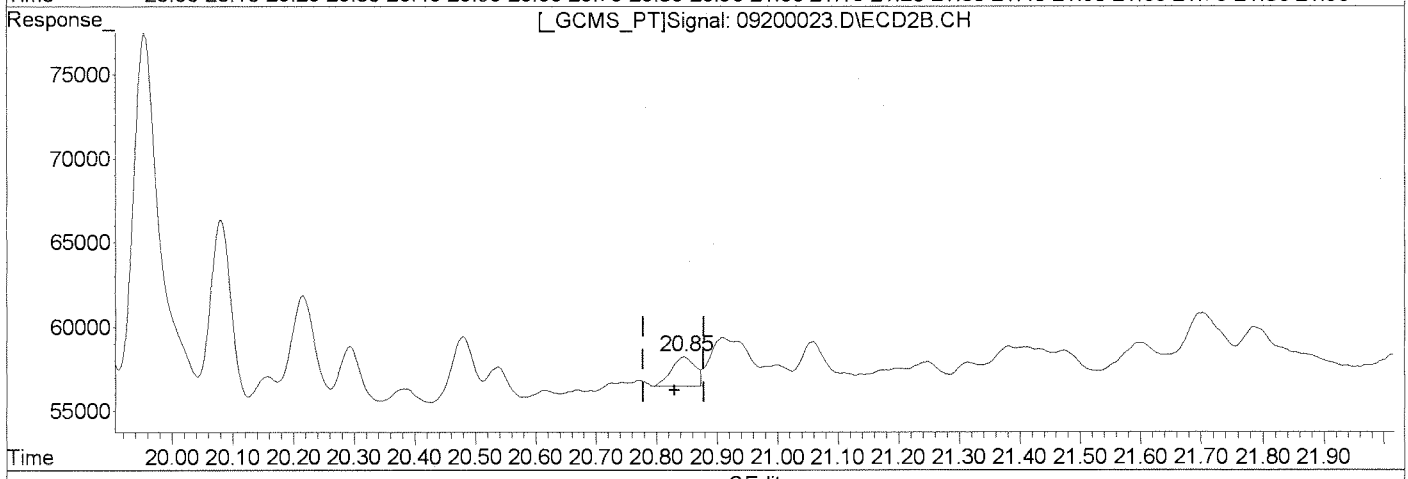
09200023.D 092013_515.M Tue Oct 01 13:31:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200023.D\ECD1A.CH Vial: 18
Signal #2 : J:\GC24\DATA\092013.515\09200023.D\ECD2B.CH
Acq On : 09-21-2013 03:03:02 AM Operator: JSCHWAB
Sample : K1309638-002 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.94min 0.770ppb m

response 17669

(19) Acifluorfen #2 (m)

20.85min 0.243ppb m

response 4833

Manual Integration:

After

Baseline / Missed peak

10/01/13

(+) = Expected Retention Time

09200023.D 092013_515.M Tue Oct 01 13:31:42 2013

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	108	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200024.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:33
Date Quantitated: 10/01/2013 13:38
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	DNRCC

Primary Review: JES 10-01-13

Secondary Review: MW

Exception Report

Data File: J:\GC24\DATA\092013.515\09200024.D\09200024C.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:33
Date Quantitated: 10/01/2013 13:38
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200024.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200024.D\09200024c.d			**Vial:**	19
Acqu Date:	09/21/2013 03:33	**Quant Date:**	10/01/2013 13:38	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-004				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282807	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.12? -0.01	1152905	1096659	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	793743m	768267	94.26	107.83			108OK
				%Recovery =		94 OK	108 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	135571m	0.0000	8.81	0.040U	0.88J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol		16.17 -0.01	0	7200	0.0000	0.0660	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)			0	960m	0.0000	0.0000	0.020U	0.020U	0.020U
1	Dinoseb			2060m	0	0.0000	0.0000	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.05 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:40 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.12	1152905	1096659	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	793743	768267	94.257m	107.828
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	135571	N.D.	8.808m#
3)	m	3,5-Dichlorobenz	11.06	11.49f	52185	6500	3.737	N.D. #
4)	m	4-Nitrophenol	12.10f	11.91f	56626	480771	15.284m	133.039m#
6)	m	Dicamba	13.29	0.00	4256	0	0.131	N.D. #
10)	m	Pentachloropheno	0.00	16.17	0	7200	N.D.	0.066 #
13)	m	Chloramben	0.00	16.60	0	7125	N.D.	0.358 #
19)	m	Acifluorfen	20.90f	20.85	13905	3997	0.622	0.206m#

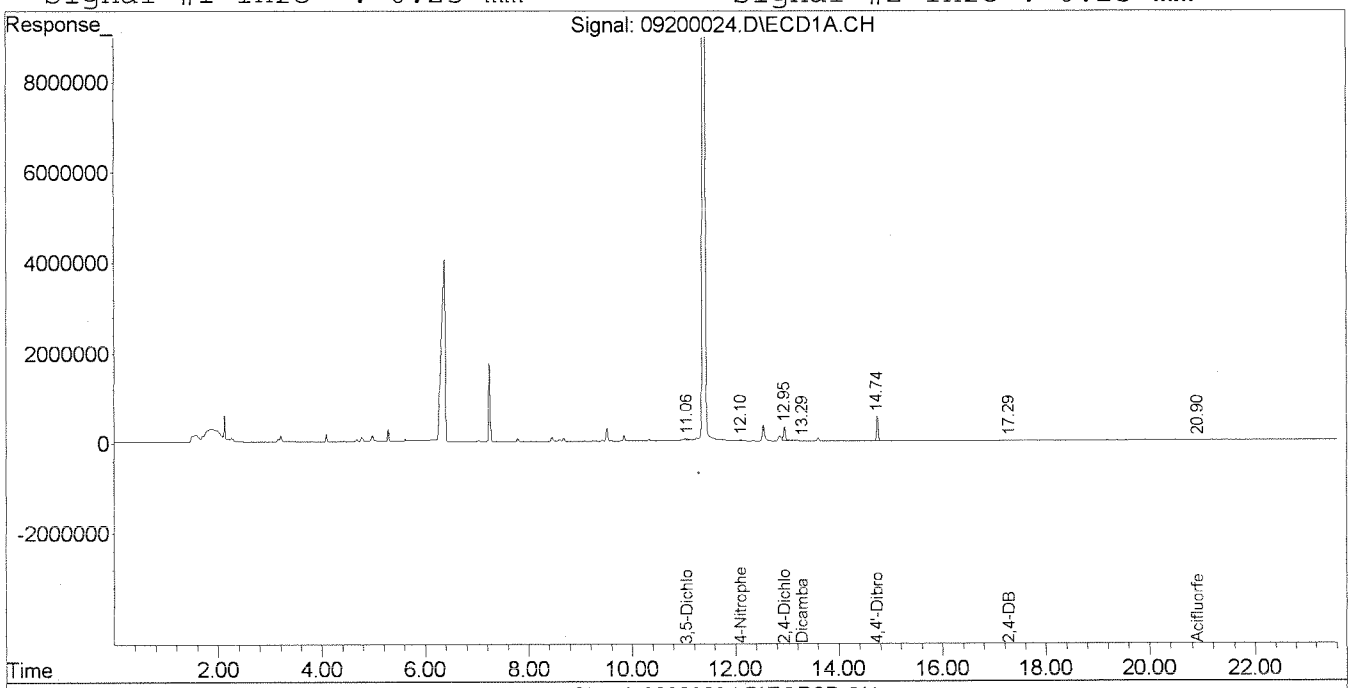
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

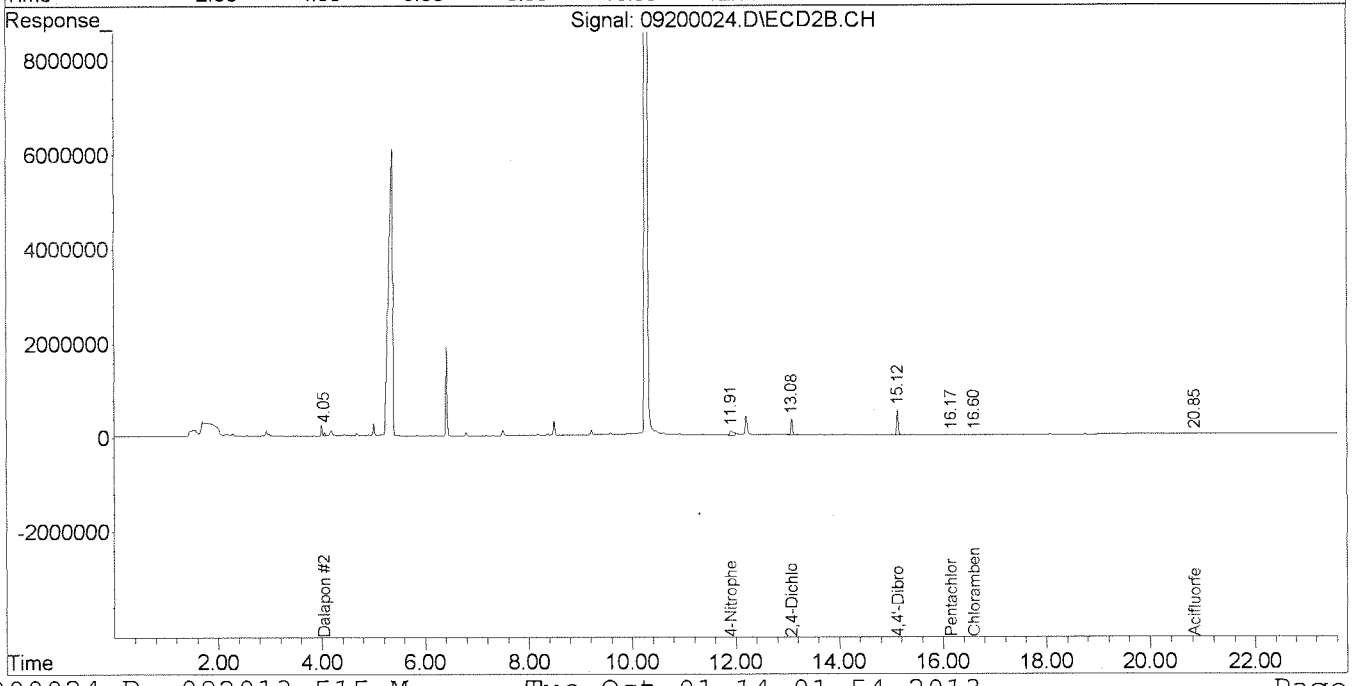
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:38 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

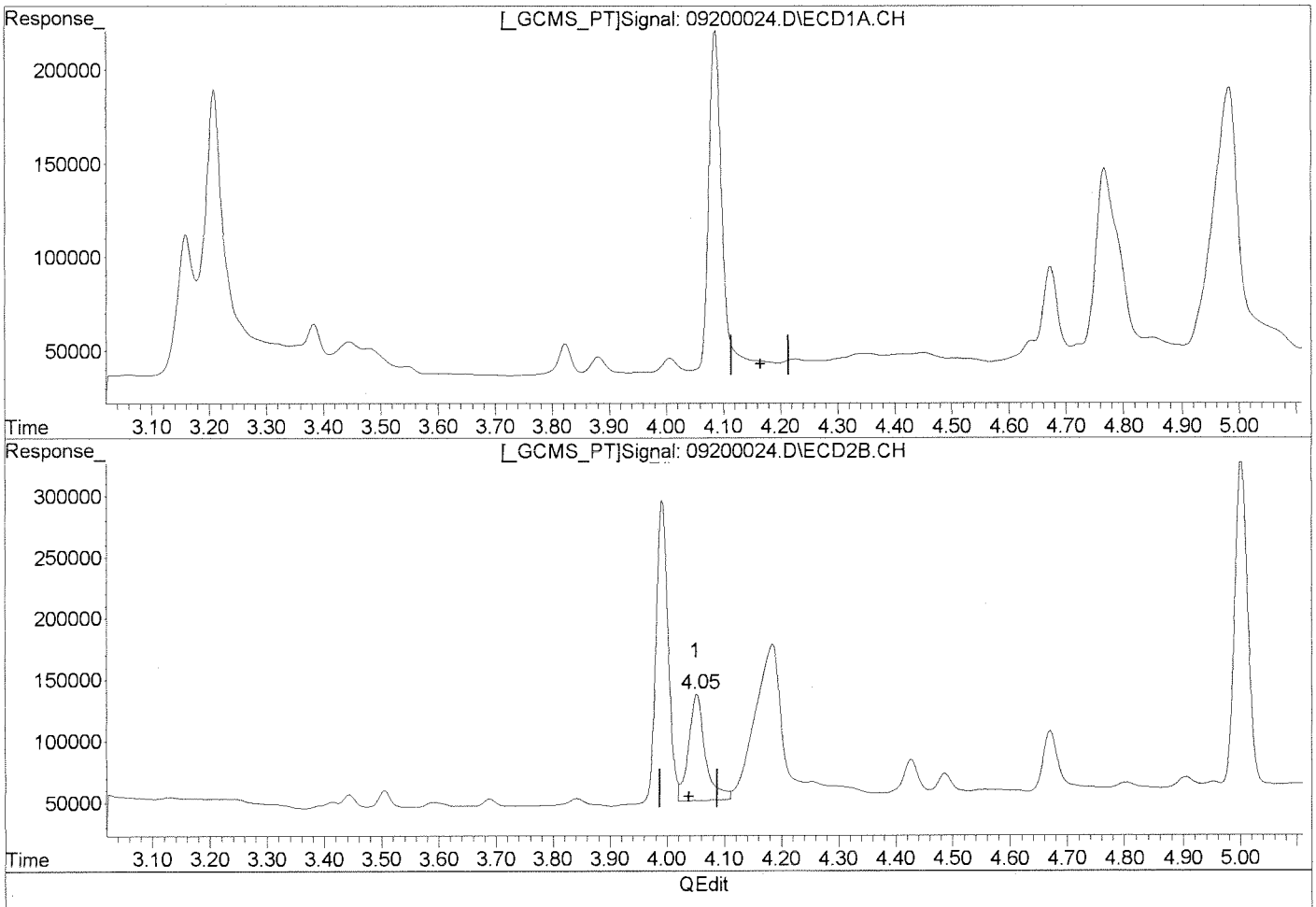




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 11.823ppb

response 173958

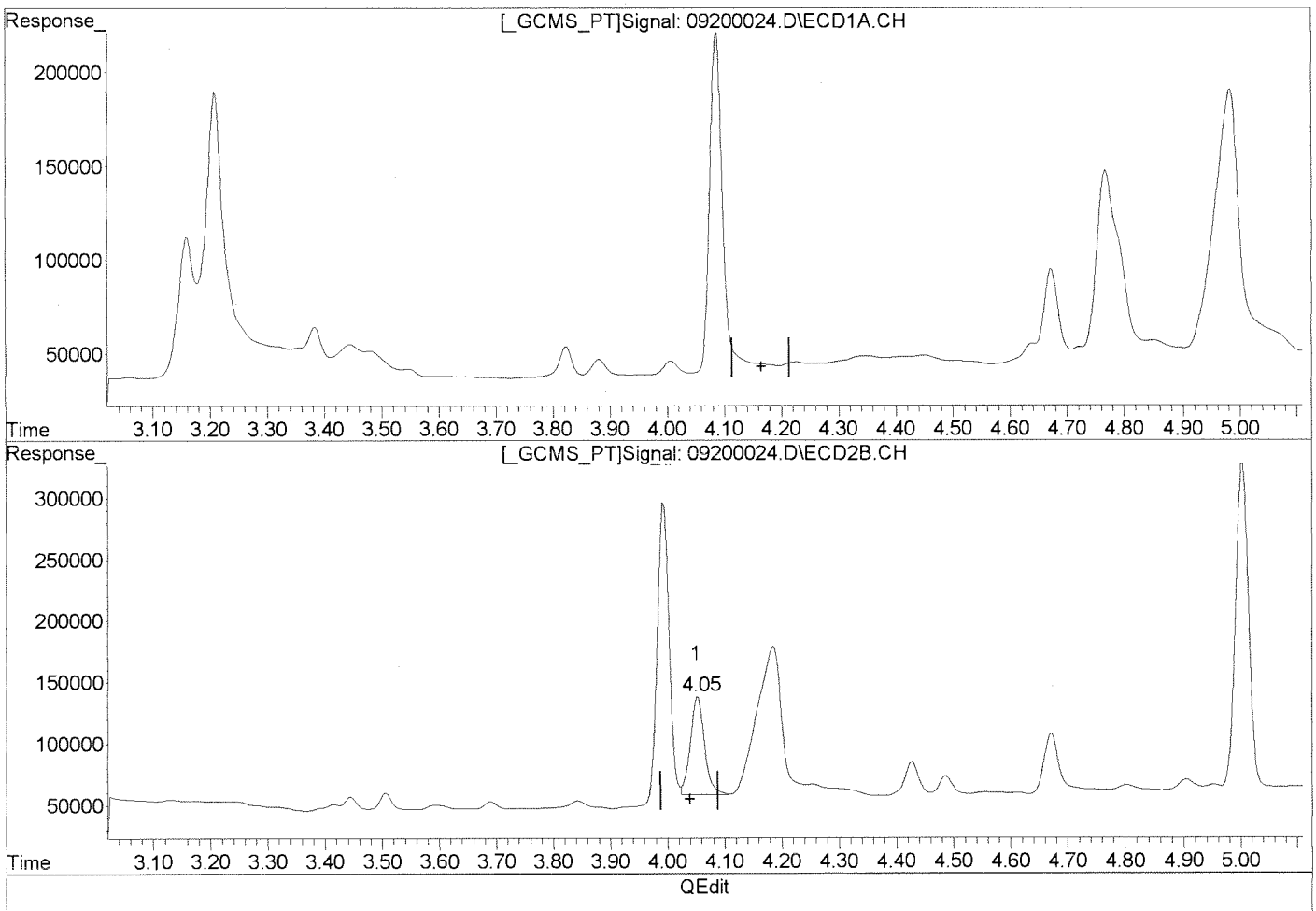
(+) = Expected Retention Time

09200024.D 092013_515.M Tue Oct 01 13:31:58 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)
0.00min 0.000ppb
response 0

(2) Dalapon #2 (m)
4.05min 8.808ppb m
response 135571

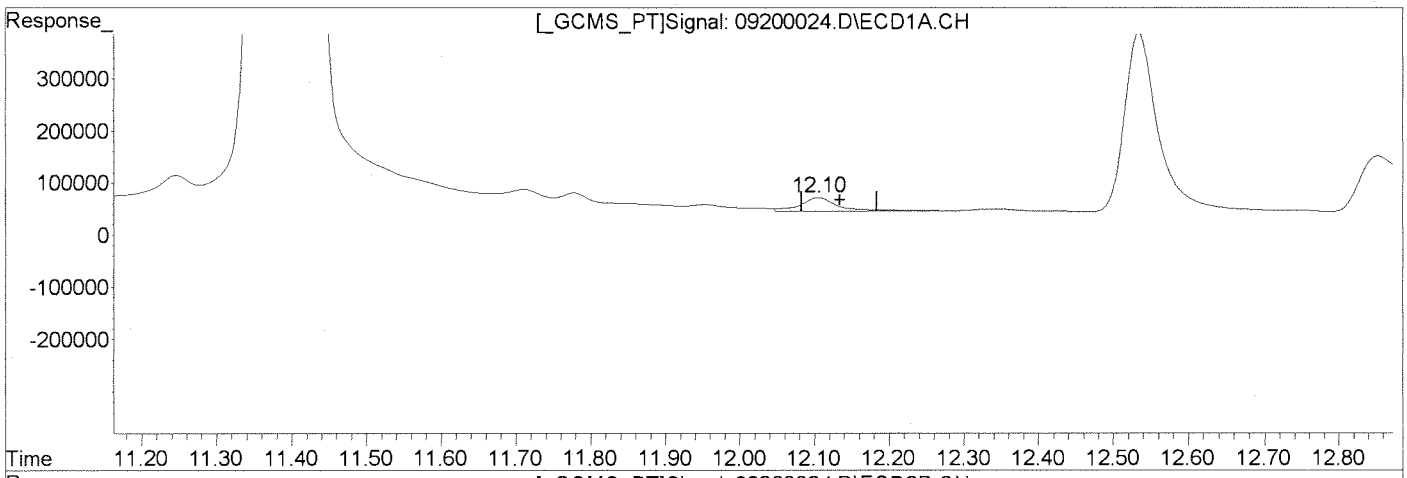
Manual Integration:
After
Baseline/Shoulder
10/01/13

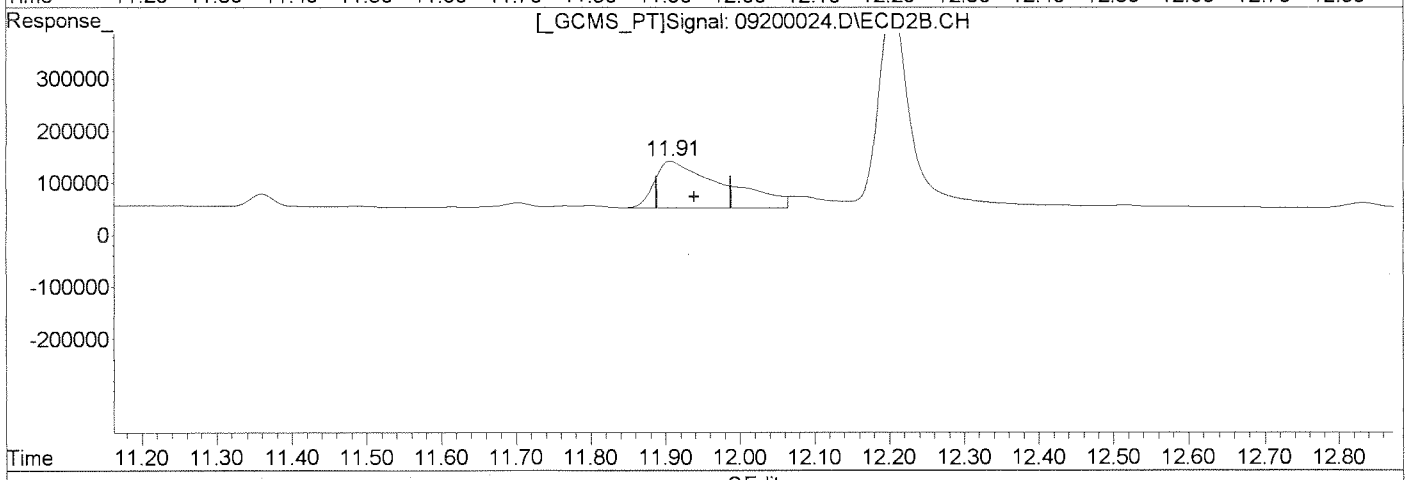
(+) = Expected Retention Time
09200024.D 092013_515.M Tue Oct 01 13:32:16 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.10min 24.546ppb

response 90937

(4) 4-Nitrophenol #2 (m)

11.91min 161.549ppb

response 583800

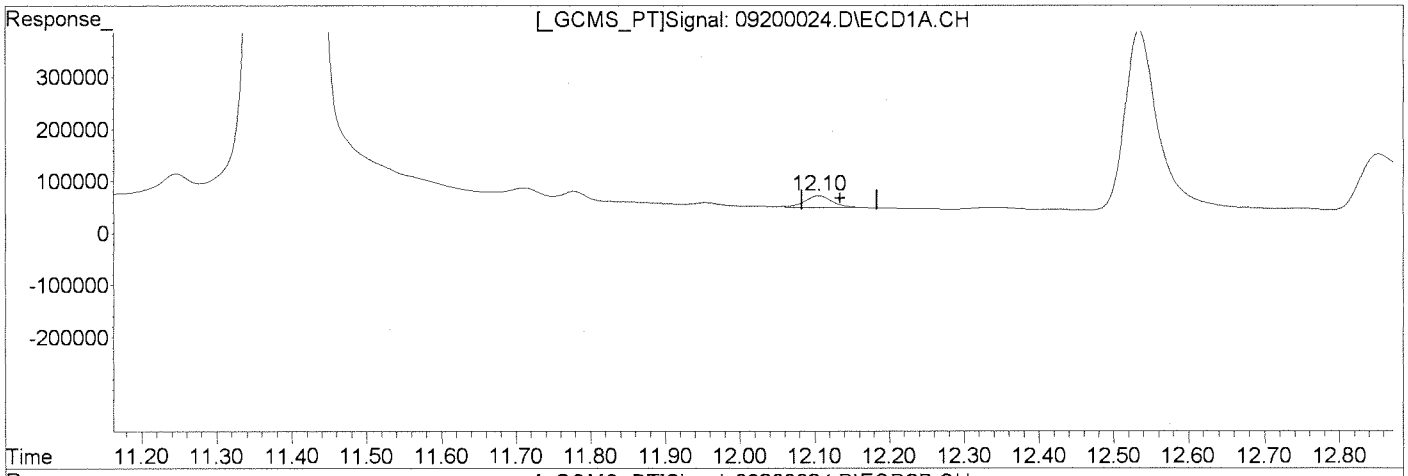
(+) = Expected Retention Time

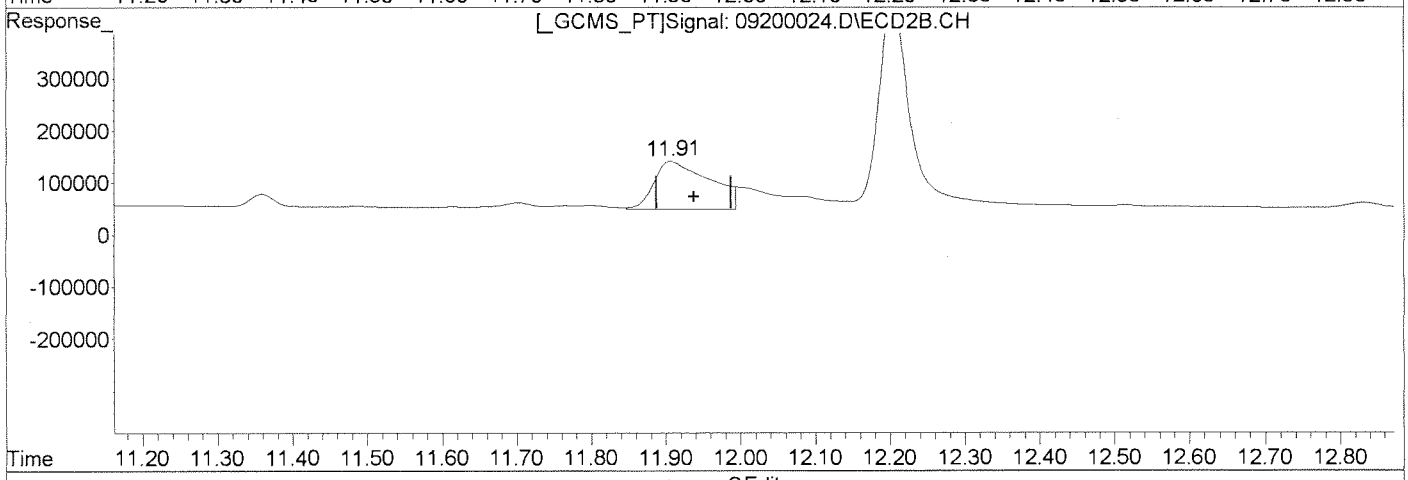
09200024.D 092013_515.M Tue Oct 01 13:32:59 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.10min 15.284ppb m

response 56626

(4) 4-Nitrophenol #2 (m)

11.91min 133.039ppb m

response 480771

Manual Integration:

After

Baseline/Shoulder

10/01/13

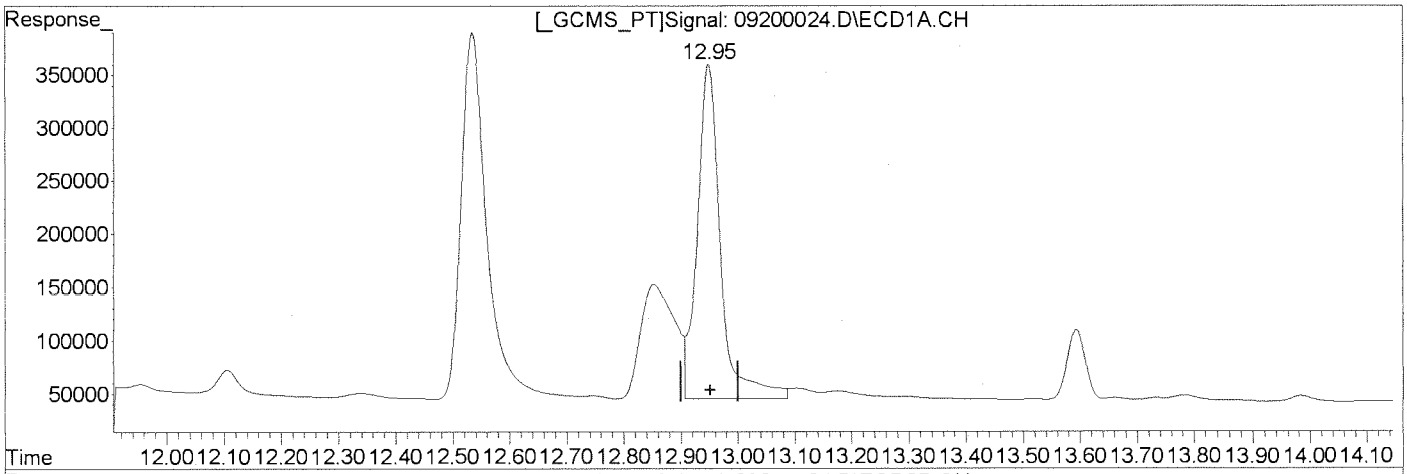
(+) = Expected Retention Time

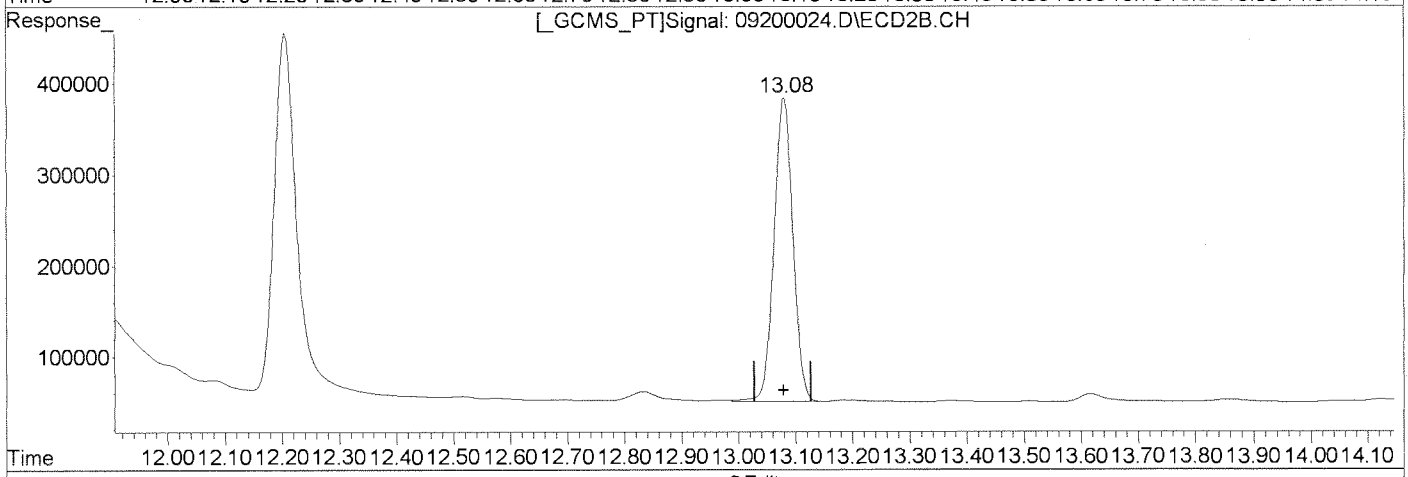
09200024.D 092013_515.M Tue Oct 01 13:33:18 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 105.688ppb

response 890007

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.828ppb

response 768267

Manual Integration:

Before

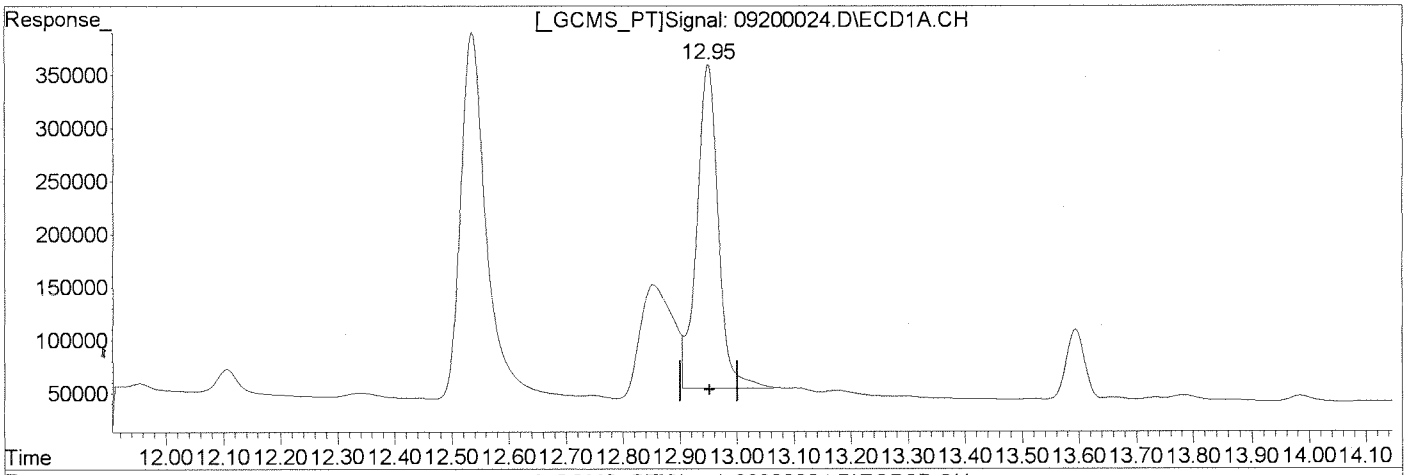
(+) = Expected Retention Time

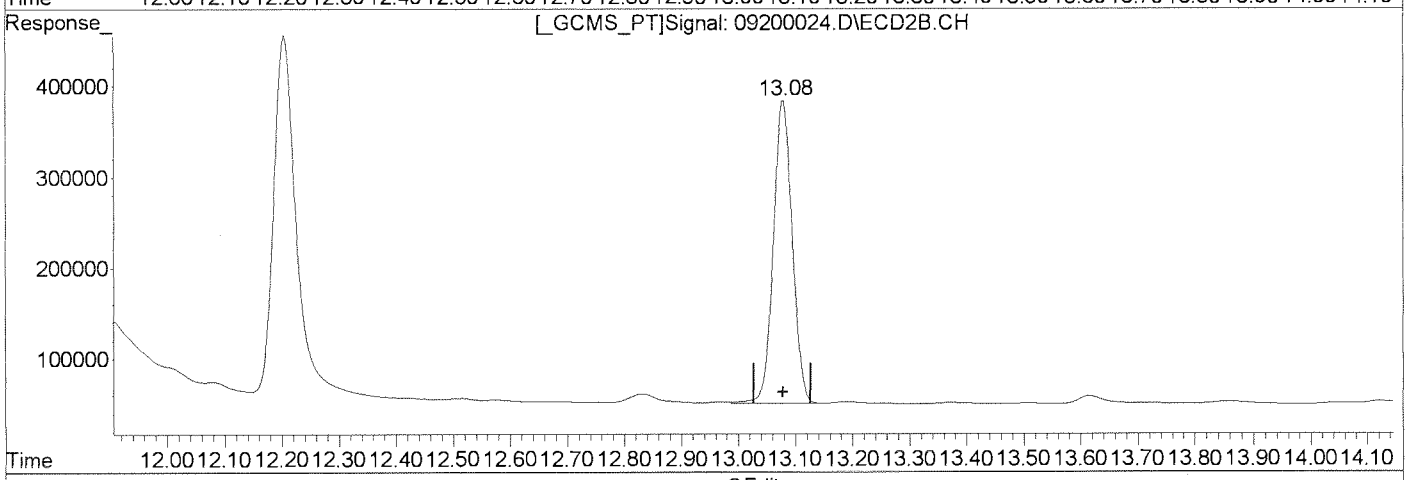
09200024.D 092013_515.M Tue Oct 01 13:33:25 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 94.257ppb m

response 793743

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.828ppb

response 768267

Manual Integration:

After

Baseline/Shoulder

10/01/13

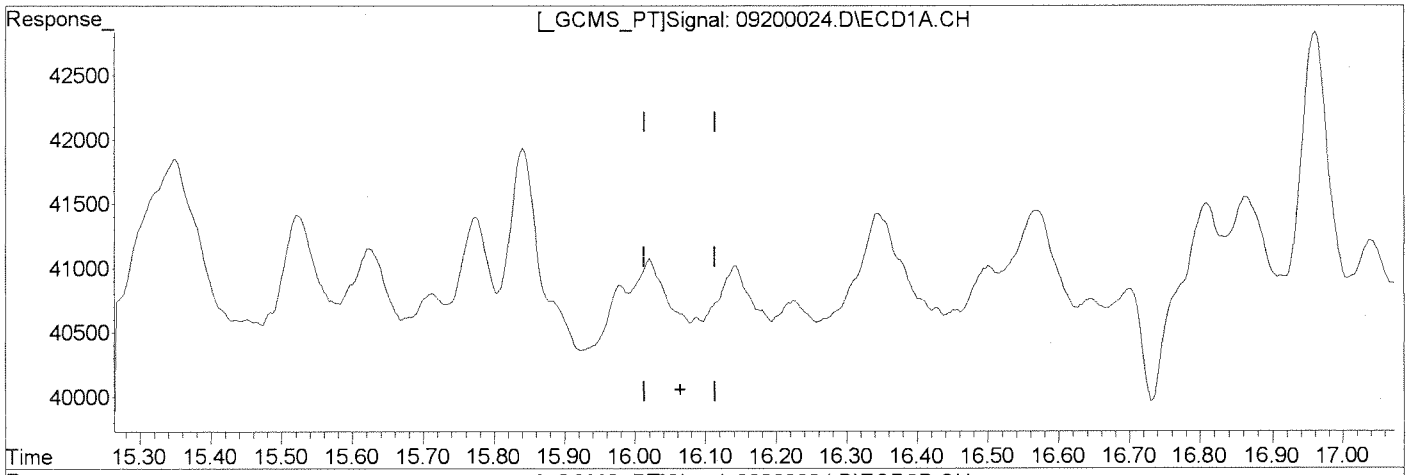
(+) = Expected Retention Time

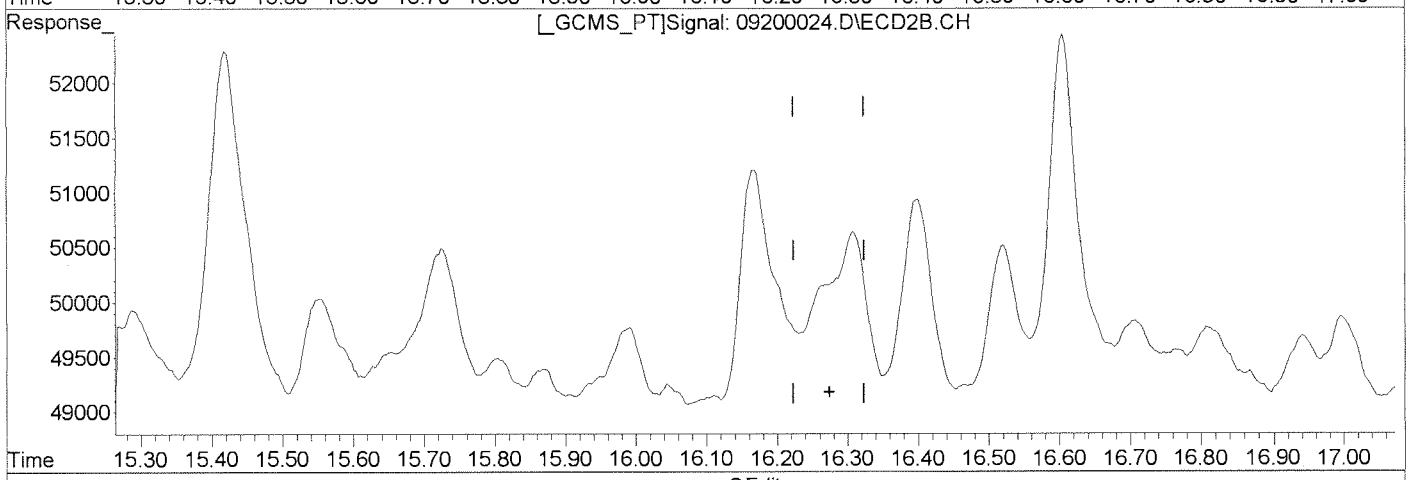
09200024.D 092013_515.M Tue Oct 01 13:33:37 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

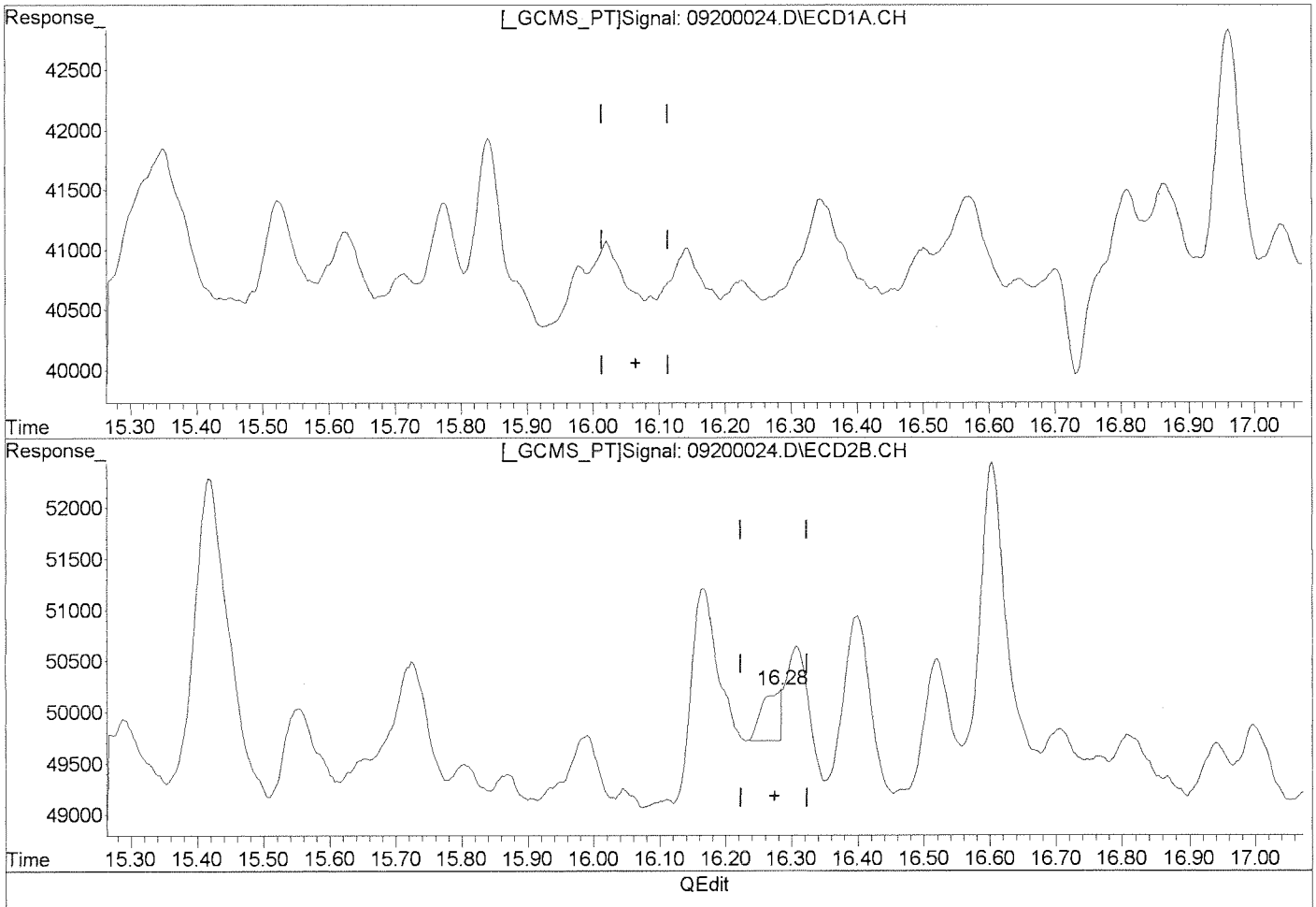
(+) = Expected Retention Time

09200024.D 092013_515.M Tue Oct 01 13:34:03 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)
0.00min 0.000ppb
response 0

(11) 2,4,5-TP (Silvex) #2 (m)
16.28min -0.547ppb m
response 960

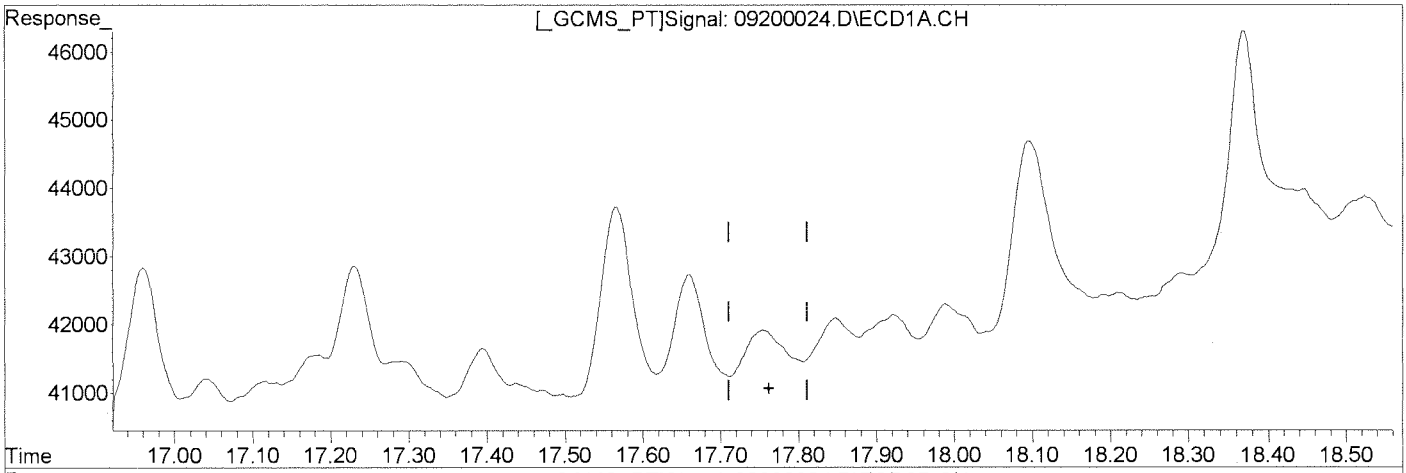
Manual Integration:
After
Missed Peak
10/01/13

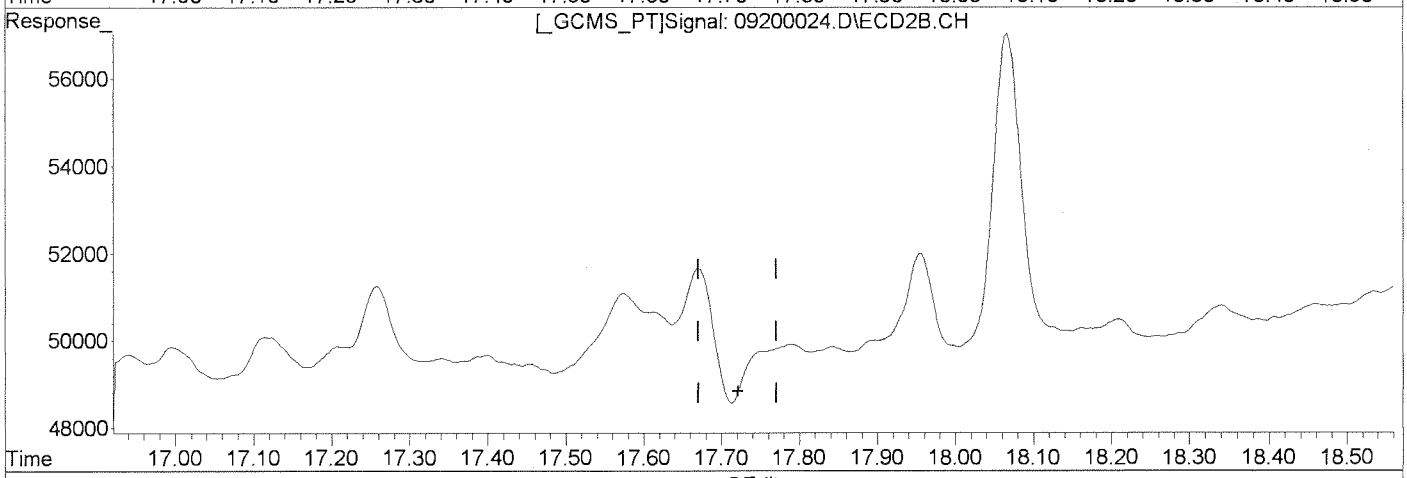
(+) = Expected Retention Time
09200024.D 092013_515.M Tue Oct 01 13:34:11 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

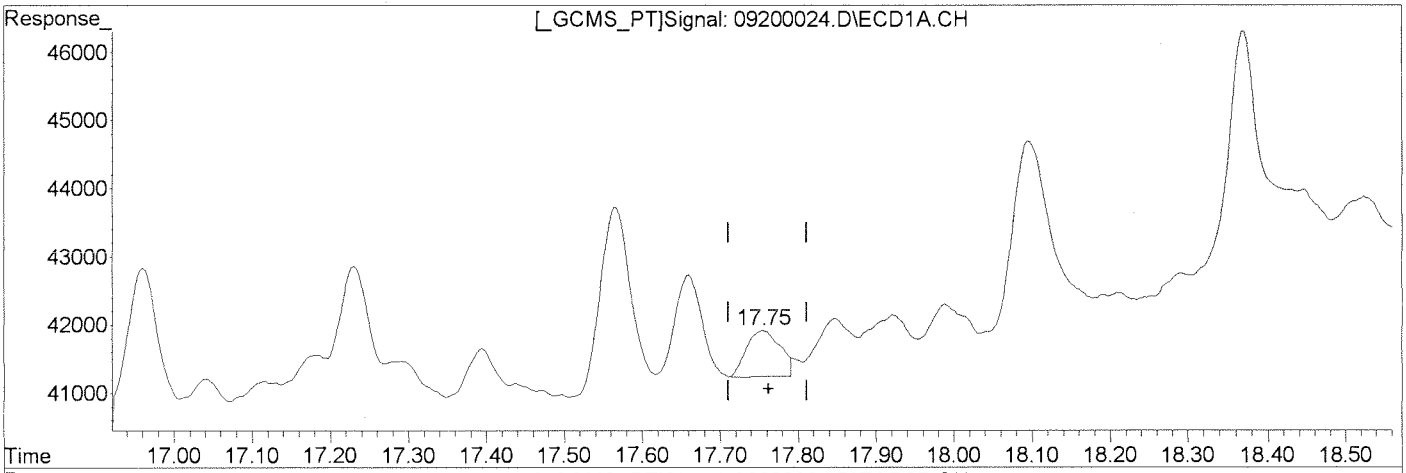
(+) = Expected Retention Time

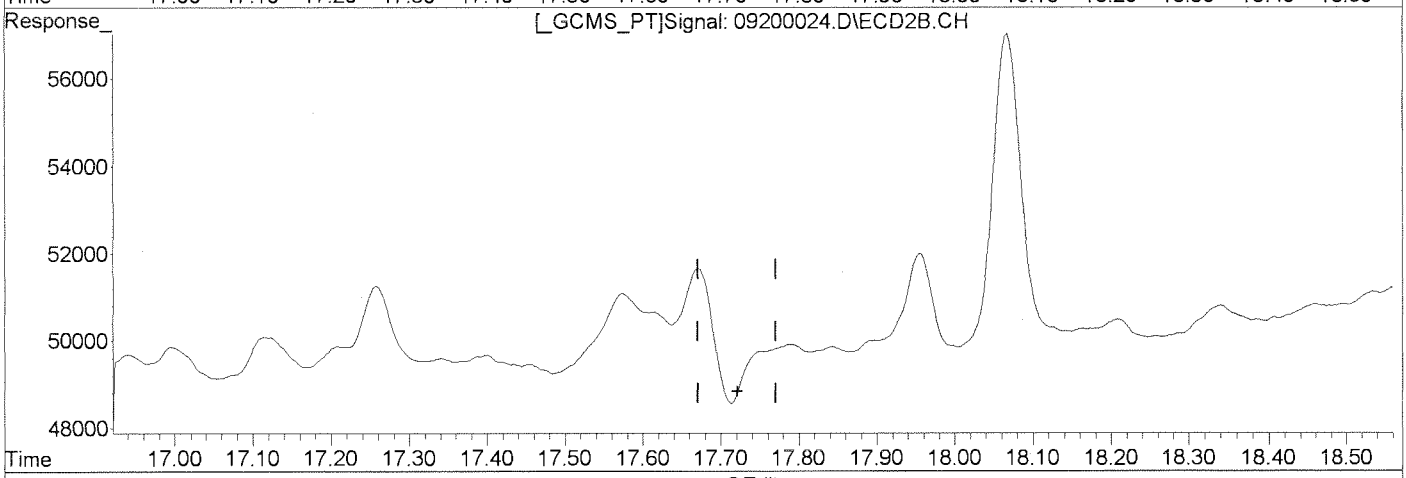
09200024.D 092013_515.M Tue Oct 01 13:34:24 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

17.75min -3.847ppb m

response 2060

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Missed Peak

10/01/13

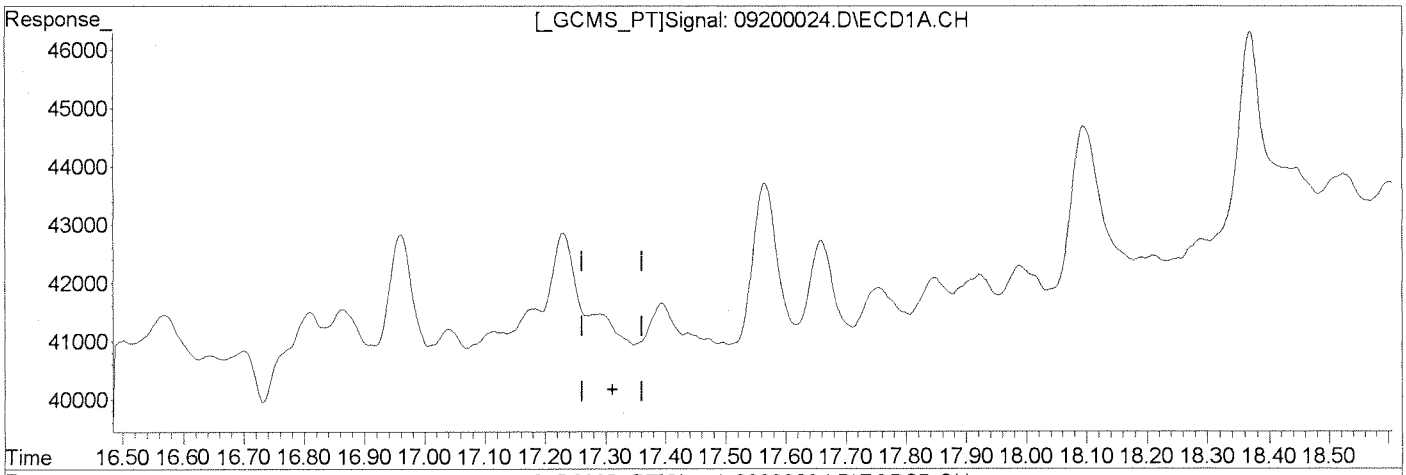
(+) = Expected Retention Time

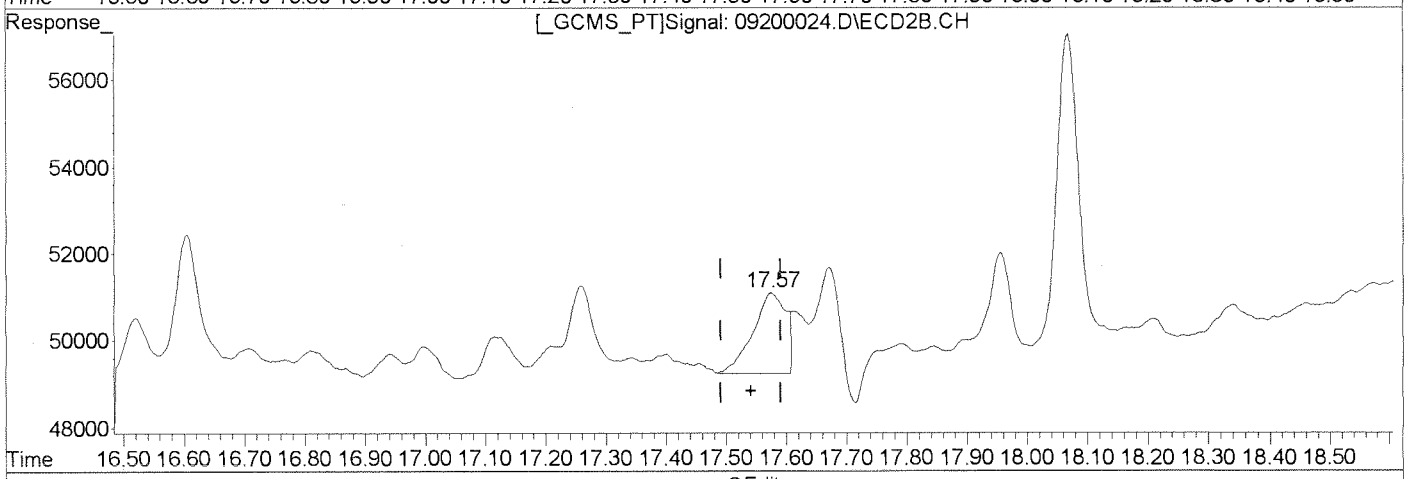
09200024.D 092013_515.M Tue Oct 01 13:34:33 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

(15) 2,4-DB #2 (m)

17.57min -3.367ppb

response 7115

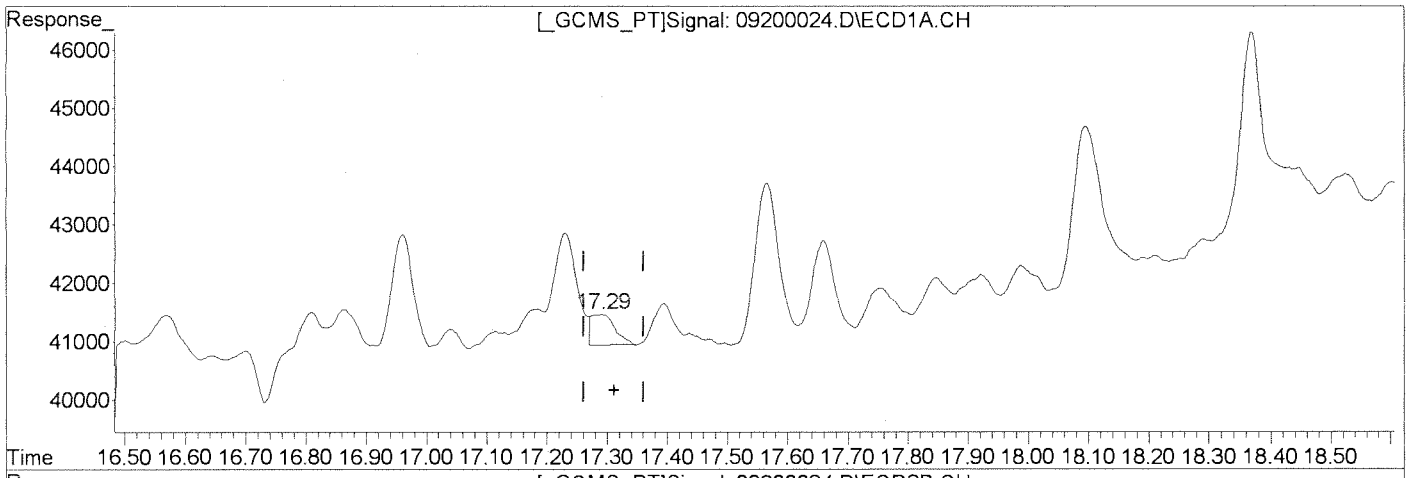
(+) = Expected Retention Time

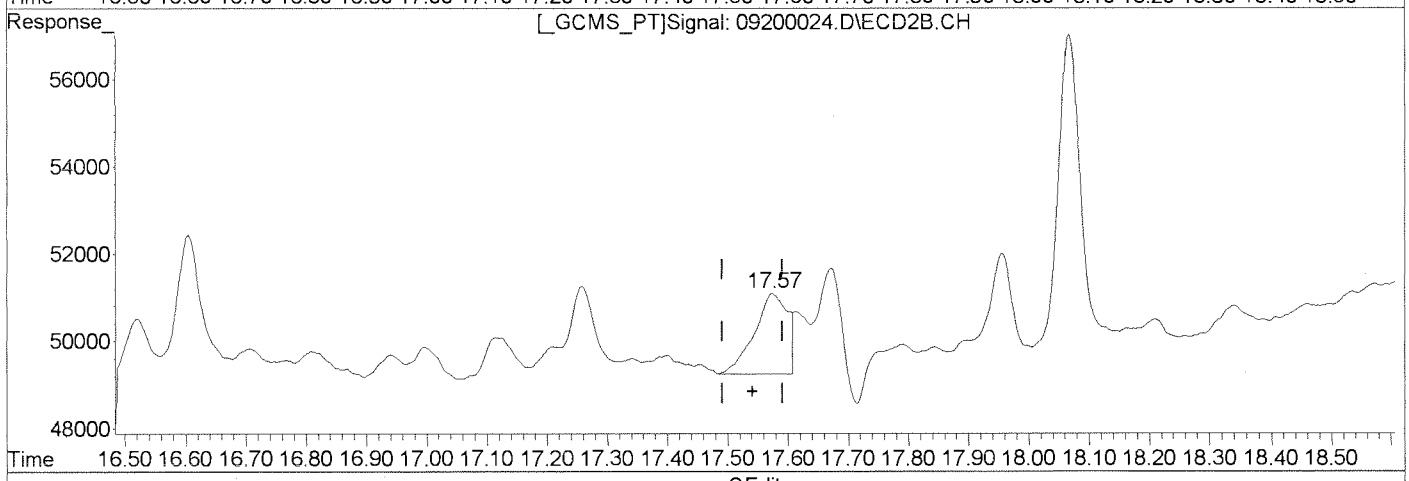
09200024.D 092013_515.M Tue Oct 01 13:34:41 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

17.29min 0.304ppb m

response 1387

(15) 2,4-DB #2 (m)

17.57min -3.367ppb

response 7115

Manual Integration:

After

Missed Peak

10/01/13

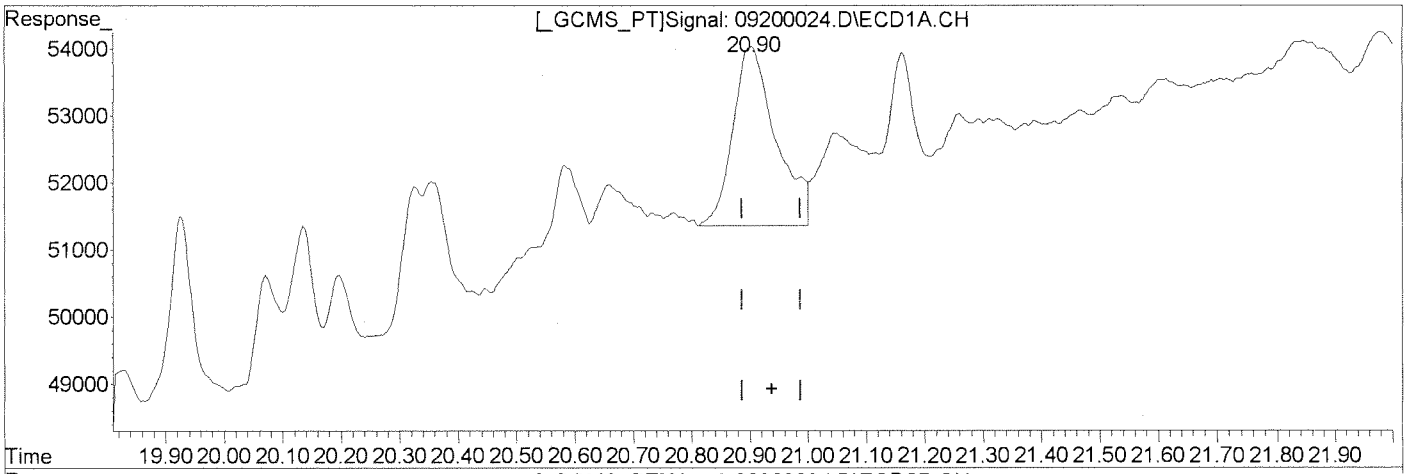
(+) = Expected Retention Time

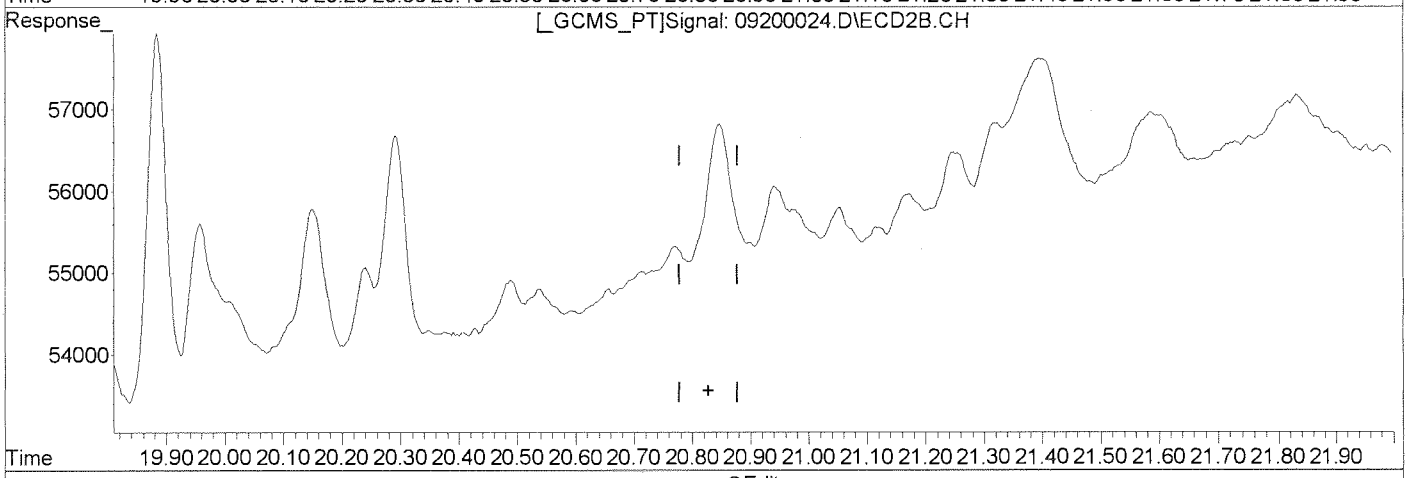
09200024.D 092013_515.M Tue Oct 01 13:34:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.90min 0.622ppb

response 13905

Manual Integration:

Before

(19) Acifluorfen #2 (m)

0.00min 0.000ppb

response 0

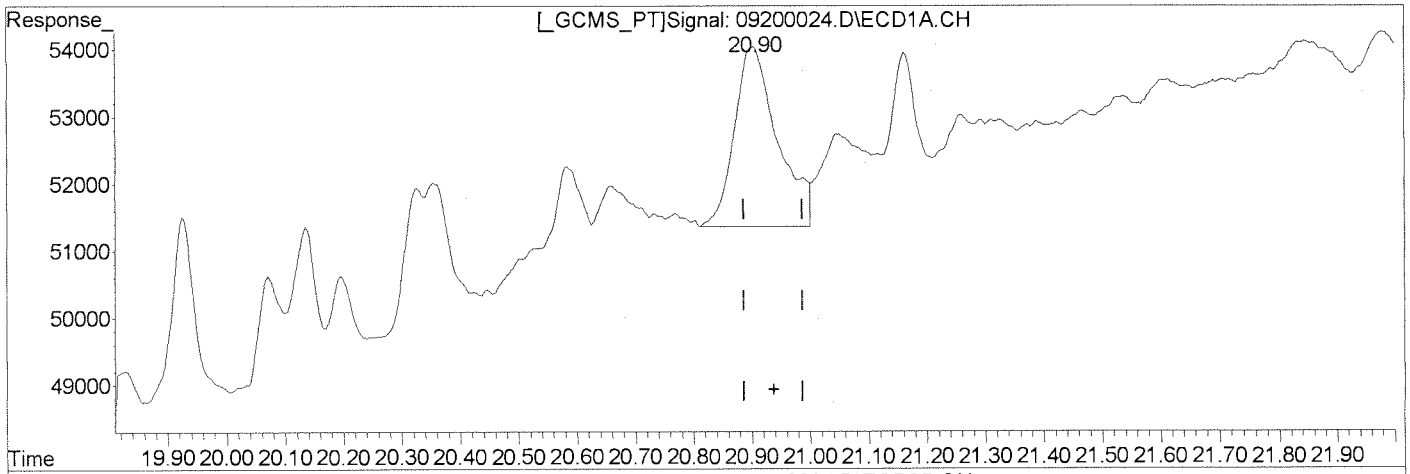
(+) = Expected Retention Time

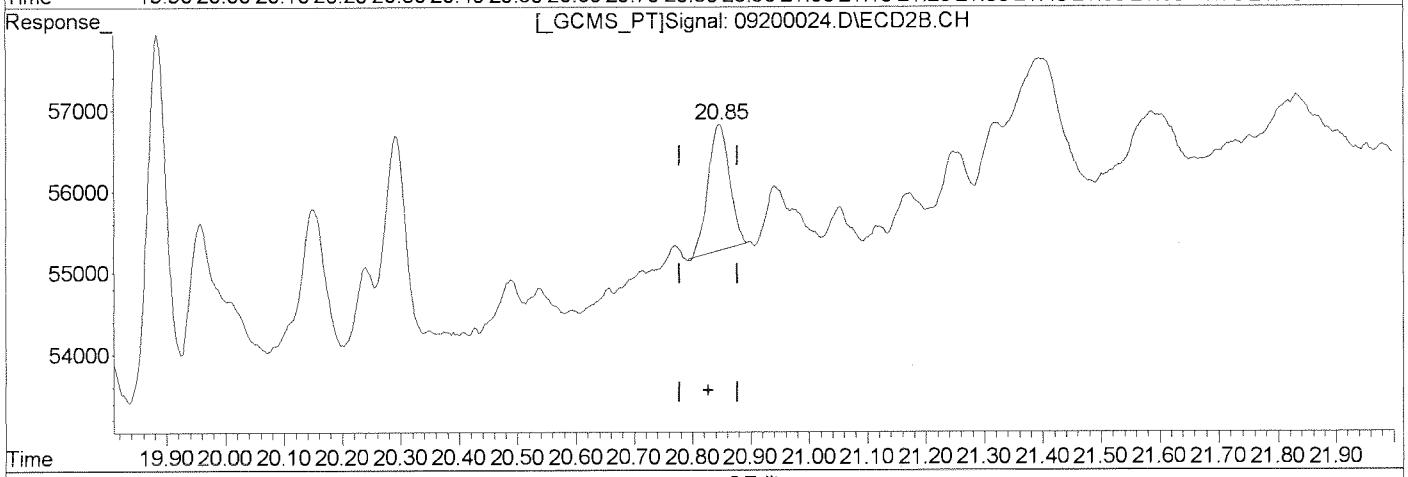
09200024.D 092013_515.M Tue Oct 01 13:35:05 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200024.D\ECD1A.CH Vial: 19
Signal #2 : J:\GC24\DATA\092013.515\09200024.D\ECD2B.CH
Acq On : 09-21-2013 03:33:10 AM Operator: JSCHWAB
Sample : K1309638-004 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.90min 0.622ppb

response 13905

(19) Acifluorfen #2 (m)

20.85min 0.206ppb m

response 3997

Manual Integration:

After

Missed Peak

10/01/13

(+) = Expected Retention Time

09200024.D 092013_515.M Tue Oct 01 13:35:14 2013

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	120	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200025.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 04:02
Date Quantitated: 10/01/2013 13:43
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Qual SCV

Primary Review: JBS 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200025.D\09200025C.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 04:02
Date Quantitated: 10/01/2013 13:43
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JR 10-01-13

Secondary Review: AN

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200025.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200025.D\09200025c.d			**Vial:**	20
Acqu Date:	09/21/2013 04:02	**Quant Date:**	10/01/2013 13:43	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-005				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282808	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1174957	1120435	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	807552m	871921	94.10	120.19			120OK
				%Recovery =		94 OK	120 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	131941m	0.0000	8.30	0.040U	0.83J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol		16.17 -0.01	0	9078	0.0000	0.0810	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)	16.02 -0.04		783m	790m	0.0190	0.0000	0.020U	0.020U	0.020U
1	Dinoseb		17.67 -0.05	2105m	7622	0.0000	0.3680	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.24 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:41 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1174957	1120435	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	807552	871921	94.097m	120.188 #
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	131941	N.D.	8.303m#
3)	m	3,5-Dichlorobenz	11.06	0.00	36742	0	2.582	N.D. #
4)	m	4-Nitrophenol	12.10f	11.91f	61133	373905	16.191m	101.271m#
6)	m	Dicamba	13.29	13.20	4008	14907	0.121m	0.466m#
7)	m	Dichloroprop	14.40f	0.00	6386	0	0.668	N.D. #
10)	m	Pentachloropheno	0.00	16.17	0	9078	N.D.	0.081 #
13)	m	Chloramben	0.00	16.60	0	7110	N.D.	0.350 #
19)	m	Acifluorfen	20.92	20.85	8856	3585	0.389	0.181m#

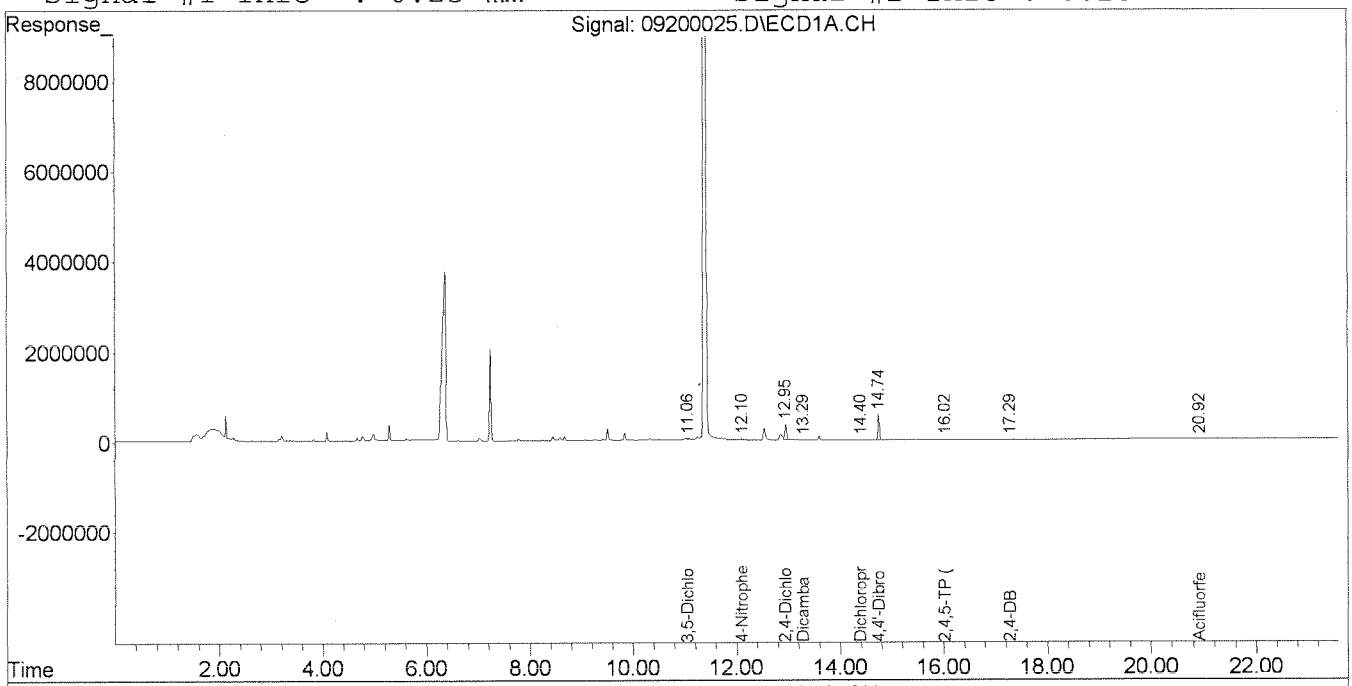
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

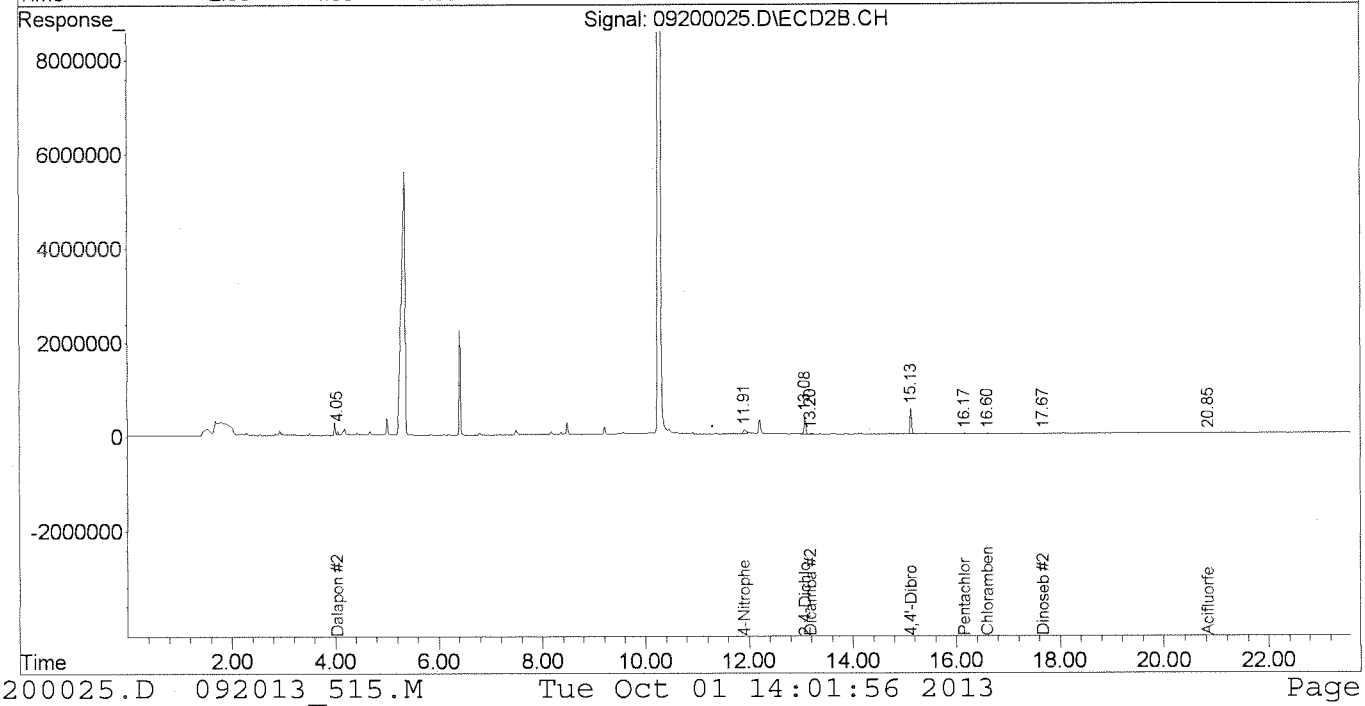
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:43 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

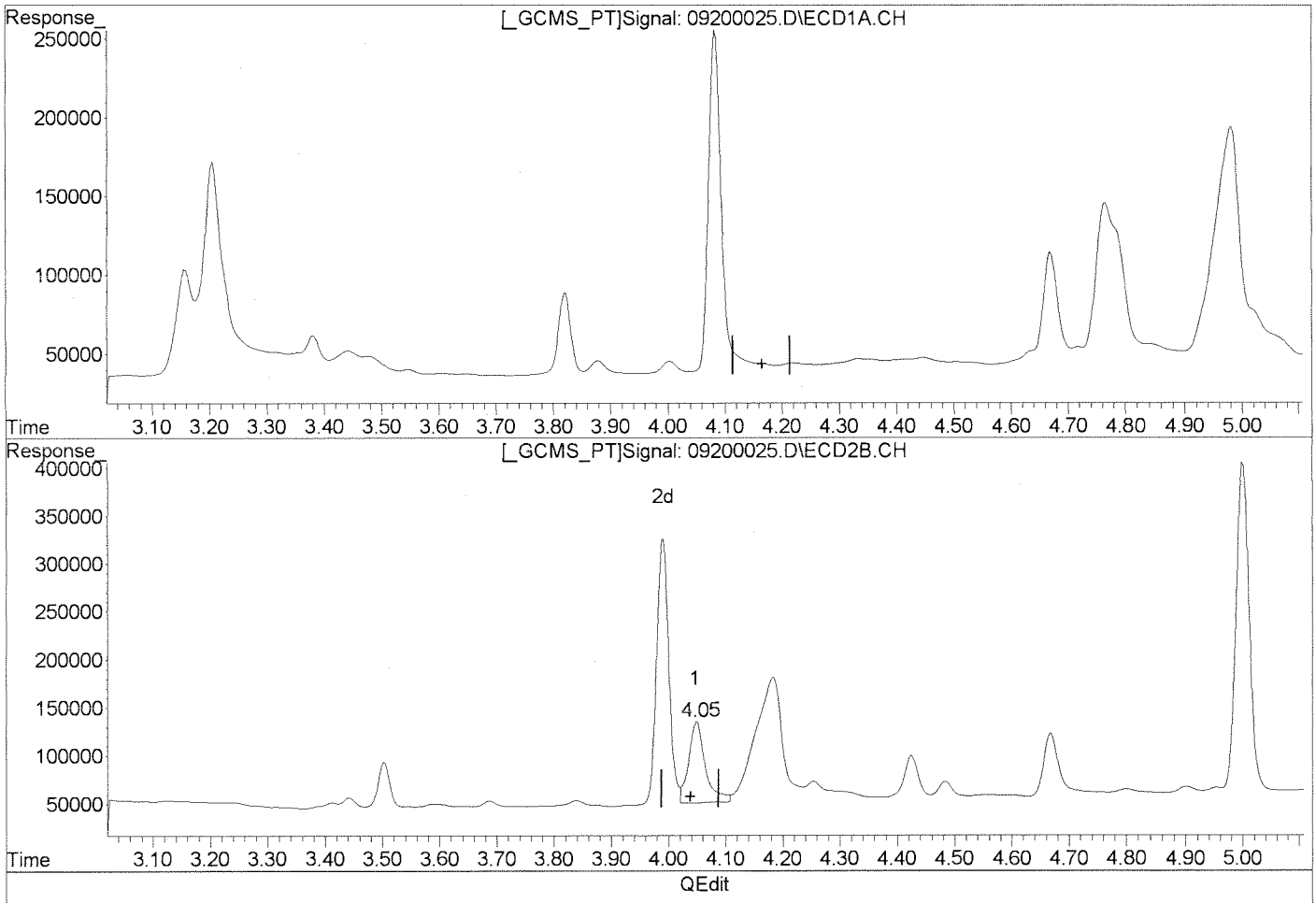




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(2) Dalapon #2 (m)

4.05min 11.312ppb

response 171073

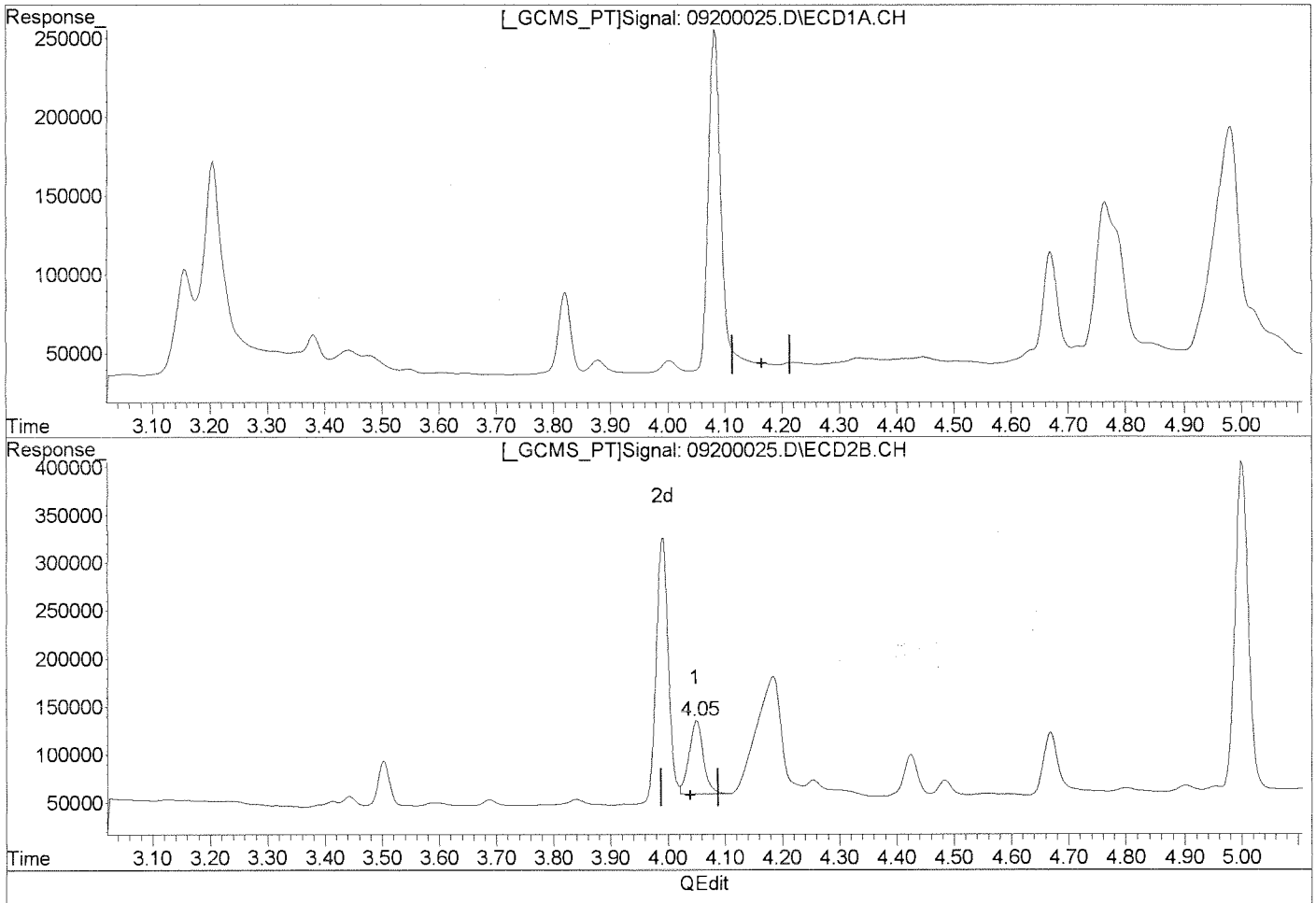
(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:35:38 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 8.303ppb m

response 131941

Manual Integration:

After

Baseline/Shoulder

10/01/13

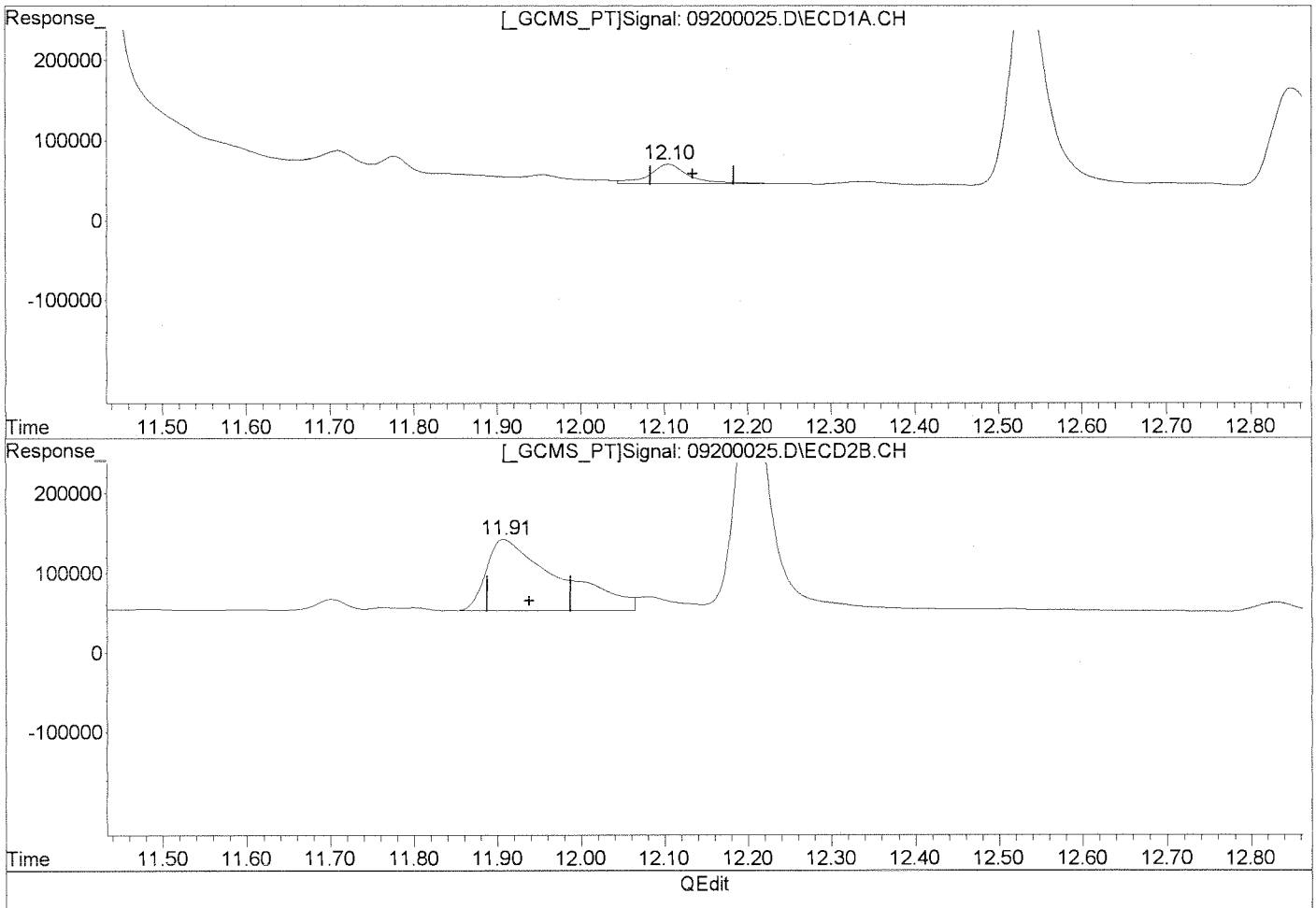
(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:35:51 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.10min 21.458ppb

response 81017

(4) 4-Nitrophenol #2 (m)

11.91min 147.947ppb

response 546236

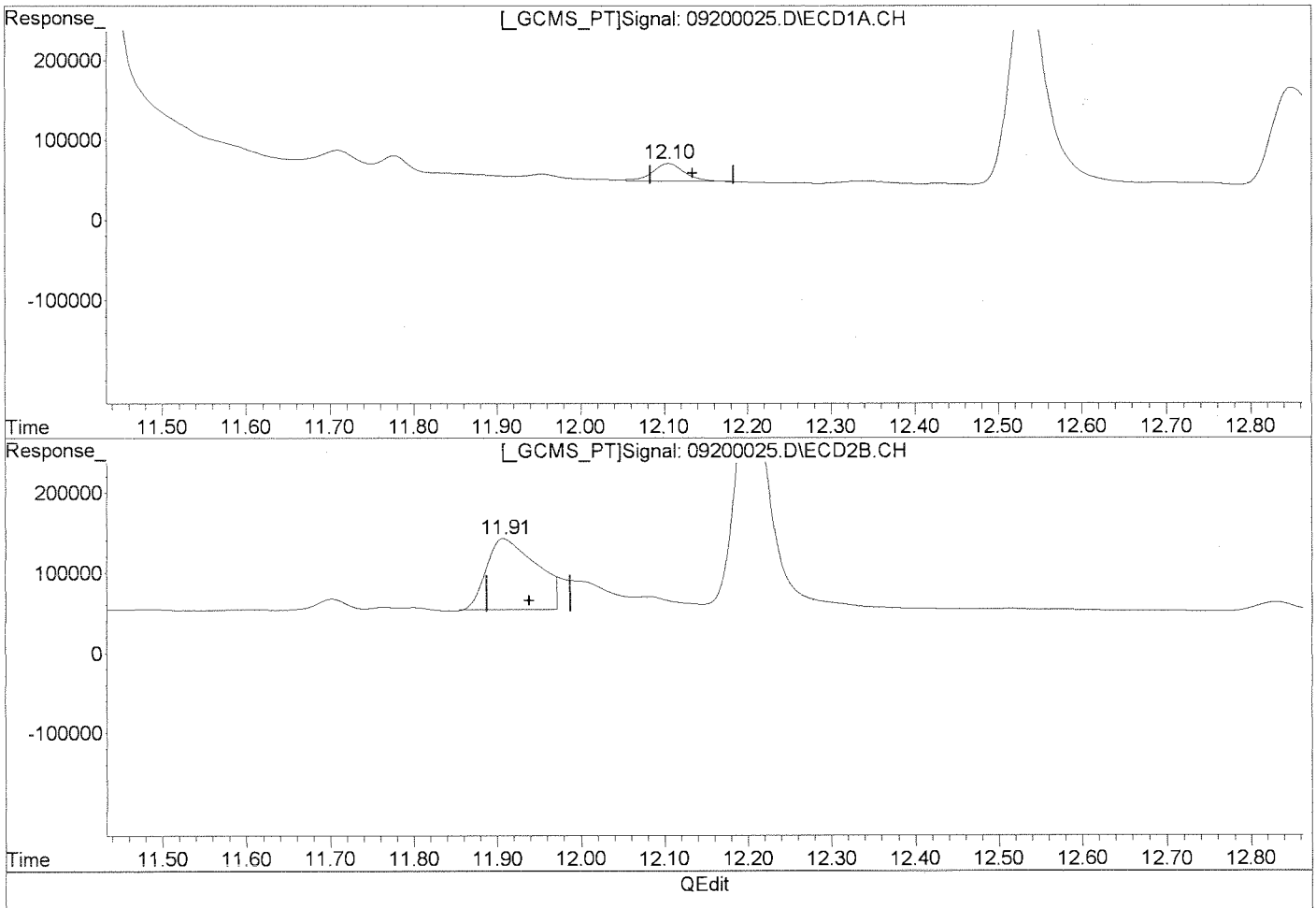
(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:36:11 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(4) 4-Nitrophenol (m)

12.10min 16.191ppb m

response 61133

(4) 4-Nitrophenol #2 (m)

11.91min 101.271ppb m

response 373905

Manual Integration:

After

Baseline/Shoulder

10/01/13

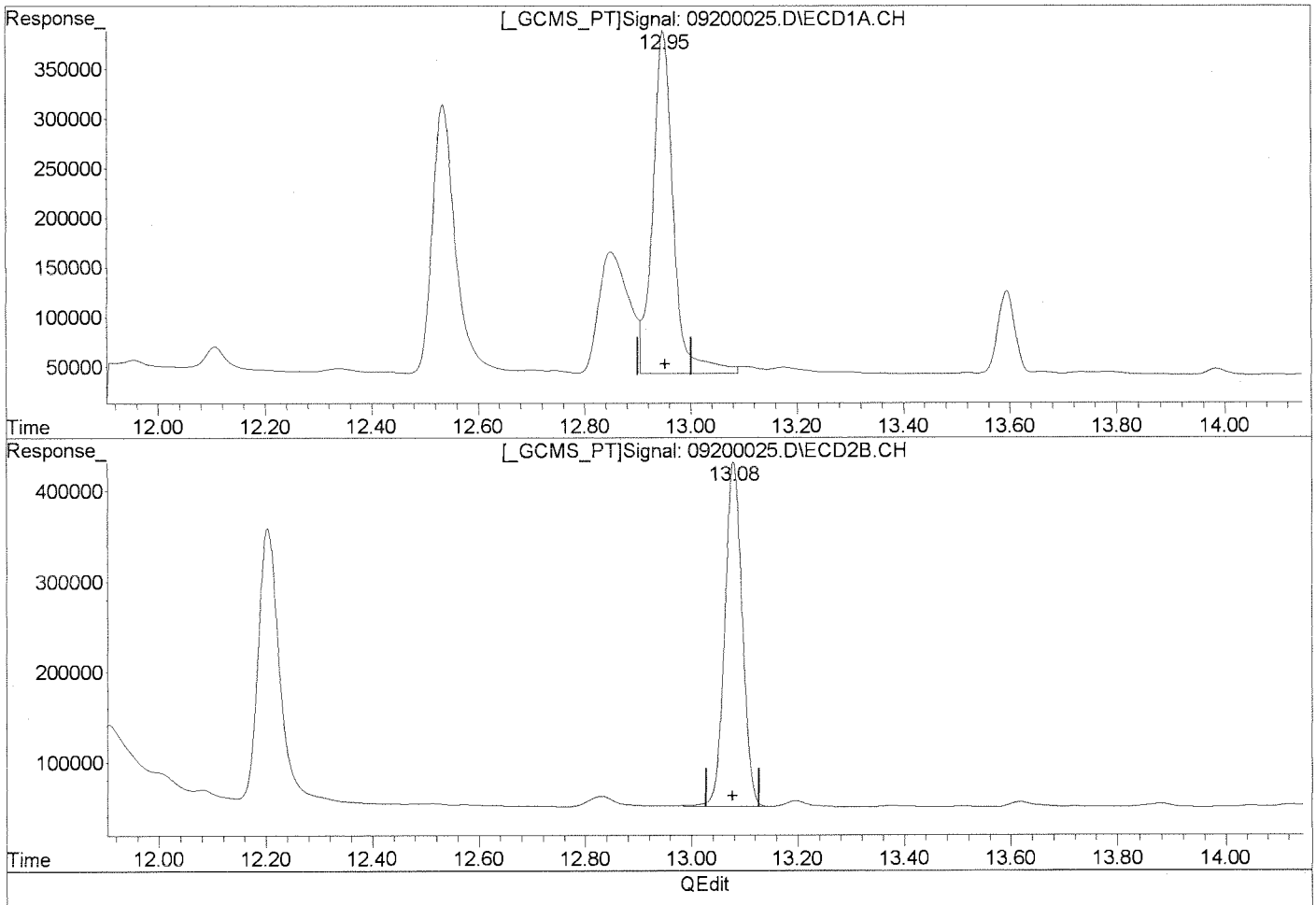
(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:36:30 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 107.886ppb

response 925891

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 120.188ppb

response 871921

Manual Integration:

Before

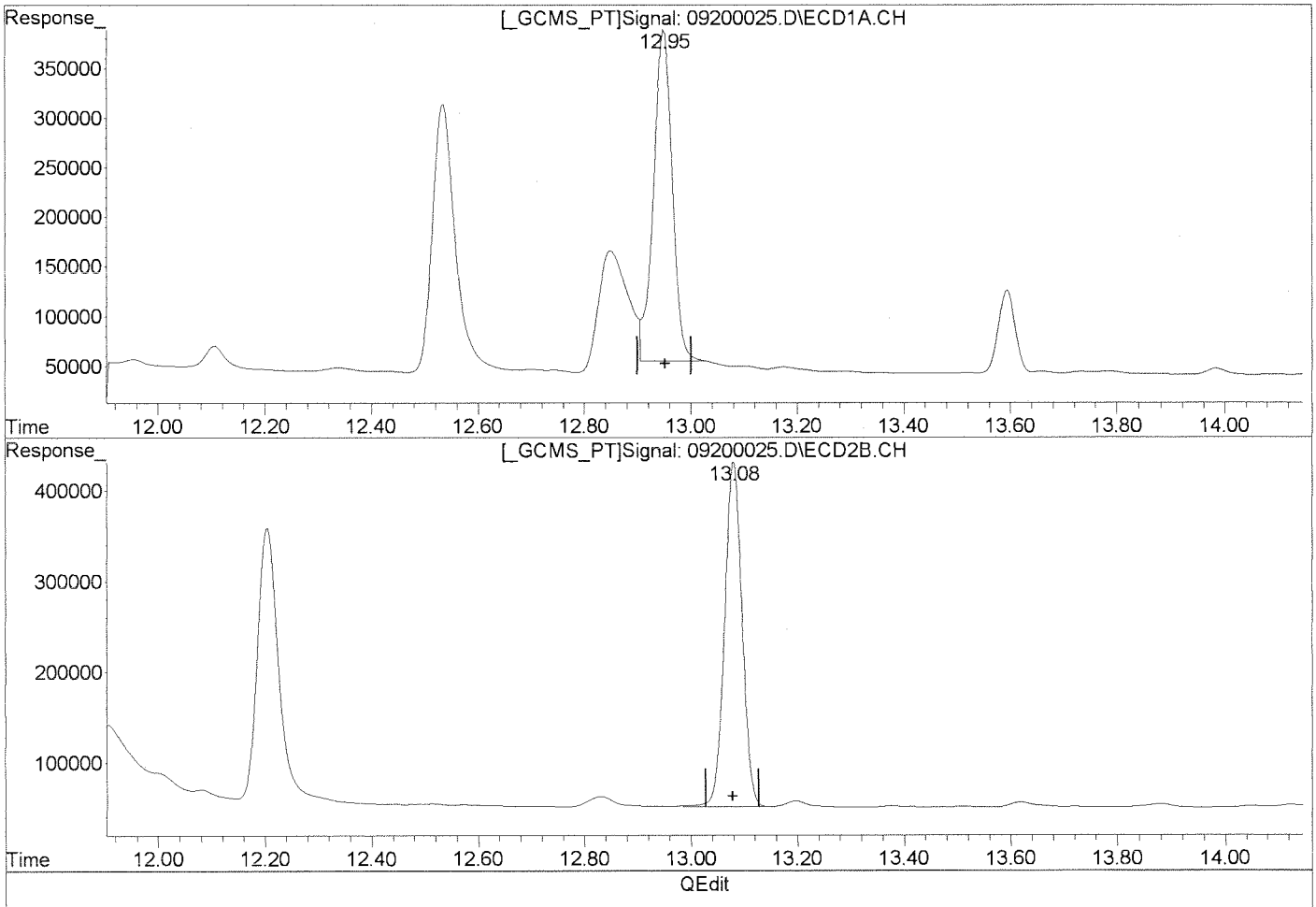
(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:36:34 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 94.097ppb m

response 807552

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 120.188ppb

response 871921

Manual Integration:

After

Baseline/Shoulder

10/01/13

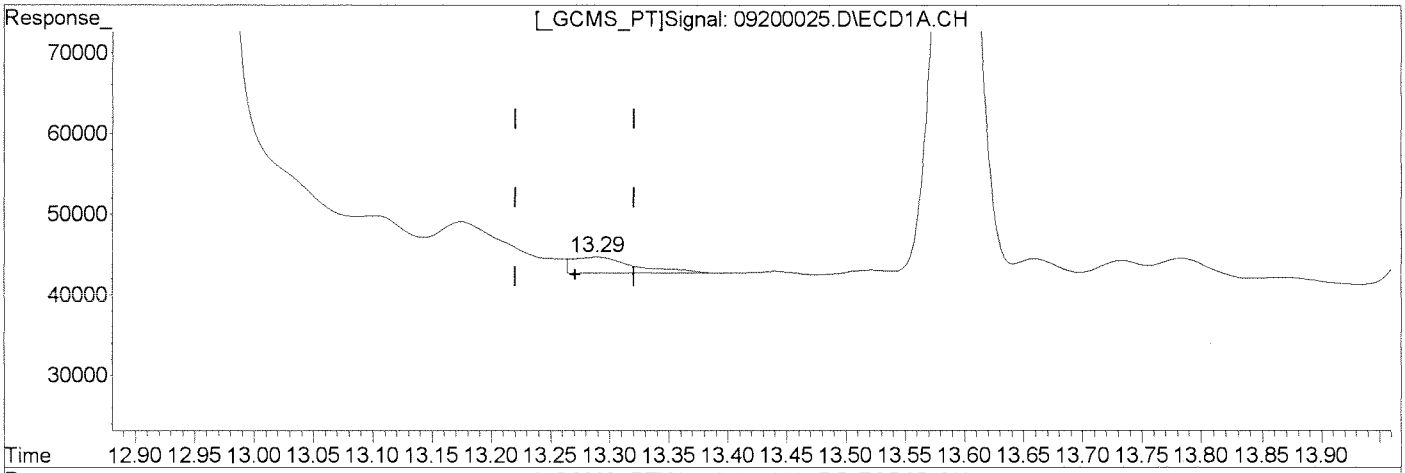
(+) = Expected Retention Time

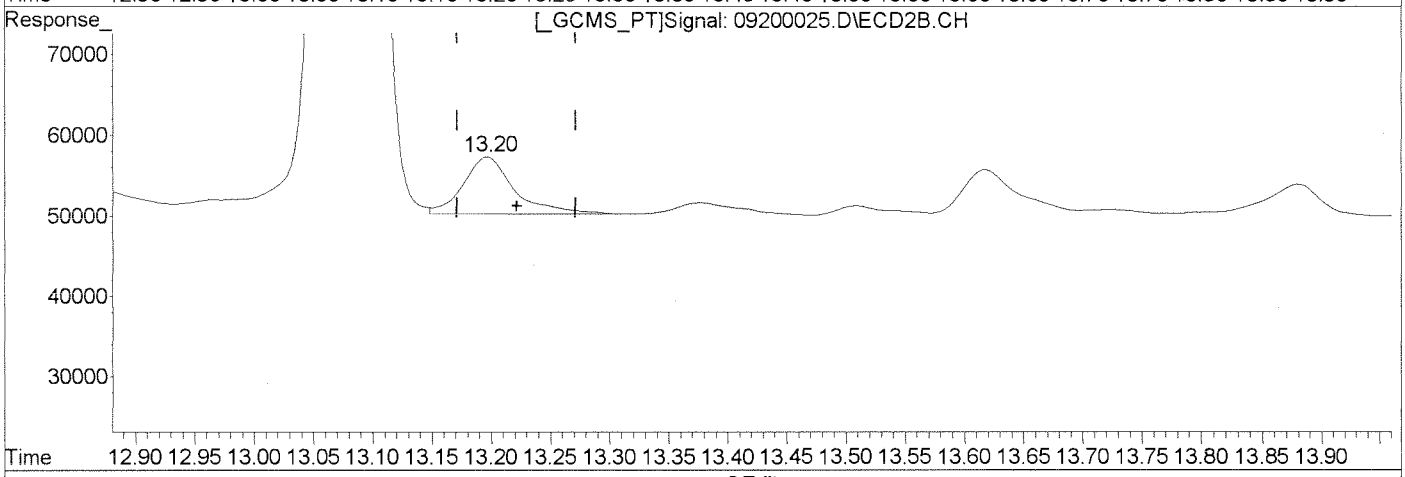
09200025.D 092013_515.M Tue Oct 01 13:36:48 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(6) Dicamba (m)

13.29min 0.212ppb

response 7029

(6) Dicamba #2 (m)

13.20min 0.672ppb

response 21524

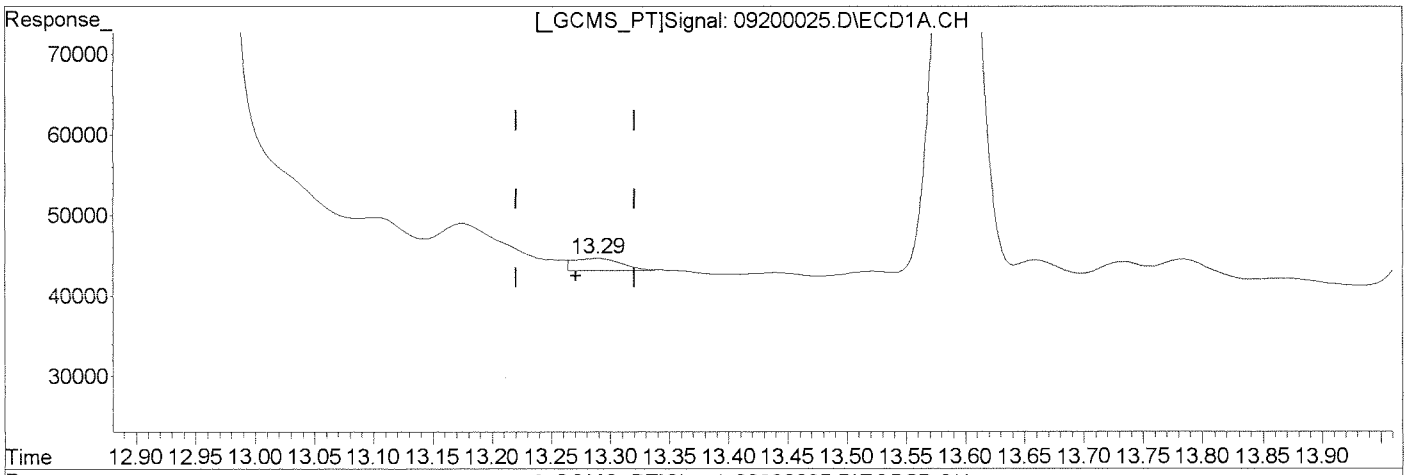
(+) = Expected Retention Time

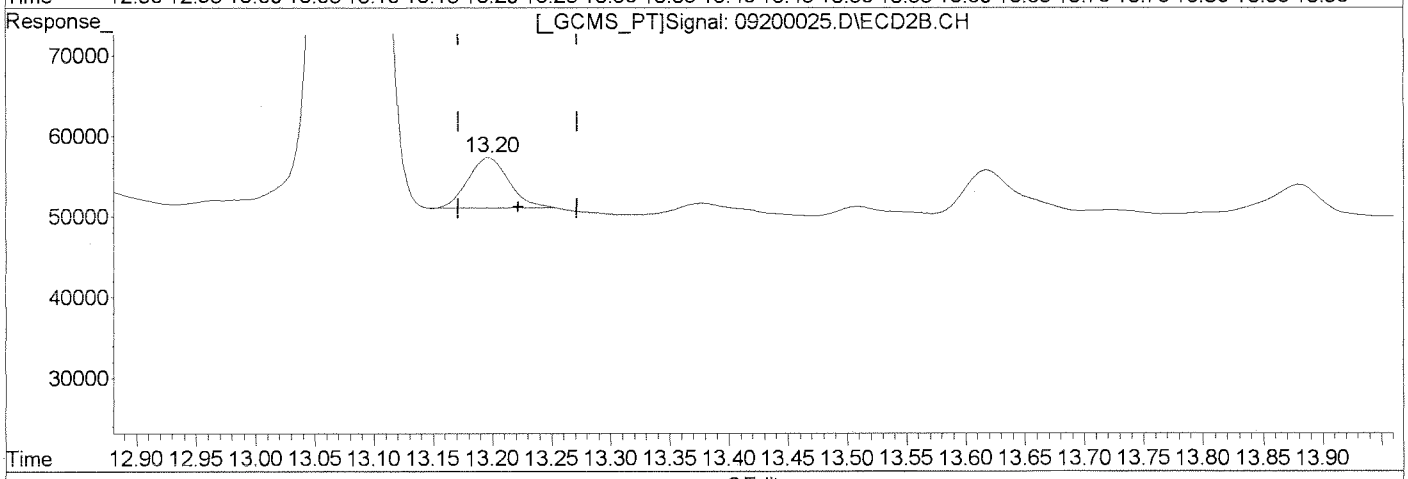
09200025.D 092013_515.M Tue Oct 01 13:36:56 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(6) Dicamba (m)

13.29min 0.121ppb m

response 4008

(6) Dicamba #2 (m)

13.20min 0.466ppb m

response 14907

Manual Integration:

After

Baseline/Shoulder

10/01/13

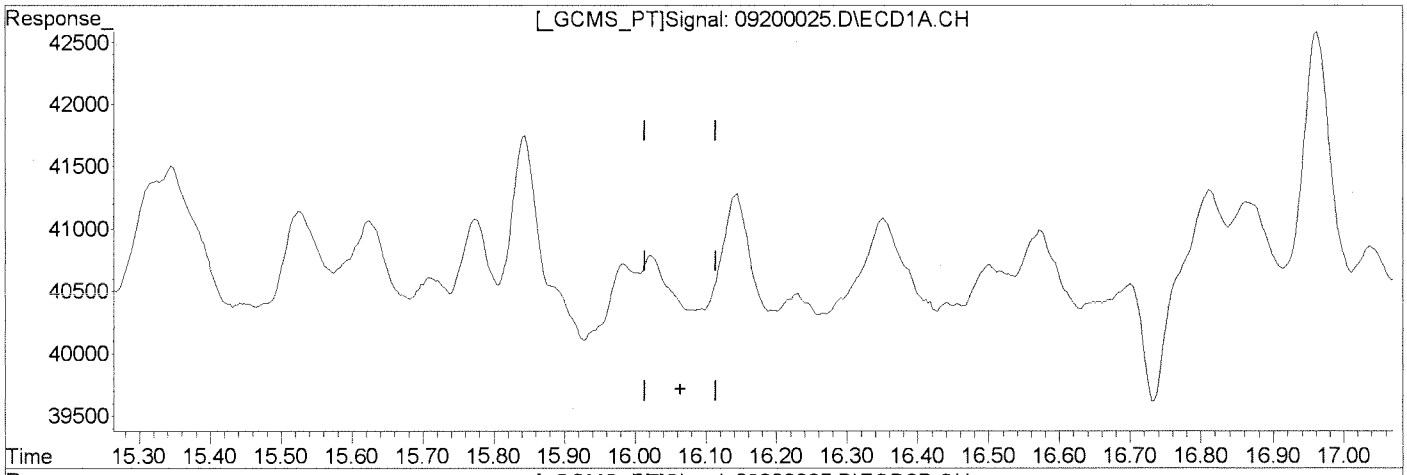
(+) = Expected Retention Time

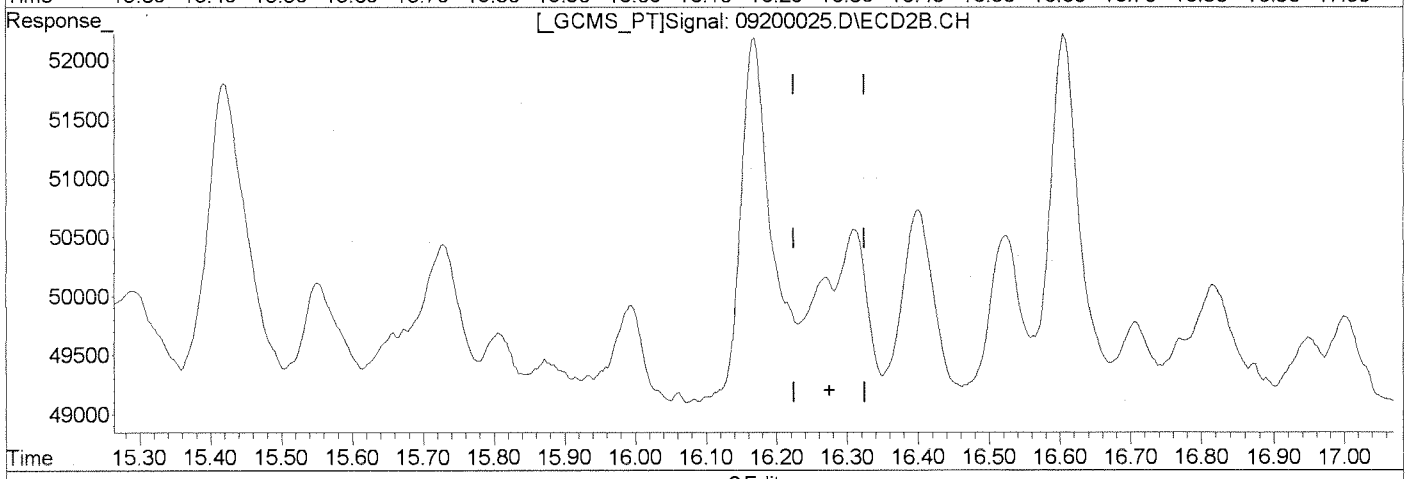
09200025.D 092013_515.M Tue Oct 01 13:37:10 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

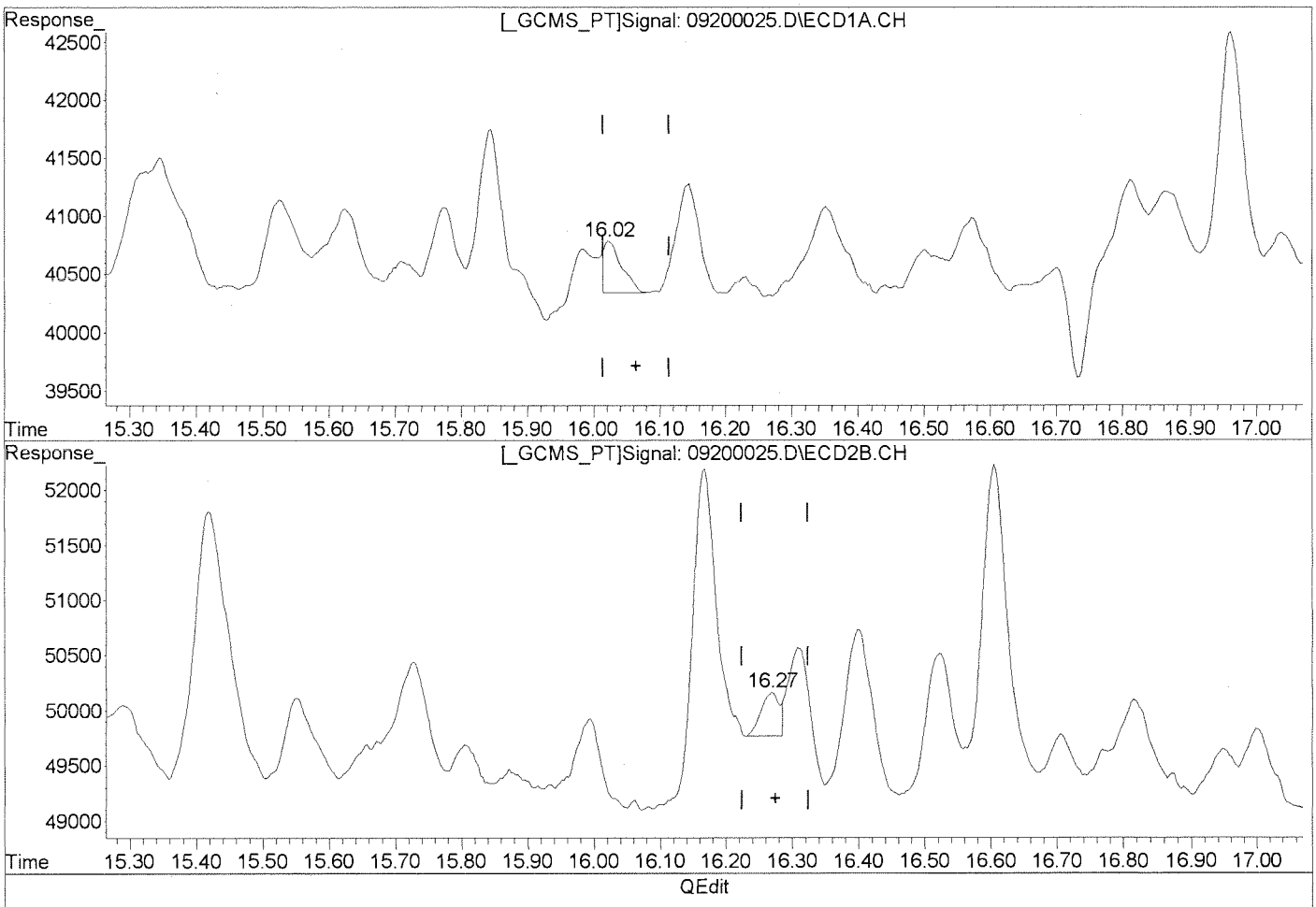
response 0

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

16.02min 0.019ppb m

response 783

(11) 2,4,5-TP (Silvex) #2 (m)

16.27min -0.553ppb m

response 790

Manual Integration:

After

Missed Peak

10/01/13

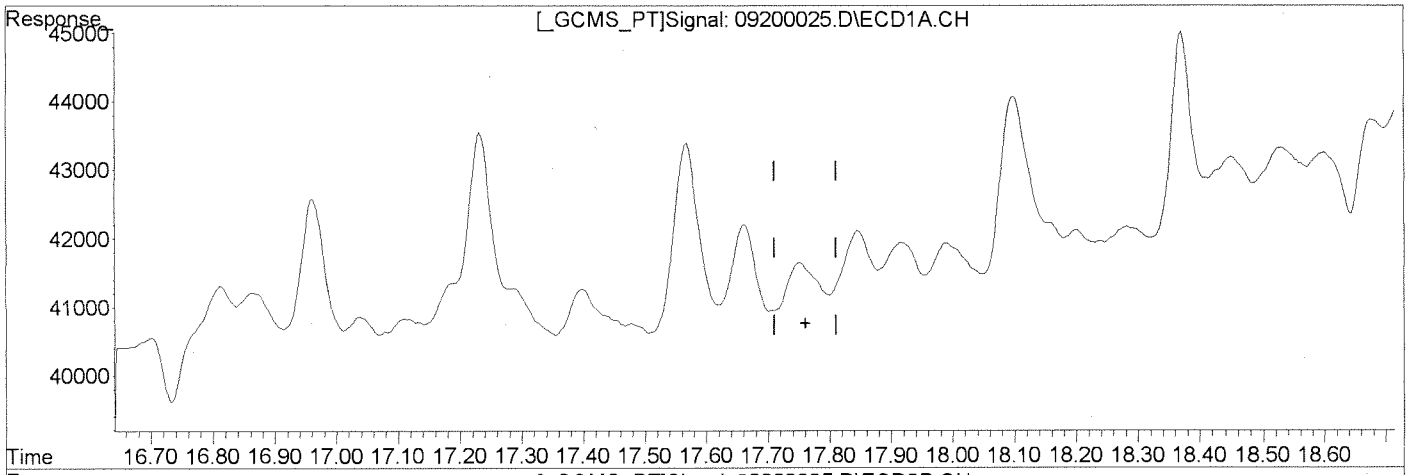
(+) = Expected Retention Time

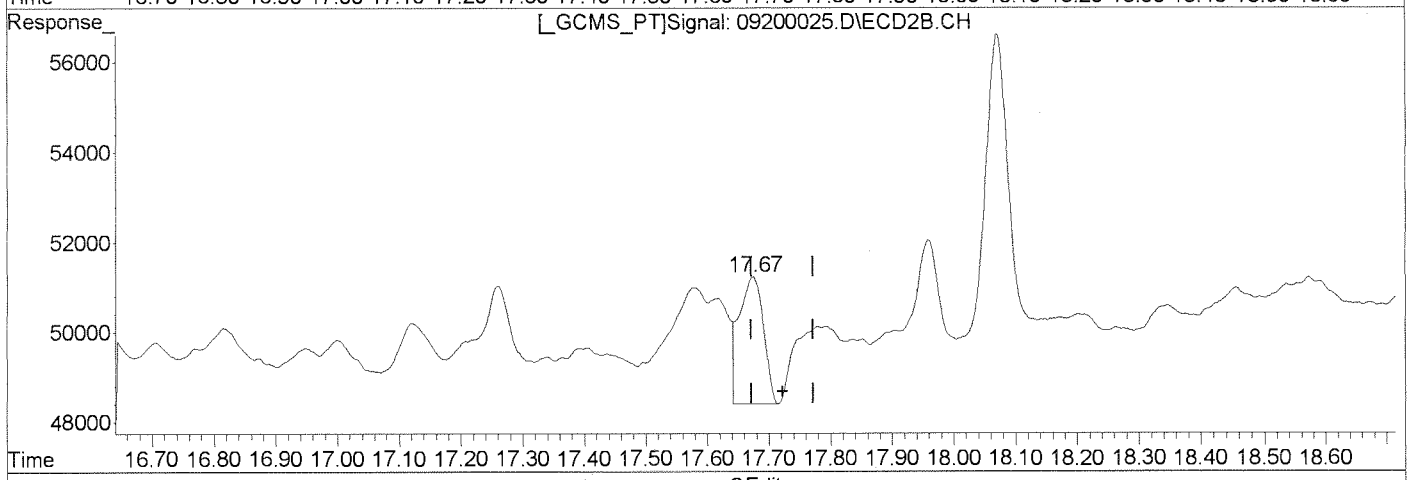
09200025.D 092013_515.M Tue Oct 01 13:38:46 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(14) Dinoseb #2 (m)

17.67min 0.368ppb

response 7622

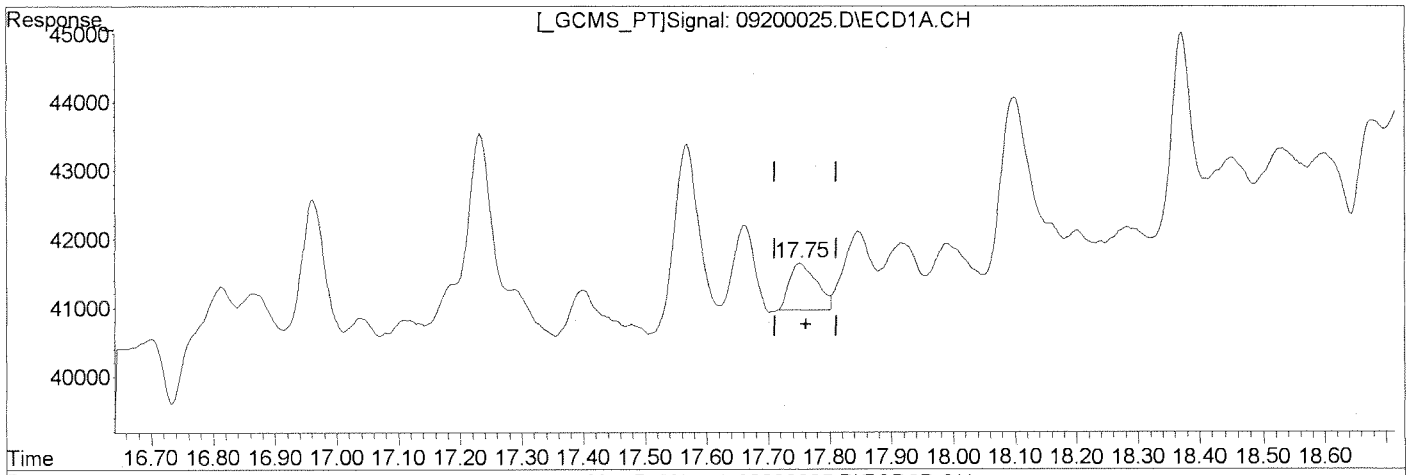
(+) = Expected Retention Time

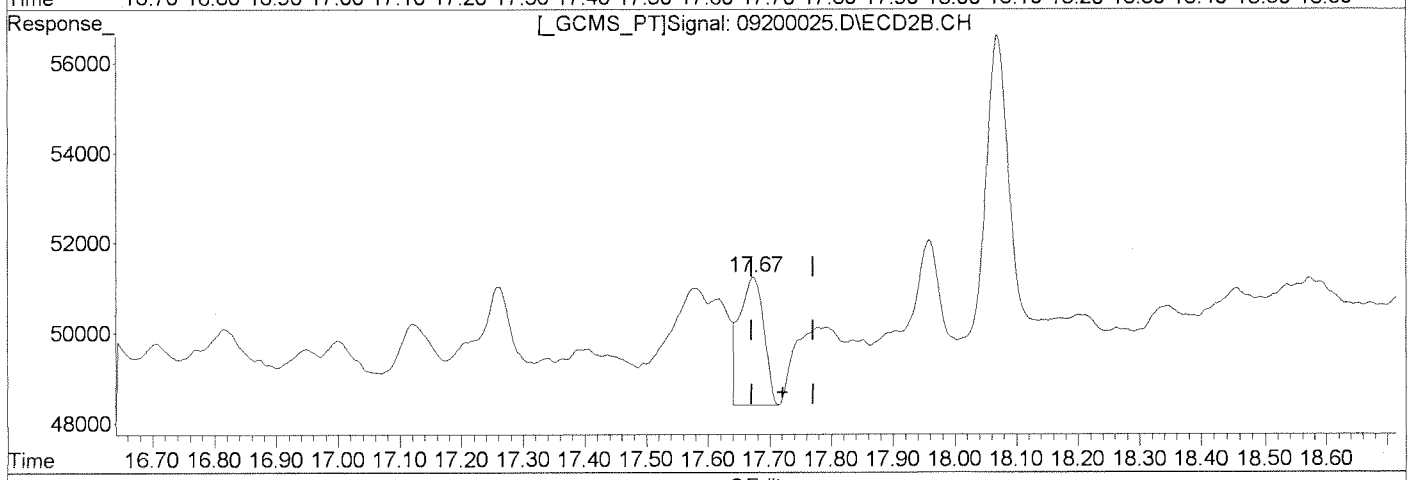
09200025.D 092013_515.M Tue Oct 01 13:38:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

17.75min -3.846ppb m

response 2105

(14) Dinoseb #2 (m)

17.67min 0.368ppb

response 7622

Manual Integration:

After

Missed Peak

10/01/13

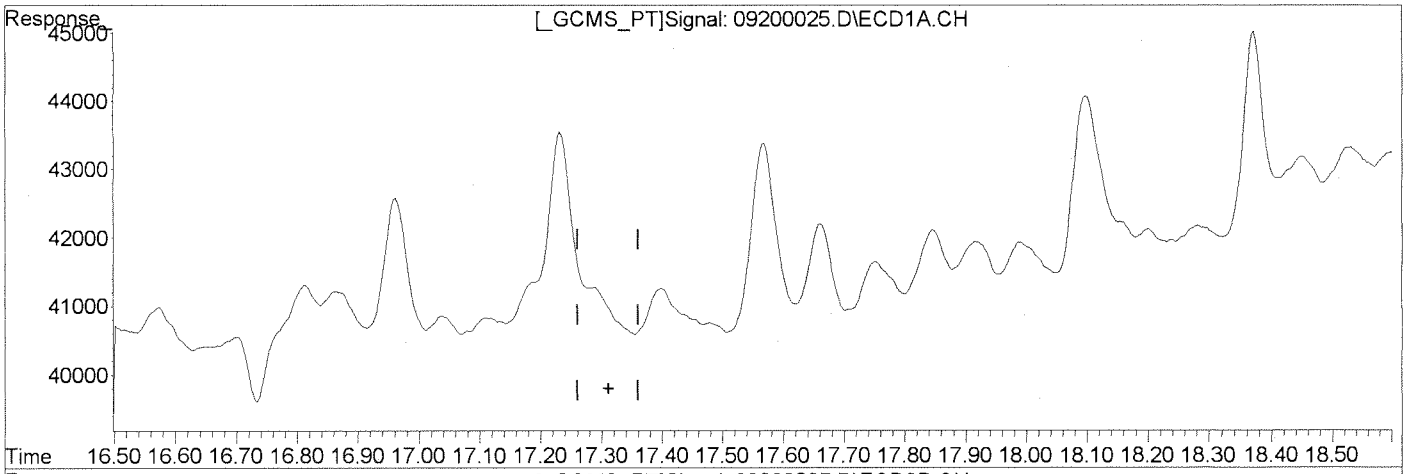
(+) = Expected Retention Time

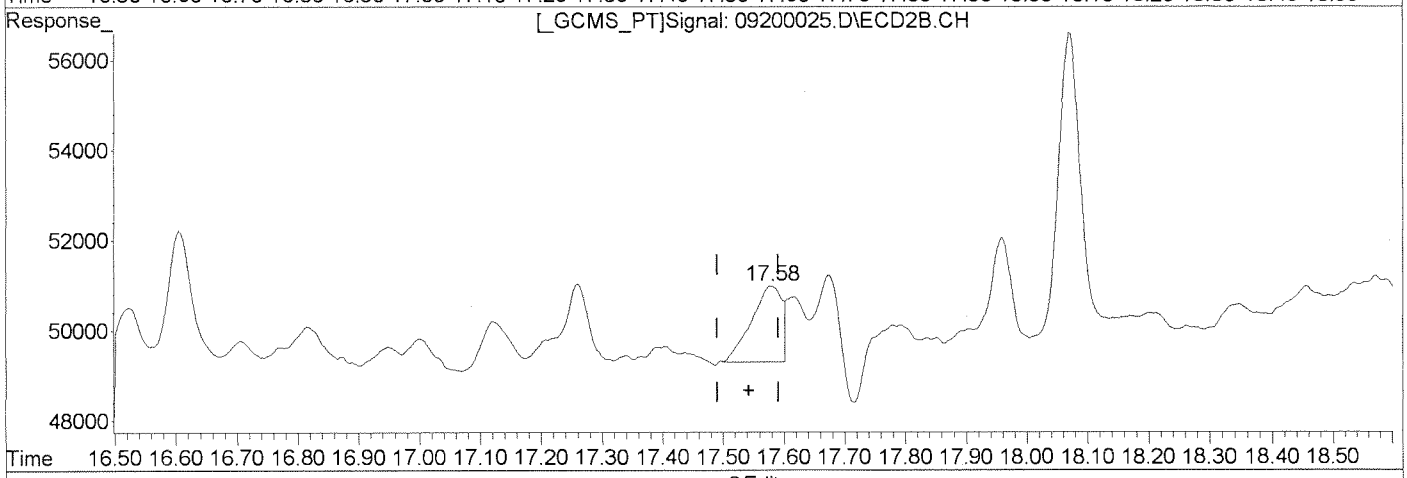
09200025.D 092013_515.M Tue Oct 01 13:39:04 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

(15) 2,4-DB #2 (m)

17.58min -3.753ppb

response 5897

Manual Integration:

Before

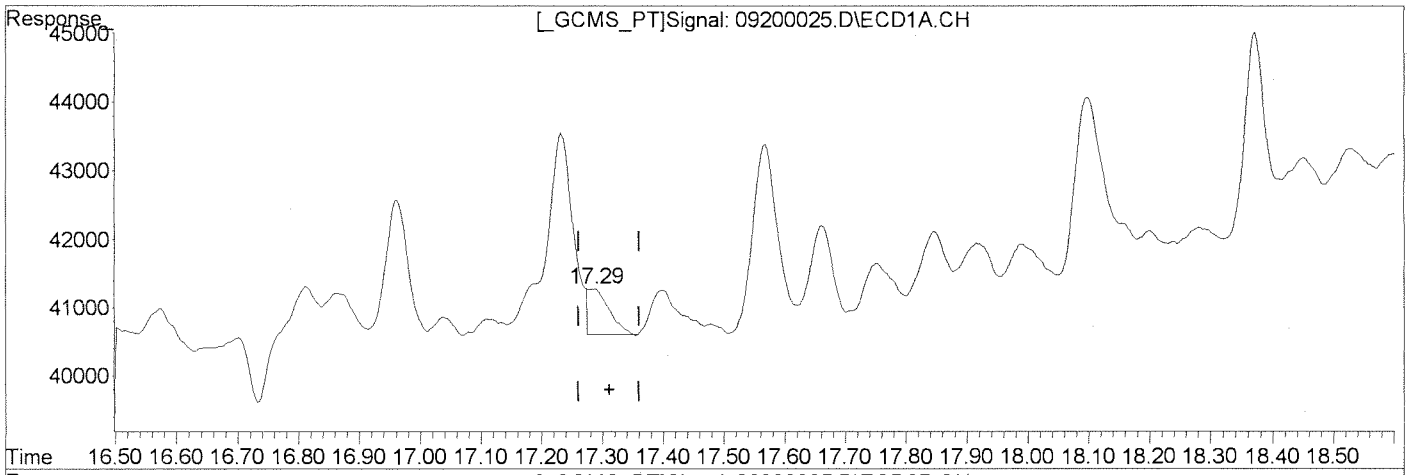
(+) = Expected Retention Time

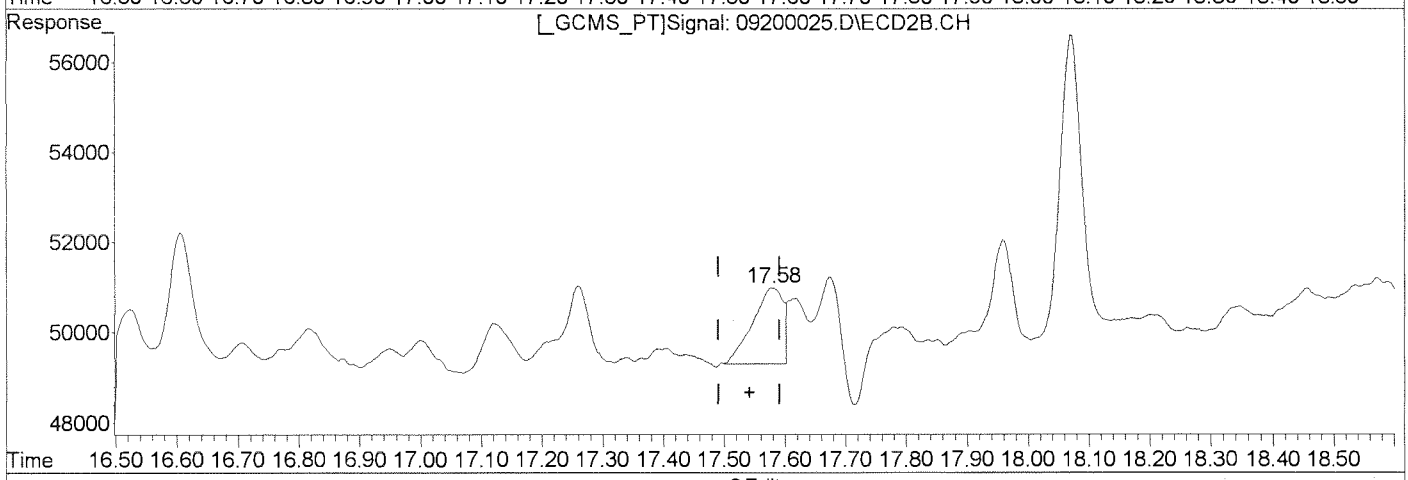
09200025.D 092013_515.M Tue Oct 01 13:39:11 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

17.29min 0.337ppb m

response 1570

(15) 2,4-DB #2 (m)

17.58min -3.753ppb

response 5897

Manual Integration:

After

Missed Peak

10/01/13

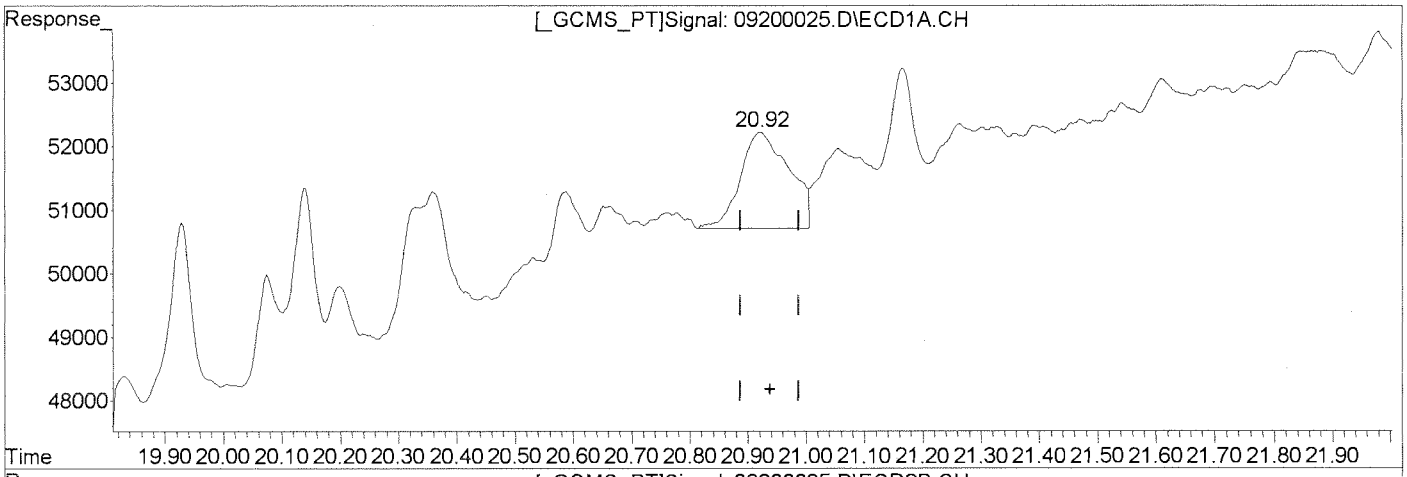
(+) = Expected Retention Time

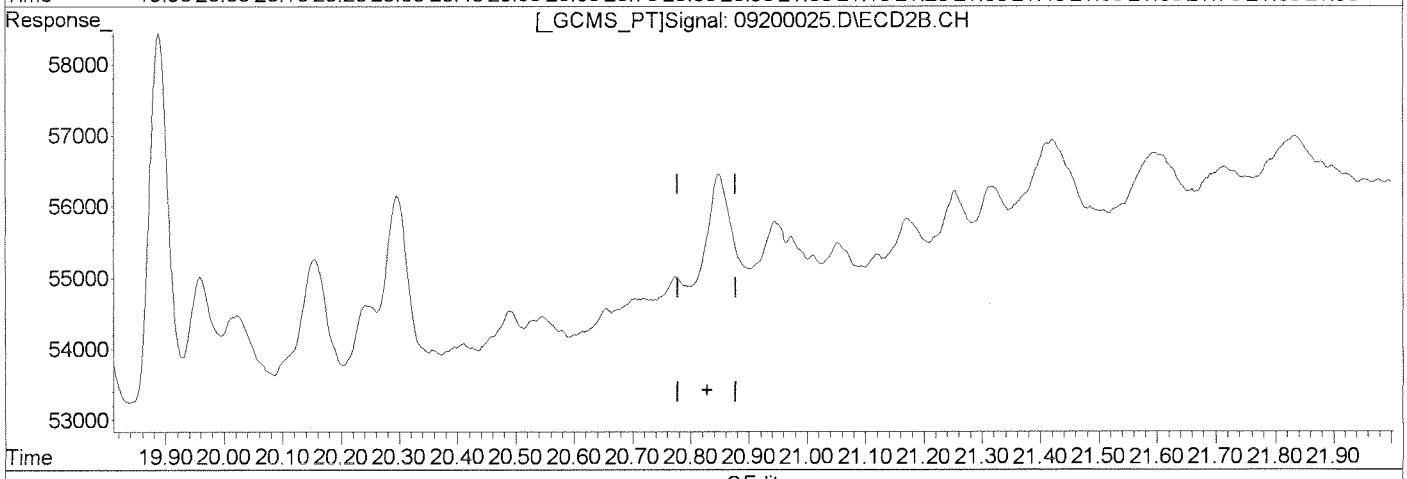
09200025.D 092013_515.M Tue Oct 01 13:39:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.92min 0.389ppb

response 8856

Manual Integration:

Before

(19) Acifluorfen #2 (m)

0.00min 0.000ppb

response 0

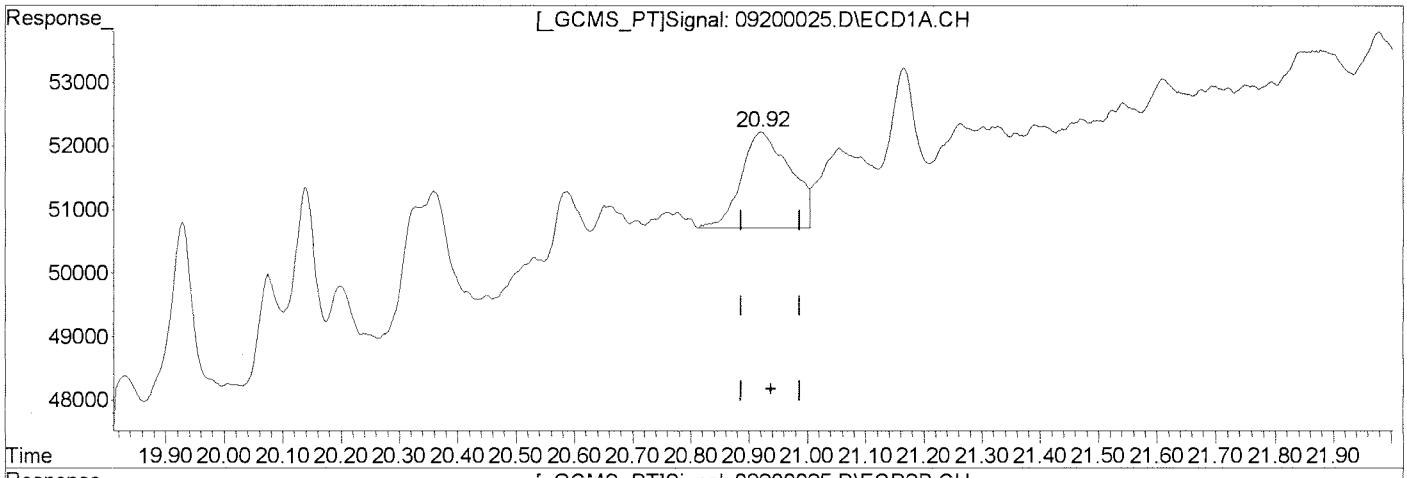
(+) = Expected Retention Time

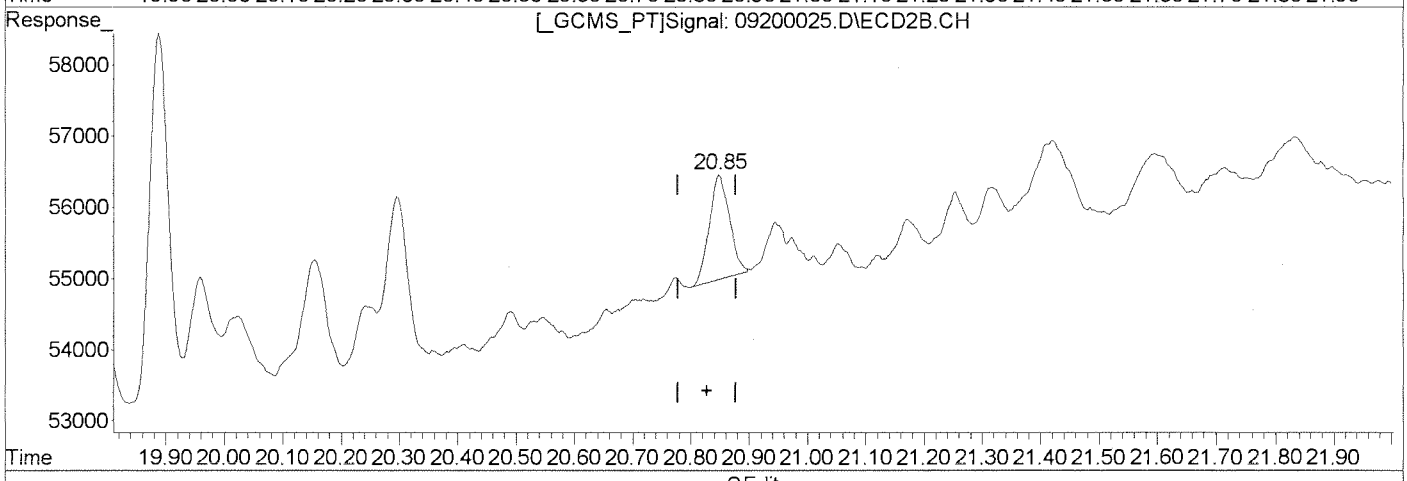
09200025.D 092013_515.M Tue Oct 01 13:39:32 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200025.D\ECD1A.CH Vial: 20
Signal #2 : J:\GC24\DATA\092013.515\09200025.D\ECD2B.CH
Acq On : 09-21-2013 04:02:48 AM Operator: JSCHWAB
Sample : K1309638-005 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.92min 0.389ppb

response 8856

(19) Acifluorfen #2 (m)

20.85min 0.181ppb m

response 3585

Manual Integration:

After

Missed Peak

10/01/13

(+) = Expected Retention Time

09200025.D 092013_515.M Tue Oct 01 13:39:40 2013

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	107	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200026.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 04:32
Date Quantitated: 10/01/2013 13:47
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Qualified

Primary Review: JDS 10-01-13

Secondary Review: N

Exception Report

Data File: J:\GC24\DATA\092013.515\09200026.D\09200026C.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 04:32
Date Quantitated: 10/01/2013 13:47
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200026.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200026.D\09200026c.d			**Vial:**	21
Acqu Date:	09/21/2013 04:32	**Quant Date:**	10/01/2013 13:47	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-008				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282809	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1151344	1088225	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	693409m	759911	82.45	107.47			107OK
				%Recovery =		82 OK	107 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	141025m	0.0000	9.32	0.040U	0.92J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol		16.17 -0.01	0	9824	0.0000	0.0900	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)	16.02 -0.04		1199m	711m	0.0290	0.0000	0.020U	0.020U	0.020U
1	Dinoseb			3222m	0	0.0000	0.0000	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.32 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:42 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1151344	1088225	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	693409	759911	82.454m	107.470 #
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	141025	N.D.	9.322m#
3)	m	3,5-Dichlorobenz	11.03f	0.00	146978	0	10.539m	N.D. #
4)	m	4-Nitrophenol	12.11	11.91f	65366	395239	17.667m	110.218 #
6)	m	Dicamba	0.00	13.20	0	32111	N.D.	1.032 #
7)	m	Dichloroprop	14.41f	0.00	9837	0	1.050	N.D. #
10)	m	Pentachloropheno	0.00	16.17	0	9824	N.D.	0.090 #
13)	m	Chloramben	0.00	16.61	0	7377	N.D.	0.374 #
19)	m	Acifluorfen	20.95	20.85	2369	5302	0.106m	0.276 #

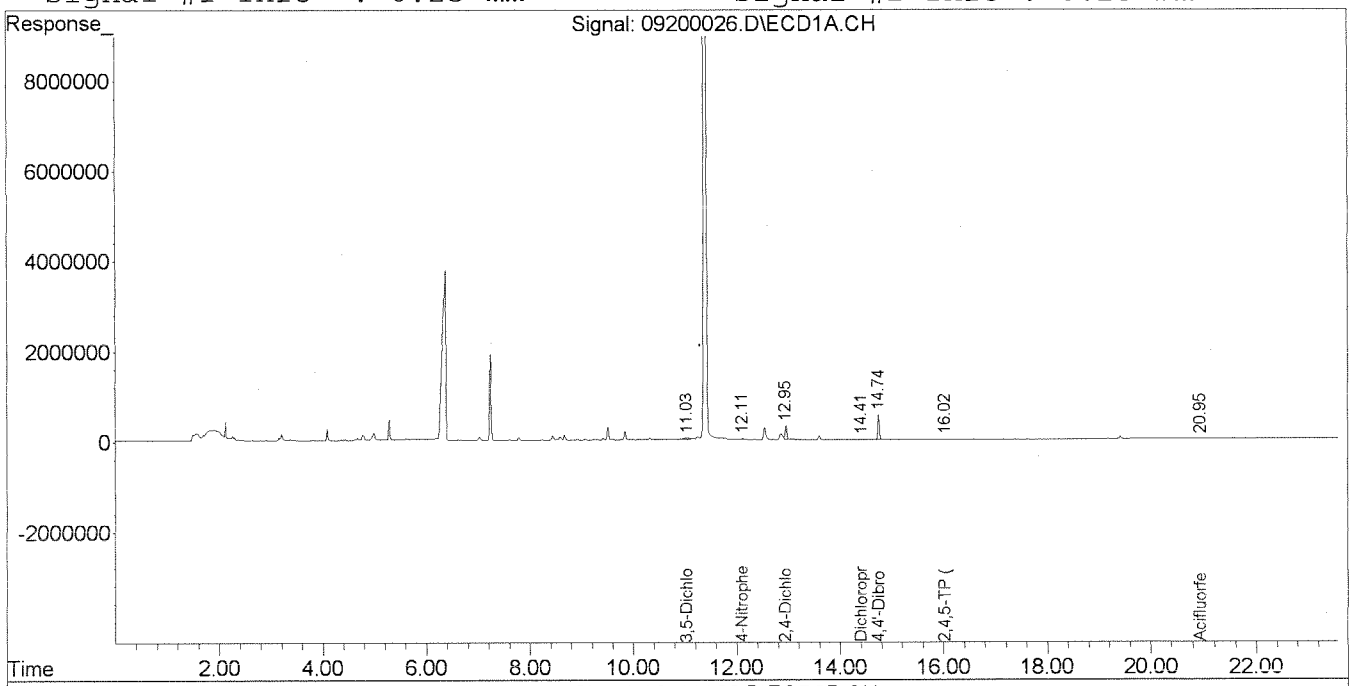
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

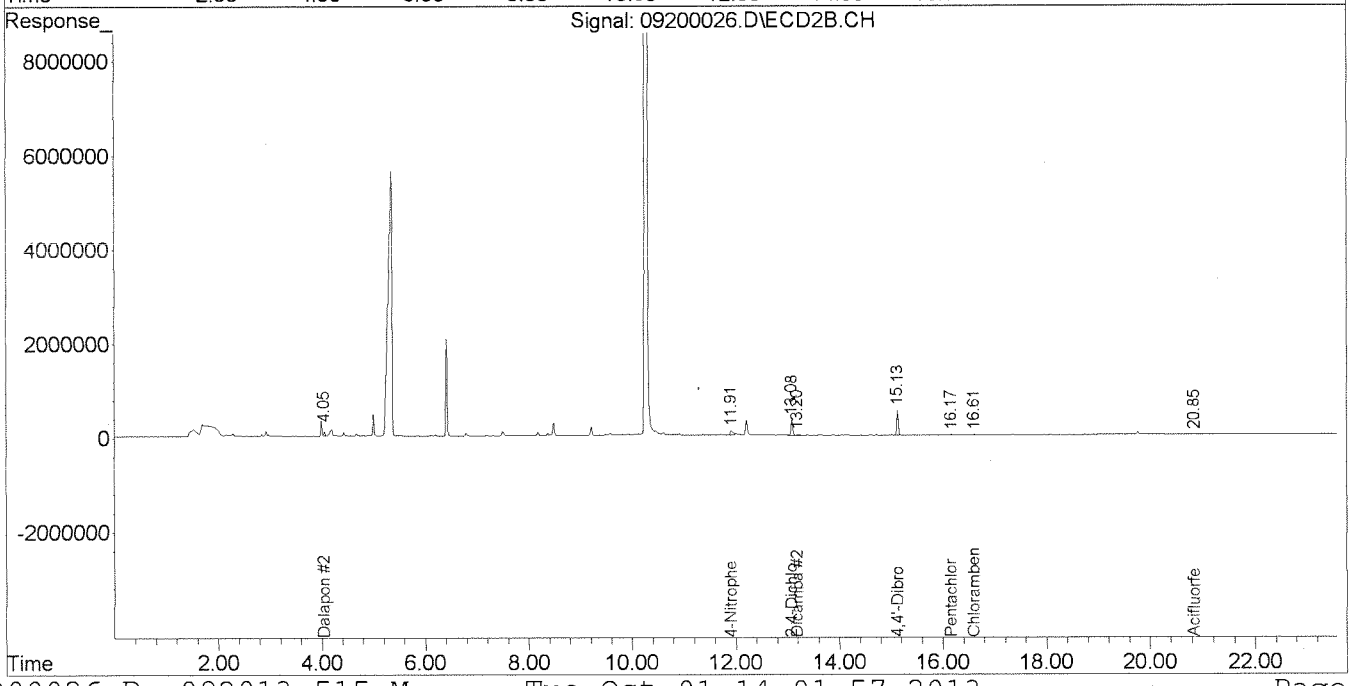
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:47 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

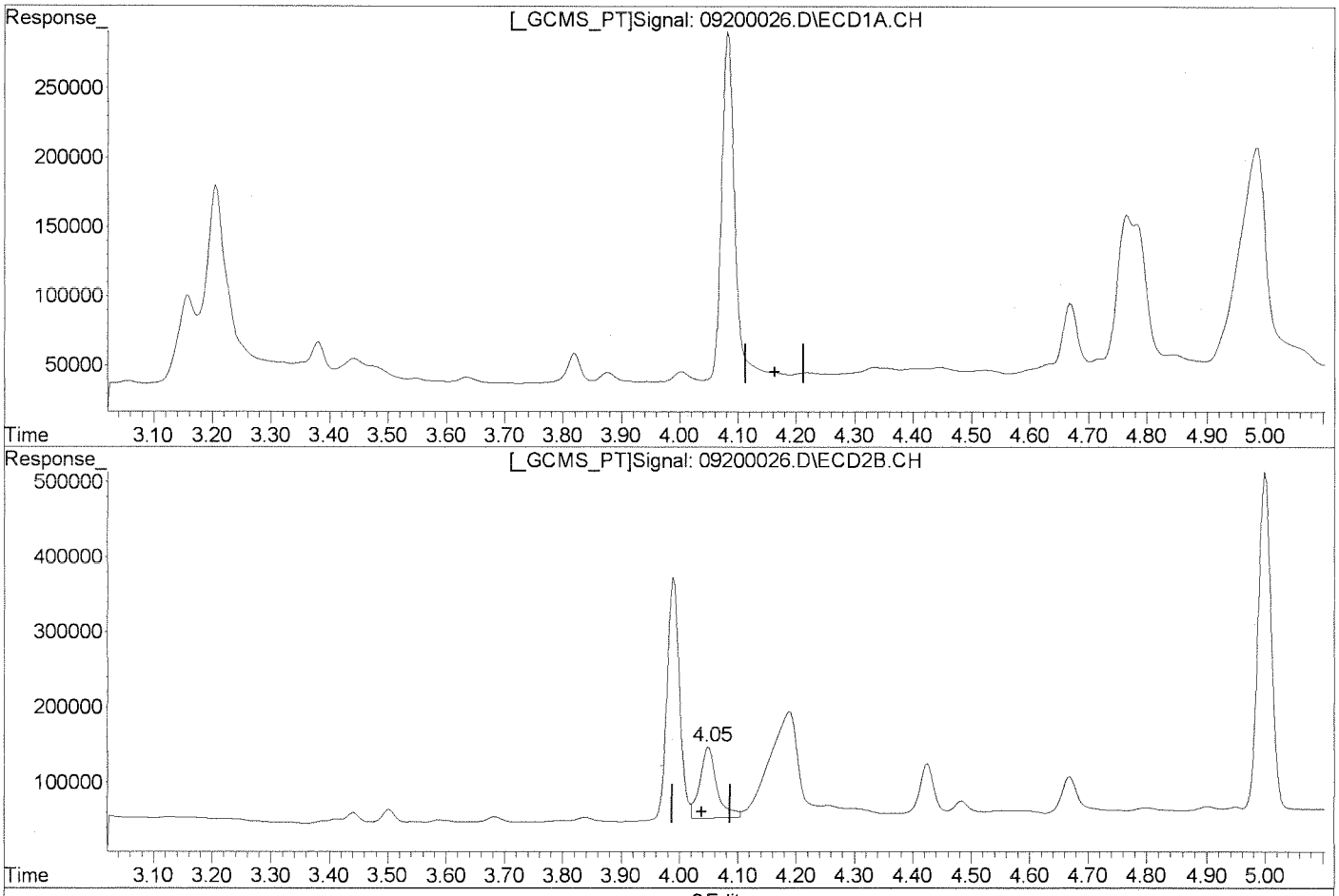




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 13.096ppb

response 188694

Manual Integration:

Before

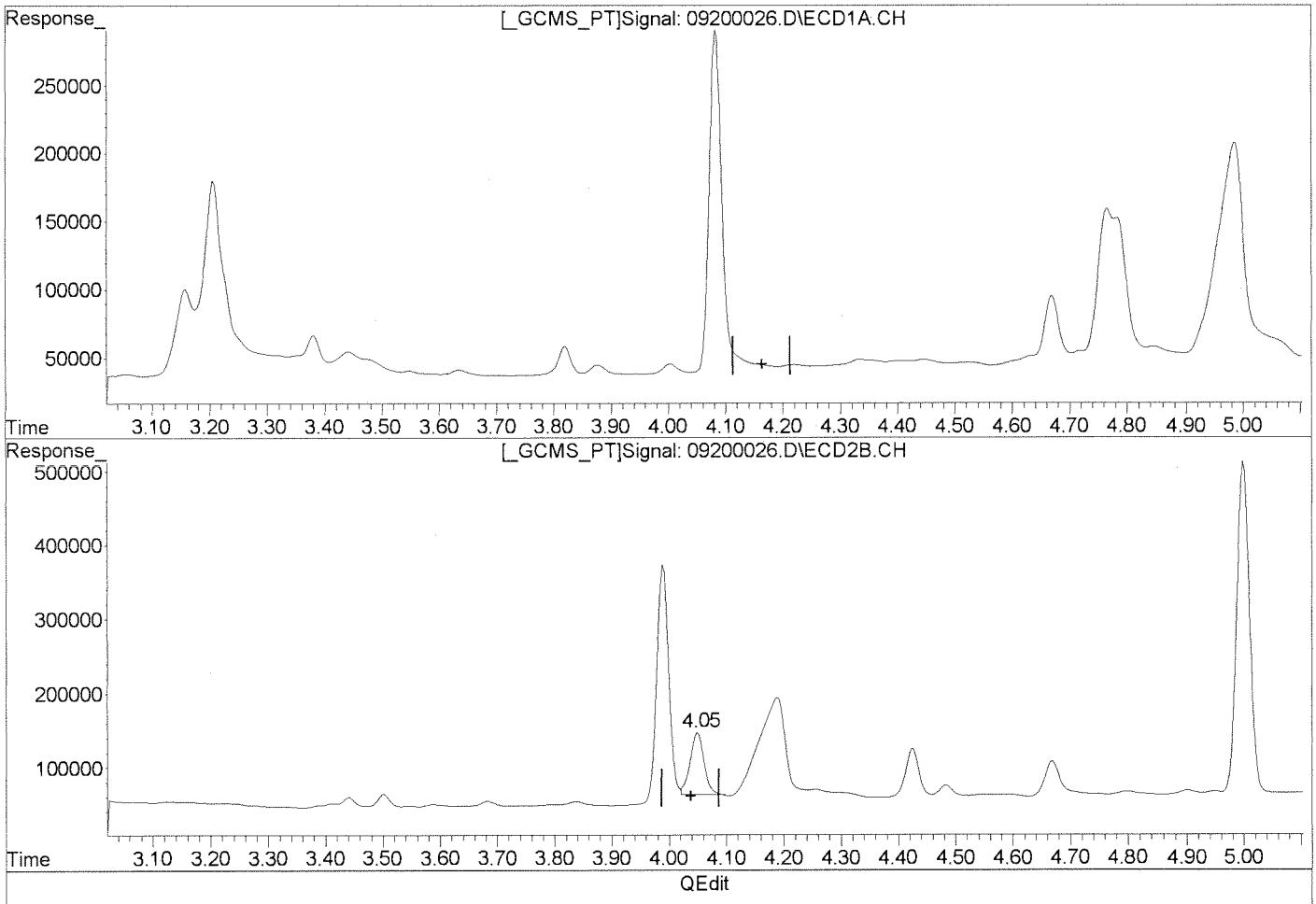
(+) = Expected Retention Time

09200026.D 092013_515.M Tue Oct 01 13:40:42 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 9.322ppb m

response 141025

Manual Integration:

After

Baseline/Shoulder

10/01/13

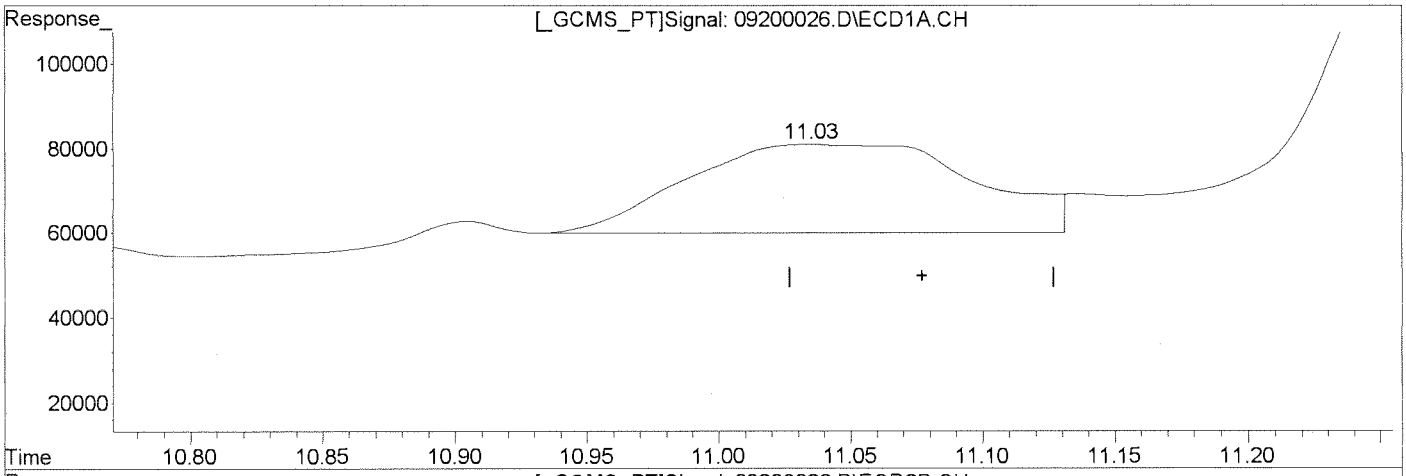
(+) = Expected Retention Time

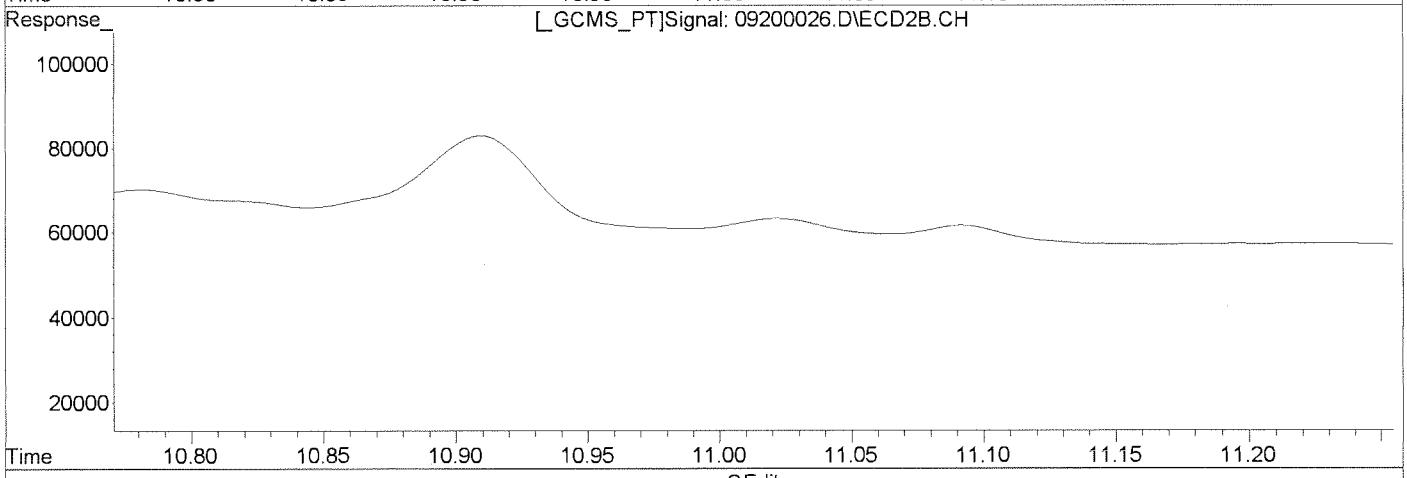
09200026.D 092013_515.M Tue Oct 01 13:41:10 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(3) 3,5-Dichlorobenzoic Acid (m)

11.03min 11.414ppb

response 159190

Manual Integration:

Before

(3) 3,5-Dichlorobenzoic Acid #2 (m)

0.00min 0.000ppb

response 0

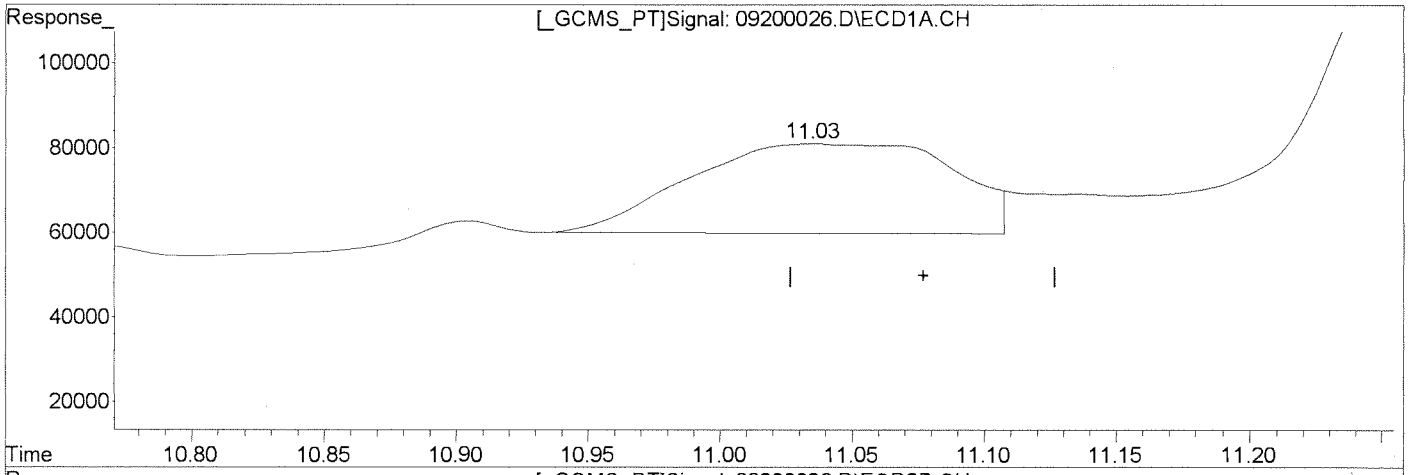
(+) = Expected Retention Time

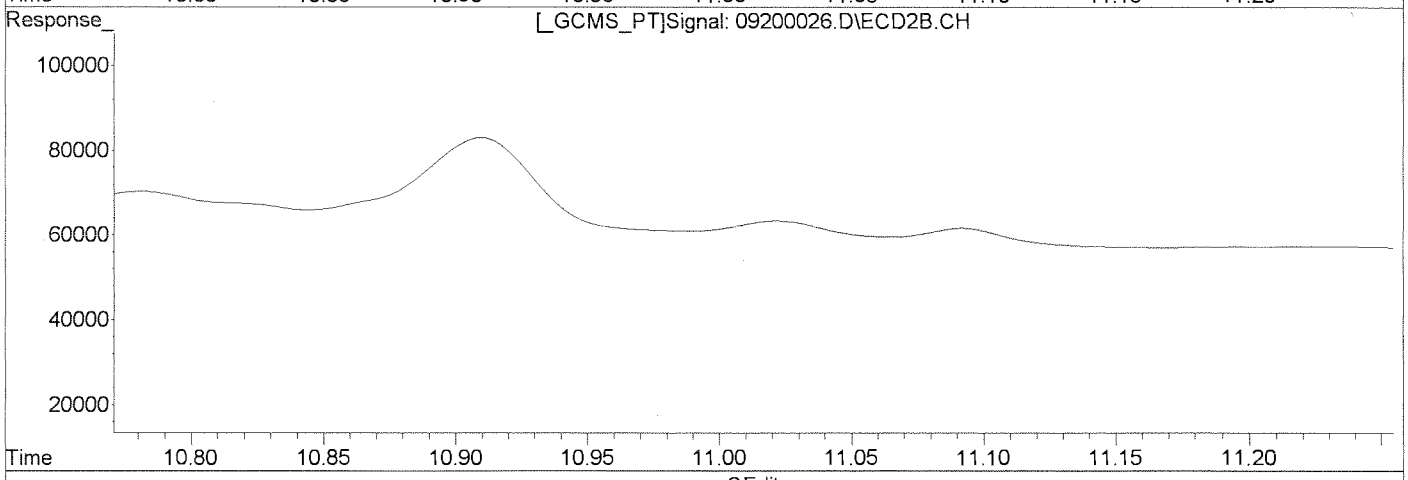
09200026.D 092013_515.M Tue Oct 01 13:41:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(3) 3,5-Dichlorobenzoic Acid (m)

11.03min 10.539ppb m

response 146978

(3) 3,5-Dichlorobenzoic Acid #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Baseline/Shoulder

10/01/13

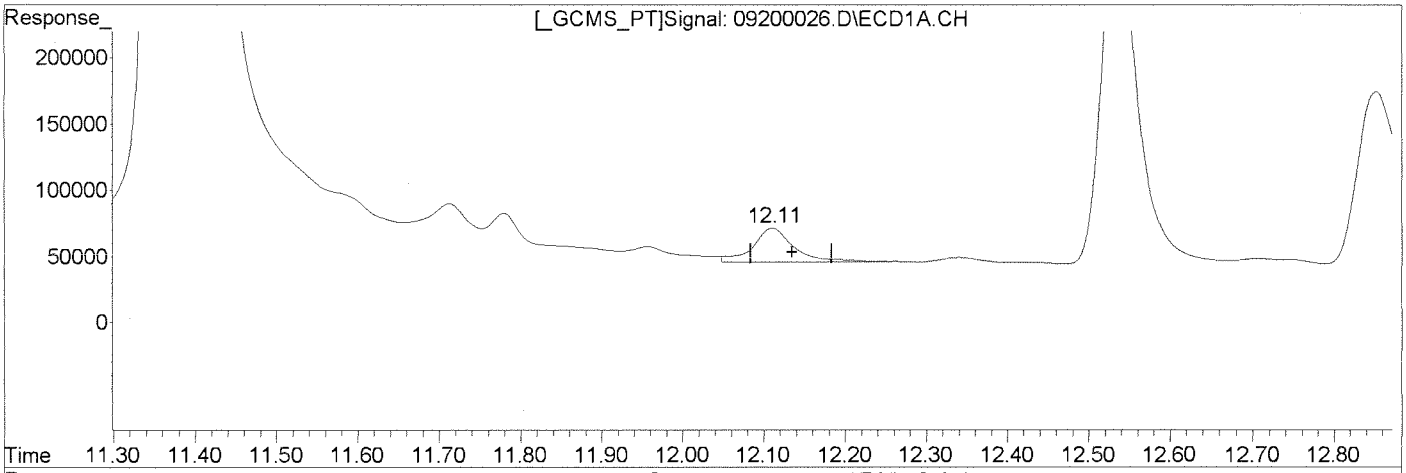
(+) = Expected Retention Time

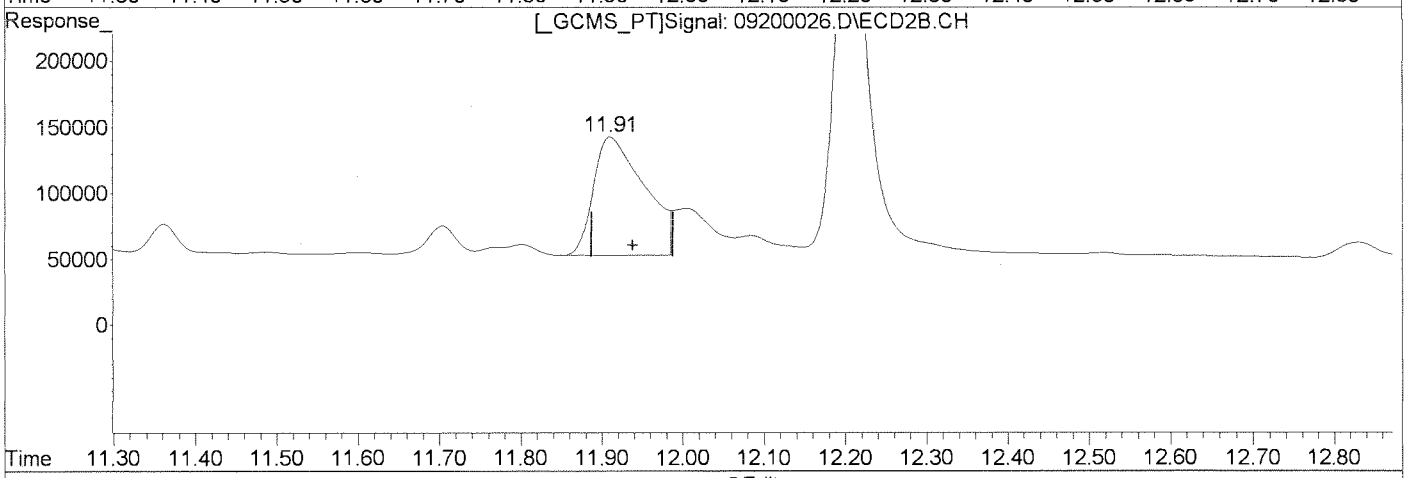
09200026.D 092013_515.M Tue Oct 01 13:41:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.11min 23.698ppb

response 87678

(4) 4-Nitrophenol #2 (m)

11.91min 110.218ppb

response 395239

Manual Integration:

Before

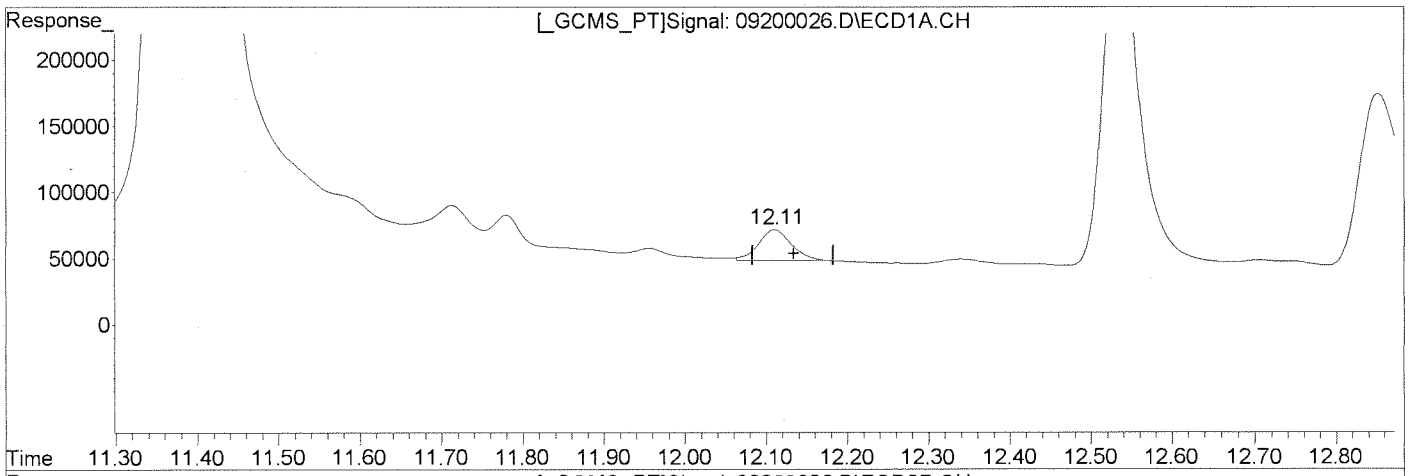
(+) = Expected Retention Time

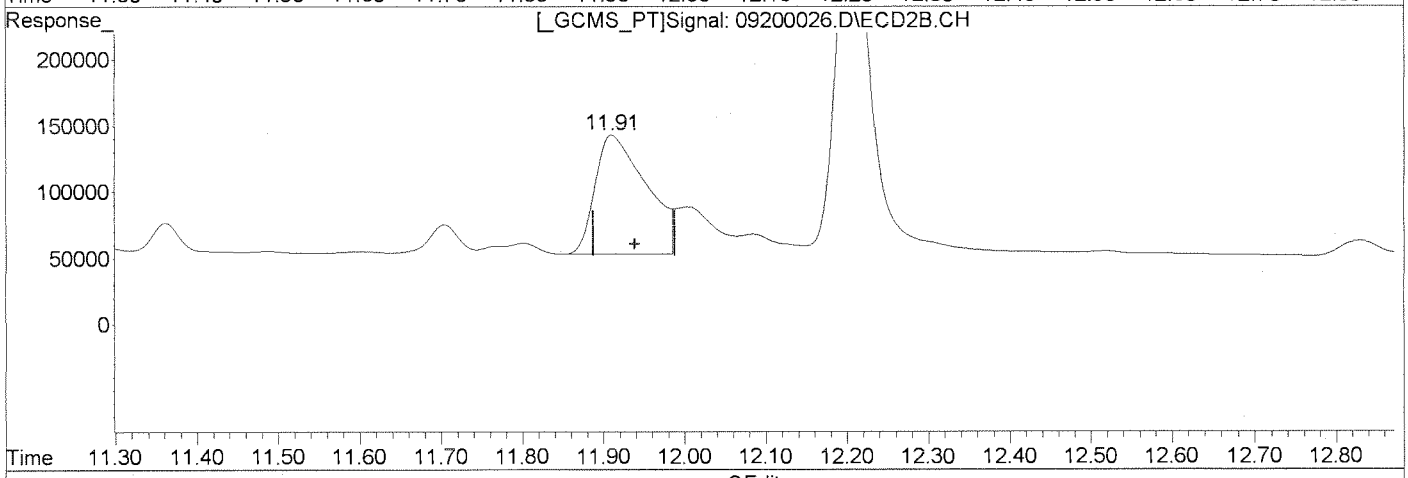
09200026.D 092013_515.M Tue Oct 01 13:41:52 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.11min 17.667ppb m

response 65366

(4) 4-Nitrophenol #2 (m)

11.91min 110.218ppb

response 395239

Manual Integration:

After

Baseline/Shoulder

10/01/13

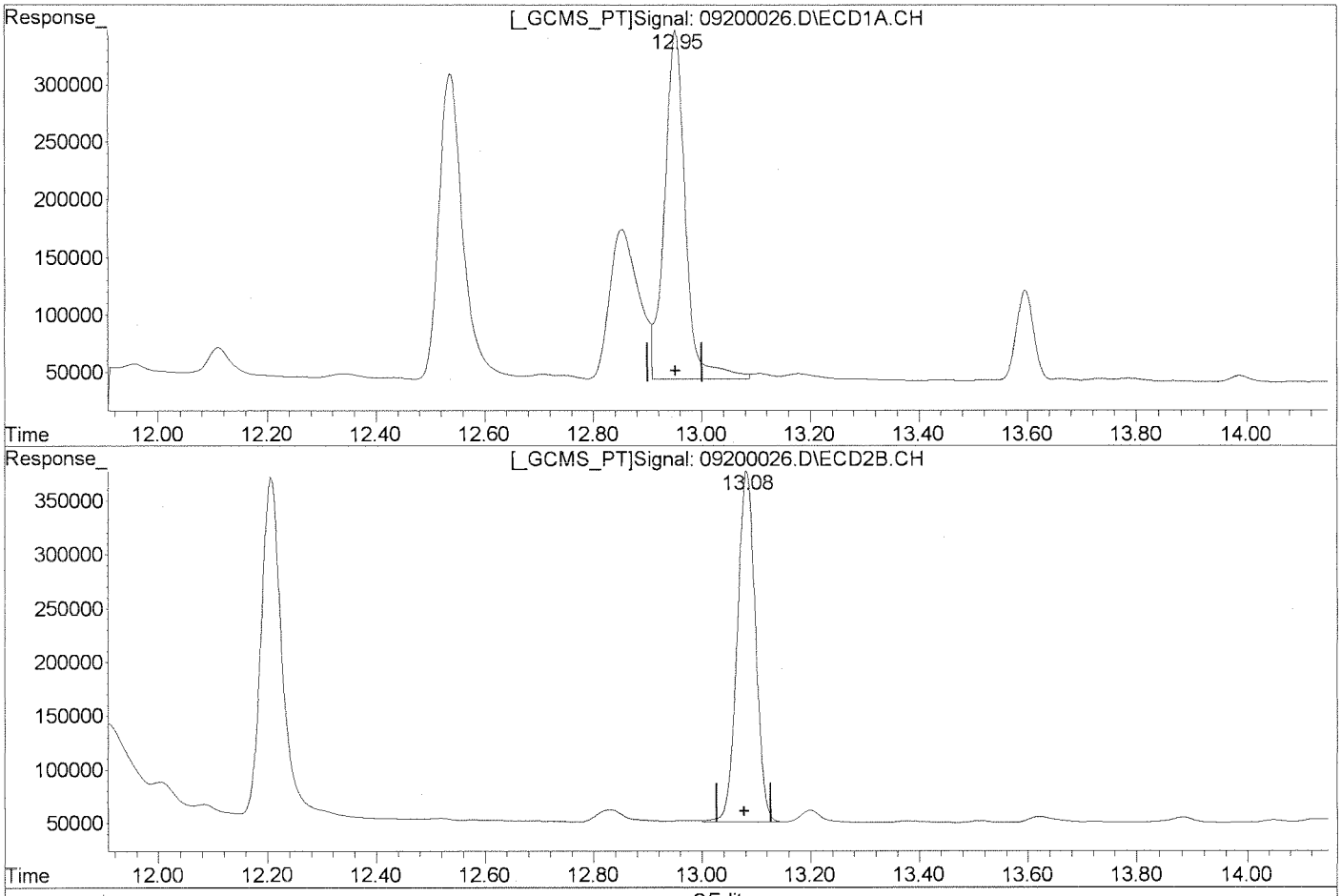
(+) = Expected Retention Time

09200026.D 092013_515.M Tue Oct 01 13:42:01 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 95.375ppb

response 802068

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.470ppb

response 759911

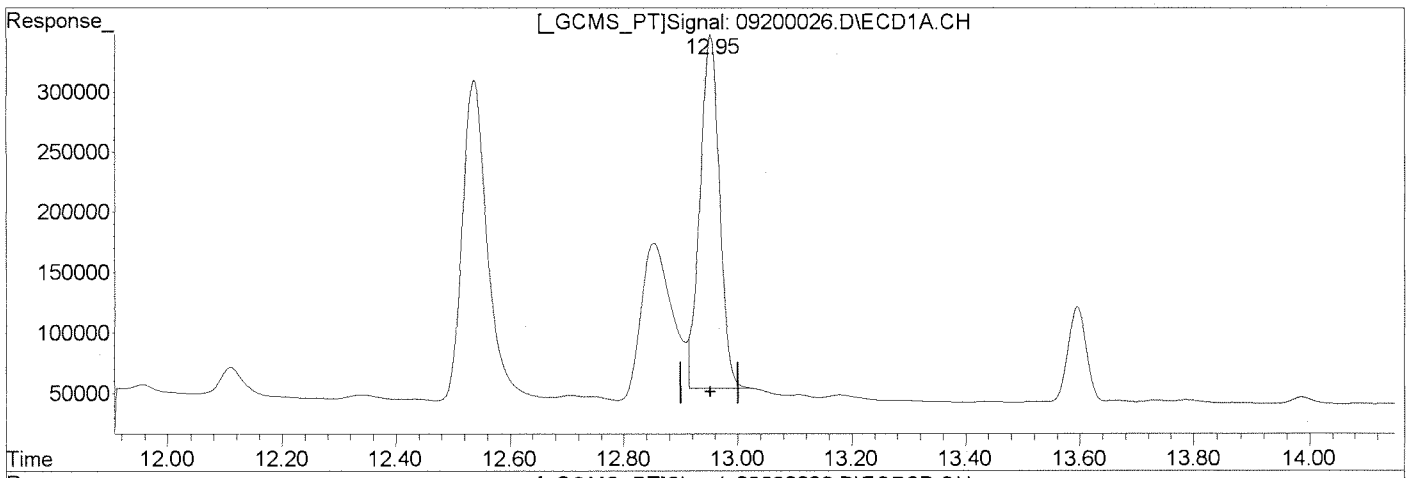
(+) = Expected Retention Time

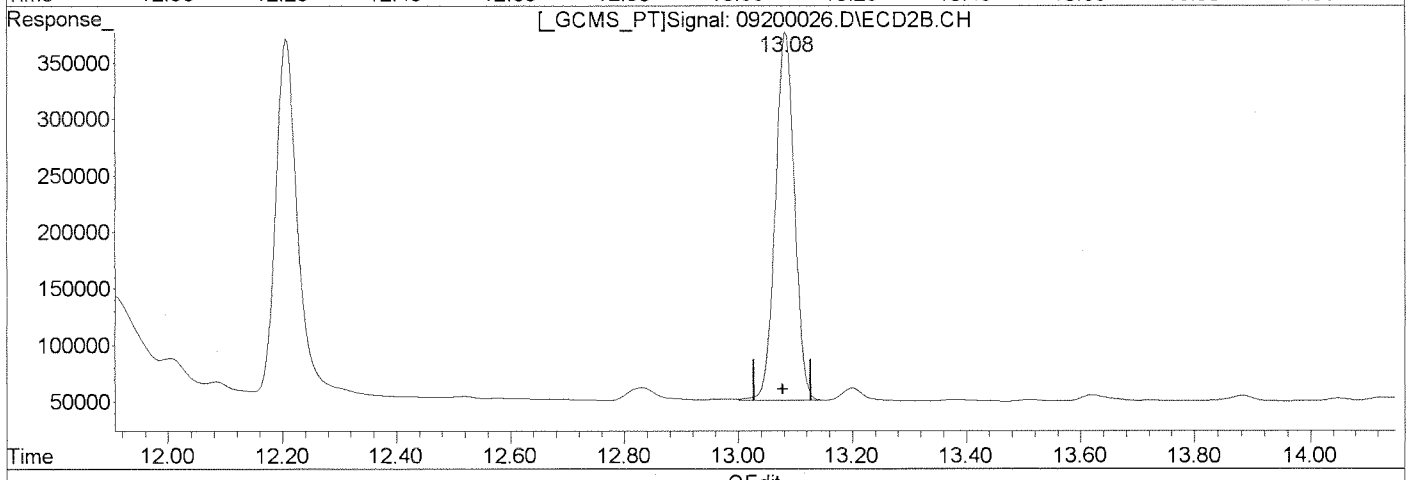
09200026.D 092013_515.M Tue Oct 01 13:42:04 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 82.454ppb m

response 693409

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.470ppb

response 759911

Manual Integration:

After

Baseline/Shoulder

10/01/13

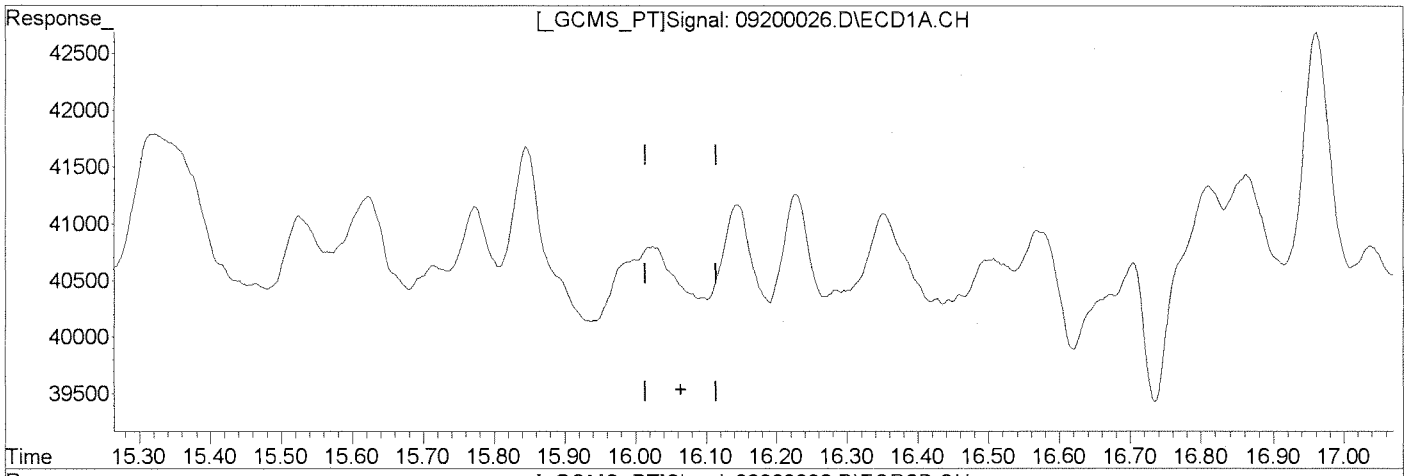
(+) = Expected Retention Time

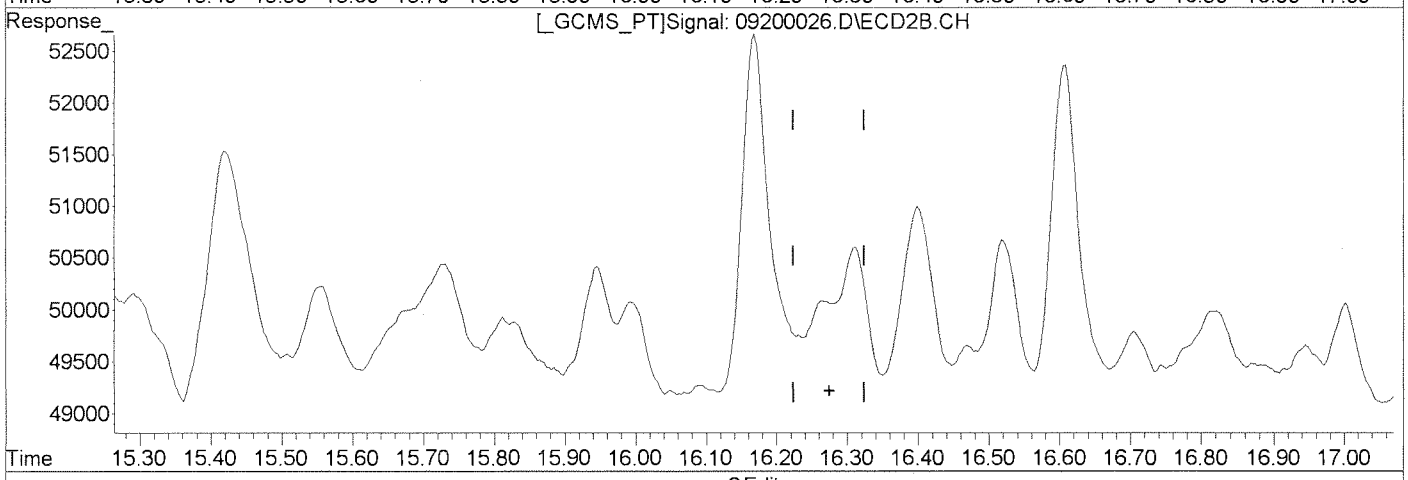
09200026.D 092013_515.M Tue Oct 01 13:42:17 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

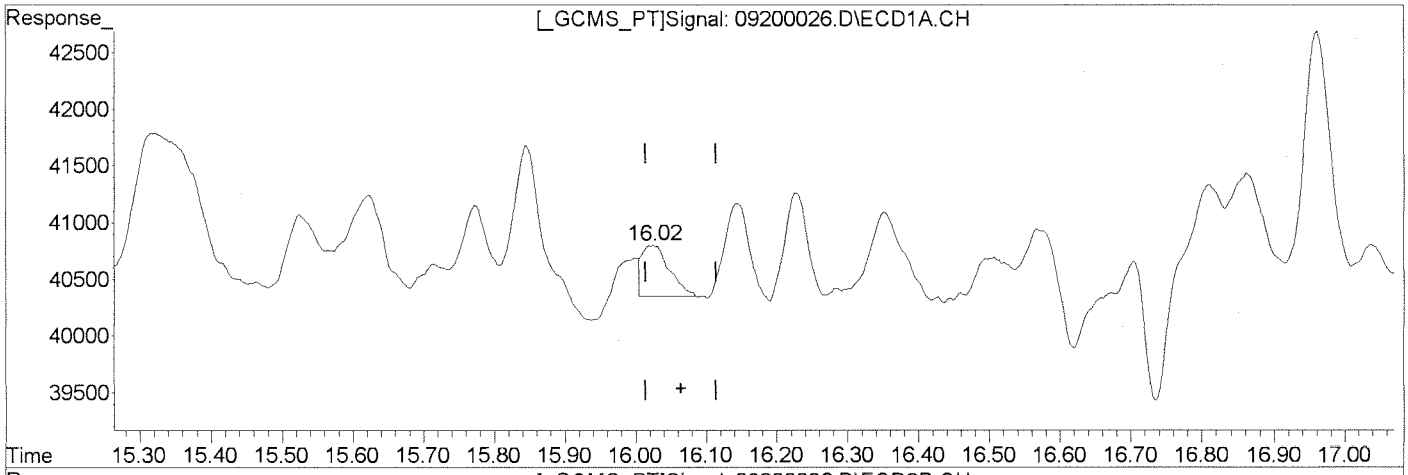
(+) = Expected Retention Time

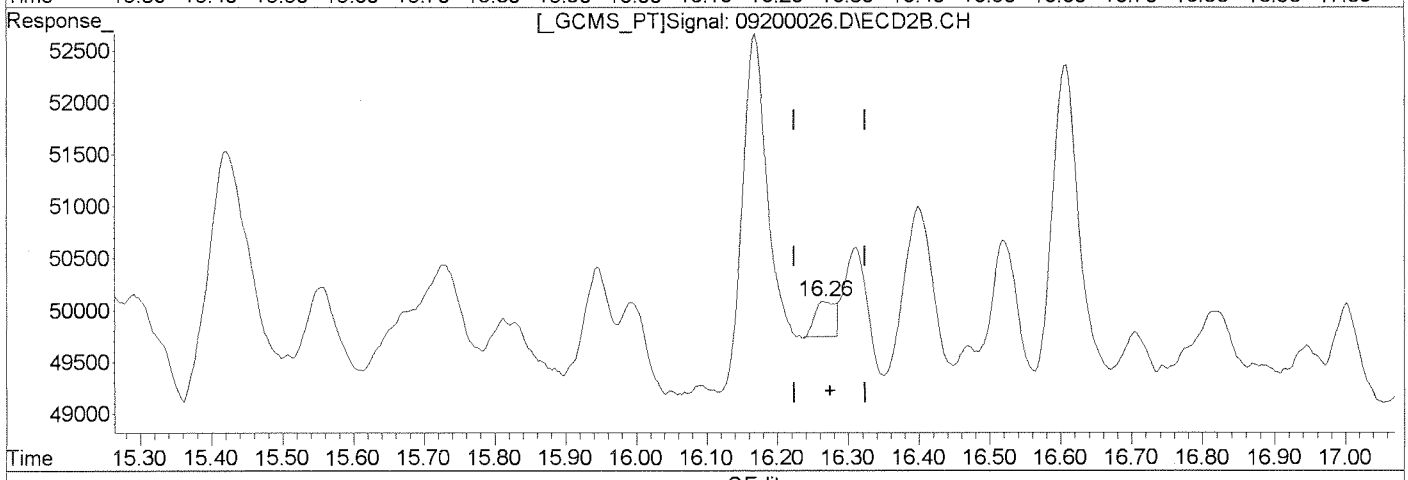
09200026.D 092013_515.M Tue Oct 01 13:42:44 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

16.02min 0.029ppb m

response 1199

(11) 2,4,5-TP (Silvex) #2 (m)

16.26min -0.555ppb m

response 711

Manual Integration:

After

Missed Peak

10/01/13

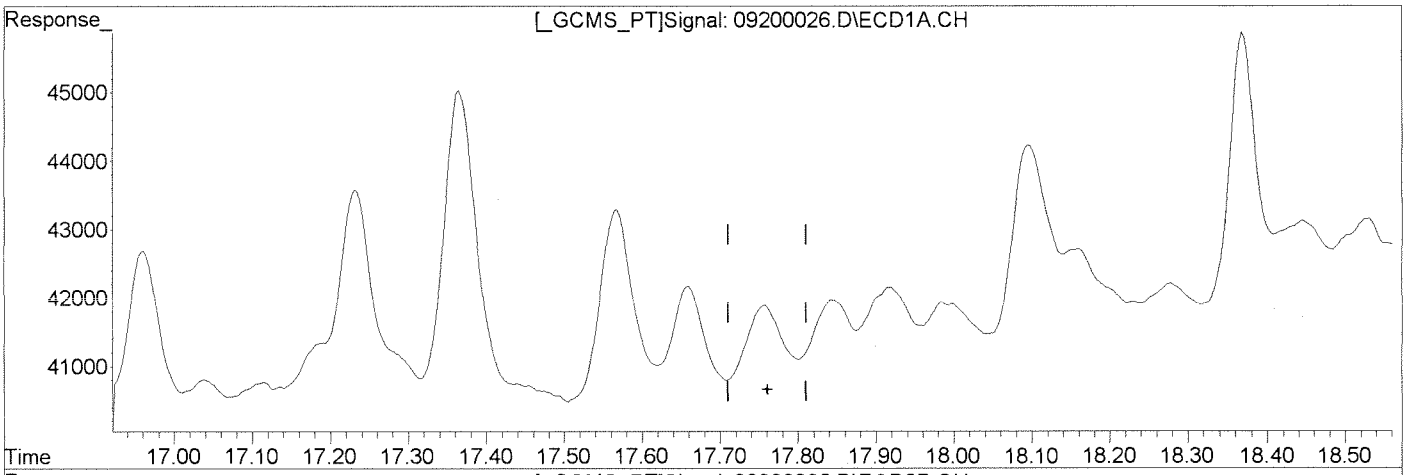
(+) = Expected Retention Time

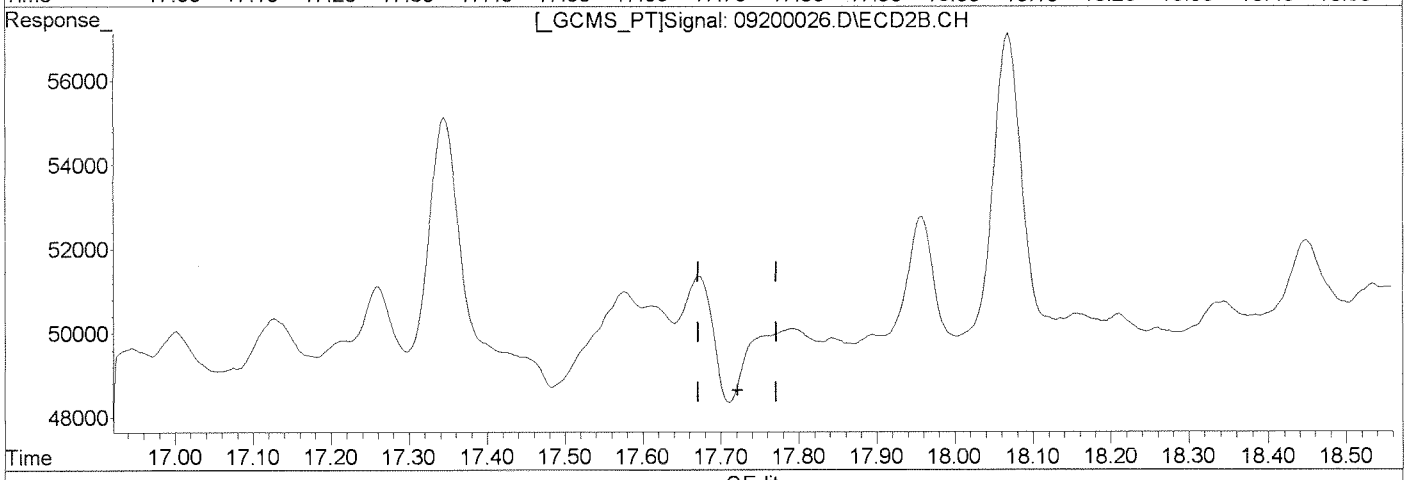
09200026.D 092013_515.M Tue Oct 01 13:43:03 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

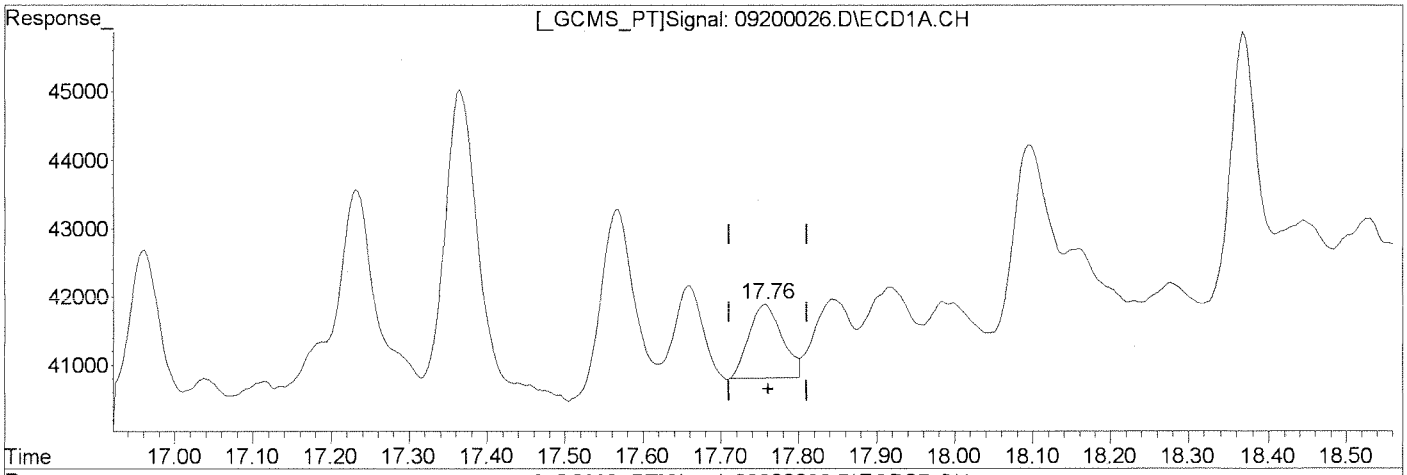
(+) = Expected Retention Time

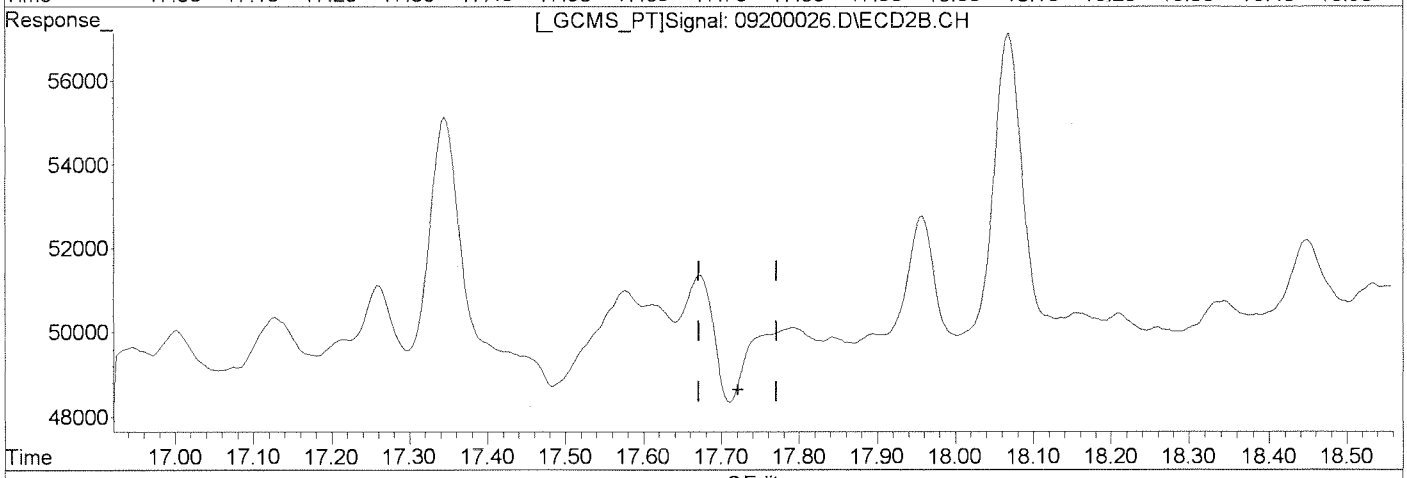
09200026.D 092013_515.M Tue Oct 01 13:43:14 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

17.76min -3.786ppb m

response 3222

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Missed Peak

10/01/13

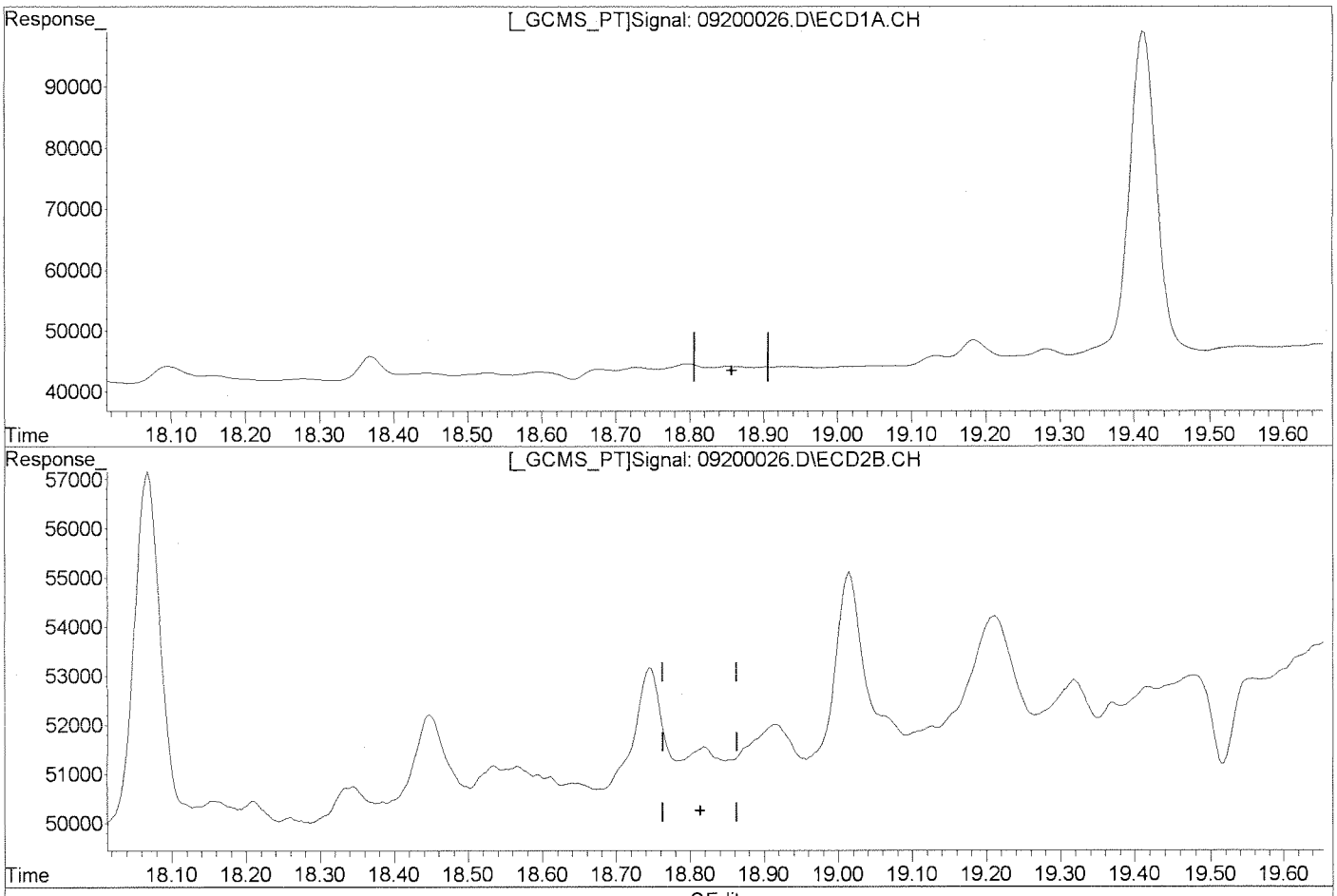
(+) = Expected Retention Time

09200026.D 092013_515.M Tue Oct 01 13:43:23 2013

Quantitation Report (QEdit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

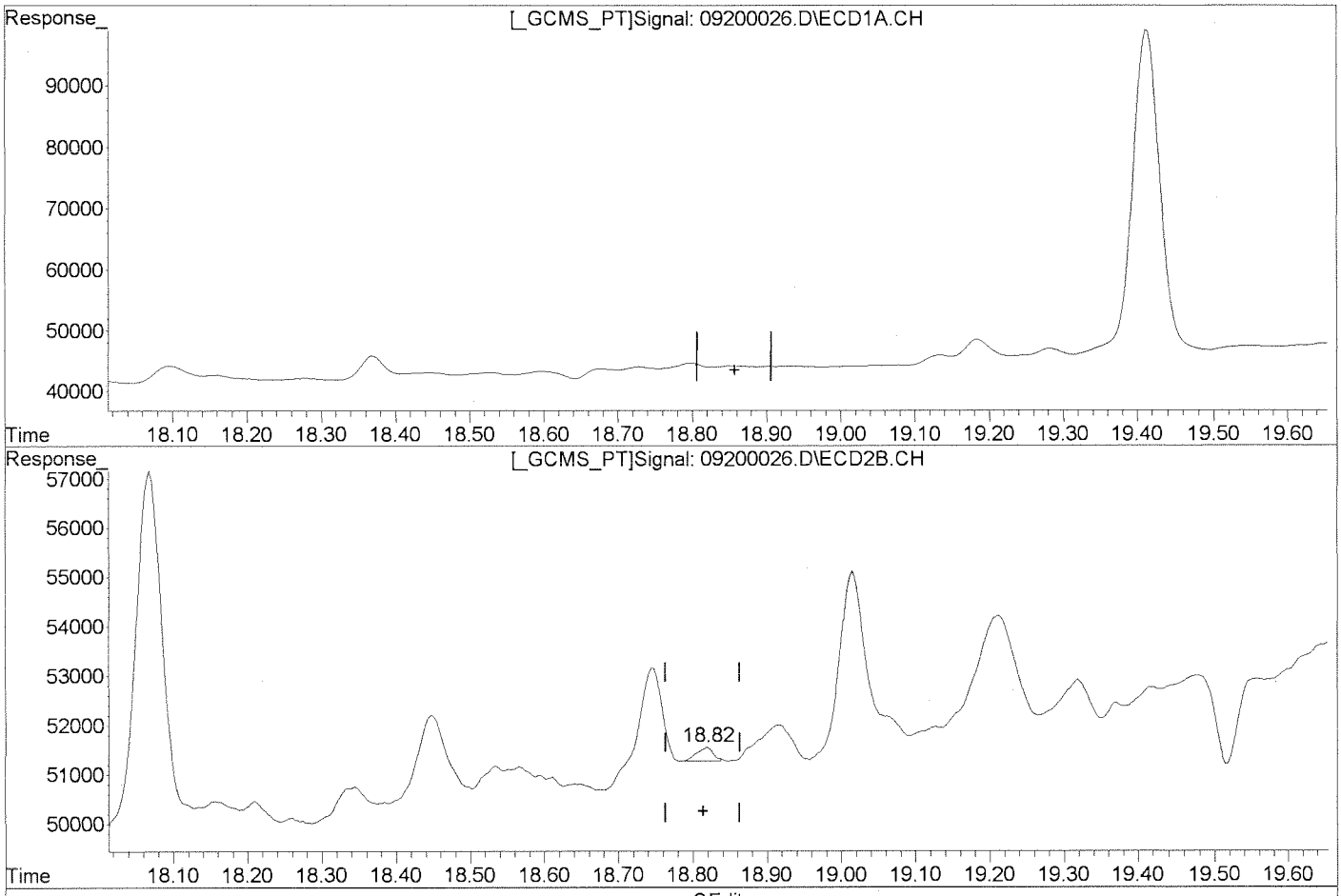
(+) = Expected Retention Time

09200026.D 092013_515.M Tue Oct 01 13:43:44 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

18.82min -0.848ppb m

response 432

Manual Integration:

After

Missed Peak

10/01/13

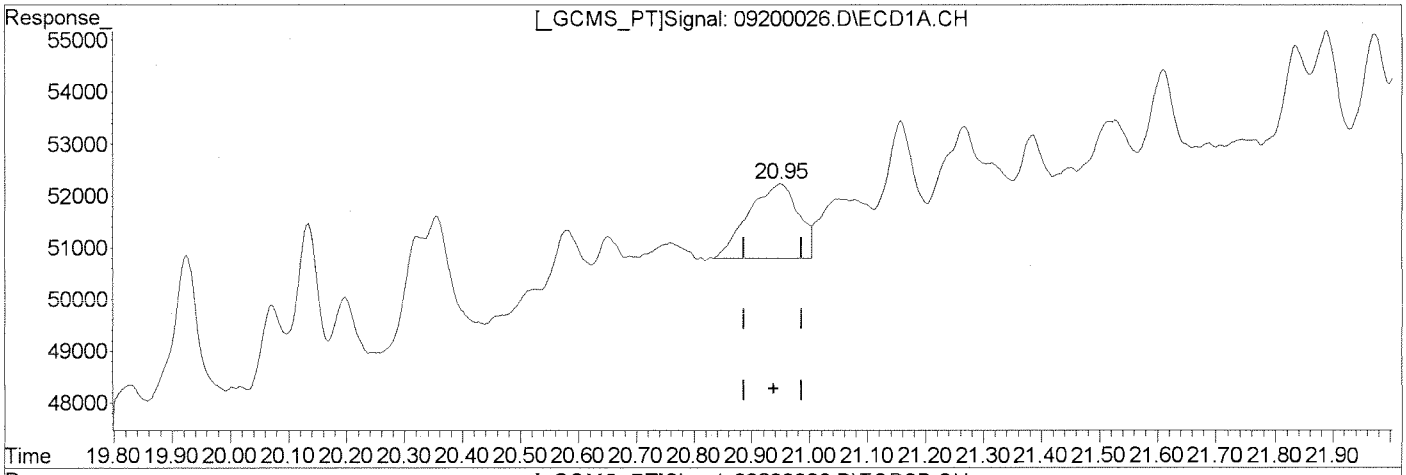
(+) = Expected Retention Time

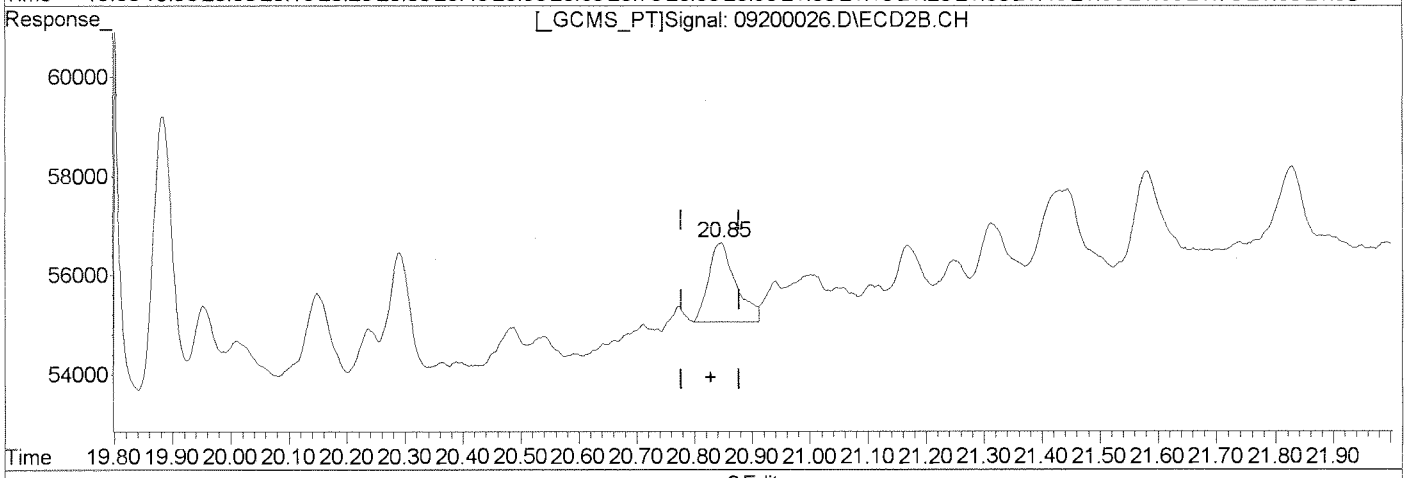
09200026.D 092013_515.M Tue Oct 01 13:43:49 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(19) Acifluorfen (m)

20.95min 0.394ppb

response 8784

(19) Acifluorfen #2 (m)

20.85min 0.276ppb

response 5302

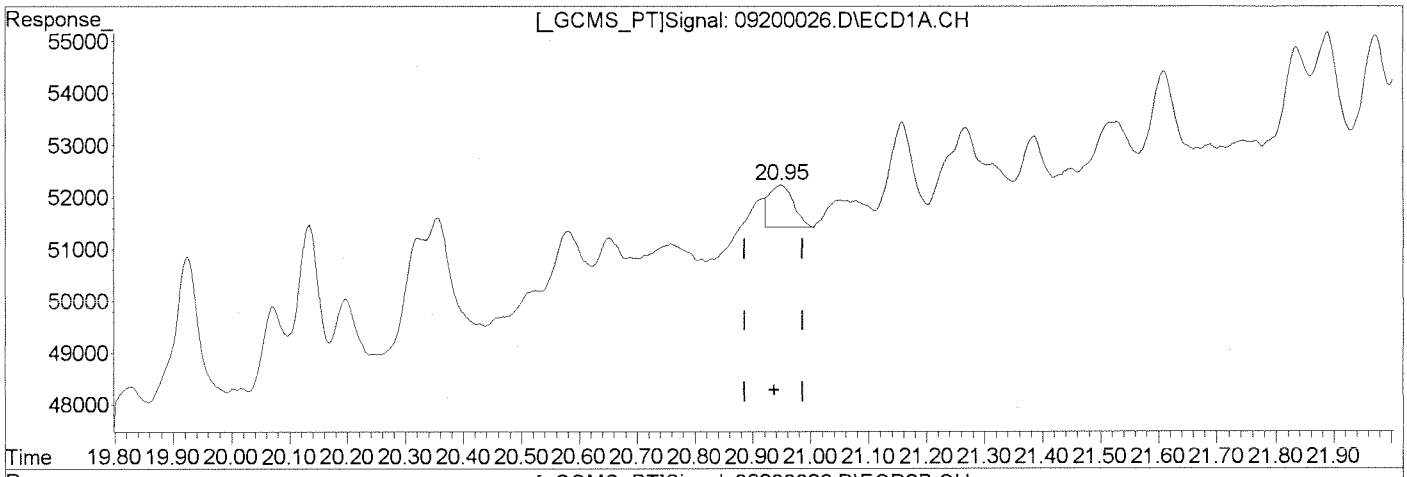
(+) = Expected Retention Time

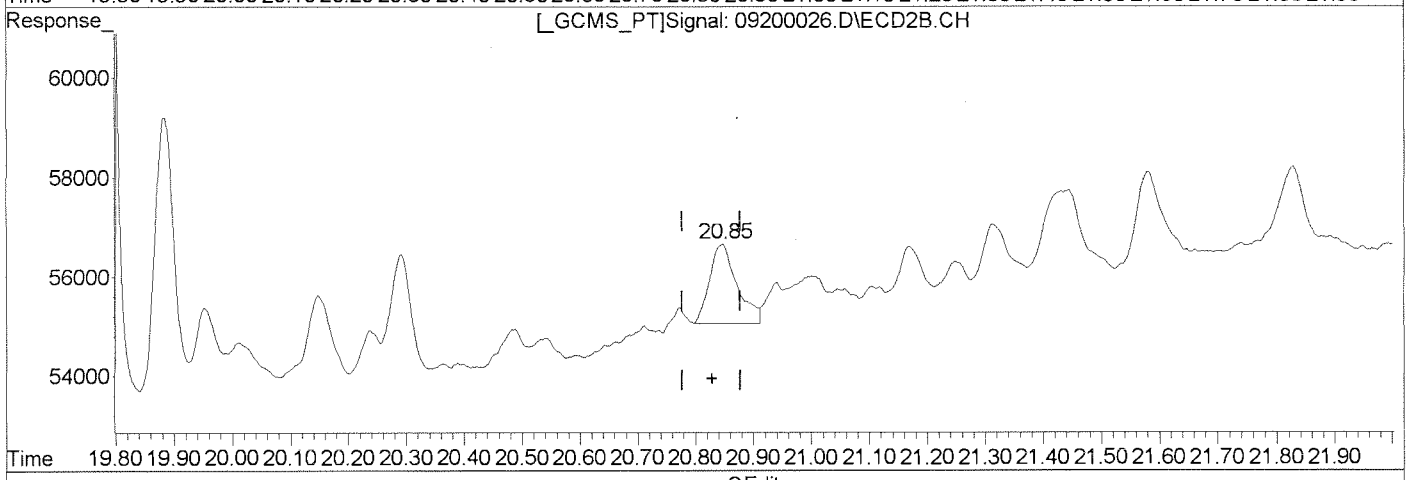
09200026.D 092013_515.M Tue Oct 01 13:43:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200026.D\ECD1A.CH Vial: 21
Signal #2 : J:\GC24\DATA\092013.515\09200026.D\ECD2B.CH
Acq On : 09-21-2013 04:32:38 AM Operator: JSCHWAB
Sample : K1309638-008 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.95min 0.106ppb m

response 2369

(19) Acifluorfen #2 (m)

20.85min 0.276ppb

response 5302

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200026.D 092013_515.M Tue Oct 01 13:44:08 2013

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-DUP
Lab Code: K1309638-010

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 515.4

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	102	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200027.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 05:02
Date Quantitated: 10/01/2013 13:53
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Duplicate

Primary Review: JD 10-01-13

Secondary Review: MN

Exception Report

Data File: J:\GC24\DATA\092013.515\09200027.D\09200027C.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 05:02
Date Quantitated: 10/01/2013 13:53
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JDS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200027.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200027.D\09200027c.d			**Vial:**	22
Acqu Date:	09/21/2013 05:02	**Quant Date:**	10/01/2013 13:53	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-010				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282810	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.12? -0.01	1153395	1076029	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2				Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	698826m	715786	82.95	102.20				102OK
				%Recovery =		83	OK	102	OK	Limits = 70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	146169m	0.0000	9.86	0.040U	0.98J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol		16.16 -0.02	0	10652	0.0000	0.0990	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)	16.03 -0.03		1538m	1279m	0.0380	0.0000	0.020U	0.020U	0.020U
1	Dinoseb			2577m	0	0.0000	0.0000	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.22 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:43 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

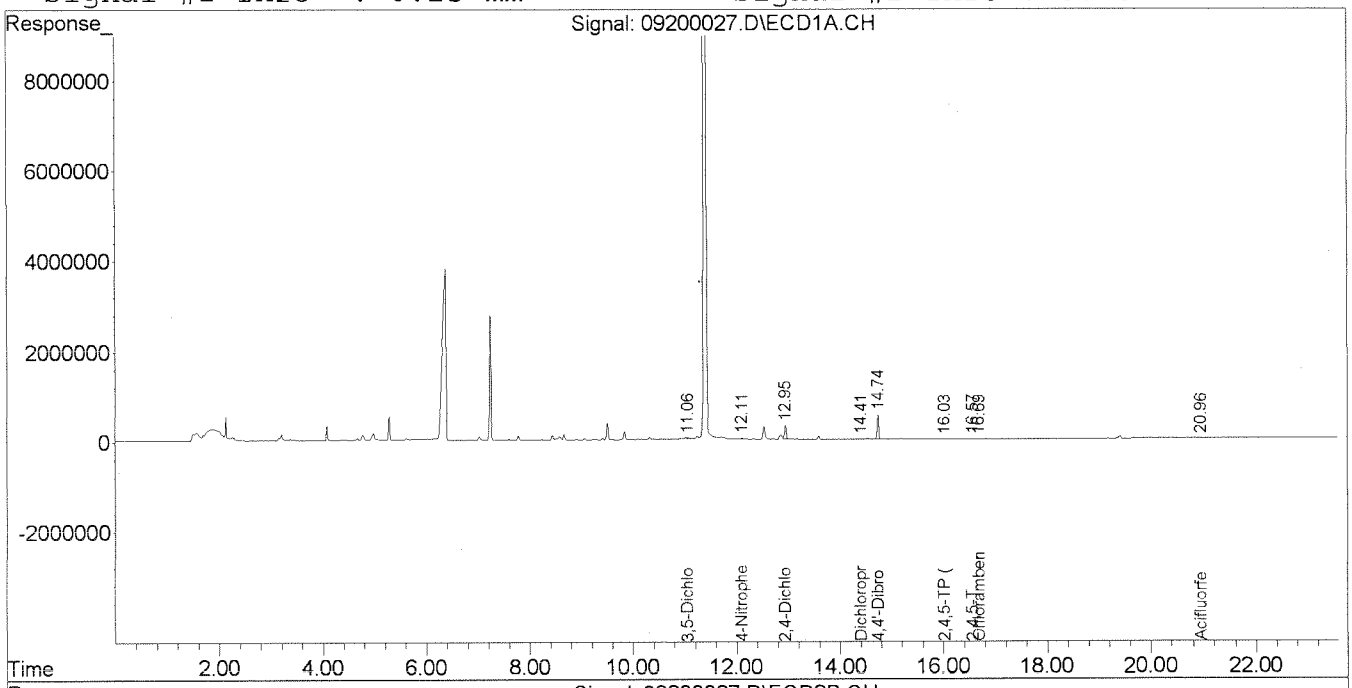
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.12	1153395	1076029	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	698826	715786	82.950m	102.202
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	146169	N.D.	9.861m#
3)	m	3,5-Dichlorobenz	11.06	0.00	38488	0	2.755	N.D. #
4)	m	4-Nitrophenol	12.11f	11.91f	71794	298426	19.370m	84.164 #
6)	m	Dicamba	0.00	13.20	0	49567	N.D.	1.612 #
7)	m	Dichloroprop	14.41f	0.00	17131	0	1.825	N.D. #
10)	m	Pentachloropheno	0.00	16.16	0	10652	N.D.	0.099 #
12)	m	2,4,5-T	16.57f	0.00	6175	0	0.206	N.D. #
13)	m	Chloramben	16.69f	16.60	4412	12045	0.231	0.618 #
19)	m	Acifluorfen	20.96	20.85	1243	5315	0.056m	0.280 #

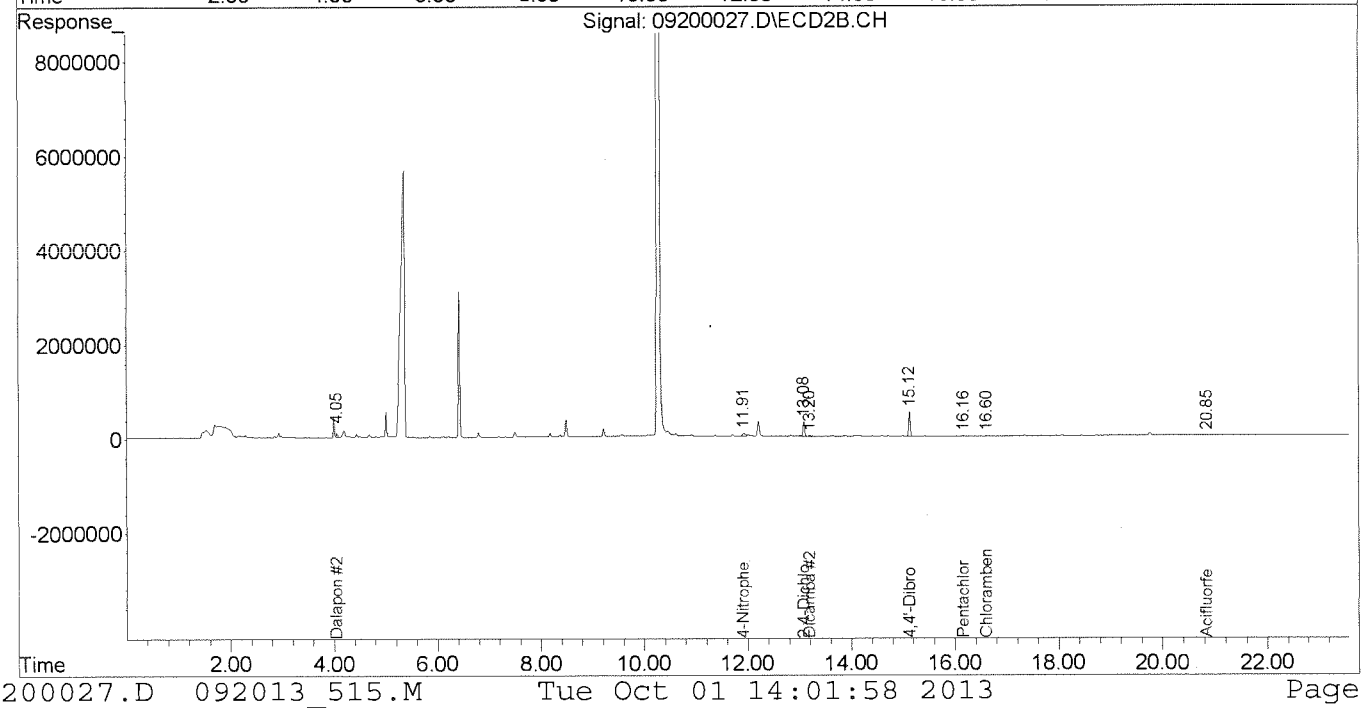
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:53 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

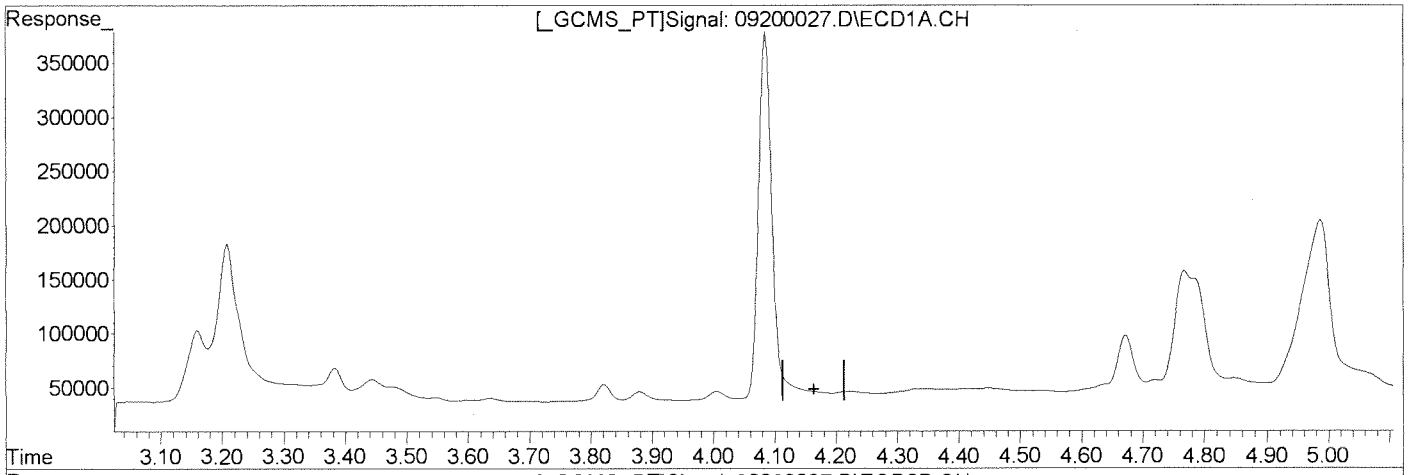


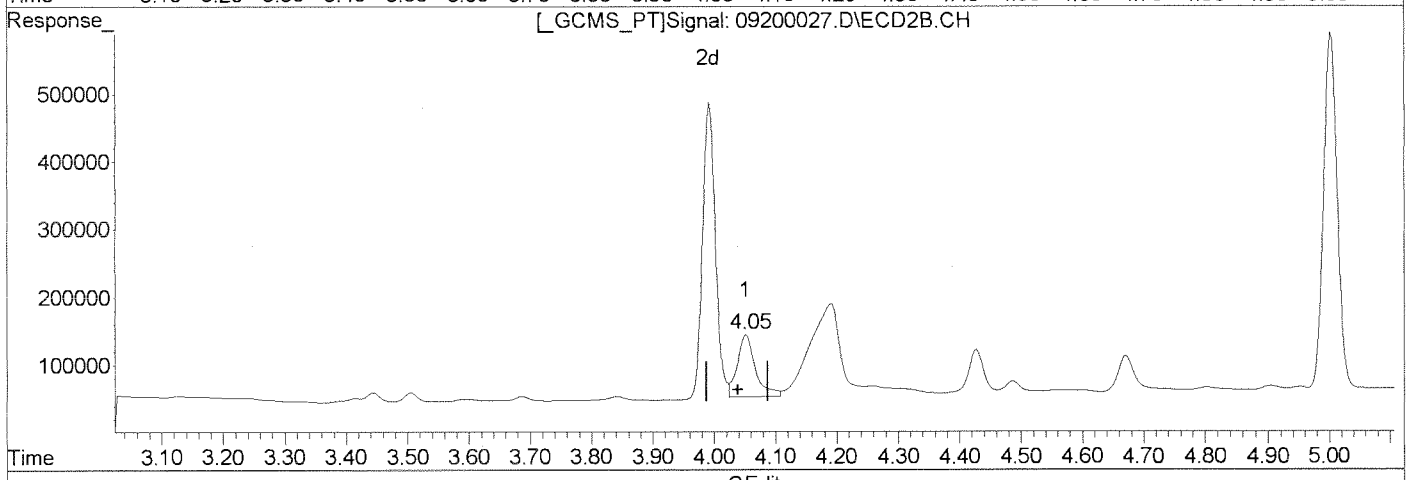


Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(2) Dalapon #2 (m)

4.05min 13.159ppb

response 187374

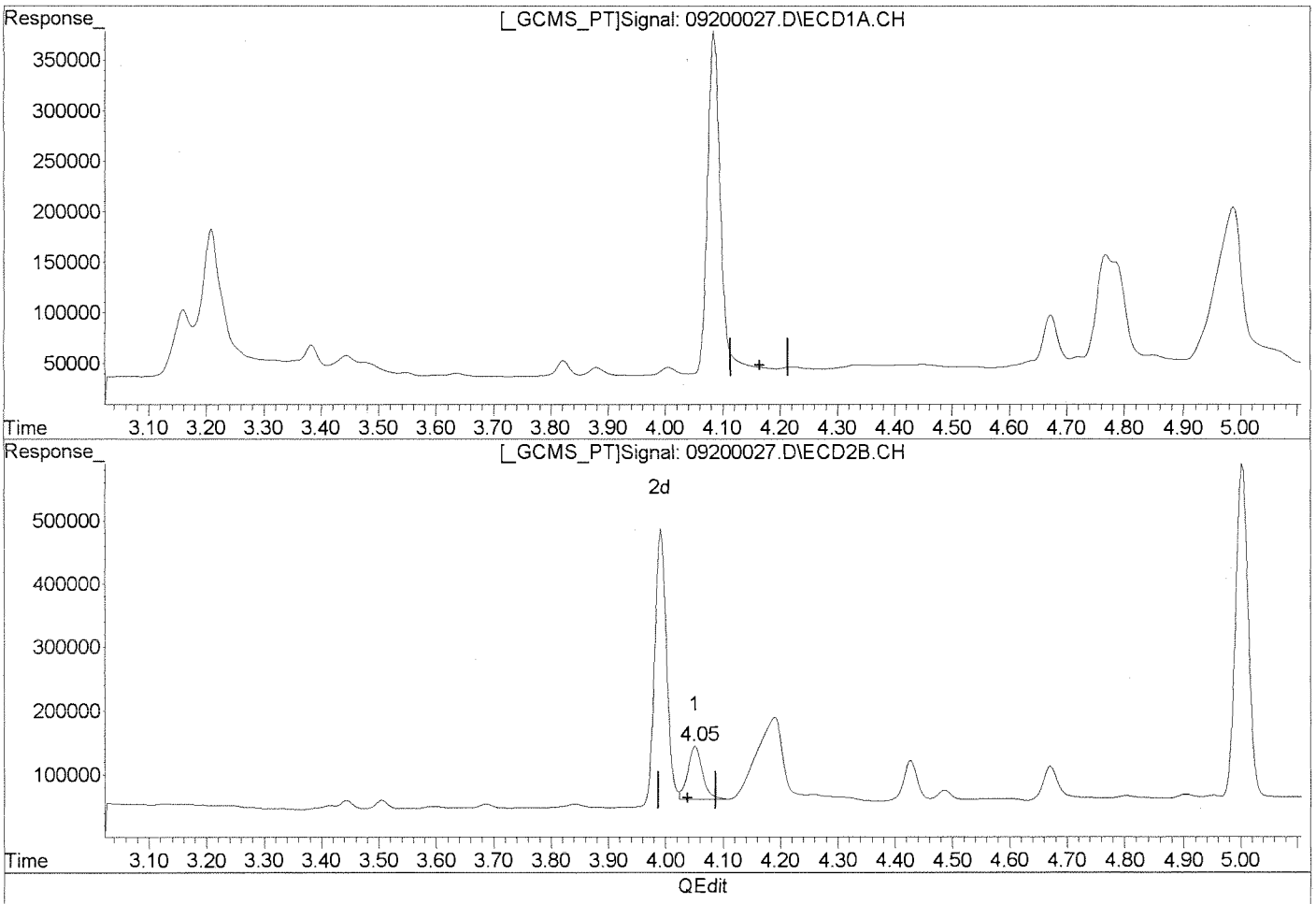
(+) = Expected Retention Time

09200027.D 092013_515.M Tue Oct 01 13:44:20 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)
0.00min 0.000ppb
response 0

(2) Dalapon #2 (m)
4.05min 9.861ppb m
response 146169

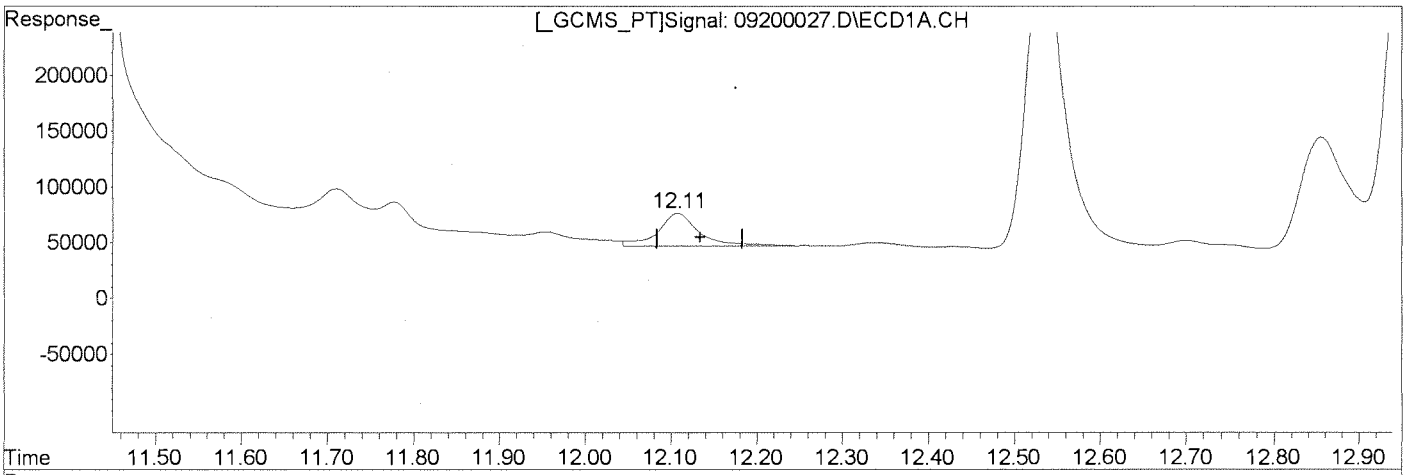
Manual Integration:
After
Baseline/Shoulder
10/01/13

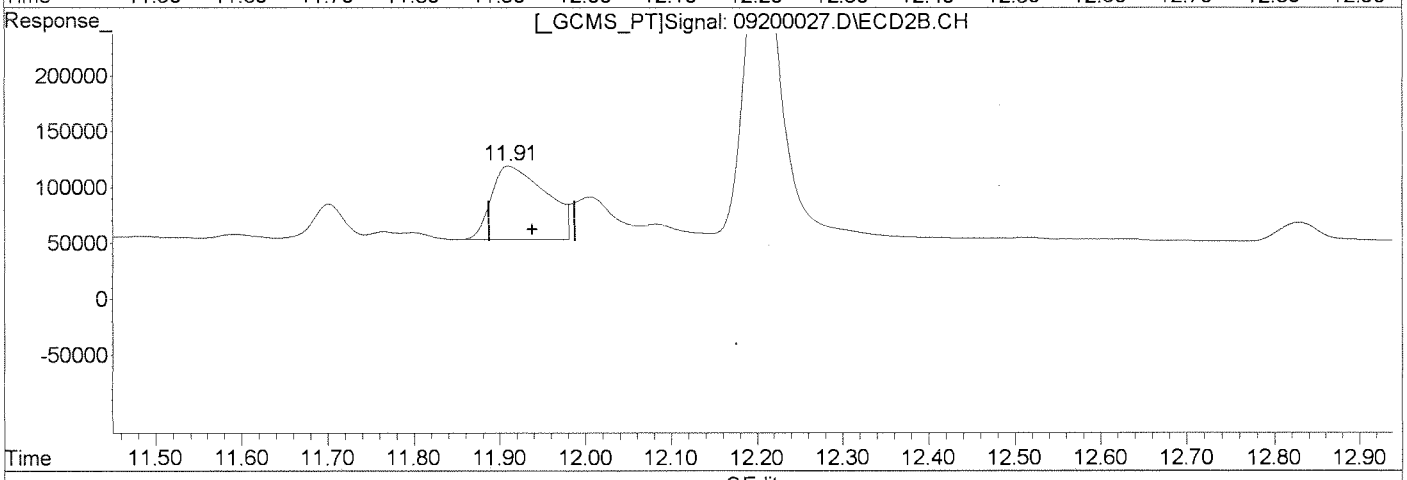
(+) = Expected Retention Time
09200027.D 092013_515.M Tue Oct 01 13:44:32 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.11min 25.818ppb

response 95692

(4) 4-Nitrophenol #2 (m)

11.91min 84.164ppb

response 298426

Manual Integration:

Before

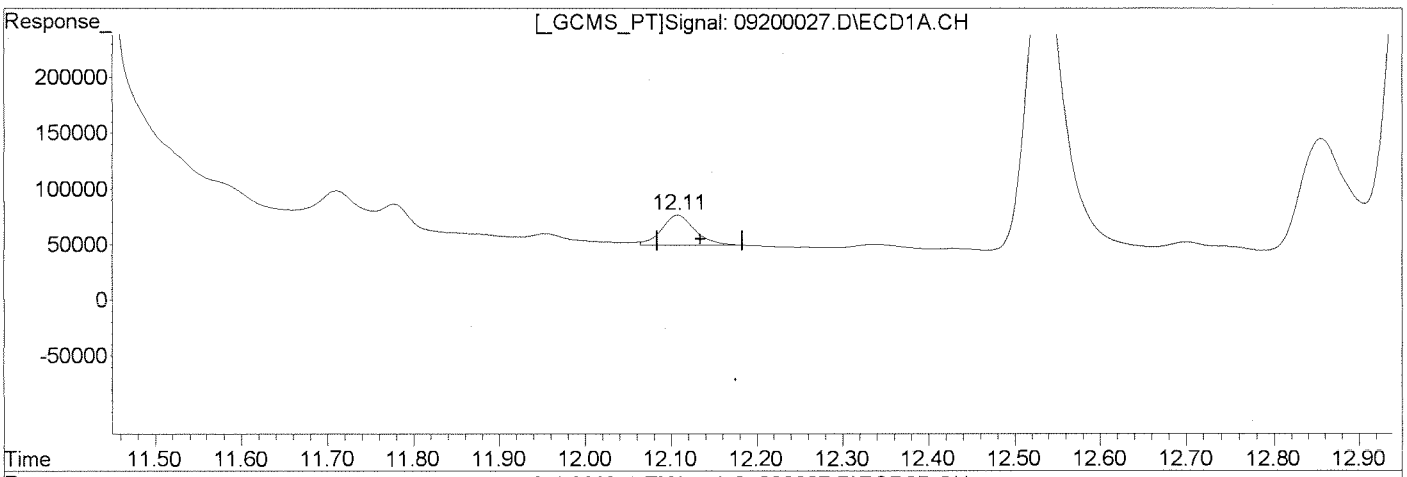
(+) = Expected Retention Time

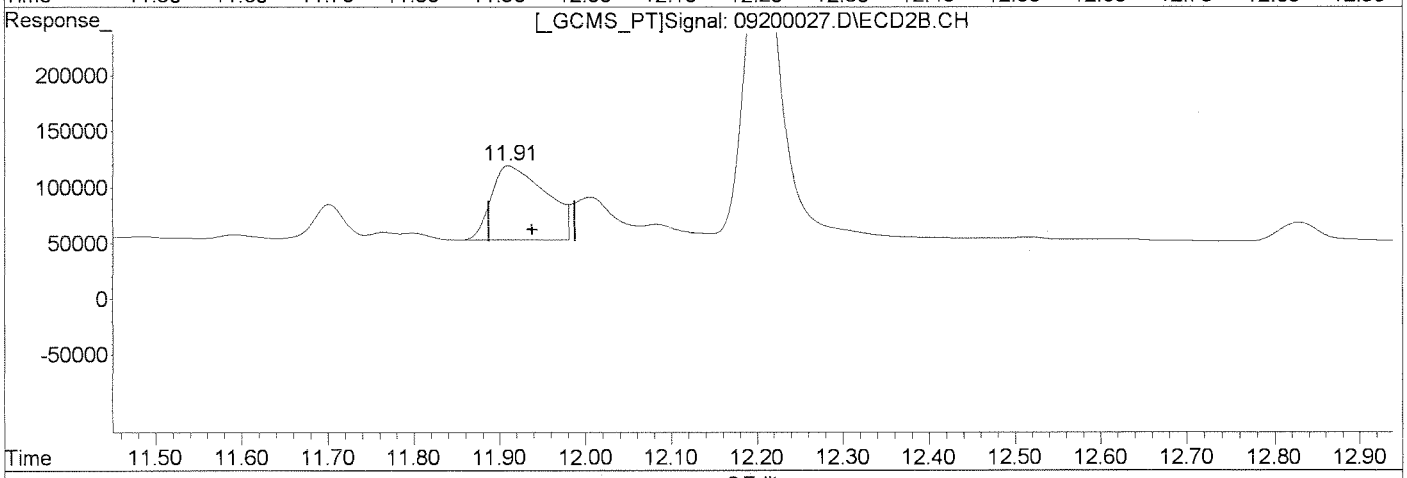
09200027.D 092013_515.M Tue Oct 01 13:44:55 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.11min 19.370ppb m

response 71794

(4) 4-Nitrophenol #2 (m)

11.91min 84.164ppb

response 298426

Manual Integration:

After

Baseline/Shoulder

10/01/13

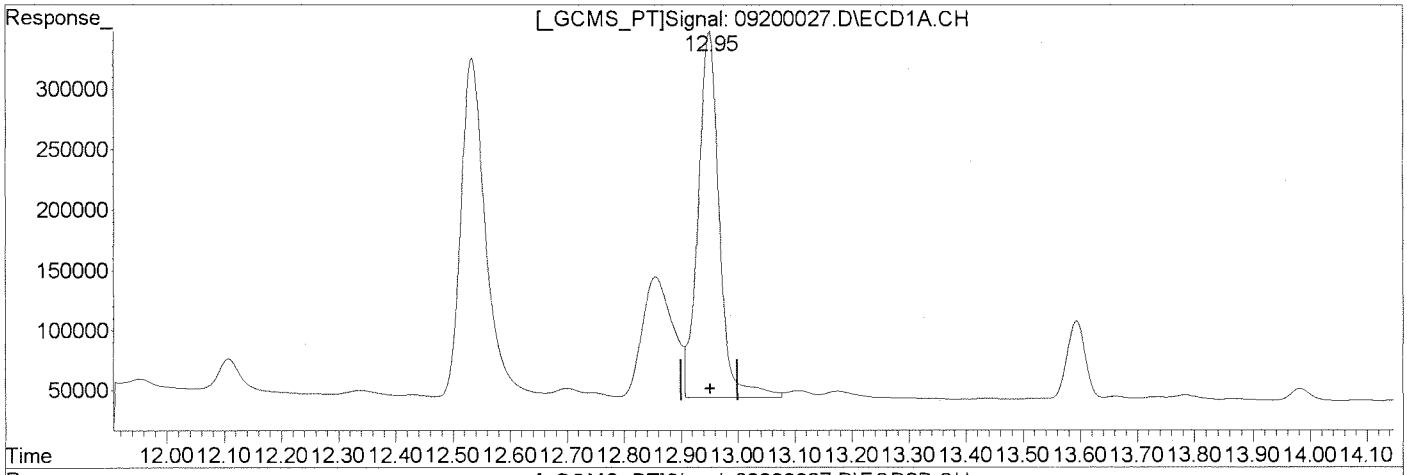
(+) = Expected Retention Time

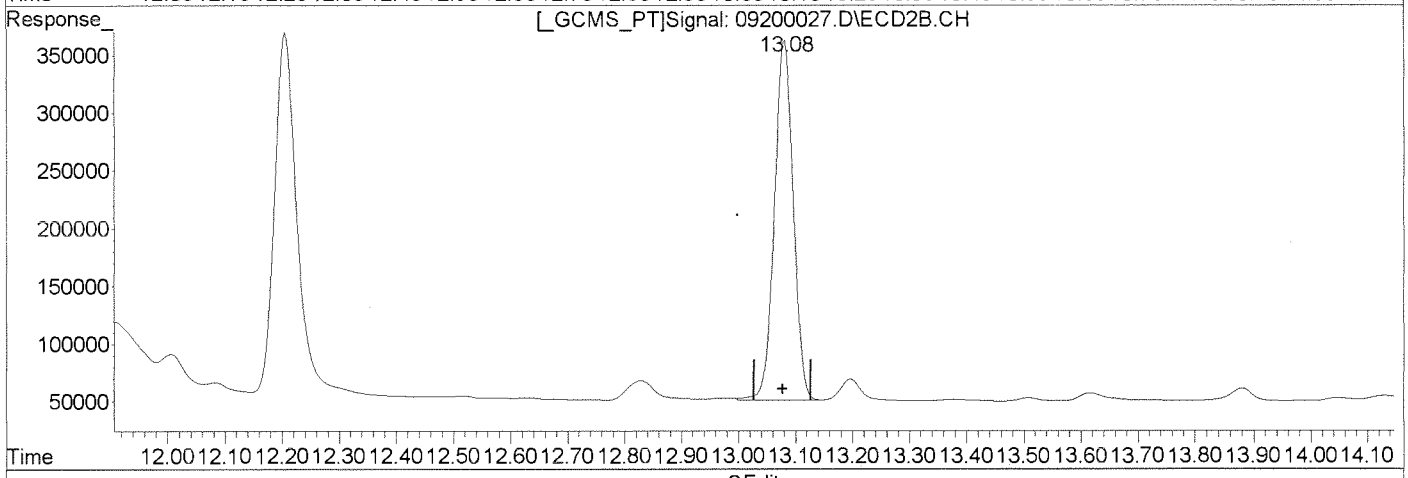
09200027.D 092013_515.M Tue Oct 01 13:45:07 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 92.499ppb

response 779268

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 102.202ppb

response 715786

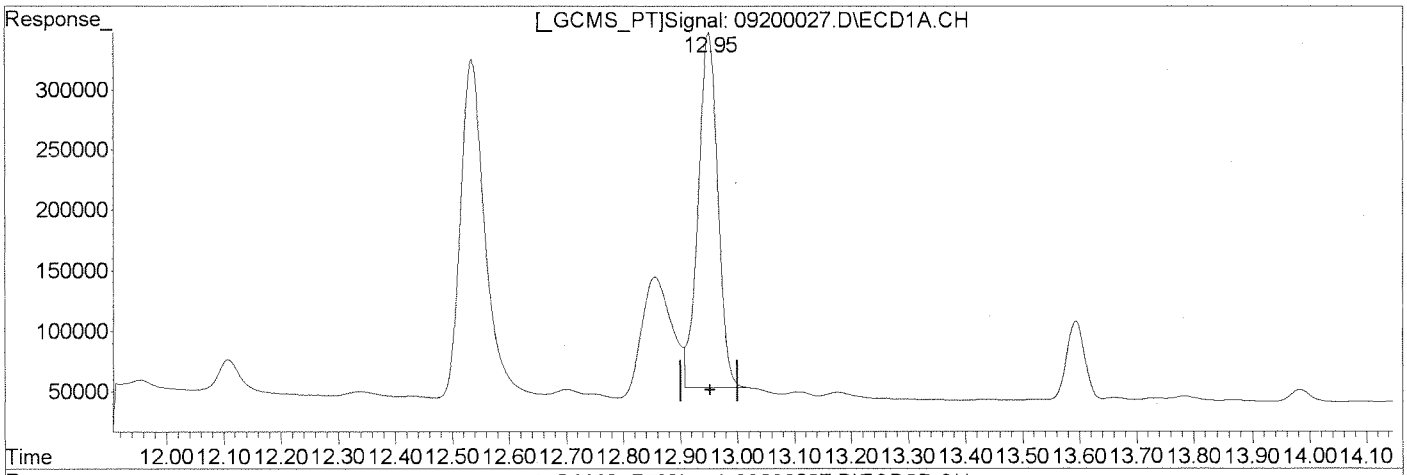
(+) = Expected Retention Time

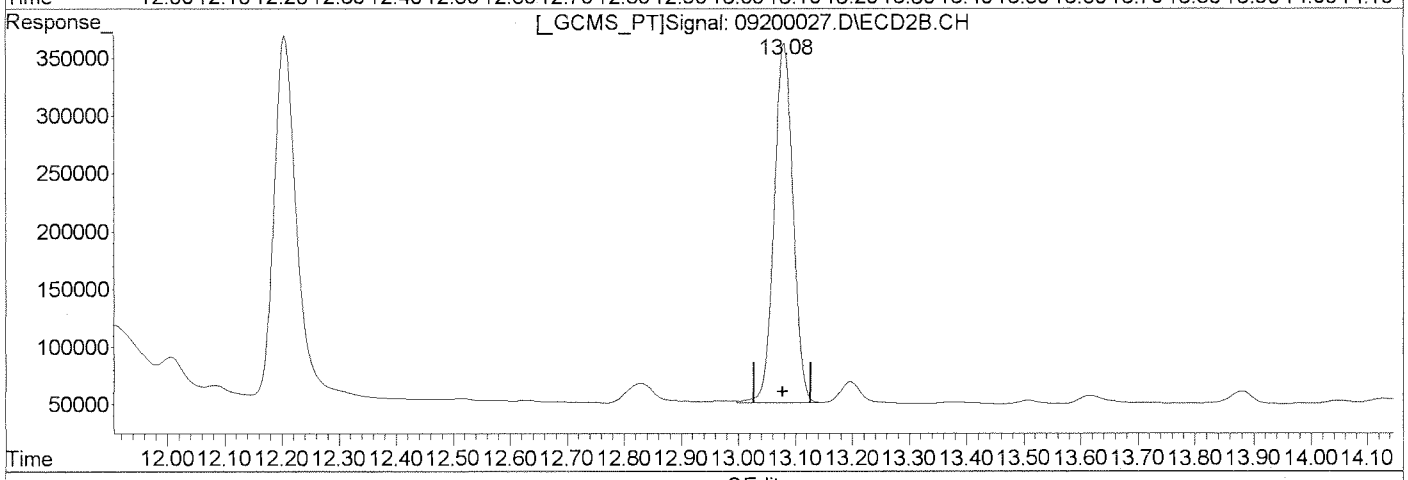
09200027.D 092013_515.M Tue Oct 01 13:45:17 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 82.950ppb m

response 698826

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 102.202ppb

response 715786

Manual Integration:

After

Baseline/Shoulder

10/01/13

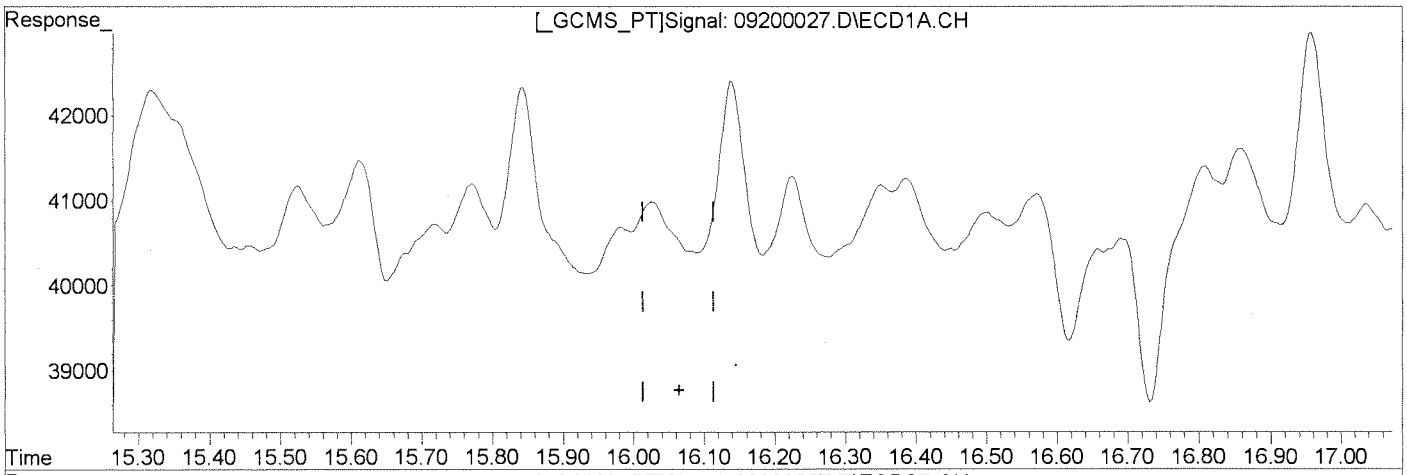
(+) = Expected Retention Time

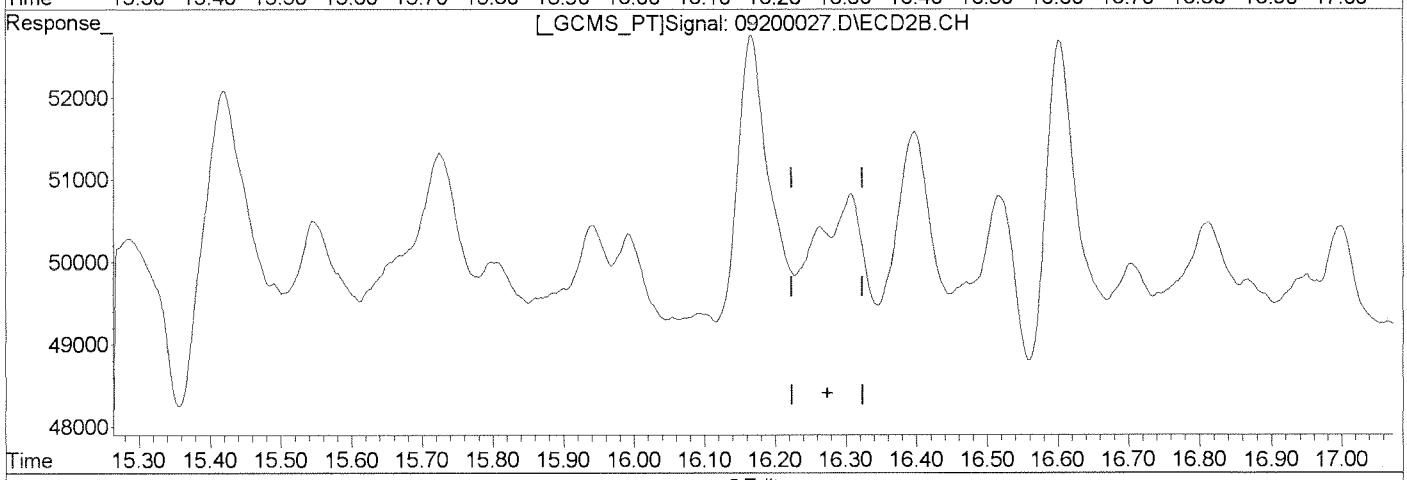
09200027.D 092013_515.M Tue Oct 01 13:45:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

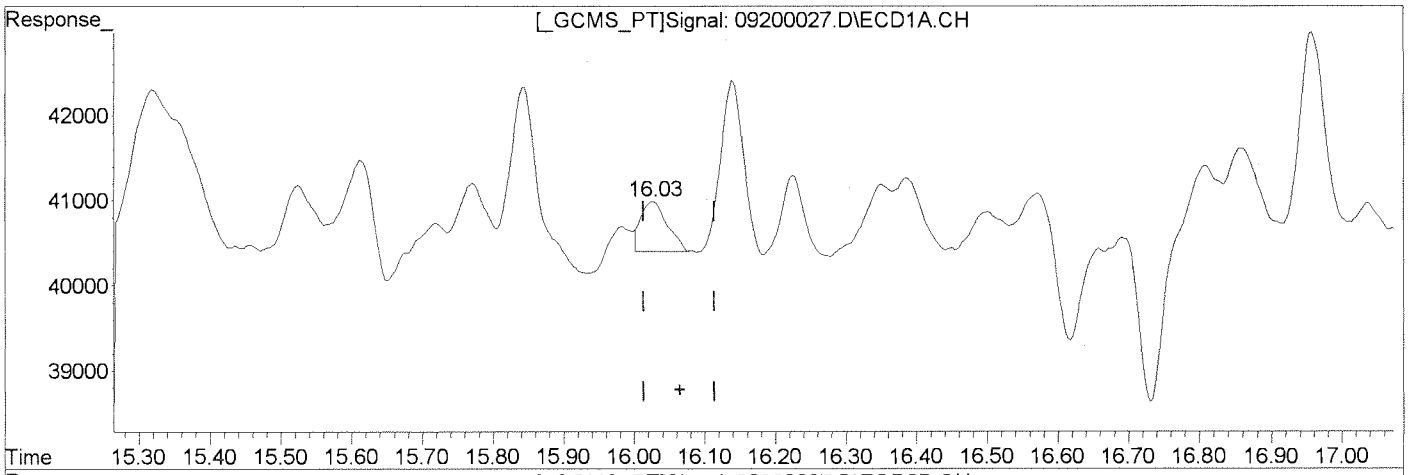
(+) = Expected Retention Time

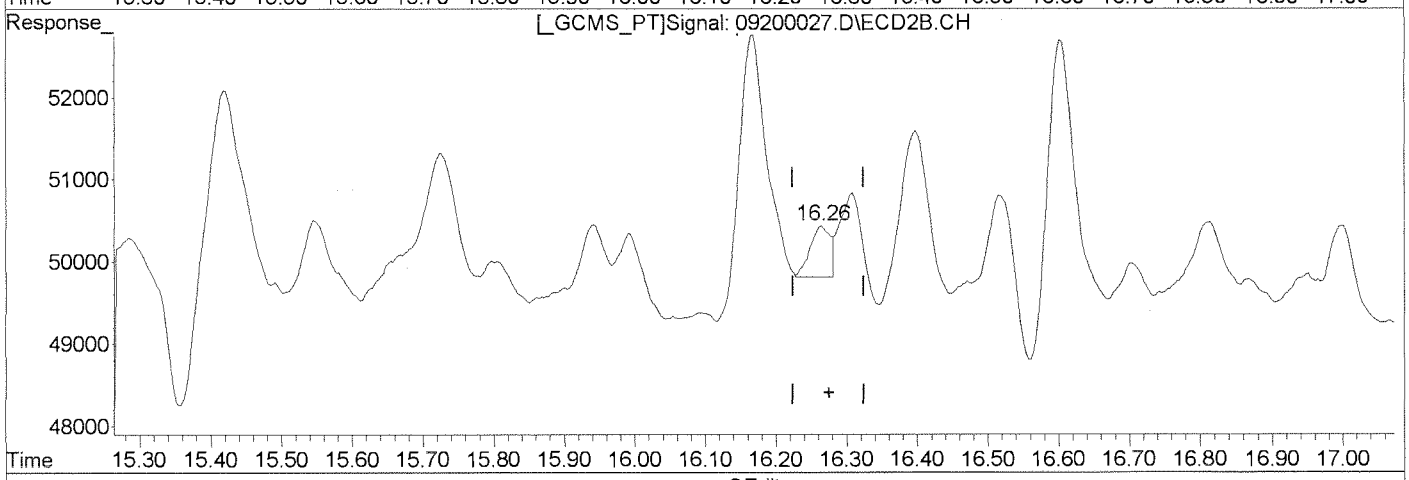
09200027.D 092013_515.M Tue Oct 01 13:45:56 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

16.03min 0.038ppb m

response 1538

(11) 2,4,5-TP (Silvex) #2 (m)

16.26min -0.537ppb m

response 1279

Manual Integration:

After

Missed Peak

10/01/13

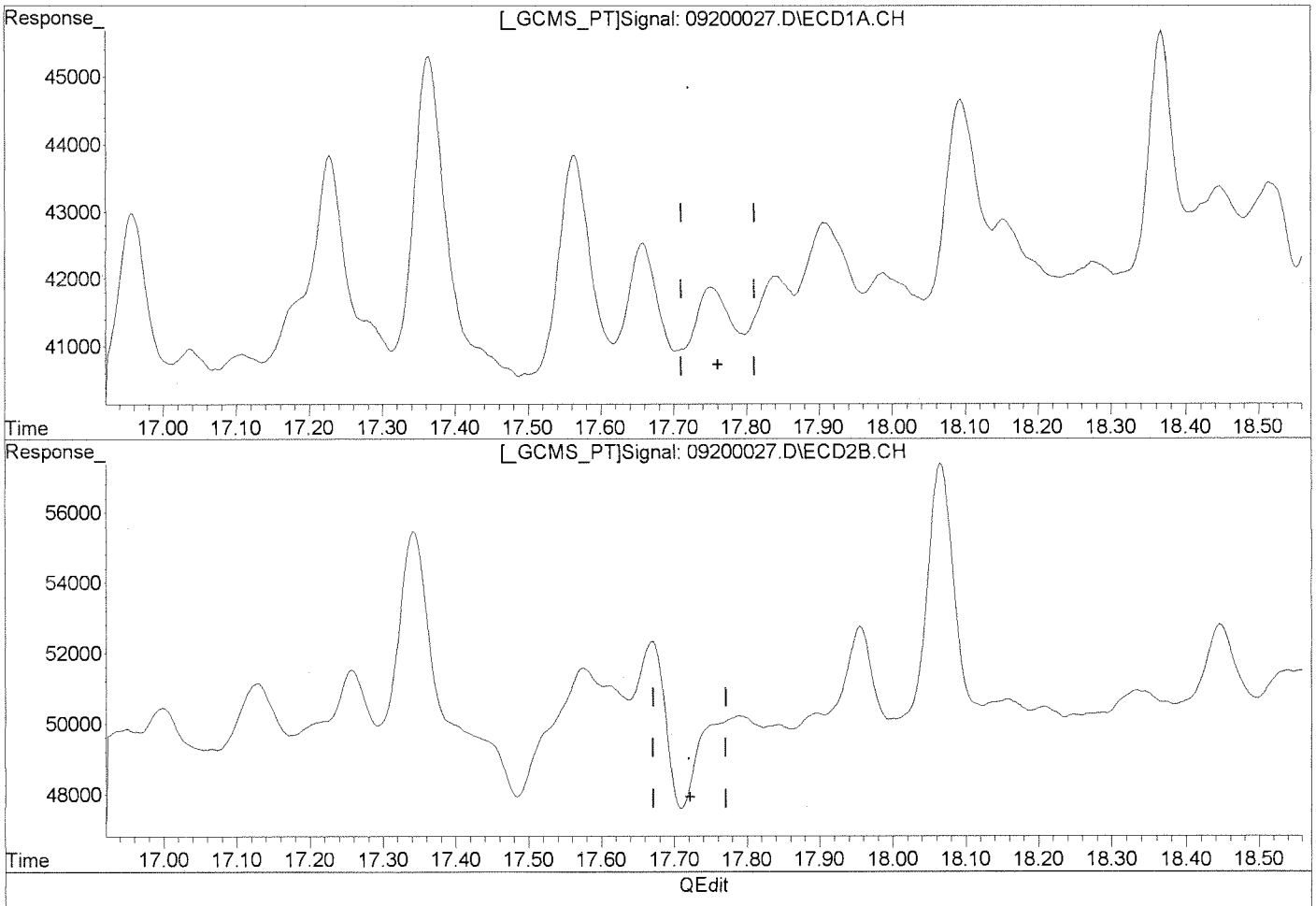
(+) = Expected Retention Time

09200027.D 092013_515.M Tue Oct 01 13:46:16 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

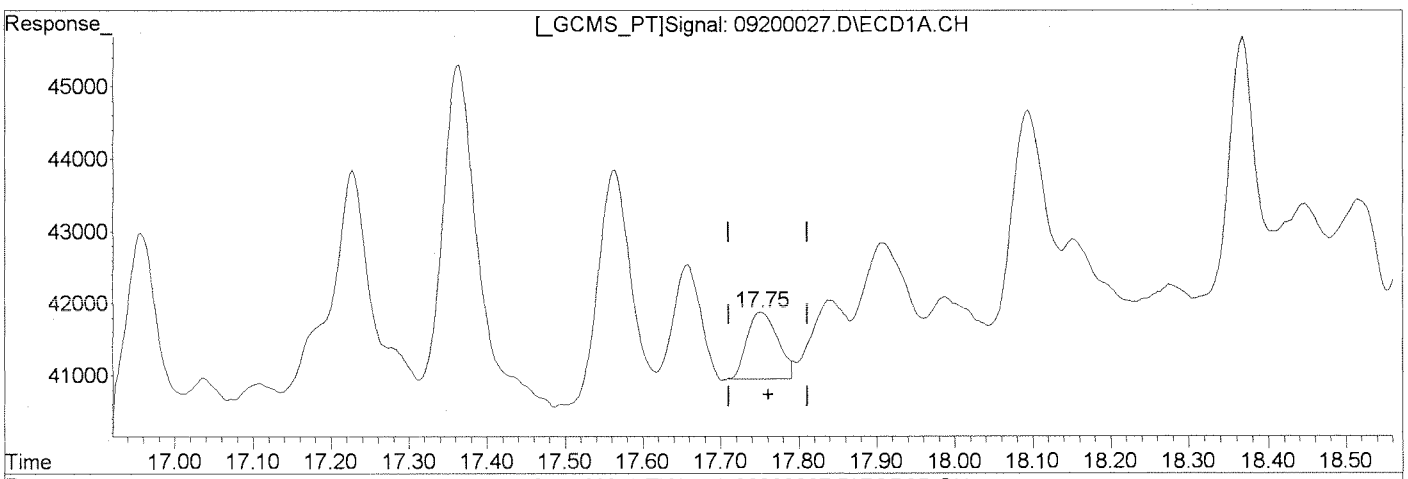
(+) = Expected Retention Time

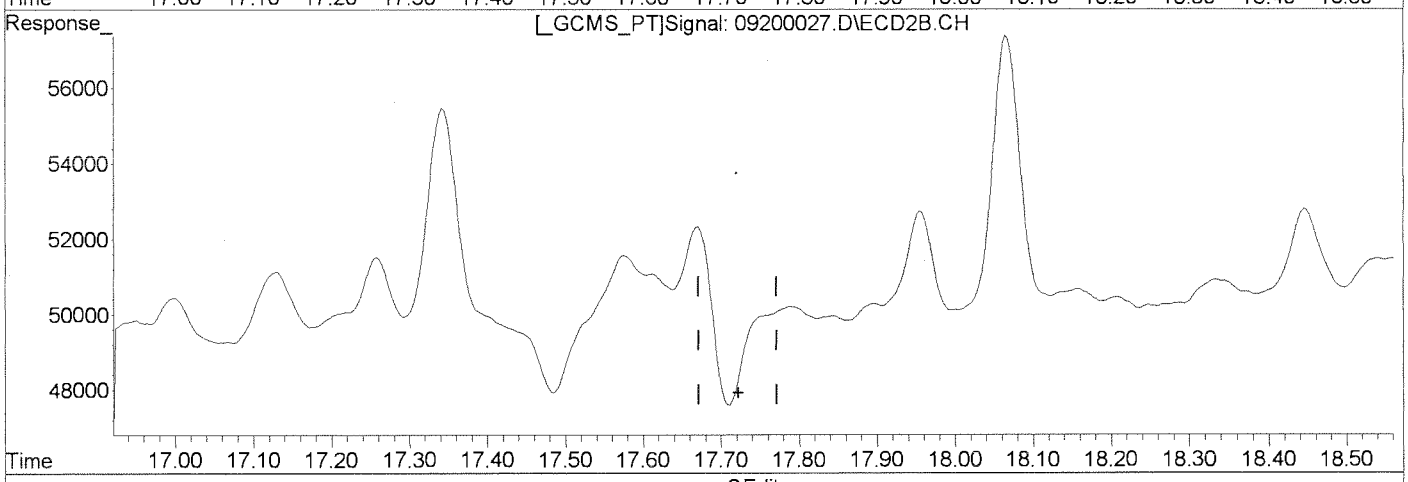
09200027.D 092013_515.M Tue Oct 01 13:46:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

17.75min -3.820ppb m

response 2577

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Missed Peak

10/01/13

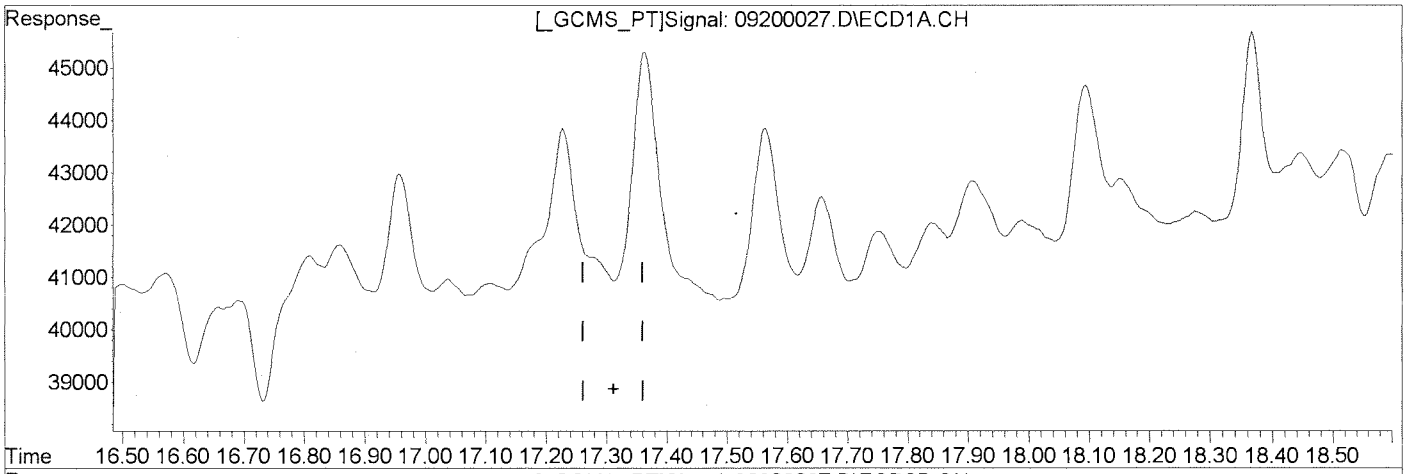
(+) = Expected Retention Time

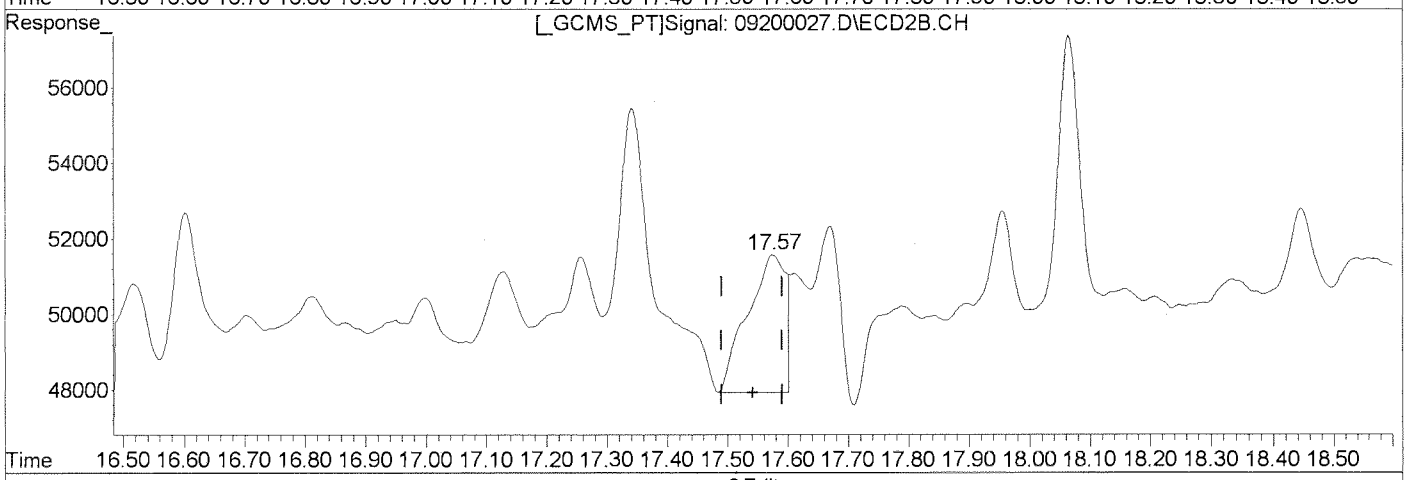
09200027.D 092013_515.M Tue Oct 01 13:46:43 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

(15) 2,4-DB #2 (m)

17.57min -0.698ppb

response 16084

Manual Integration:

Before

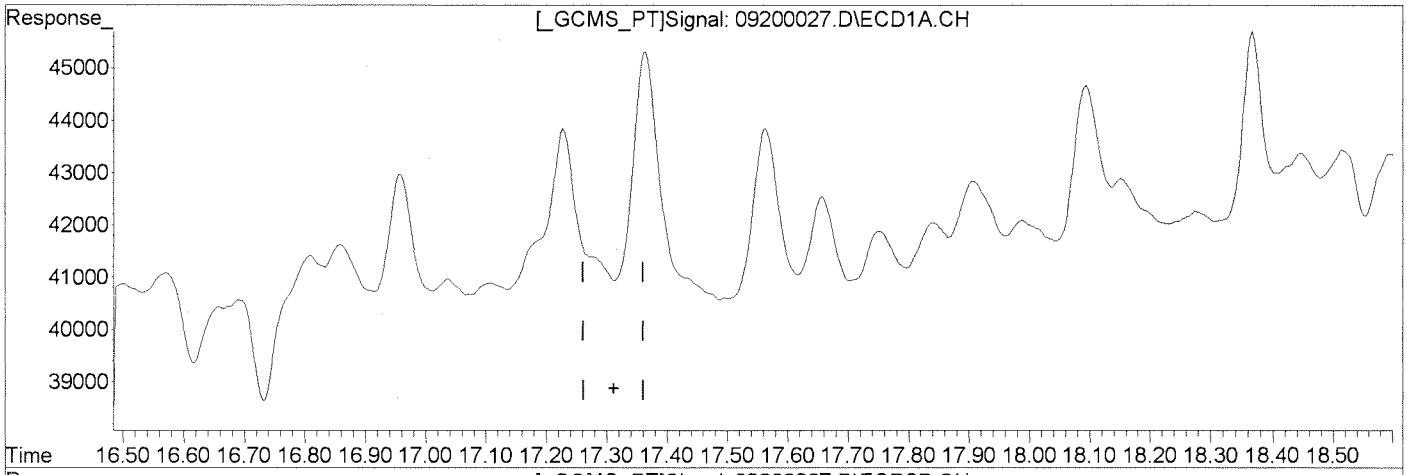
(+) = Expected Retention Time

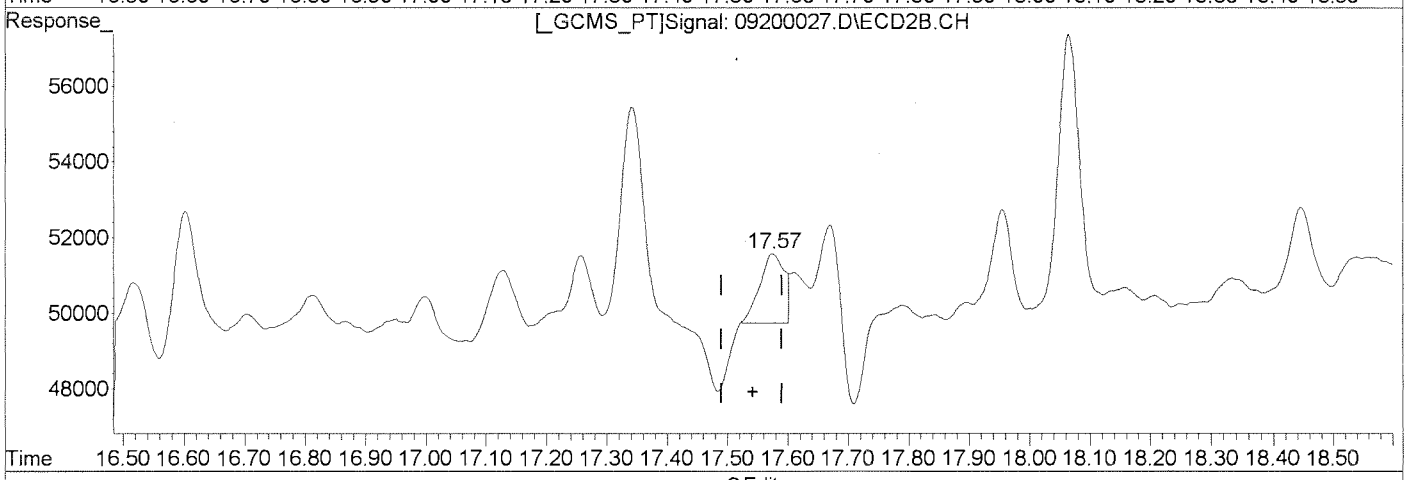
09200027.D 092013_515.M Tue Oct 01 13:47:50 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)
0.00min 0.000ppb
response 0

(15) 2,4-DB #2 (m)
17.57min -3.870ppb m
response 5263

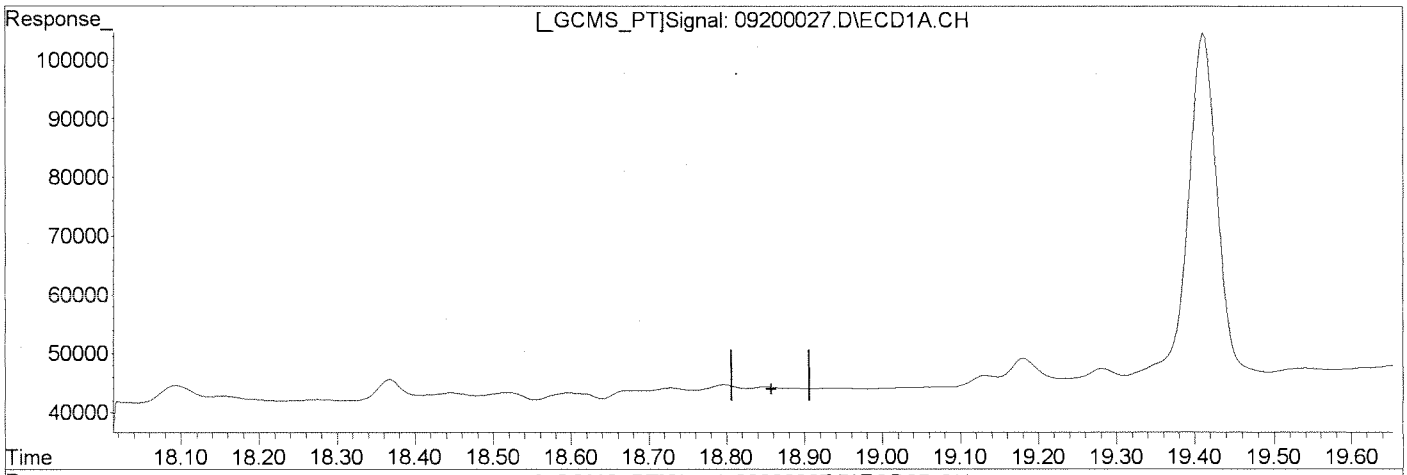
Manual Integration:
After
Baseline/Shoulder
10/01/13

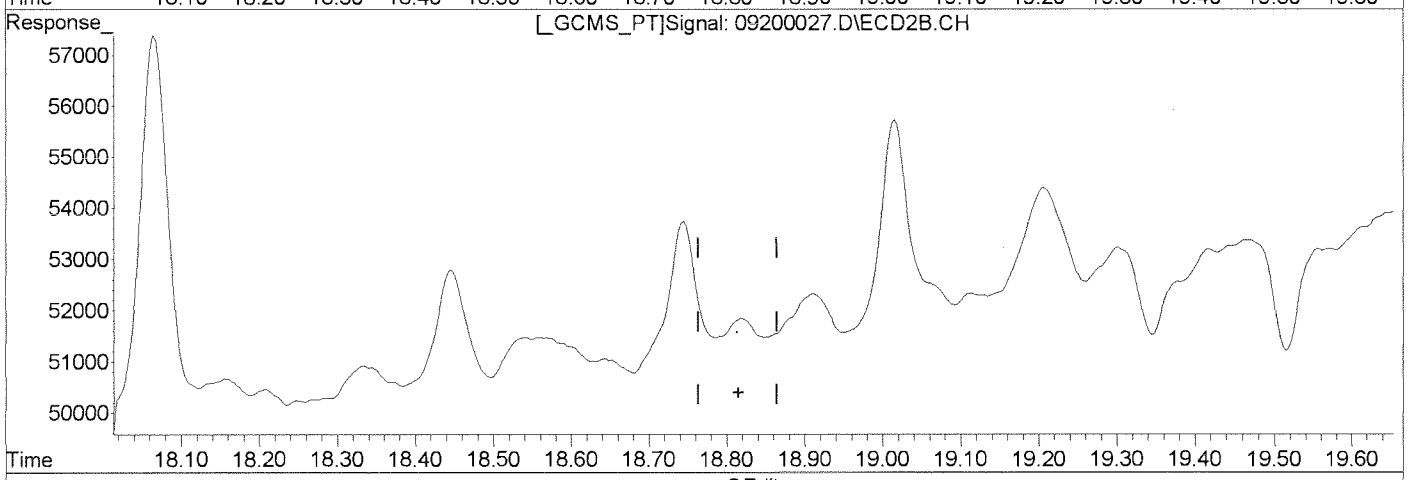
(+) = Expected Retention Time
09200027.D 092013_515.M Tue Oct 01 13:48:00 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

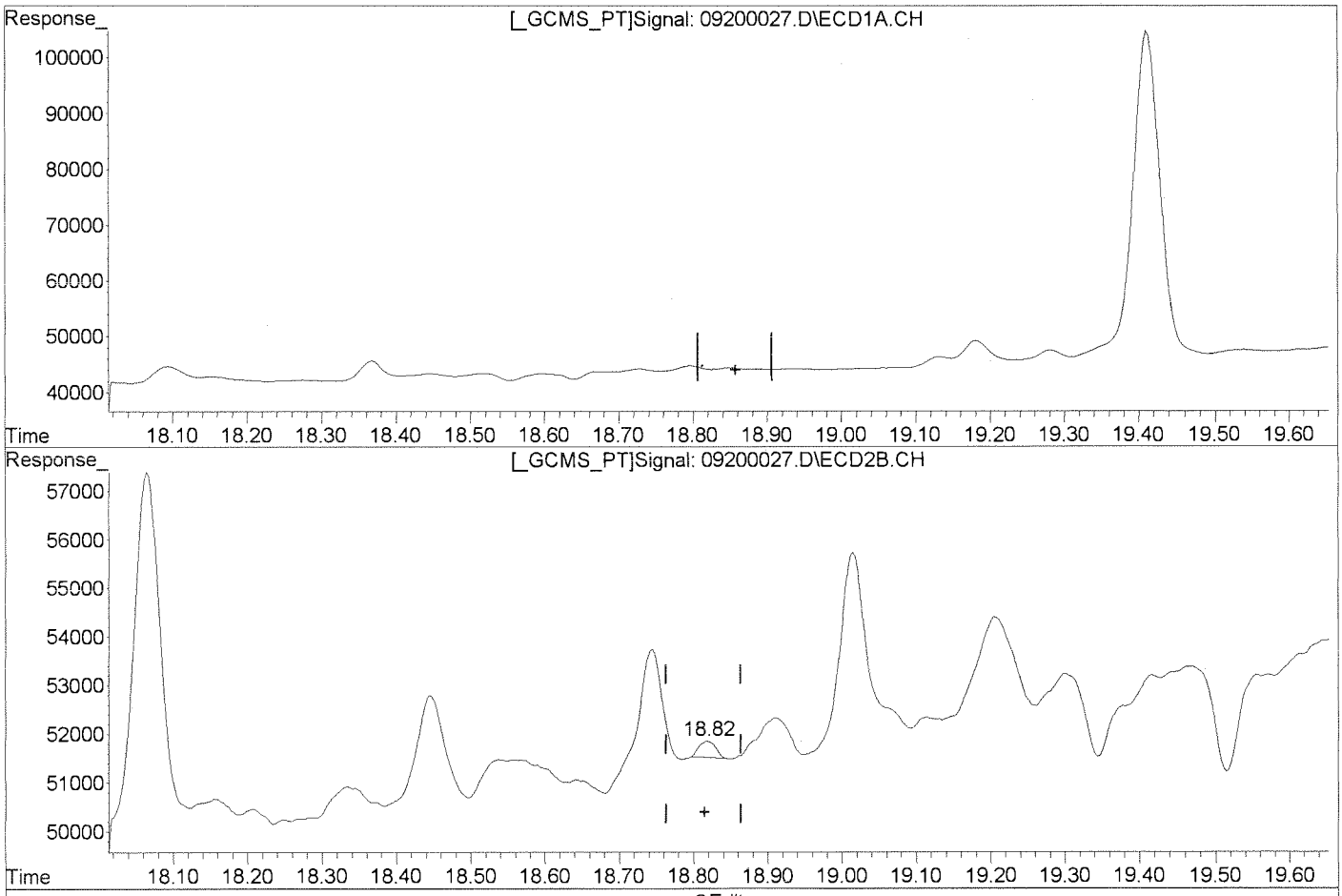
(+) = Expected Retention Time

09200027.D 092013_515.M Tue Oct 01 13:49:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

18.82min -0.844ppb m

response 517

Manual Integration:

After

Missed Peak

10/01/13

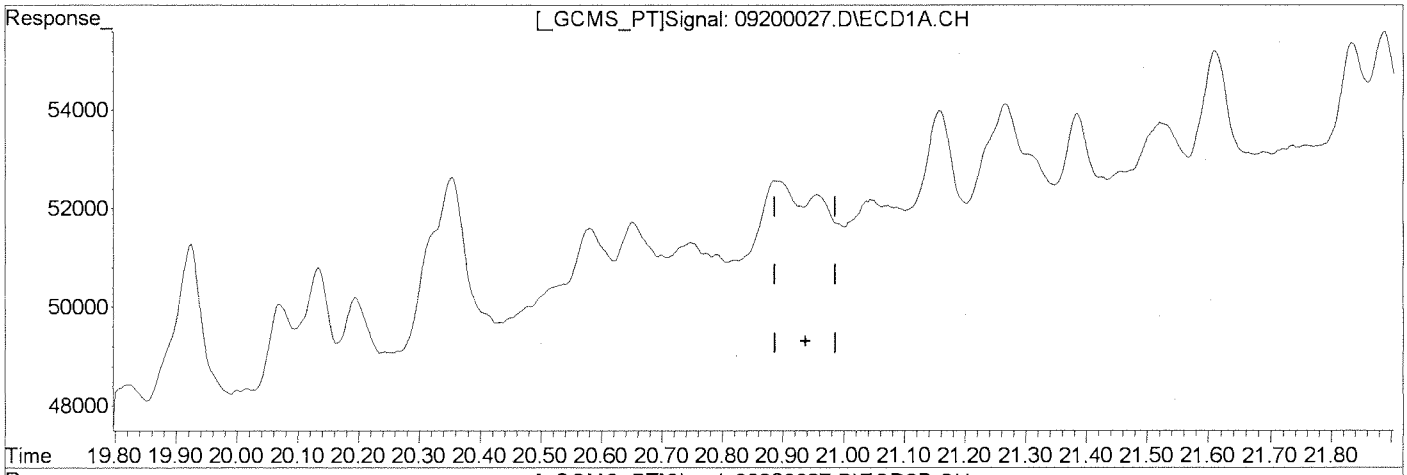
(+) = Expected Retention Time

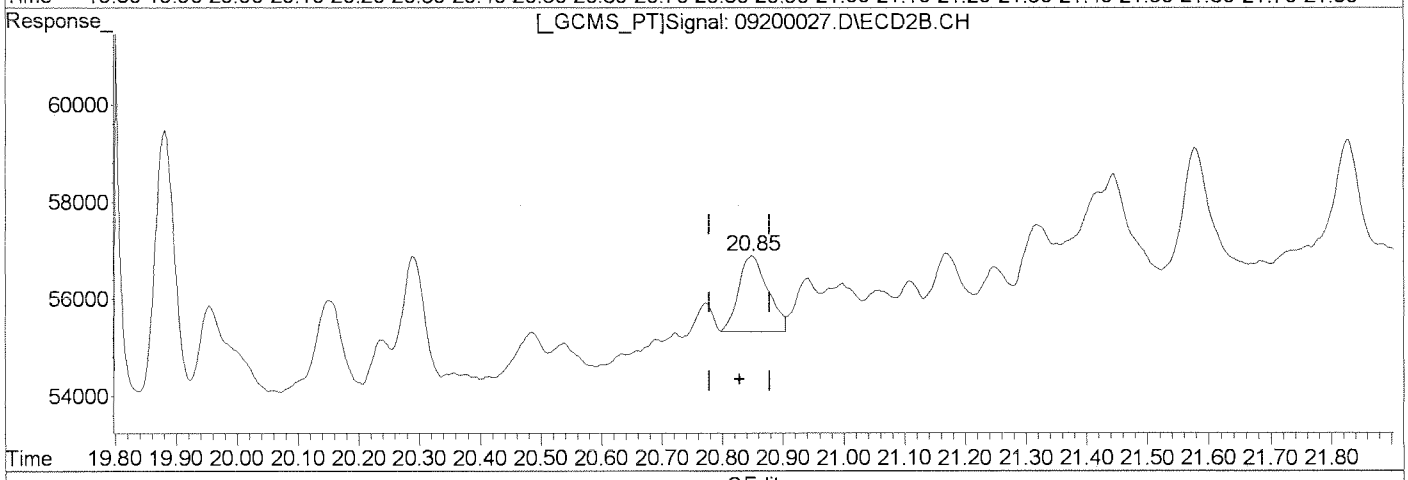
09200027.D 092013_515.M Tue Oct 01 13:49:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(19) Acifluorfen #2 (m)

20.85min 0.280ppb

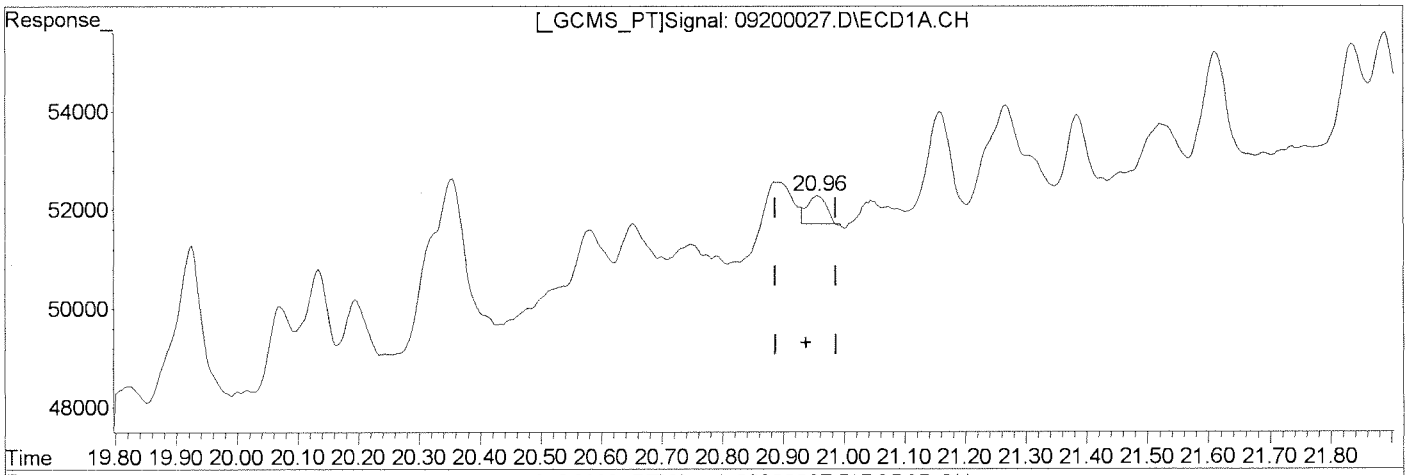
response 5315

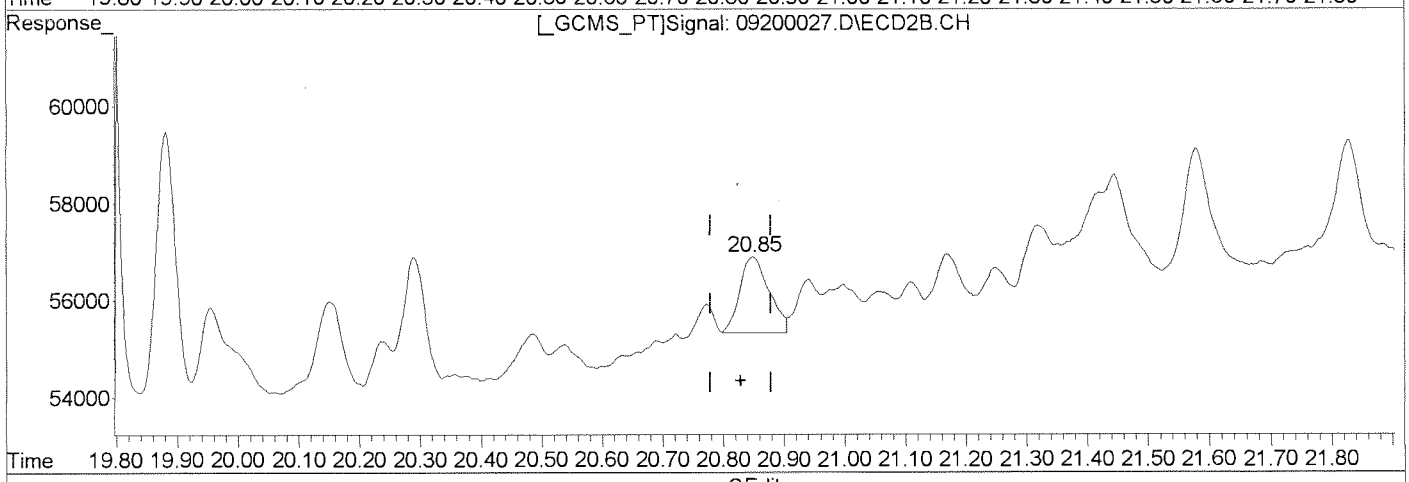
(+) = Expected Retention Time
09200027.D 092013_515.M Tue Oct 01 13:49:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200027.D\ECD1A.CH Vial: 22
Signal #2 : J:\GC24\DATA\092013.515\09200027.D\ECD2B.CH
Acq On : 09-21-2013 05:02:45 AM Operator: JSCHWAB
Sample : K1309638-010 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(19) Acifluorfen (m)

20.96min 0.056ppb m

response 1243

(19) Acifluorfen #2 (m)

20.85min 0.280ppb

response 5315

Manual Integration:

After

Missed Peak

10/01/13

(+) = Expected Retention Time

09200027.D 092013_515.M Tue Oct 01 13:49:46 2013

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 515.4

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	105	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200028.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 05:32
Date Quantitated: 10/01/2013 14:01
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Pentachlorophenol	216.1	NA	30	Dvdl ICV

Primary Review: JD 10-1-13

Secondary Review: MM

Exception Report

Data File: J:\GC24\DATA\092013.515\09200028.D\09200028C.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 05:32
Date Quantitated: 10/01/2013 14:01
Batch ID: KWG1310789
Analysis Method: 515.4
ListJoinID: LJ12241

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JBS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200028.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200028.D\09200028c.d			**Vial:**	23
Acqu Date:	09/21/2013 05:32	**Quant Date:**	10/01/2013 14:01	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ppb
Lab ID:	K1309638-011				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	K1309638
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282811	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:	Chlorinated Acids by EPA Method 515.4	**Report List ID:**	LJ12241
MB Ref:	J:\GC24\DATA\092013.515\09200018.D	**Method ID:**	MJ503
		Quant based on Report List	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1142108	1077972	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2				Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	711670m	733699m	85.31	104.66				105OK
				%Recovery =		85	OK	105	OK	Limits = 70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	138414m	0.0000	9.22	0.040U	0.92J	0.040U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Pentachlorophenol		16.17 -0.01	4861	6551	0.0000	0.0610	0.016U	0.016U	0.016U
1	2,4,5-TP (Silvex)	16.02 -0.04		1141m	1579m	0.0280	0.0000	0.020U	0.020U	0.020U
1	Dinoseb			1650m	0	0.0000	0.0000	0.048U	0.048U	0.048U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.20 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:43 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

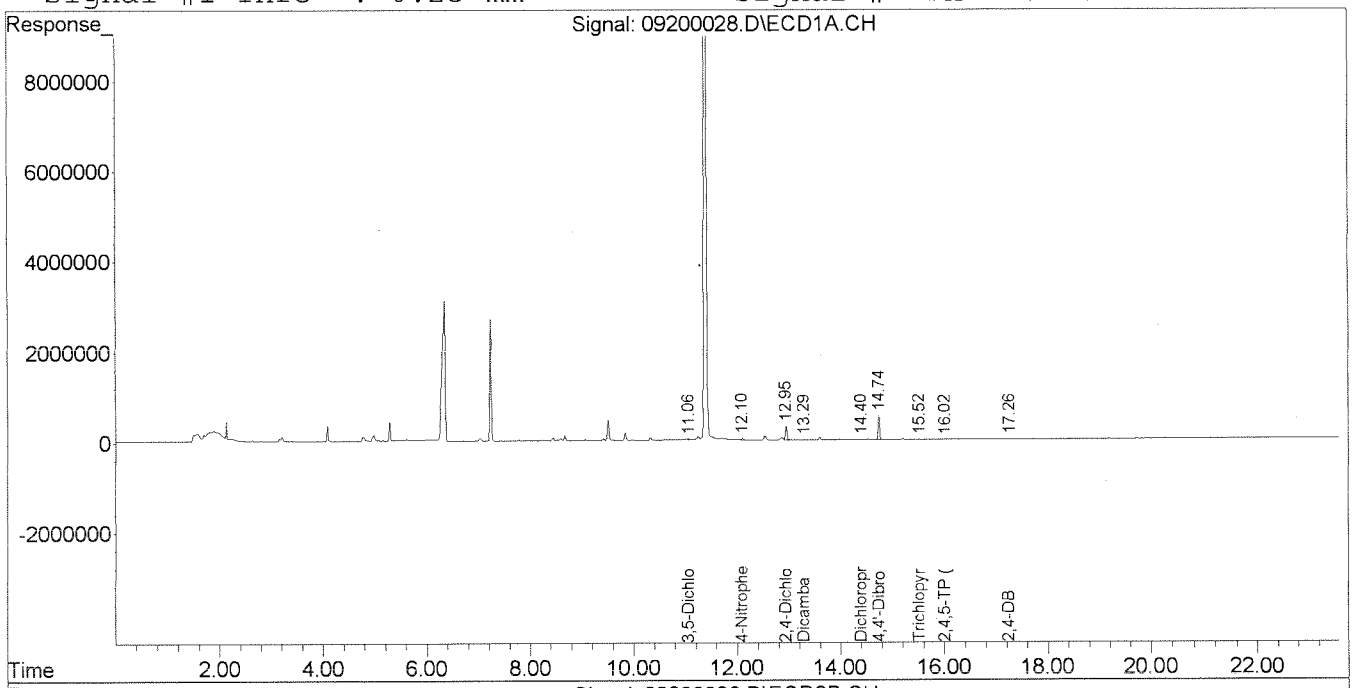
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1142108	1077972	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	711670	733699	85.310m	104.656m
		Target Compounds						
2)	m	Dalapon	0.00	4.05	0	138414	N.D.	9.220m#
3)	m	3,5-Dichlorobenz	11.06	0.00	23726	0	1.715	N.D. #
4)	m	4-Nitrophenol	12.10f	11.90f	76384	70846	20.812m	19.944m
6)	m	Dicamba	13.29	13.20f	1830	43534	0.057m	1.413 #
7)	m	Dichloroprop	14.40f	14.41f	16472	5978	1.772	N.D. #
9)	m	Trichlopyr	15.52f	0.00	4861	0	0.037	N.D. #
13)	m	Chloramben	0.00	16.60	0	8320	N.D.	0.426 #
19)	m	Acifluorfen	0.00	20.85	0	5383	N.D.	0.283 #

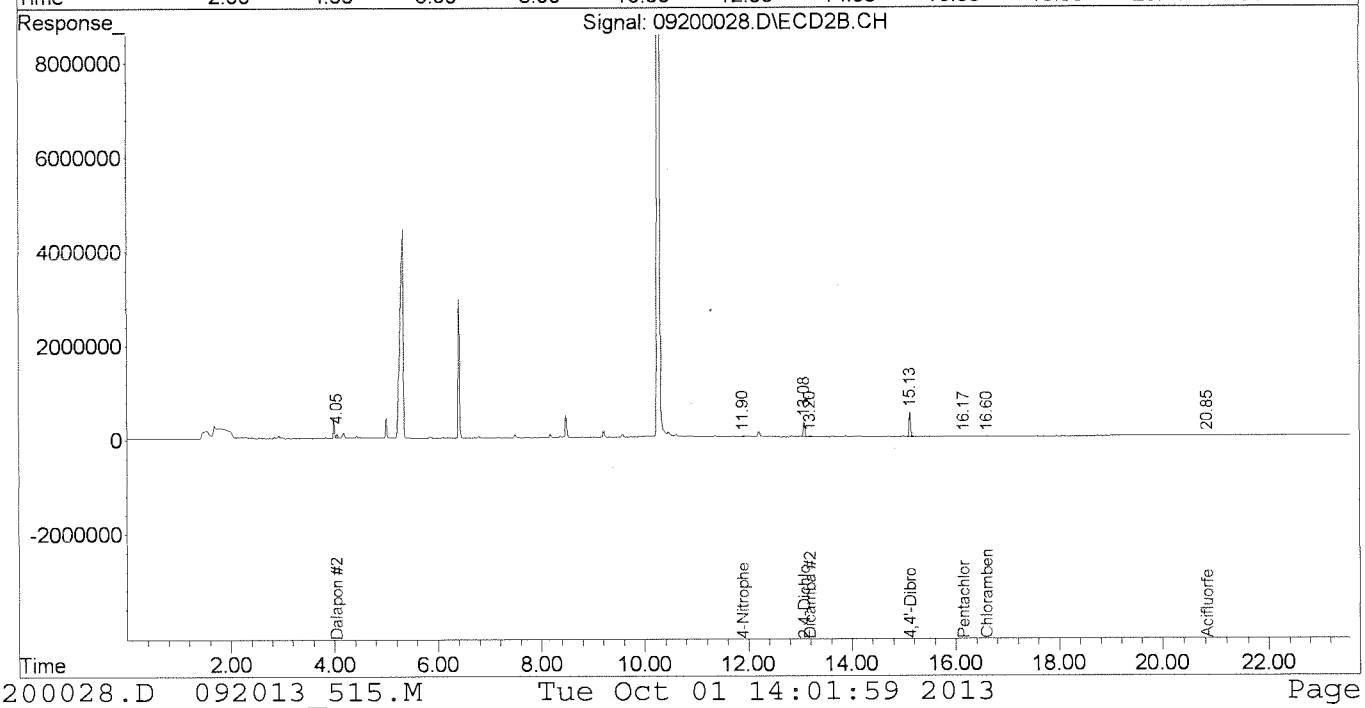
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 14:01 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

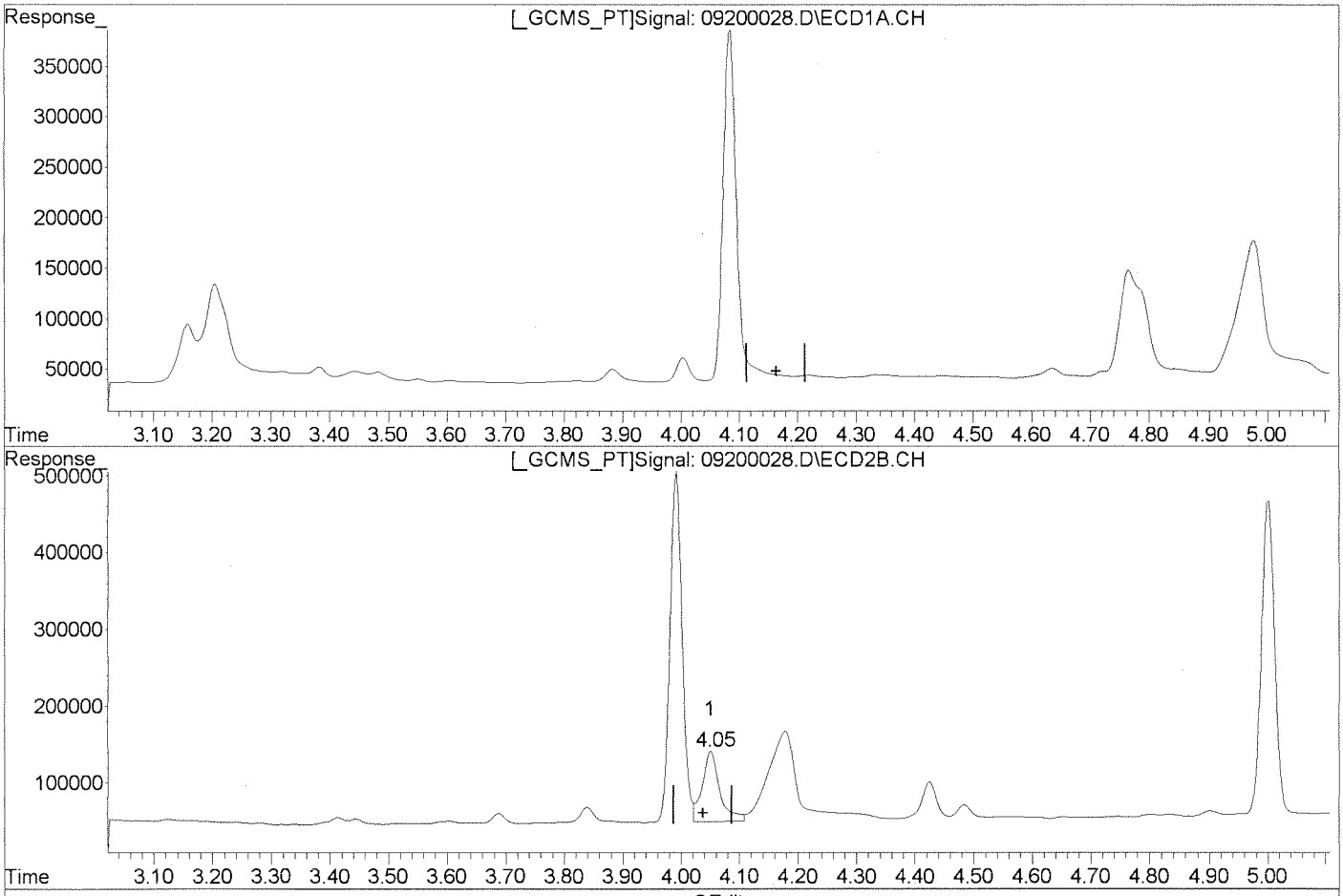




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

0.00min 0.000ppb

response 0

(2) Dalapon #2 (m)

4.05min 13.628ppb

response 193572

Manual Integration:

Before

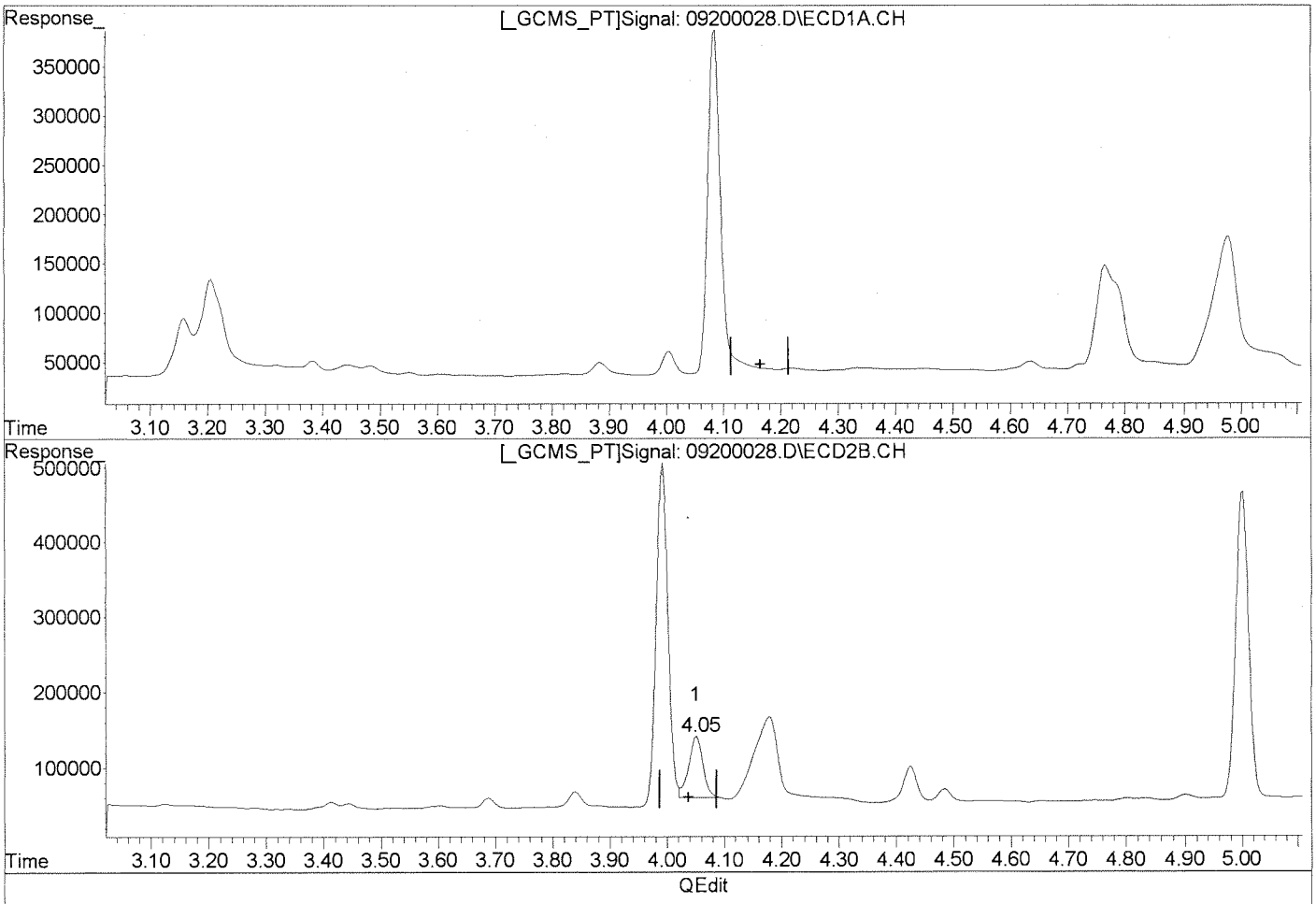
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:50:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)
0.00min 0.000ppb
response 0

(2) Dalapon #2 (m)
4.05min 9.220ppb m
response 138414

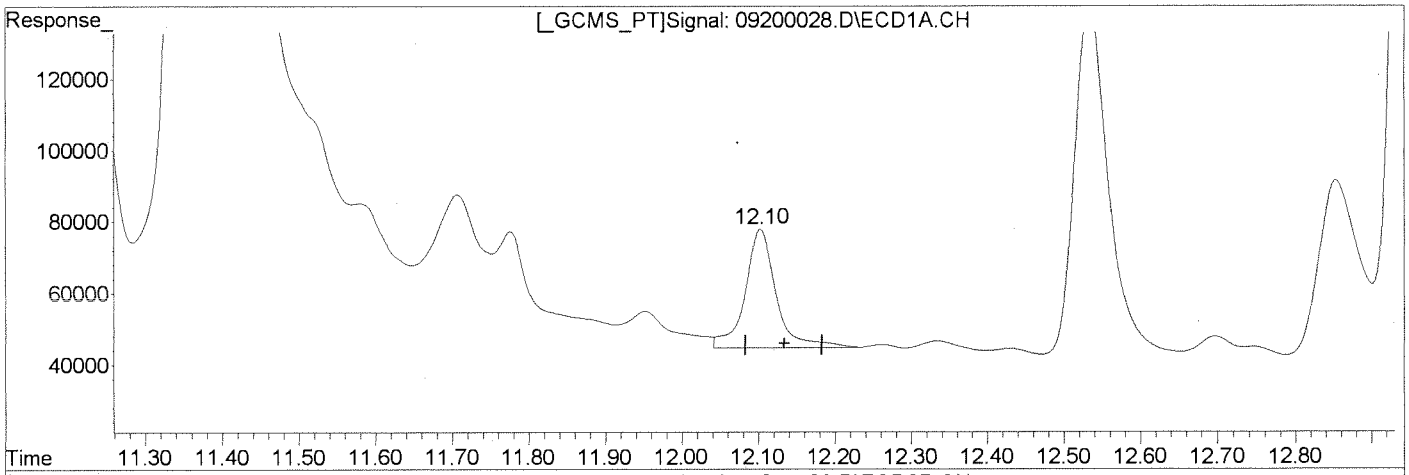
Manual Integration:
After
Baseline/Shoulder
10/01/13

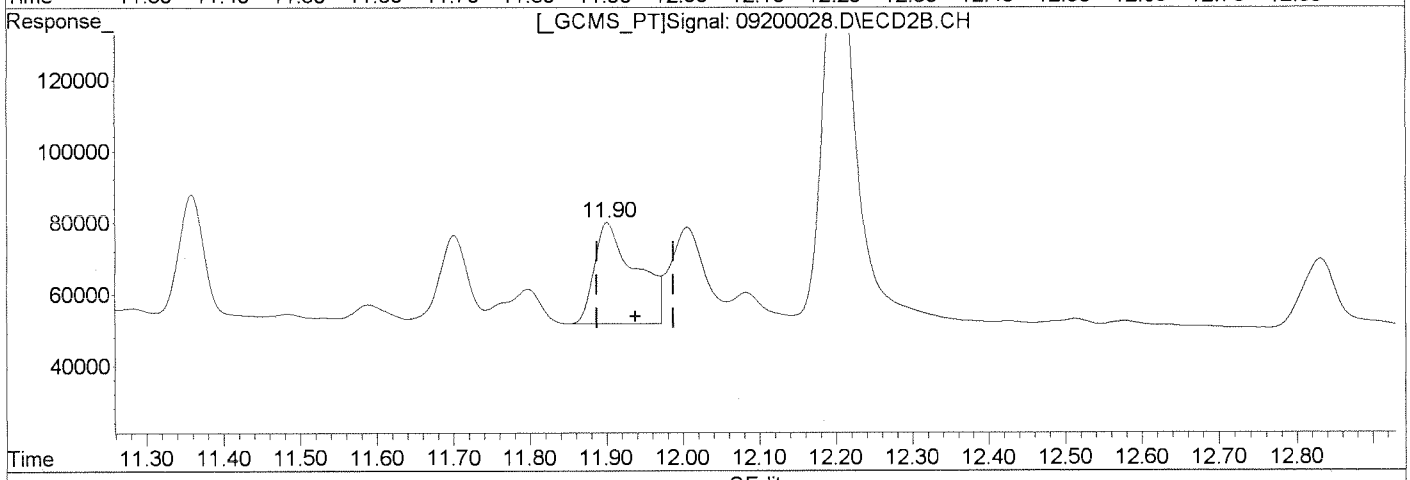
(+) = Expected Retention Time
09200028.D 092013_515.M Tue Oct 01 13:51:08 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.10min 25.259ppb

response 92702

(4) 4-Nitrophenol #2 (m)

11.90min 30.503ppb

response 108351

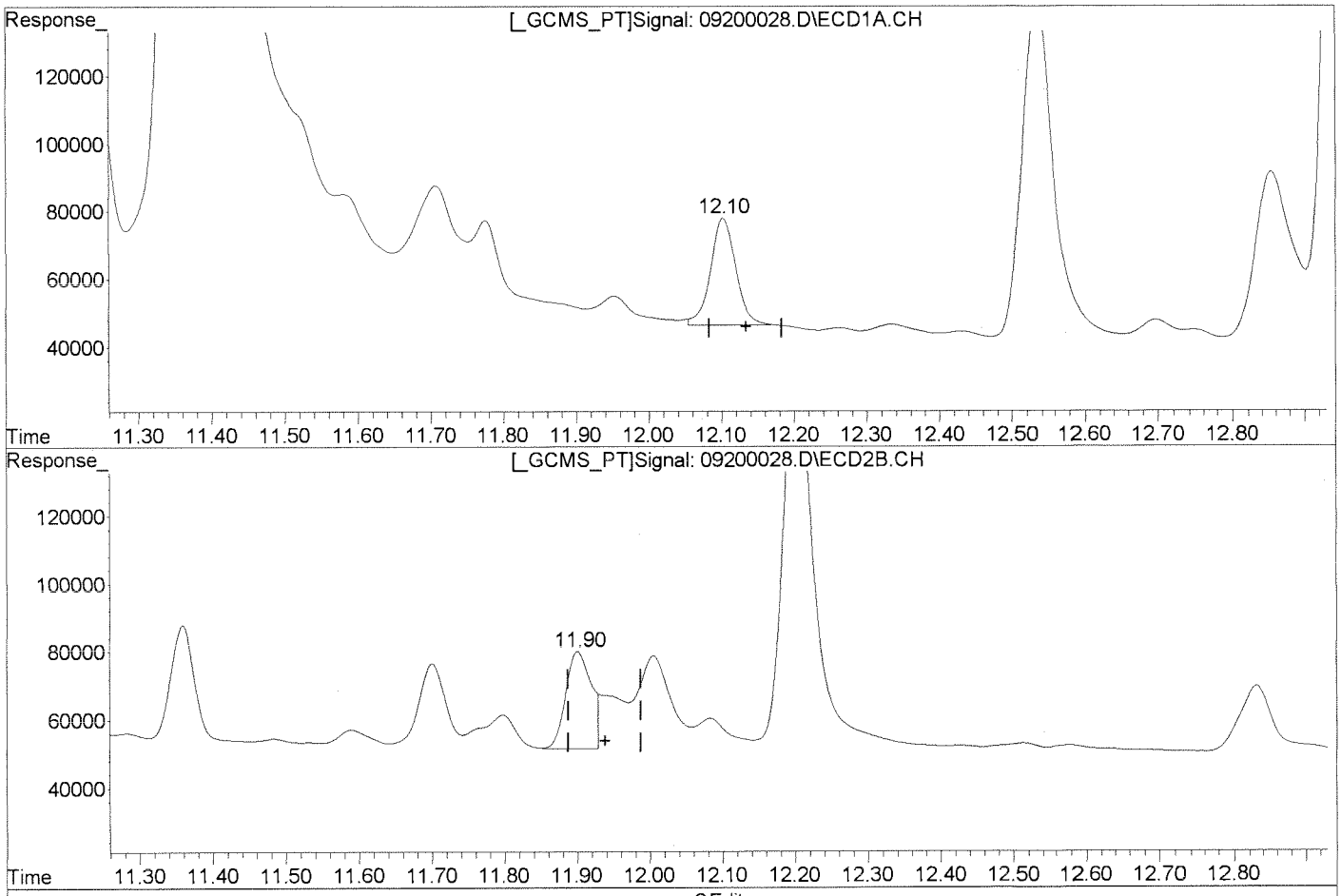
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:51:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(4) 4-Nitrophenol (m)

12.10min 20.812ppb m

response 76384

(4) 4-Nitrophenol #2 (m)

11.90min 19.944ppb m

response 70846

Manual Integration:

After

Baseline/Shoulder

10/01/13

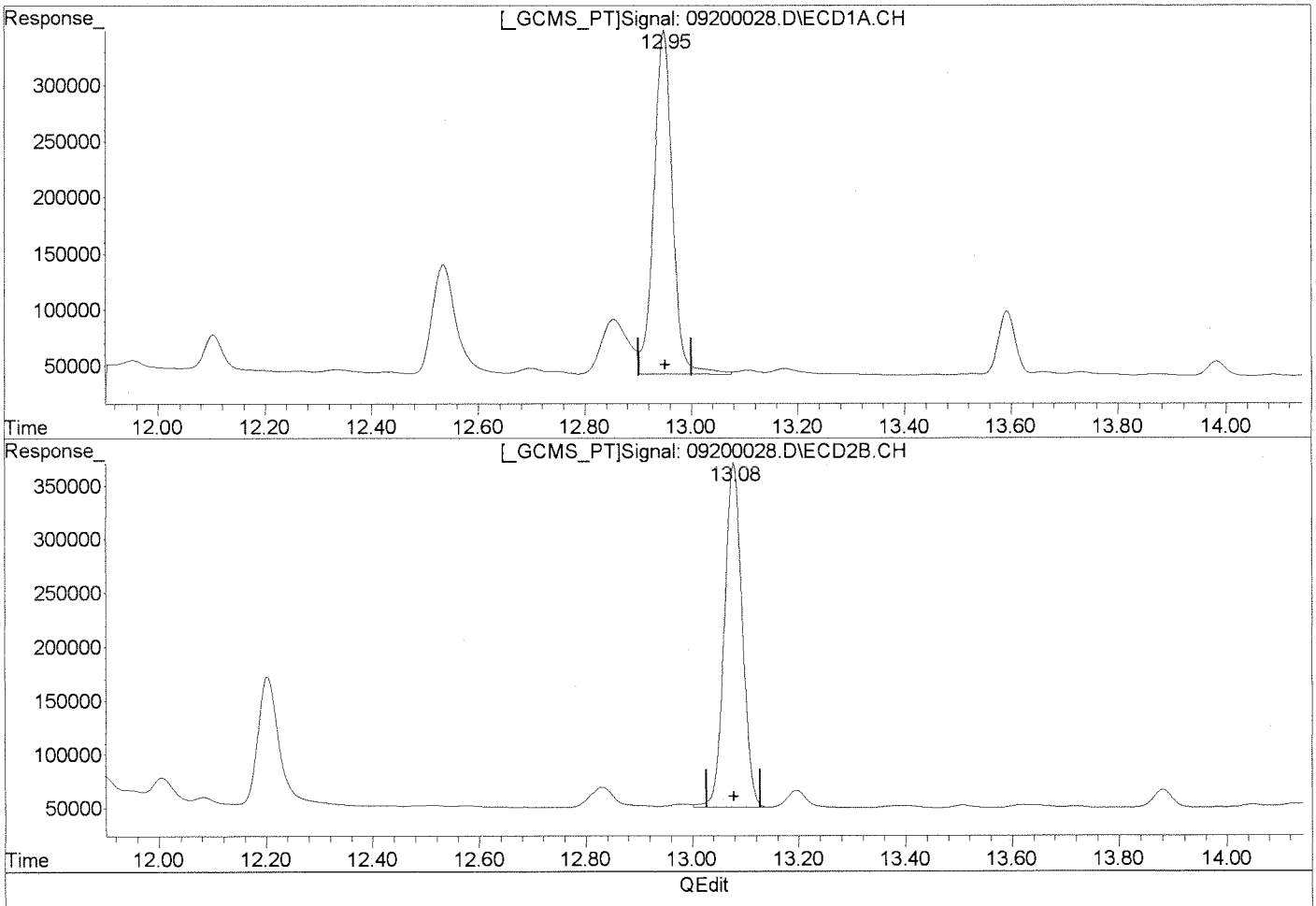
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:51:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 89.472ppb

response 746388

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 106.518ppb

response 746306

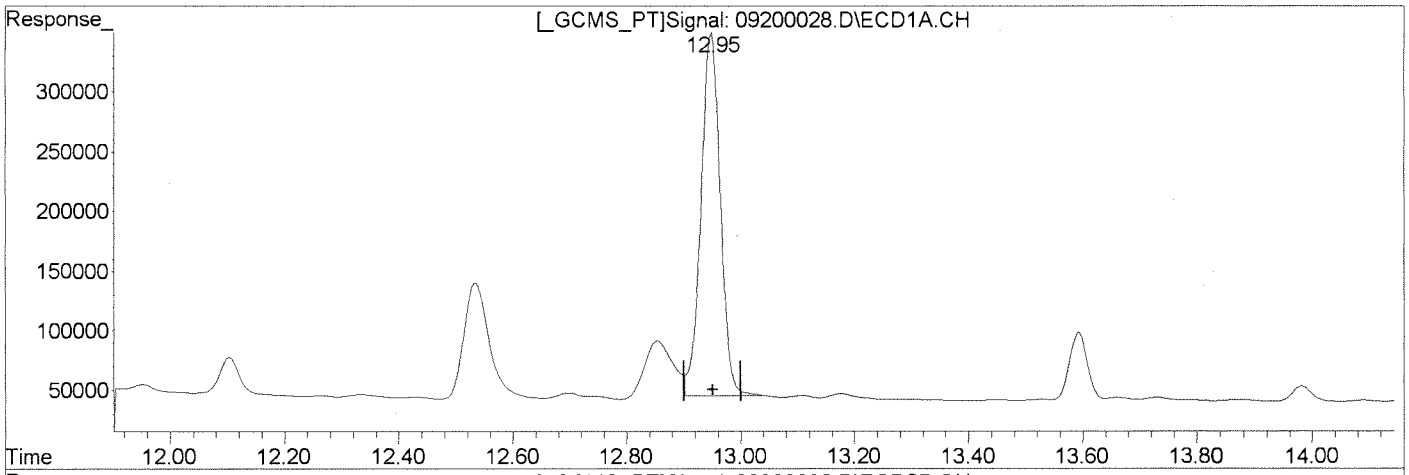
(+) = Expected Retention Time

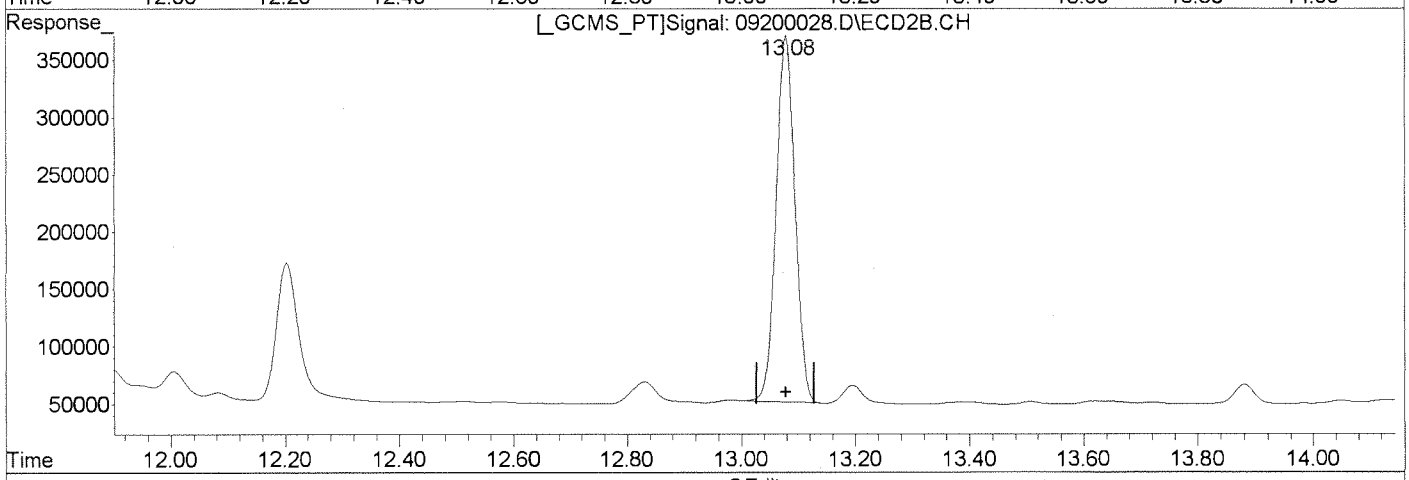
09200028.D 092013_515.M Tue Oct 01 13:54:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 85.310ppb m

response 711670

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 104.656ppb m

response 733699

Manual Integration:

After

Baseline/Shoulder

10/01/13

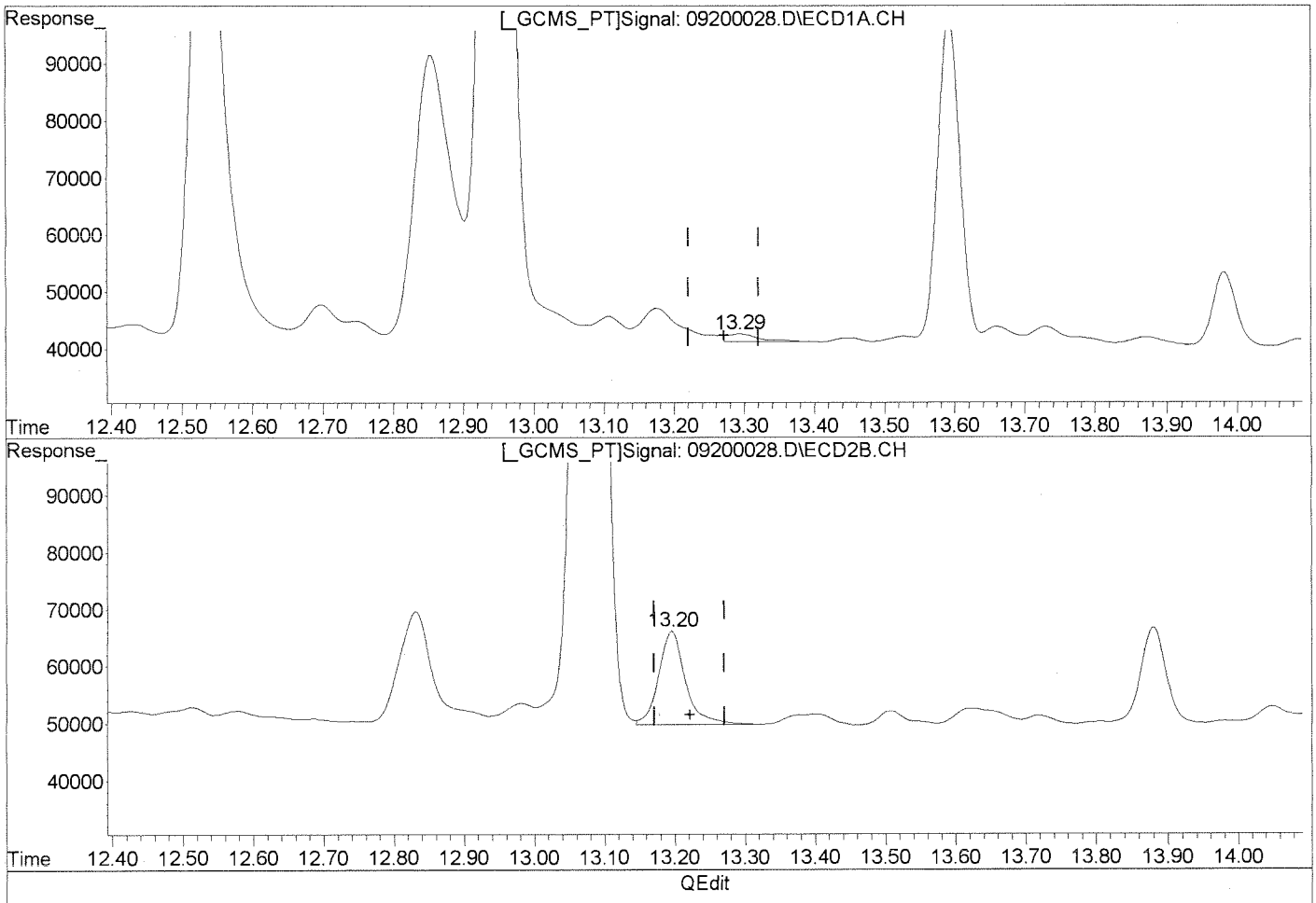
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:56:01 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.29min 0.127ppb

response 4101

Manual Integration:

Before

(6) Dicamba #2 (m)

13.20min 1.413ppb

response 43534

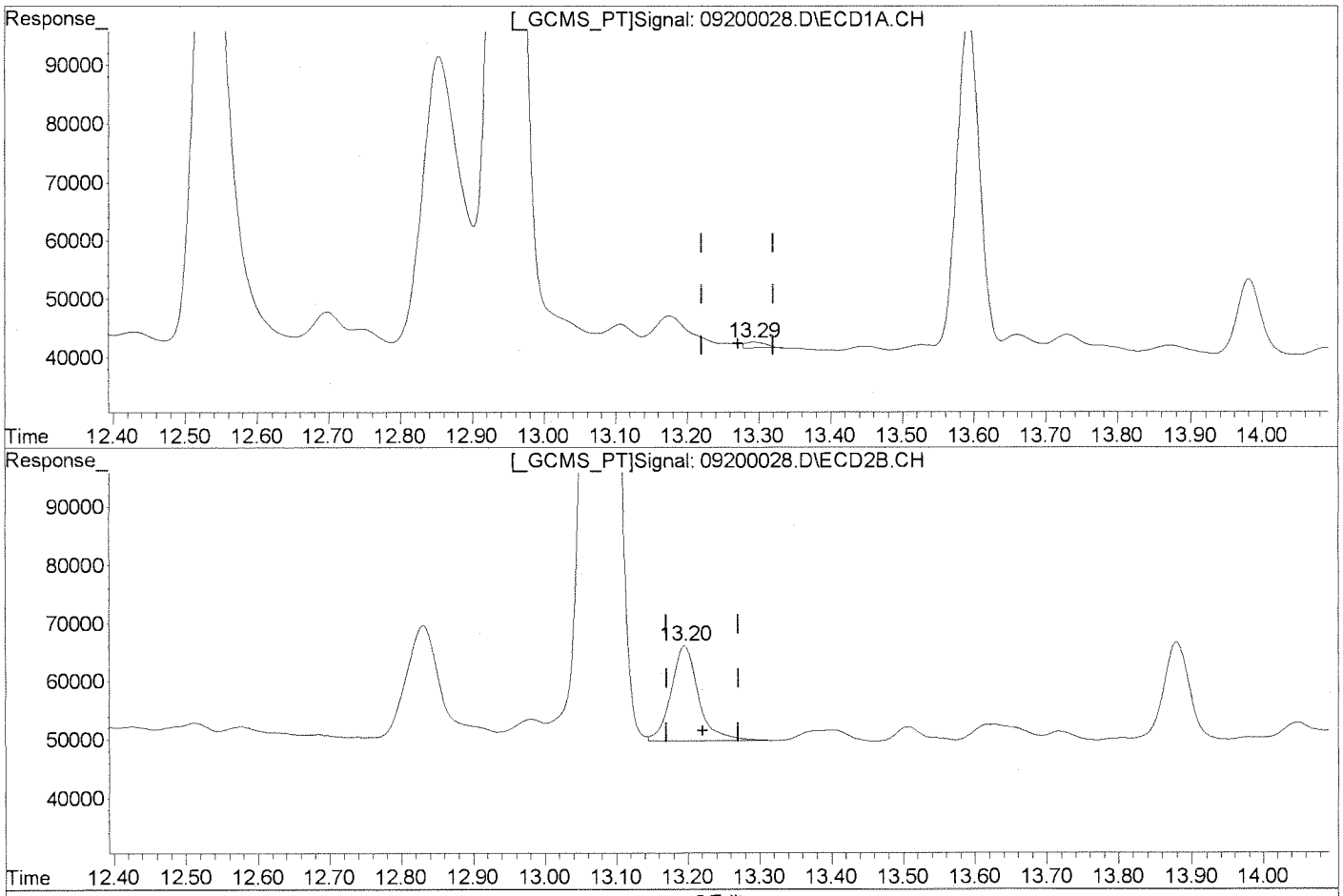
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:56:13 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.29min 0.057ppb m

response 1830

(6) Dicamba #2 (m)

13.20min 1.413ppb

response 43534

Manual Integration:

After

Baseline/Shoulder

10/01/13

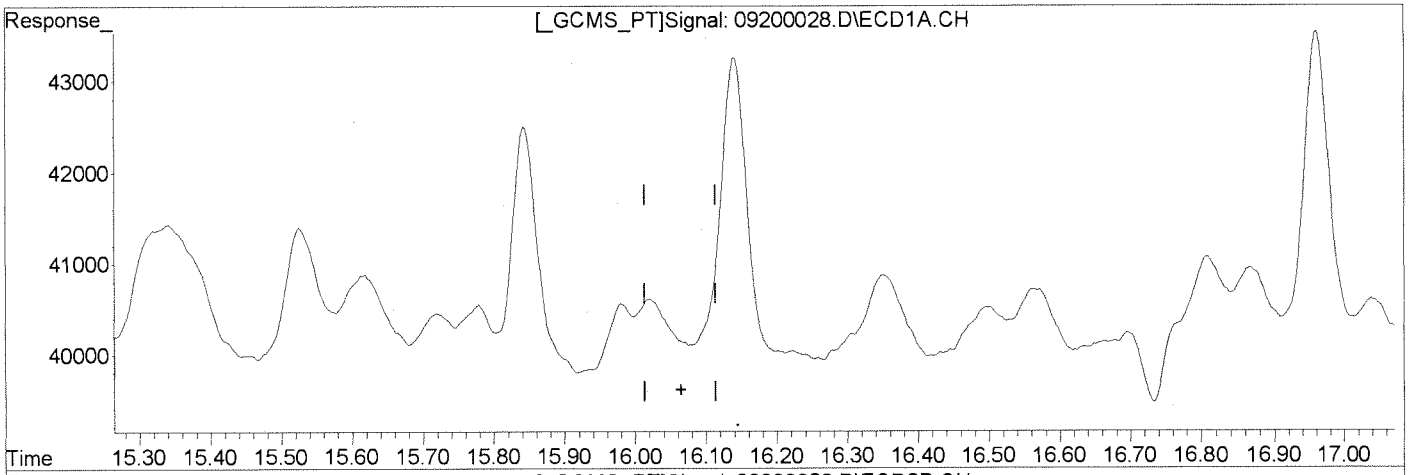
(+) = Expected Retention Time

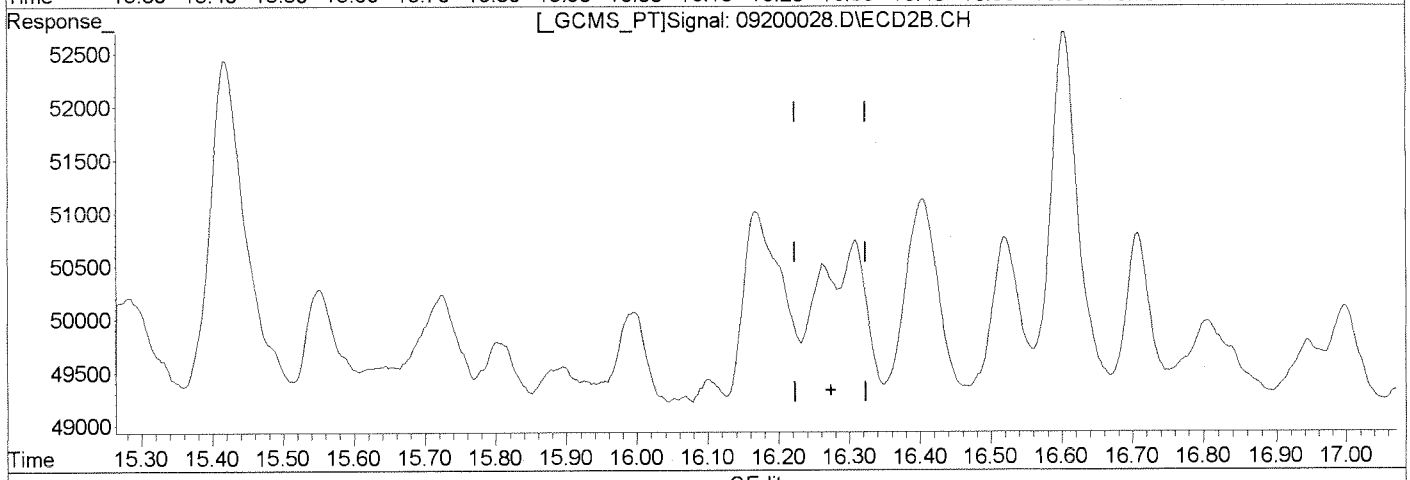
09200028.D 092013_515.M Tue Oct 01 13:56:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

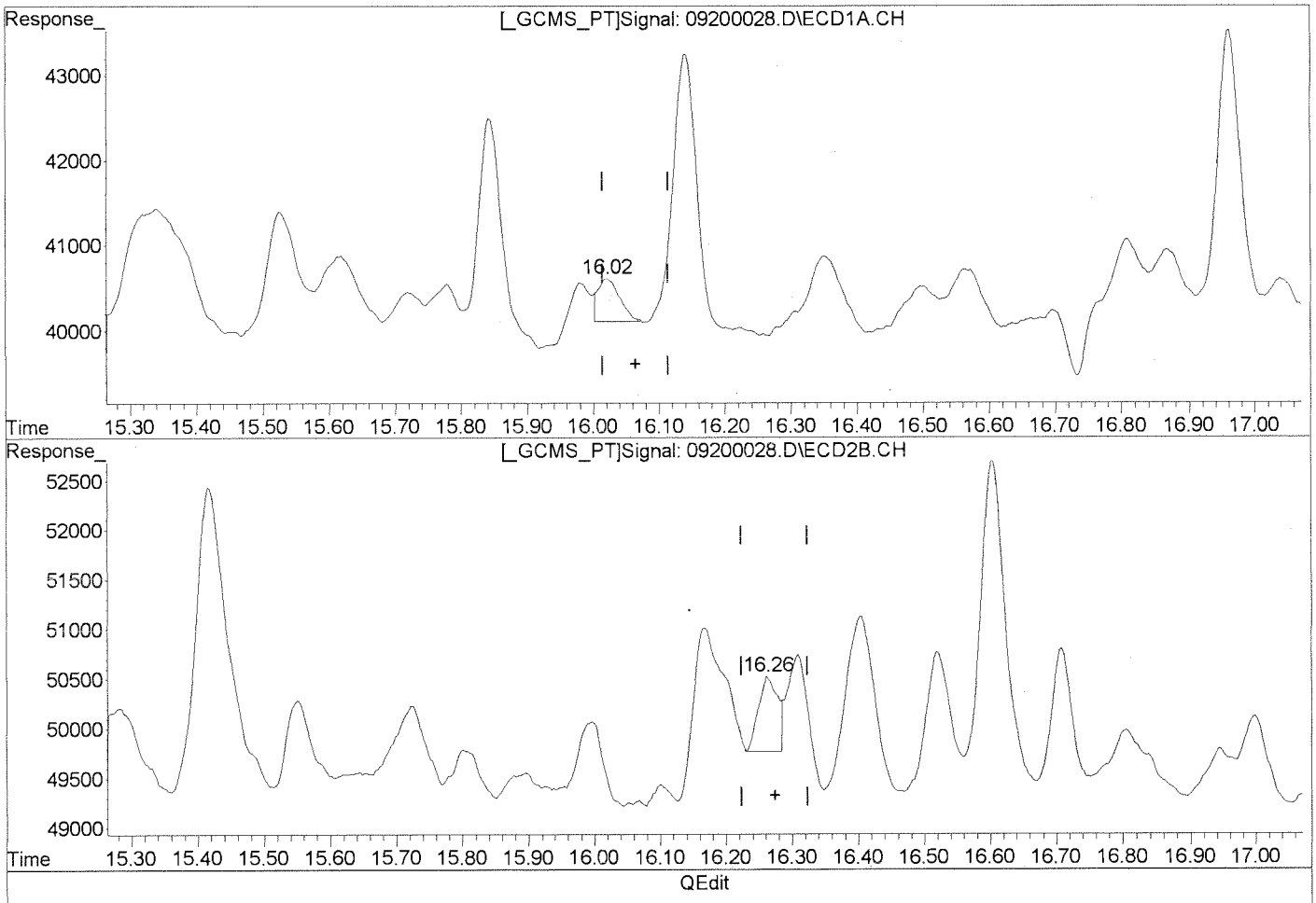
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:56:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

16.02min 0.028ppb m

response 1141

(11) 2,4,5-TP (Silvex) #2 (m)

16.26min -0.528ppb m

response 1579

Manual Integration:

After

Missed Peak

10/01/13

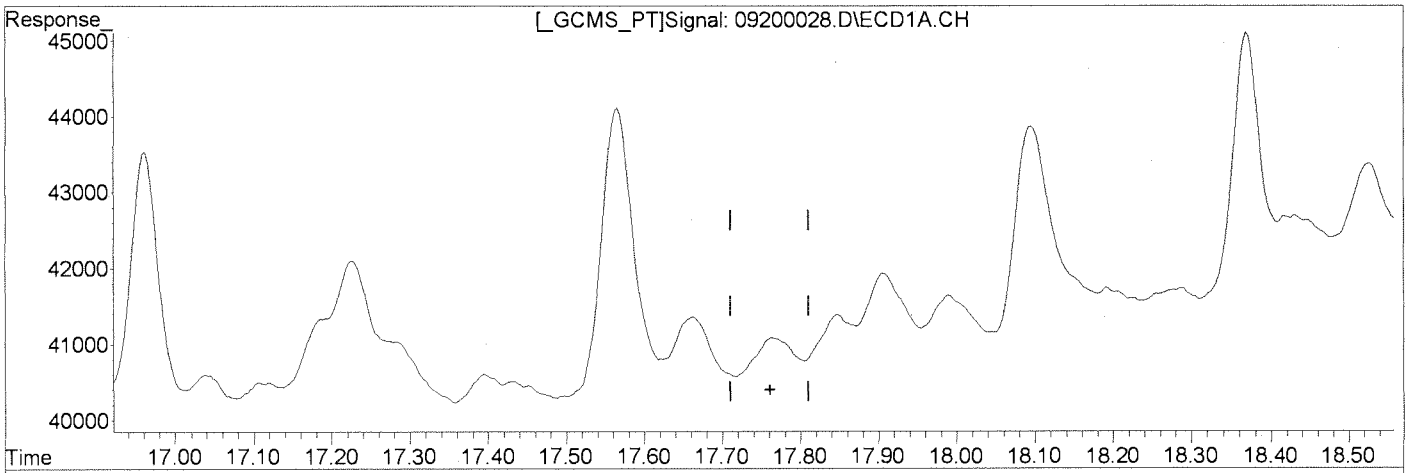
(+) = Expected Retention Time

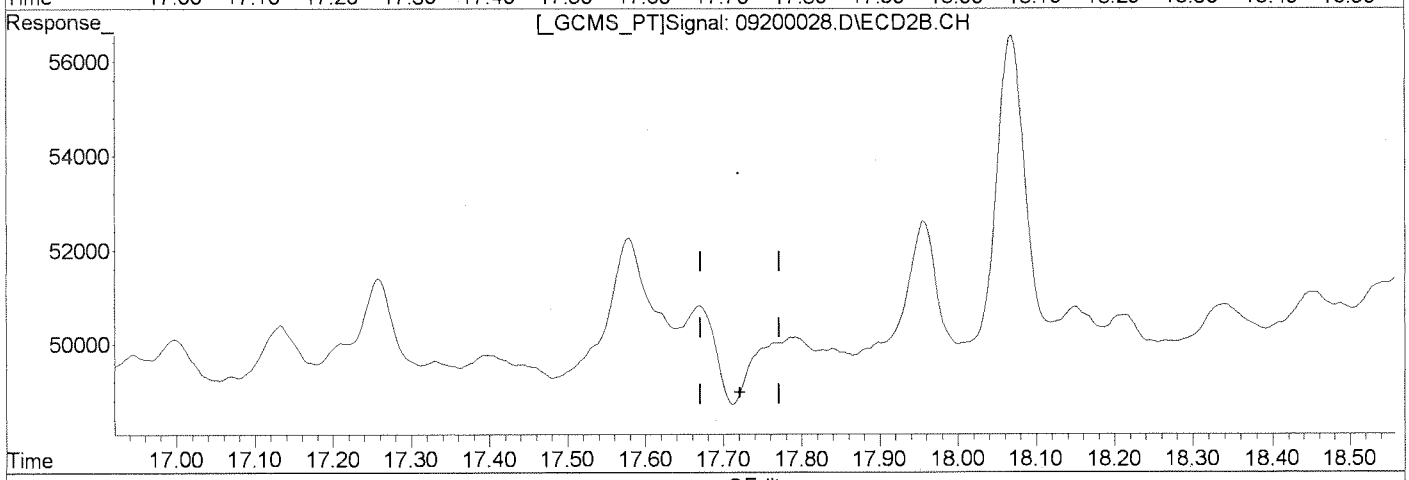
09200028.D 092013_515.M Tue Oct 01 13:57:13 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(14) Dinoseb (m)

0.00min 0.000ppb

response 0

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

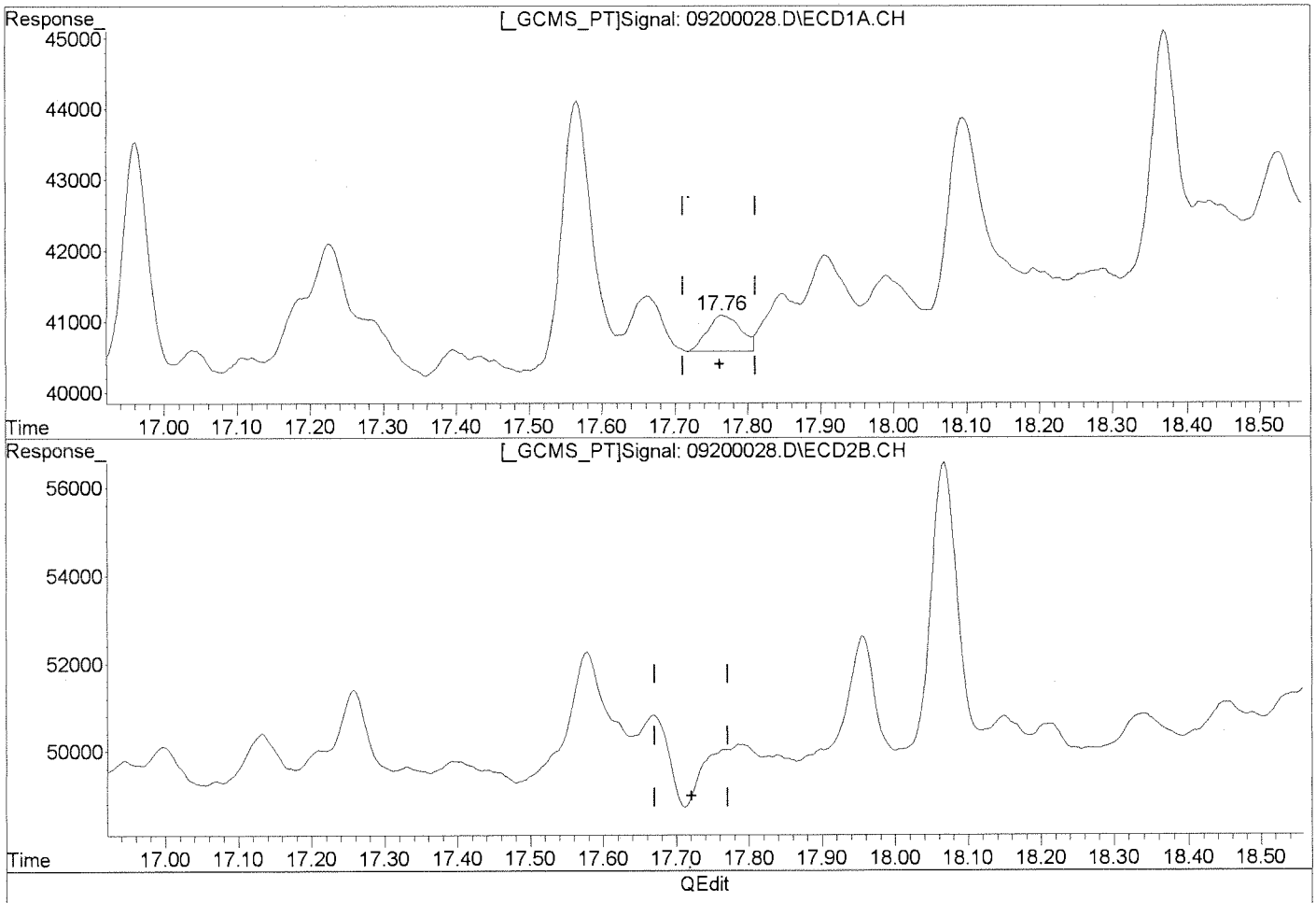
(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:57:27 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(14) Dinoseb (m)

17.76min -3.867ppb m

response 1650

(14) Dinoseb #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

After

Missed Peak

10/01/13

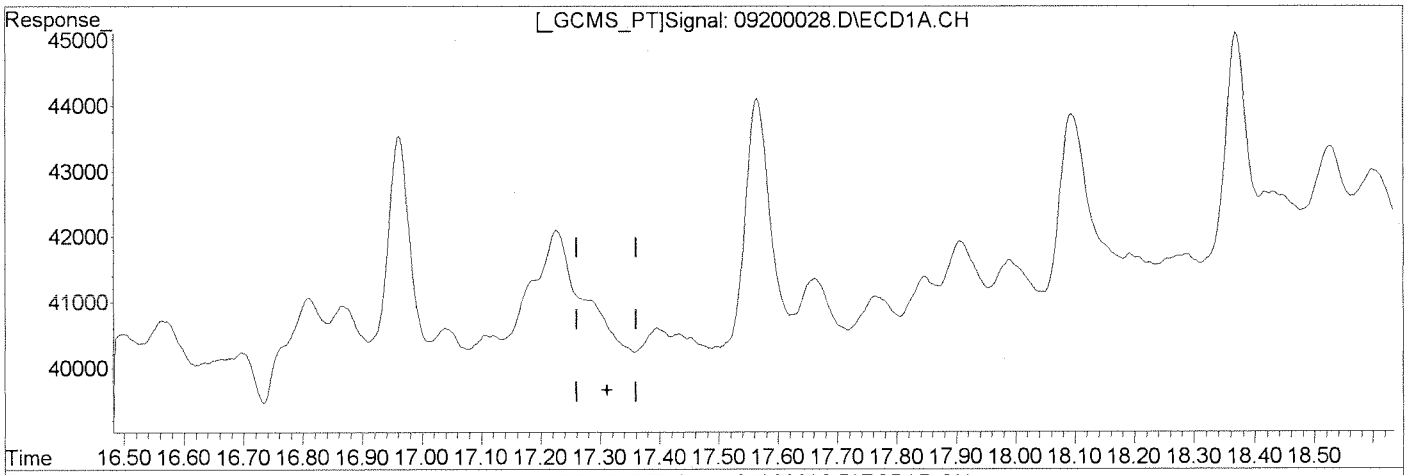
(+) = Expected Retention Time

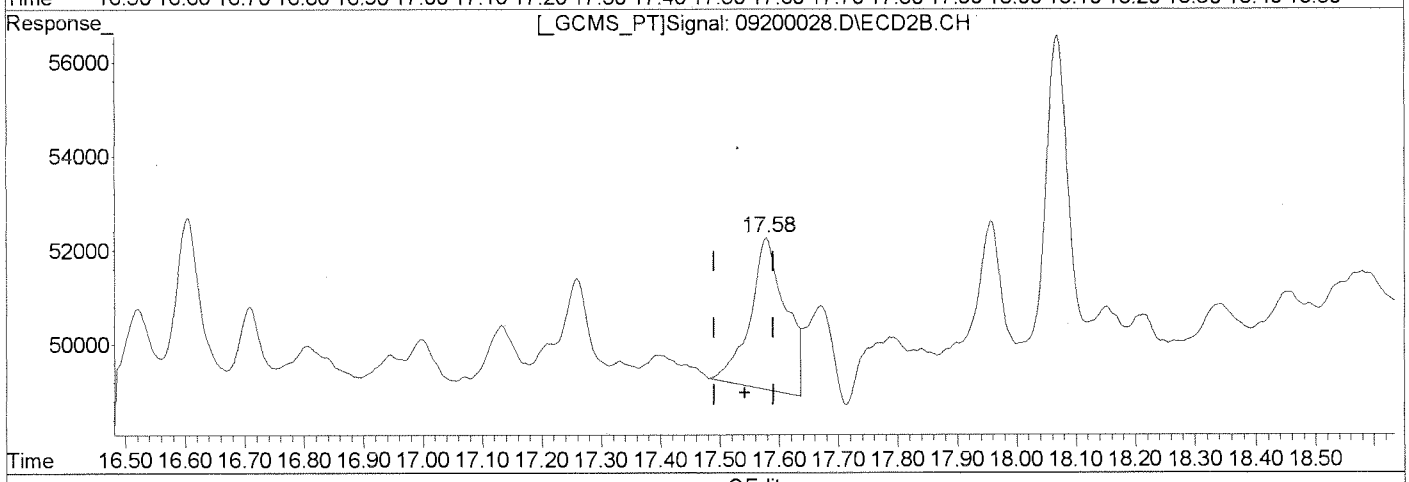
09200028.D 092013_515.M Tue Oct 01 13:57:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

(15) 2,4-DB #2 (m)

17.58min -1.504ppb

response 13358

Manual Integration:

Before

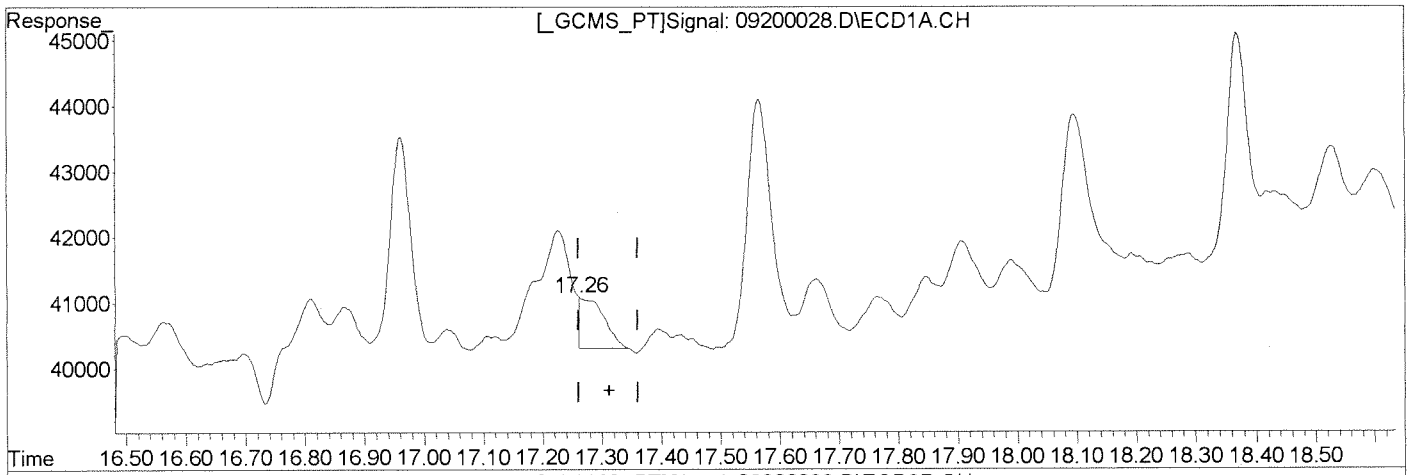
(+) = Expected Retention Time

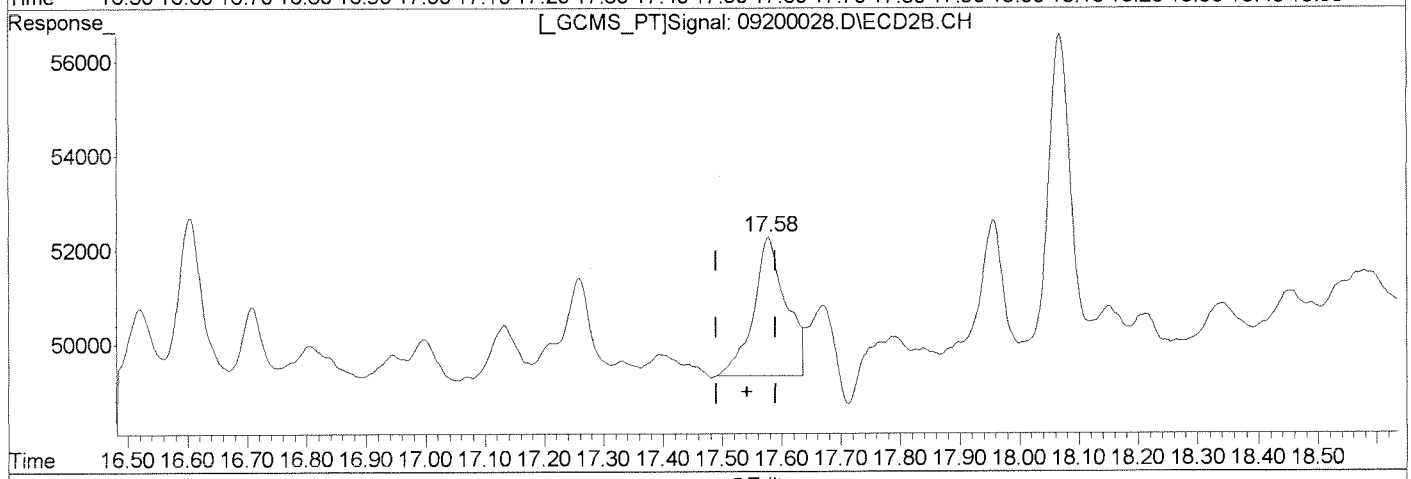
09200028.D 092013_515.M Tue Oct 01 13:57:40 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(15) 2,4-DB (m)

17.26min 0.465ppb m

response 2105

(15) 2,4-DB #2 (m)

17.58min -2.127ppb m

response 11231

Manual Integration:

After

Baseline/Shoulder

10/01/13

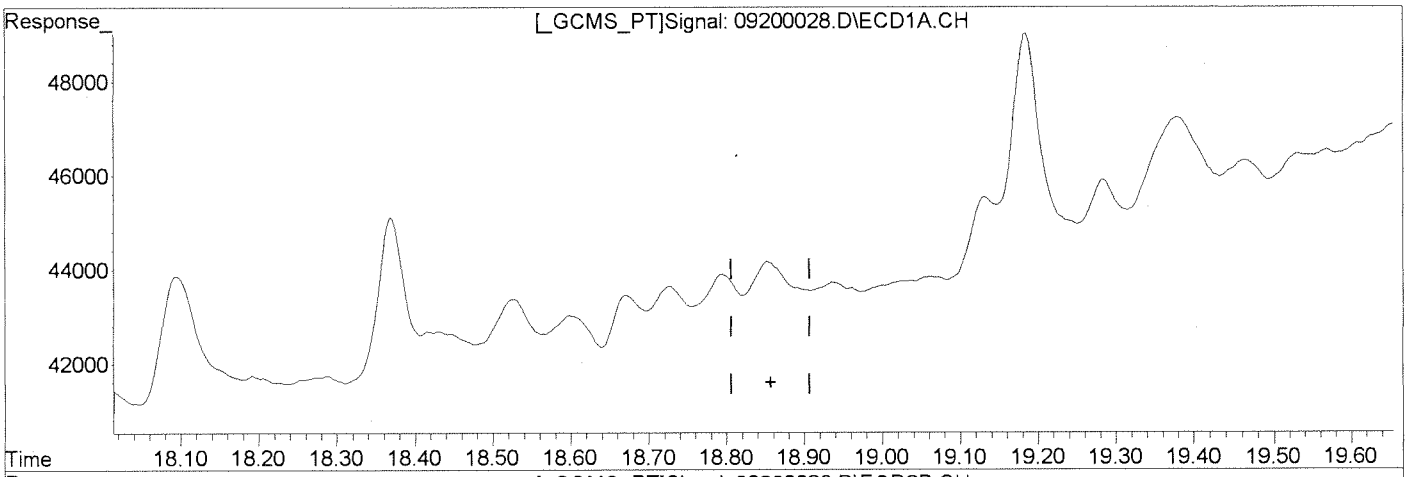
(+) = Expected Retention Time

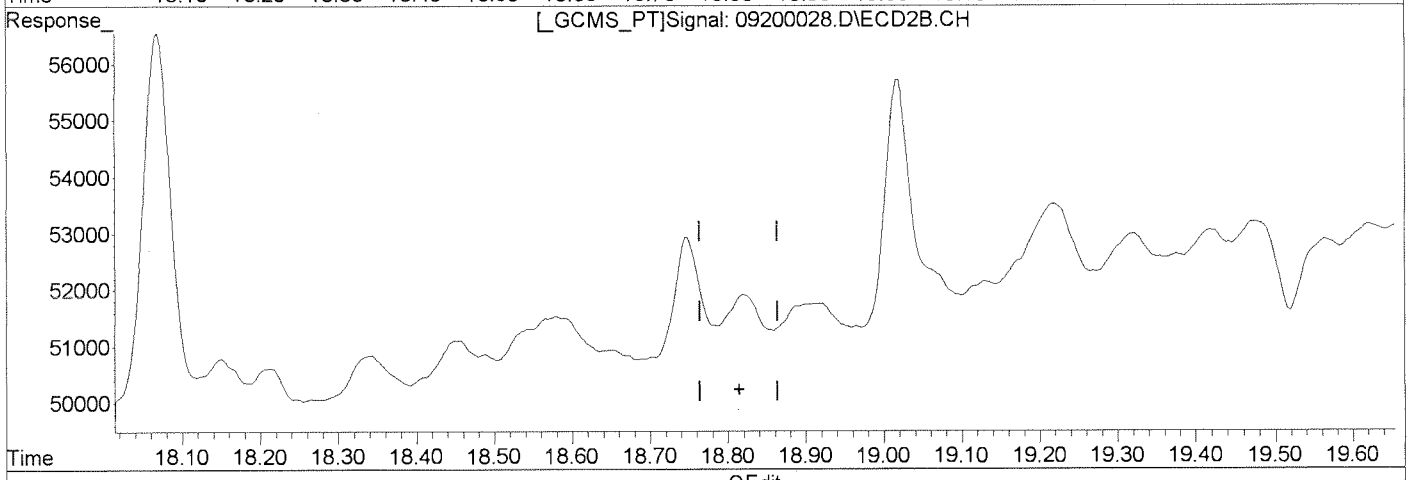
09200028.D 092013_515.M Tue Oct 01 13:57:56 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

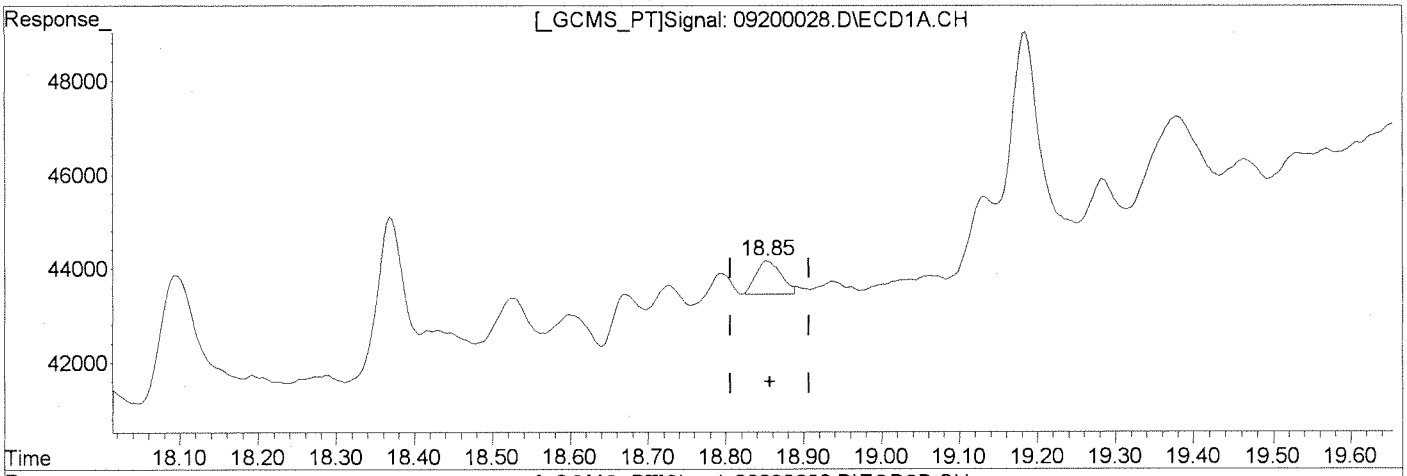
(+) = Expected Retention Time

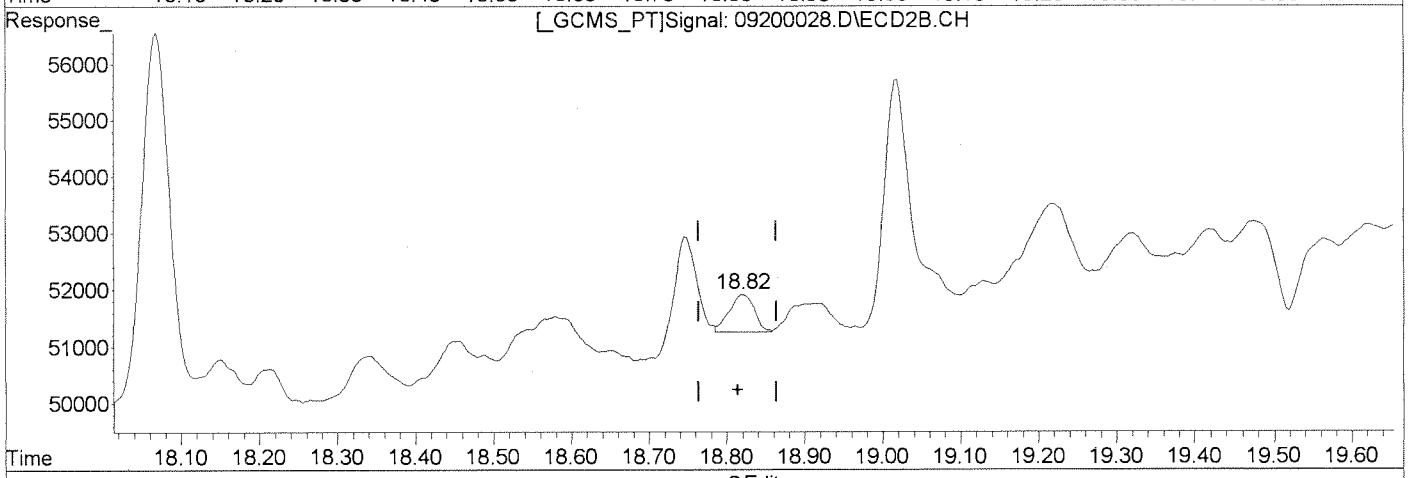
09200028.D 092013_515.M Tue Oct 01 13:58:02 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200028.D\ECD1A.CH Vial: 23
Signal #2 : J:\GC24\DATA\092013.515\09200028.D\ECD2B.CH
Acq On : 09-21-2013 05:32:34 AM Operator: JSCHWAB
Sample : K1309638-011 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(17) DCPA (Dacthal) (m)

18.85min -1.462ppb m

response 1591

(17) DCPA (Dacthal) #2 (m)

18.82min -0.802ppb m

response 1454

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200028.D 092013_515.M Tue Oct 01 13:58:17 2013

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Chlorinated Acids by EPA Method 515.4

Sample Name: Method Blank
Lab Code: KWG1310098-4

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	ND	U	1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	ND	U	0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	ND	U	0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	ND	U	0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	ND	U	0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	ND	U	0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	101	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200018.D
Lab ID: KWG1310098-4
RunType: MB
Matrix: WATER

Date Acquired: 09/21/2013 00:33
Date Quantitated: 10/01/2013 13:17
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	NR
	Pentachlorophenol	216.1	NA	30	Dual ICV
	Dacthal Diacid	38.4	NA	30	NR

Primary Review: DS 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200018.D\09200018C.D
Lab ID: KWG1310098-4
RunType: MB
Matrix: WATER

Date Acquired: 09/21/2013 00:33
Date Quantitated: 10/01/2013 13:17
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	
Continuing Calibration Recovery (Closing)	Dacthal Diacid	-32.2	NA	30	

Primary Review: JBS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200018.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200018.D\09200018c.d			**Vial:**	13
Acqu Date:	09/21/2013 00:33	**Quant Date:**	10/01/2013 13:17	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-4				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282815	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:			
MB Ref:		**Method ID:**	MJ503
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1172353	1125568	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	745950	741755	87.11	101.21			101OK
				%Recovery =		87 OK	101 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon		4.05 +0.02	0	63990	0.0000	3.06	0.040U	0.306J	0.040U
1	3,5-Dichlorobenzoic Acid			0	0	0.0000	0.0000	0.028U	0.028U	0.028U
1	4-Nitrophenol		11.90 -0.04	0	42514	0.0000	11.46	0.089U	1.15	0.089U
1	Dicamba			0	0	0.0000	0.0000	0.032U	0.032U	0.032U
1	Dichlorprop			0	0	0.0000	0.0000	0.077U	0.077U	0.077U
1	2,4-D			0	0	0.0000	0.0000	0.089U	0.089U	0.089U
1	Triclopyr			0	0	0.0000	0.0000	0.050U	0.050U	0.050U
1	Pentachlorophenol		16.18	0	29078	0.0000	0.2580	0.016U	0.0258J	0.016U
1	2,4,5-TP (Silvex)	16.03 -0.03		2416m	5301m	0.0580	0.0000	0.020U	0.020U	0.020U
1	2,4,5-T			0	0	0.0000	0.0000	0.041U	0.041U	0.041U
1	Chloramben	16.71 -0.02	16.60 -0.01	1616m	9483	0.0830	0.4650	0.10U	0.10U	0.10U
1	Dinoseb		17.67 -0.05	36697	6304	0.0000	0.3030	0.048U	0.048U	0.048U
1	2,4-DB	17.29 -0.02		1520m	18678m	0.3270	0.0000	0.12U	0.12U	0.12U
1	Bentazon			0	15852	0.0000	0.0000	0.13U	0.13U	0.13U

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200018.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200018.D\09200018c.d			**Vial:**	13
Acqu Date:	09/21/2013 00:33	**Quant Date:**	10/01/2013 13:17	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-4				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid			1913m	1412m	0.0000	0.0000^{CCV}	0.14U	0.14U	0.14U
1	Picloram			0	0	0.0000	0.0000	0.091U	0.091U	0.091U
1	Acifluorfen	20.90 -0.04	20.85 +0.02	11332	5770	0.4990	0.2900	0.0499J	0.038U	0.038U

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.00 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:35 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Internal Standards							
1)	I	4,4'-Dibromoocta	14.74	15.13	1172353	1125568	20.000	20.000	
		System Monitoring Compounds							
5)	s	2,4-Dichlorophen	12.95	13.08	745950	741755	87.112	101.214	
		Target Compounds							
2)	m	Dalapon	0.00	4.05	0	63990	N.D.	3.056	#
4)	m	4-Nitrophenol	0.00	11.90f	0	42514	N.D.	11.462	#
10)	m	Pentachloropheno	0.00	16.18	0	29078	N.D.	0.258	#
13)	m	Chloramben	16.71	16.60	1616	9483	0.083m	0.465	#
15)	m	2,4-DB	17.29	17.60f	1520	18678	0.327m	N.D.	m#
19)	m	Acifluorfen	20.90f	20.85	11332	5770	0.499	0.290	#

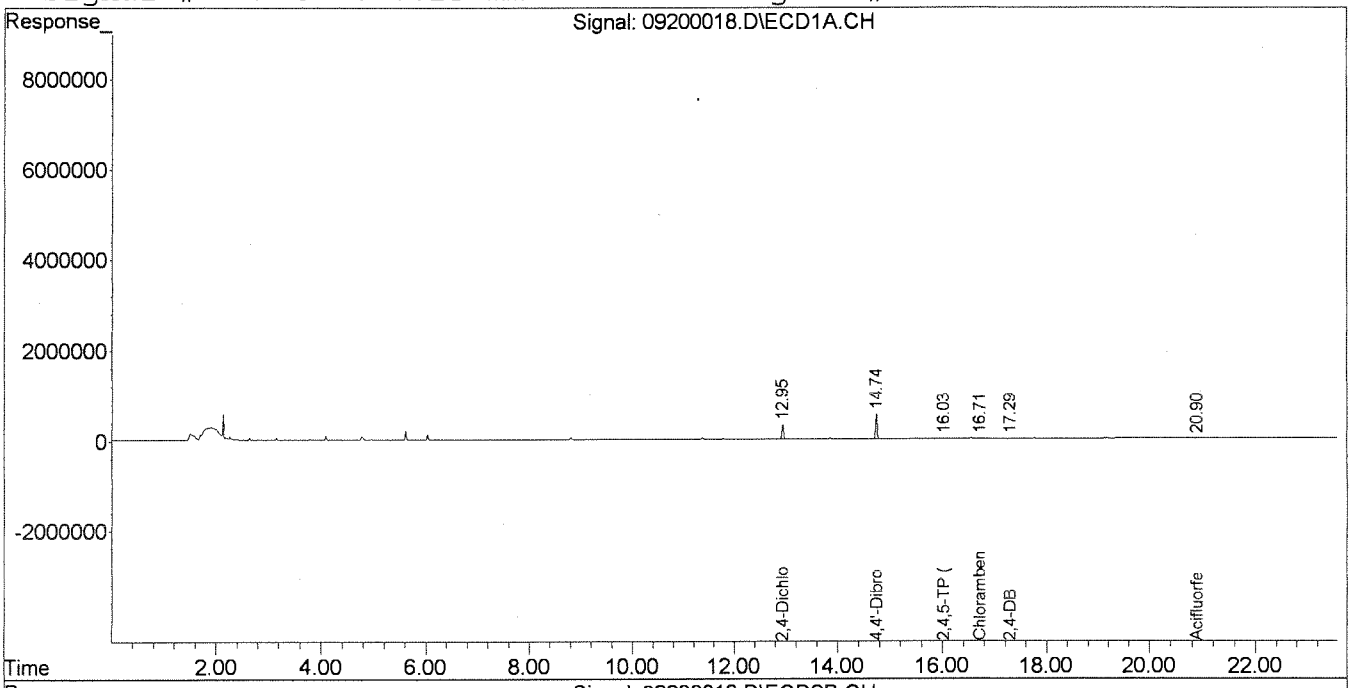
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

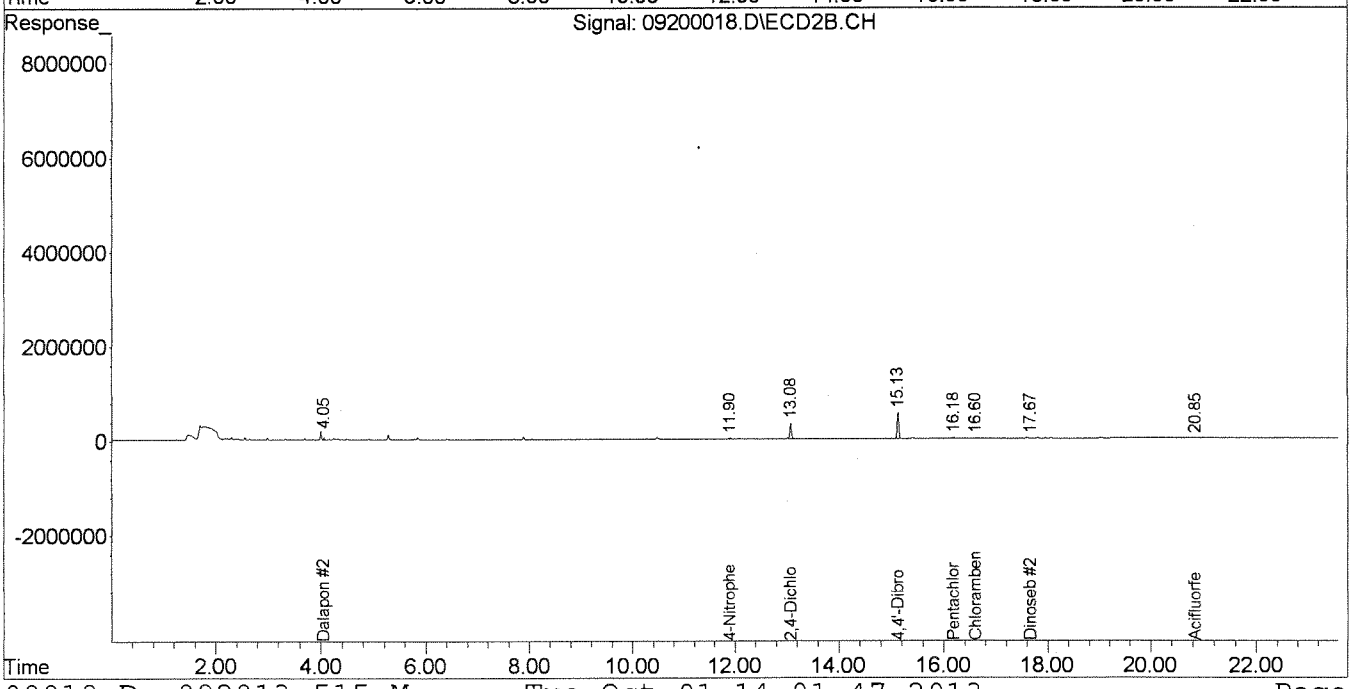
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:17 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

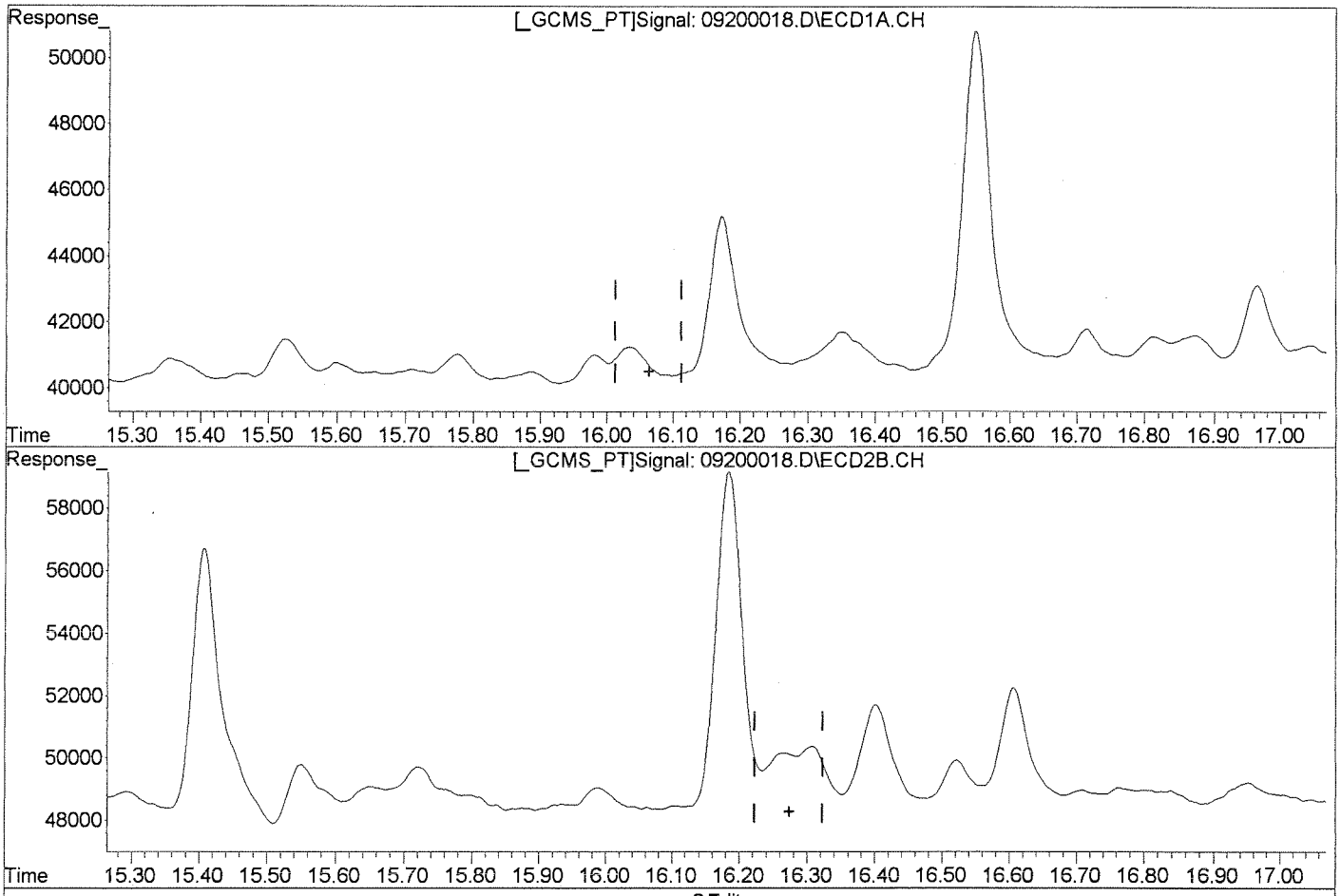




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(11) 2,4,5-TP (Silvex) #2 (m)

0.00min 0.000ppb

response 0

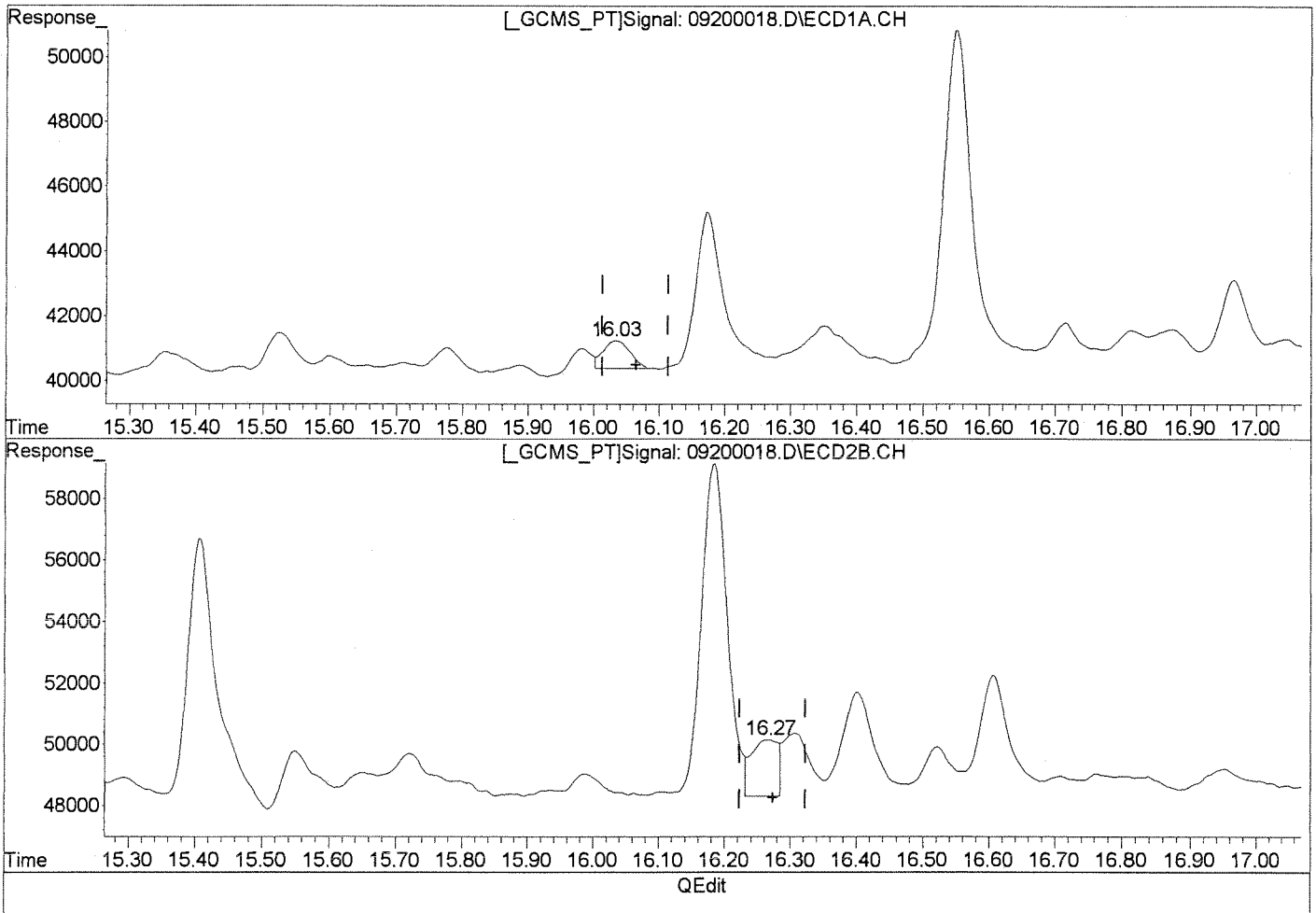
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:12:59 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(11) 2,4,5-TP (Silvex) (m)

16.03min 0.058ppb m

response 2416

(11) 2,4,5-TP (Silvex) #2 (m)

16.27min -0.421ppb m

response 5301

Manual Integration:

After

Missed Peak

10/01/13

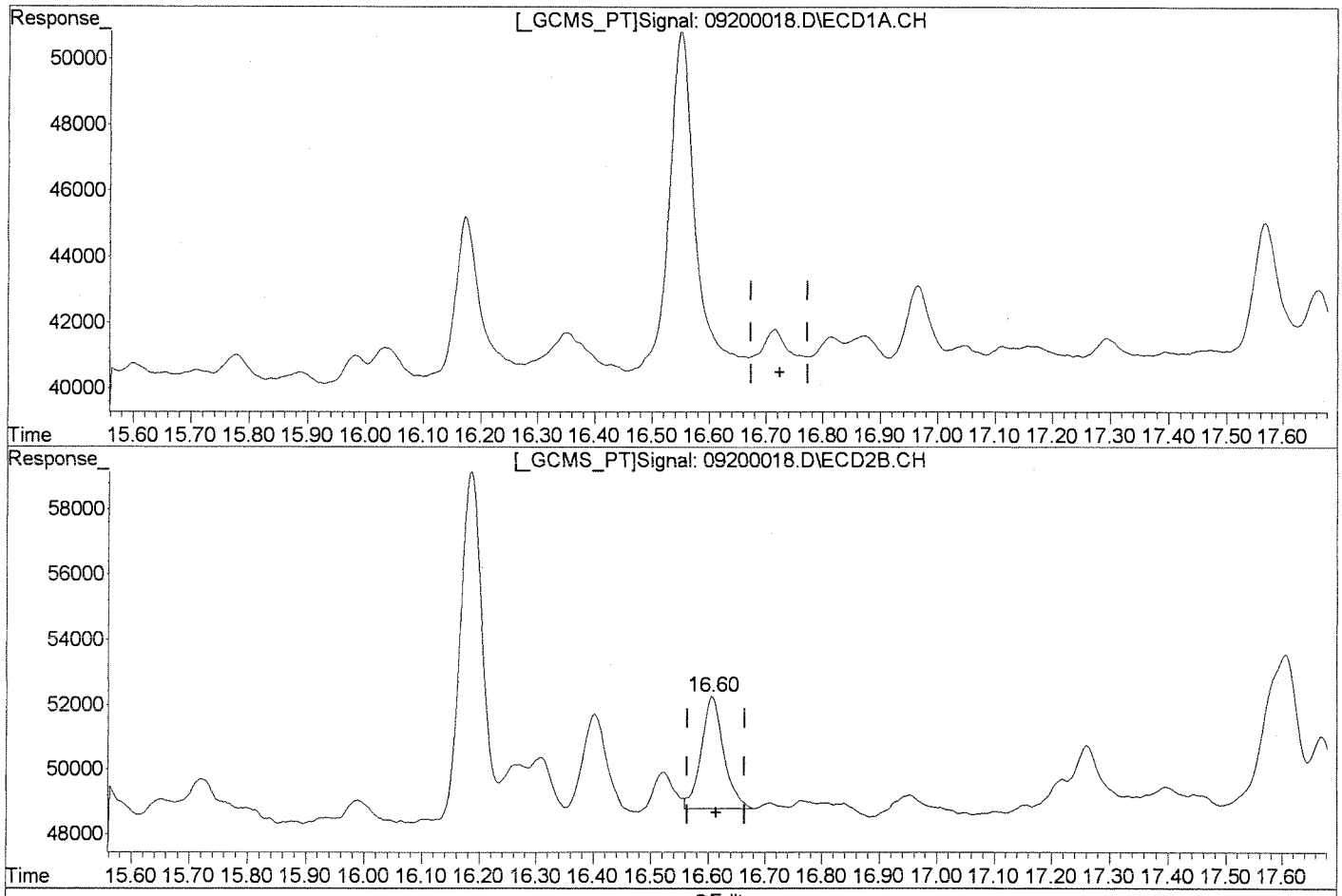
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:13:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(13) Chloramben (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

(13) Chloramben #2 (m)

16.60min 0.465ppb

response 9483

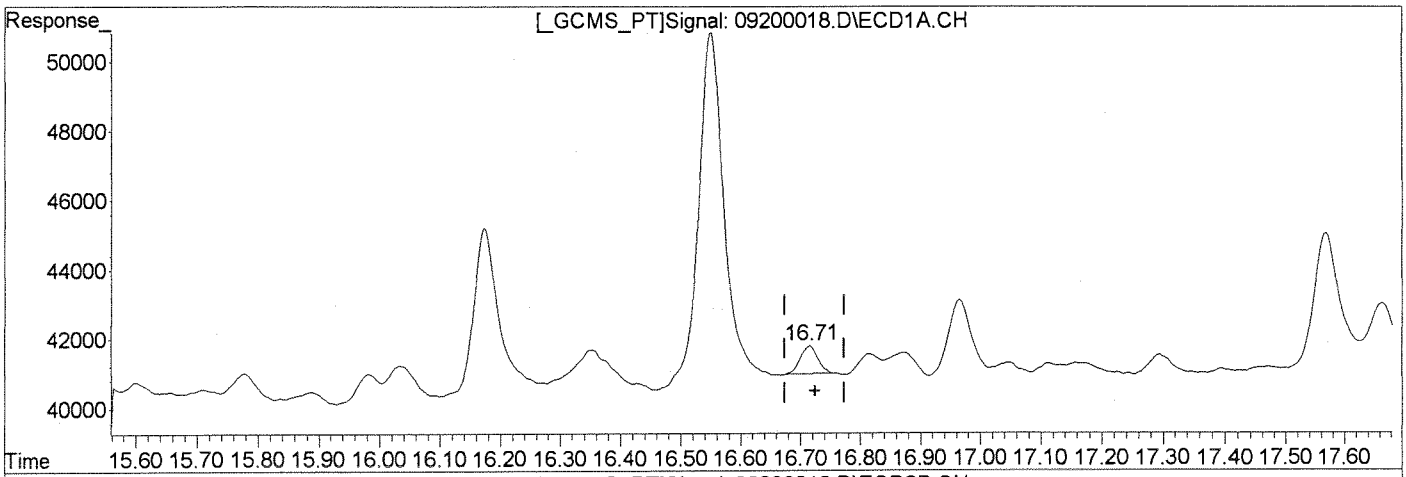
(+) = Expected Retention Time

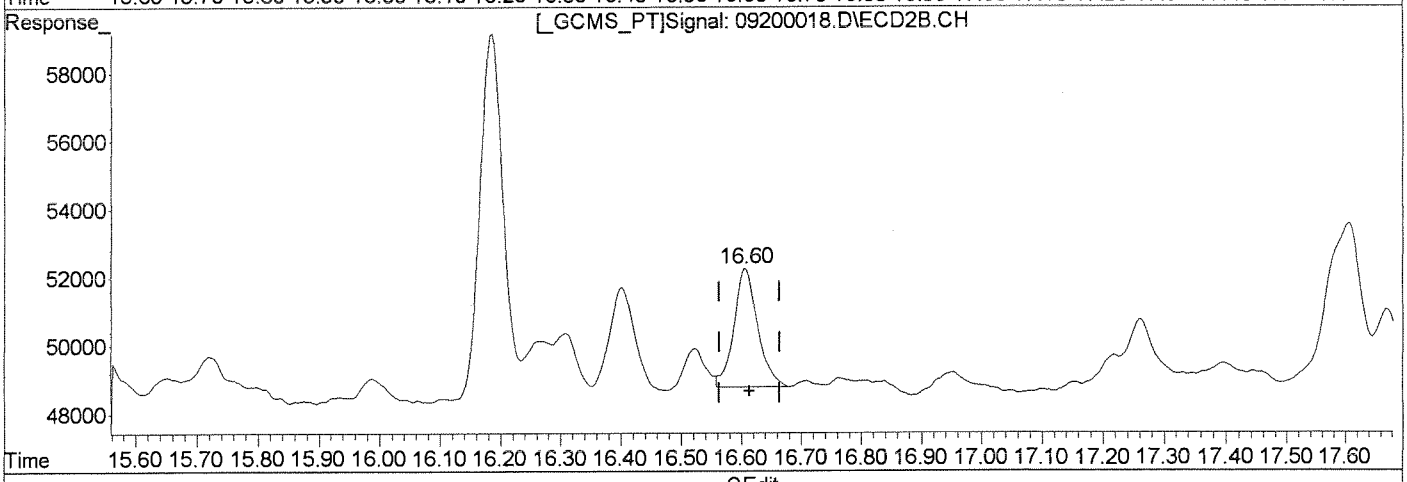
09200018.D 092013_515.M Tue Oct 01 13:13:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(13) Chloramben (m)

16.71min 0.083ppb m

response 1616

(13) Chloramben #2 (m)

16.60min 0.465ppb

response 9483

Manual Integration:

After

Missed Peak

10/01/13

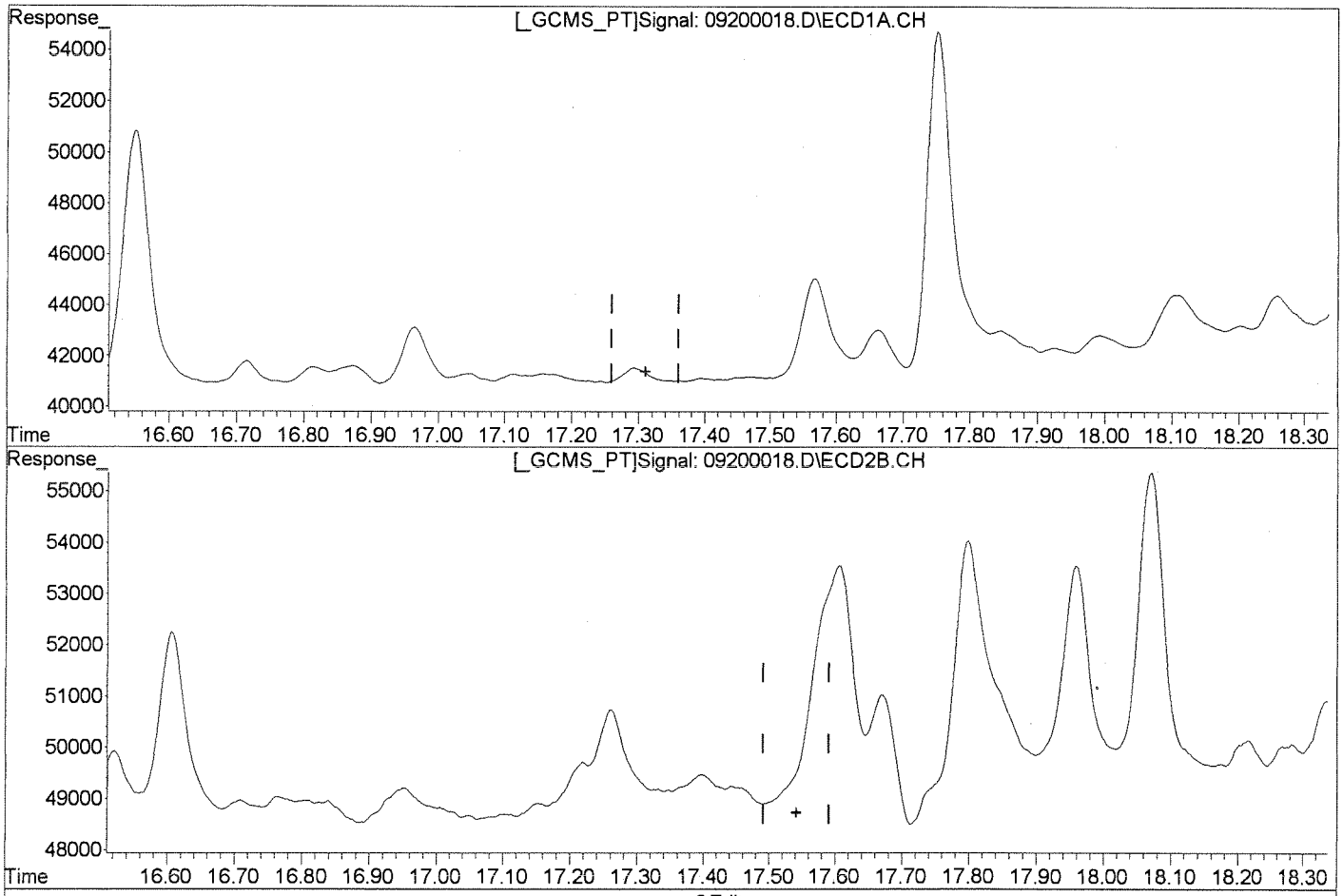
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:13:37 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(15) 2,4-DB (m)

0.00min 0.000ppb

response 0

(15) 2,4-DB #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

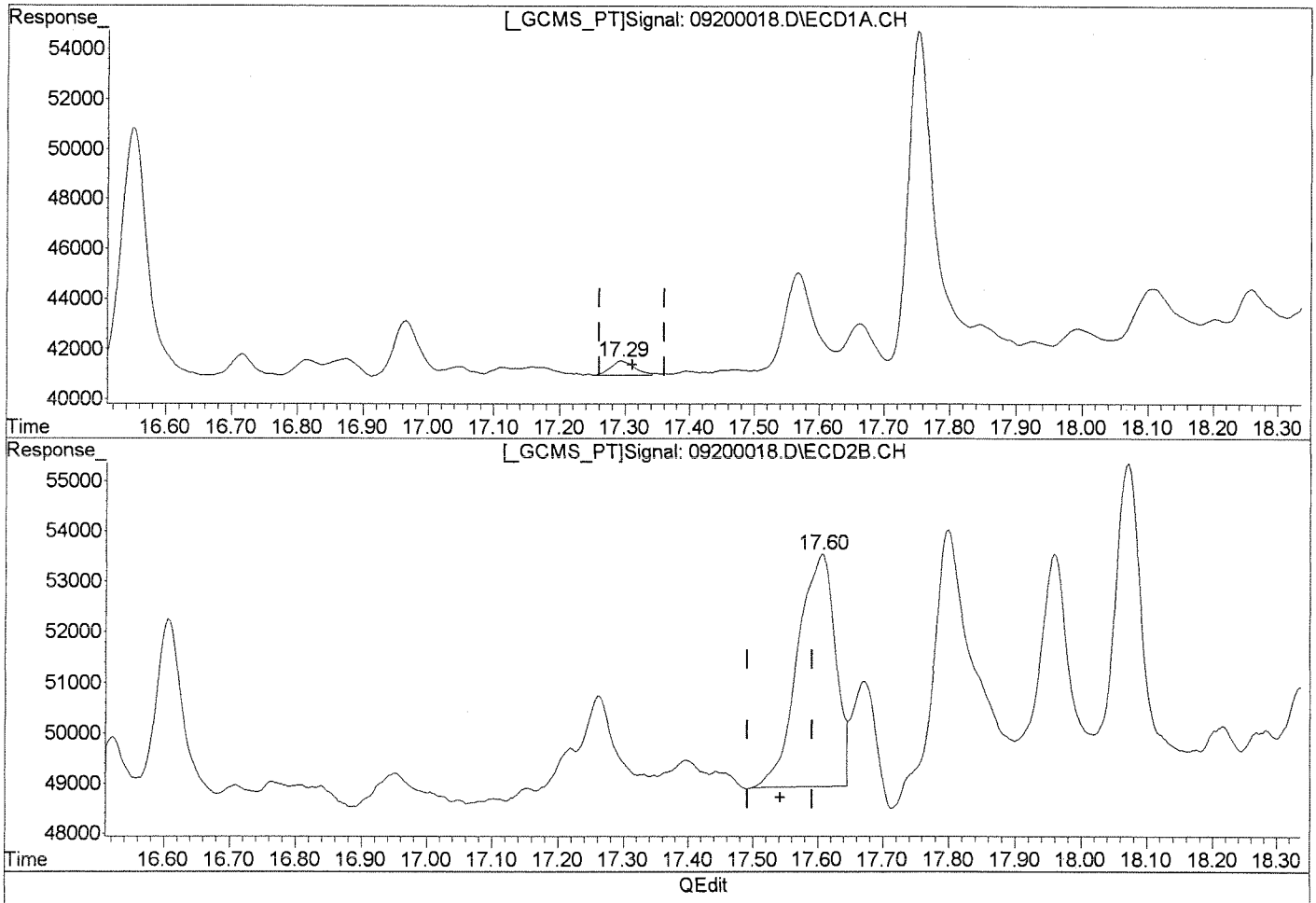
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:13:44 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(15) 2,4-DB (m)

17.29min 0.327ppb m

response 1520

(15) 2,4-DB #2 (m)

17.60min -0.178ppb m

response 18678

Manual Integration:

After

Missed Peak

10/01/13

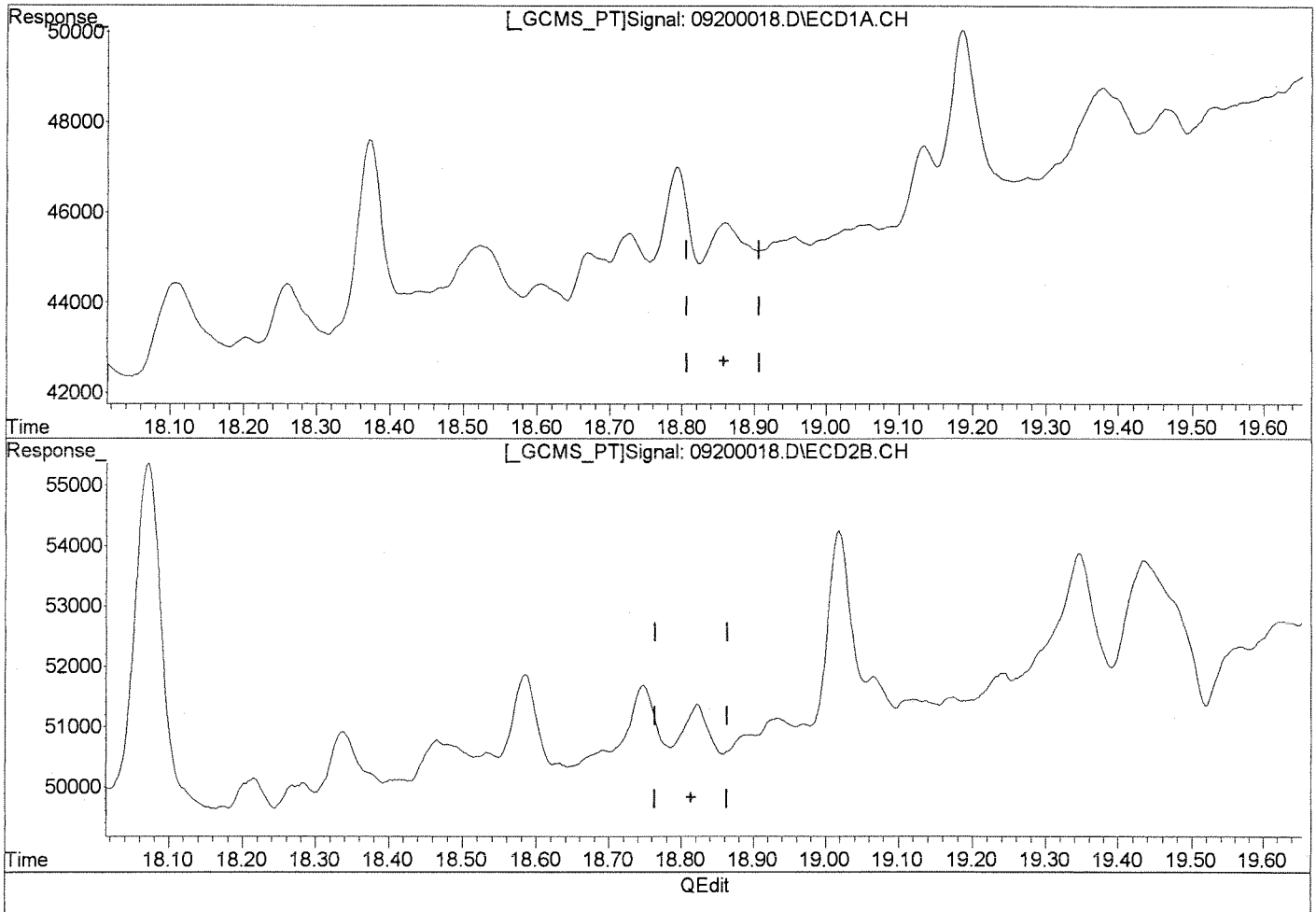
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:13:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(17) DCPA (Dacthal) (m)

0.00min 0.000ppb

response 0

(17) DCPA (Dacthal) #2 (m)

0.00min 0.000ppb

response 0

Manual Integration:

Before

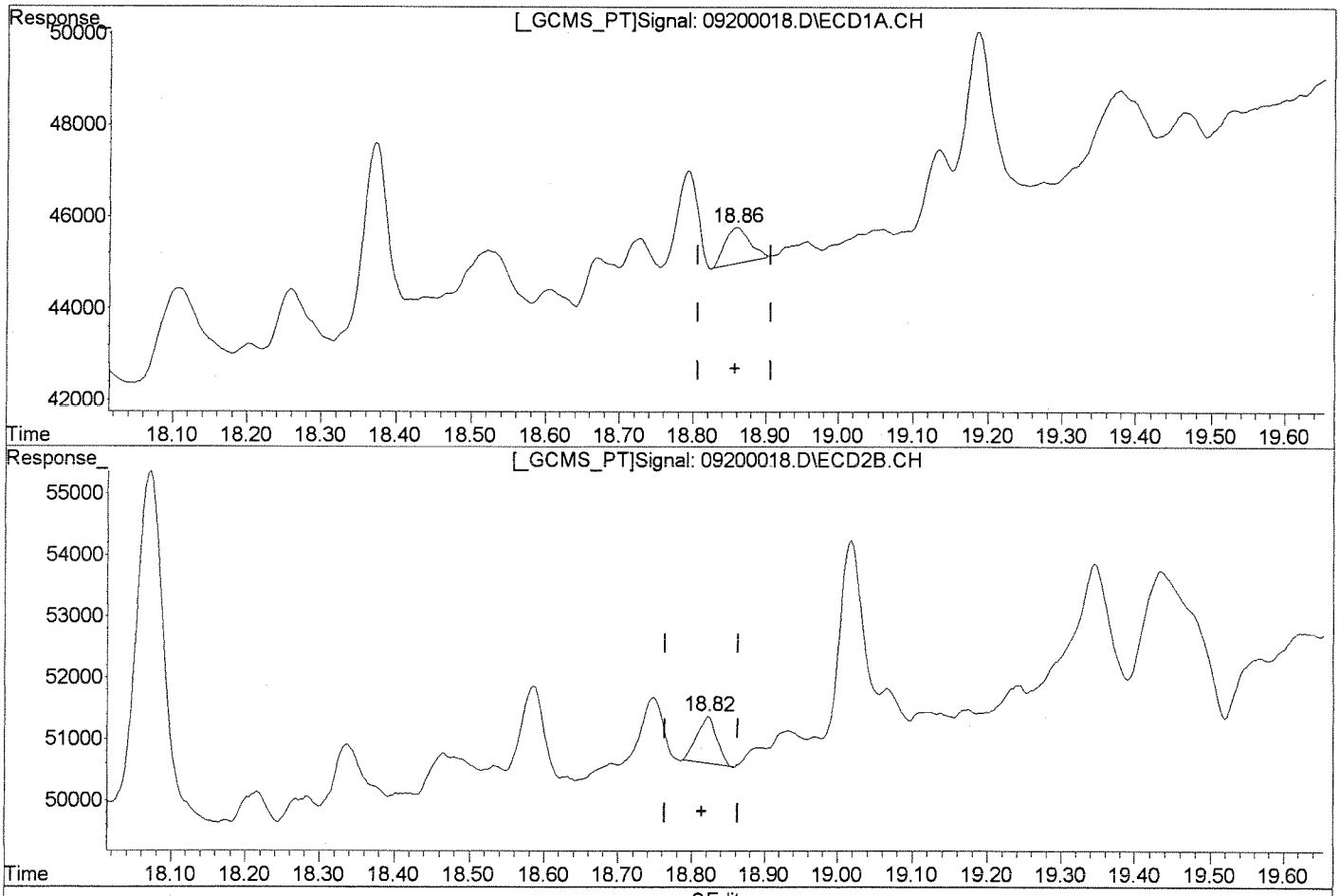
(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:14:05 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200018.D\ECD1A.CH Vial: 13
Signal #2 : J:\GC24\DATA\092013.515\09200018.D\ECD2B.CH
Acq On : 21 Sep 2013 12:33 am Operator: JSCHWAB
Sample : KWG-0098-4 MB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(17) DCPA (Dacthal) (m)

18.86min -1.449ppb m

response 1913

(17) DCPA (Dacthal) #2 (m)

18.82min -0.807ppb m

response 1412

Manual Integration:

After

Missed Peak

10/01/13

(+) = Expected Retention Time

09200018.D 092013_515.M Tue Oct 01 13:14:17 2013

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-4MS
Lab Code: KWG1310098-1

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	**4.86**		1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	**4.70**		0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	**4.84**		0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	**3.98**		0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	**4.13**		0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	**4.46**		0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	111	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200021.D
Lab ID: KWG1310098-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/21/2013 02:03
Date Quantitated: 10/01/2013 13:28
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	NR
	Pentachlorophenol	216.1	NA	30	Dual ICV
	Dacthal Diacid	38.4	NA	30	NR
Analyte Co-elution	Triclopyr	15.55	NA	NA	NR
	Pentachlorophenol	15.55	NA	NA	NC

Primary Review: JDS 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200021.D\09200021C.D
Lab ID: KWG1310098-1 -- K1309638-001MS
RunType: MS
Matrix: WATER

Date Acquired: 09/21/2013 02:03
Date Quantitated: 10/01/2013 13:28
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NR
Continuing Calibration Recovery (Closing)	Dacthal Diacid	-32.2	NA	30	

Primary Review: JDS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200021.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200021.D\09200021c.d			**Vial:**	16
Acqu Date:	09/21/2013 02:03	**Quant Date:**	10/01/2013 13:28	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-1 -- K1309638-001MS				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282812	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M			**Calibration ID:**	CAL12806
Title:					
MB Ref:	J:\GC24\DATA\092013.515\09200018.D			**Method ID:**	MJ503
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1143301	1074530	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	782288m	771333	93.68	110.58			111OK
				%Recovery =		94 OK	111 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon	4.16	4.02 -0.01	749869	721831m	48.91	56.03	4.86	5.56	**4.86**
1	3,5-Dichlorobenzoic Acid	11.08	11.53	634823	619022	45.84	54.44	4.55	5.41	**4.55**
1	4-Nitrophenol	12.14	11.94	181548m	178712m	49.42	50.47	4.91	5.01	**4.91**
1	Dicamba	13.27	13.22	1537653	1523905	47.57	49.62	4.72	4.93	**4.72**
1	Dichlorprop	14.37	14.47 +0.01	426170	401779	45.81	52.06	4.55	5.17	**4.55**
1	2,4-D	14.86	14.88	432732	404549	47.81	47.29	4.75	4.70	**4.70**
1	Triclopyr	15.55 c	15.64	6013320	990946	46.16	48.38	4.58	4.80	**4.80**
1	Pentachlorophenol	15.55 c	16.18	6013320	5232902	51.82	48.72	5.15	4.84	**4.84**
1	2,4,5-TP (Silvex)	16.06	16.27	1620910	1510063	40.04	45.68	3.98	4.54	**3.98**
1	2,4,5-T	16.61 -0.01	16.77	1195030	1111021	40.20	39.76	3.99	3.95	**3.95**
1	Chloramben	16.73	16.62 +0.01	789217	729129	41.72	37.43	4.14	3.72	**3.72**
1	Dinoseb	17.76	17.72	951426	825285	45.86	41.57	4.55	4.13	**4.13**
1	2,4-DB	17.31	17.54	192124	181147	42.43	47.77	4.21	4.74	**4.21**
1	Bentazon	18.47	18.07	136468	132981	46.94	47.83	4.66	4.75	**4.66**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200021.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200021.D\09200021c.d			**Vial:**	16
Acqu Date:	09/21/2013 02:03	**Quant Date:**	10/01/2013 13:28	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-1 -- K1309638-001MS				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid	18.86	18.81	1211657	1162620	54.12	51.58[CCV]	5.37	5.12	**5.12**
1	Picloram	18.95	18.61	812547	741020	49.91	44.87	4.96	4.46	**4.46**
1	Acifluorfen	20.94	20.83	975703	884313	44.03	46.62	4.37	4.63	**4.37**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.28 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:37 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

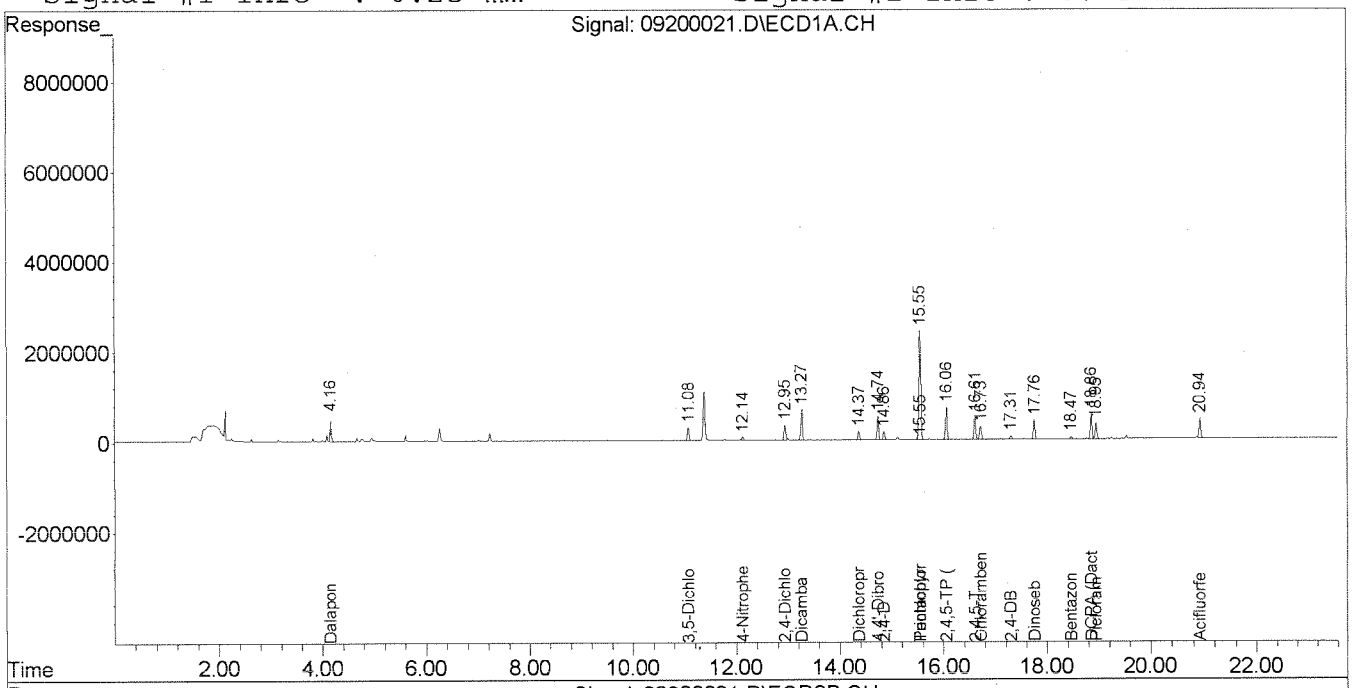
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1143301	1074530	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	782288	771333	93.677m	110.579
		Target Compounds						
2)	m	Dalapon	4.16	4.02	749869	721831	48.907	56.027m
3)	m	3,5-Dichlorobenz	11.08	11.53	634823	619022	45.838	54.435
4)	m	4-Nitrophenol	12.14	11.94	181548	178712	49.415m	50.472m
6)	m	Dicamba	13.27	13.22	1537653	1523905	47.573	49.621
7)	m	Dichloroprop	14.37	14.47	426170	401779	45.806	52.057
8)	m	2,4-D	14.86	14.88	432732	404549	47.814	47.286
9)	m	Trichlopyr	15.55	15.64	6013320	990946	46.155	48.384
10)	m	Pentachloropheno	15.55	16.18	6013320	5232902	51.815	48.720
11)	m	2,4,5-TP (Silvex	16.06	16.27	1620910	1510063	40.037	45.683
12)	m	2,4,5-T	16.61	16.77	1195030	1111021	40.199	39.757
13)	m	Chloramben	16.73	16.62	789217	729129	41.719	37.434
14)	m	Dinoseb	17.76	17.72	951426	825285	45.858	41.565
15)	m	2,4-DB	17.31	17.54	192124	181147	42.428	47.770
16)	m	Bentazon	18.47	18.07	136468	132981	46.938	47.829
17)	m	DCPA (Dacthal)	18.86	18.81	1211657	1162620	54.121	51.584
18)	m	Picloram	18.95	18.61	812547	741020	49.905	44.868
19)	m	Acifluorfen	20.94	20.83	975703	884313	44.033	46.622

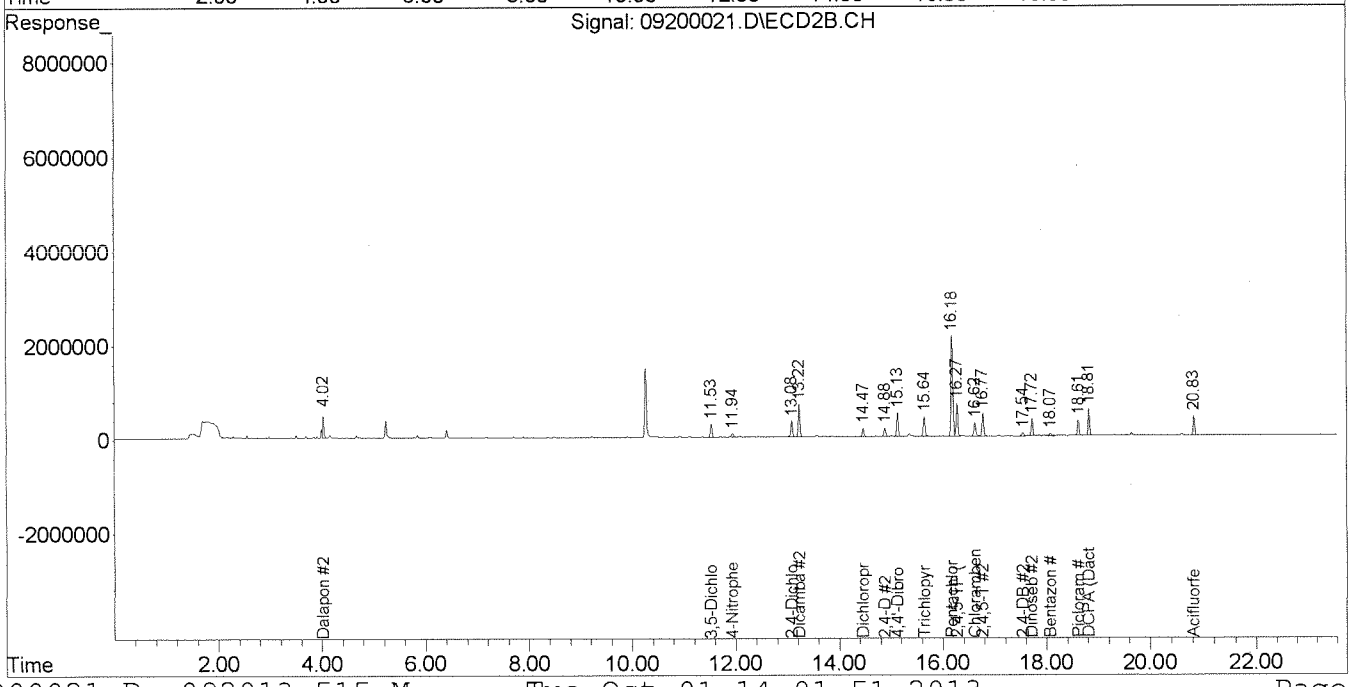
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:28 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

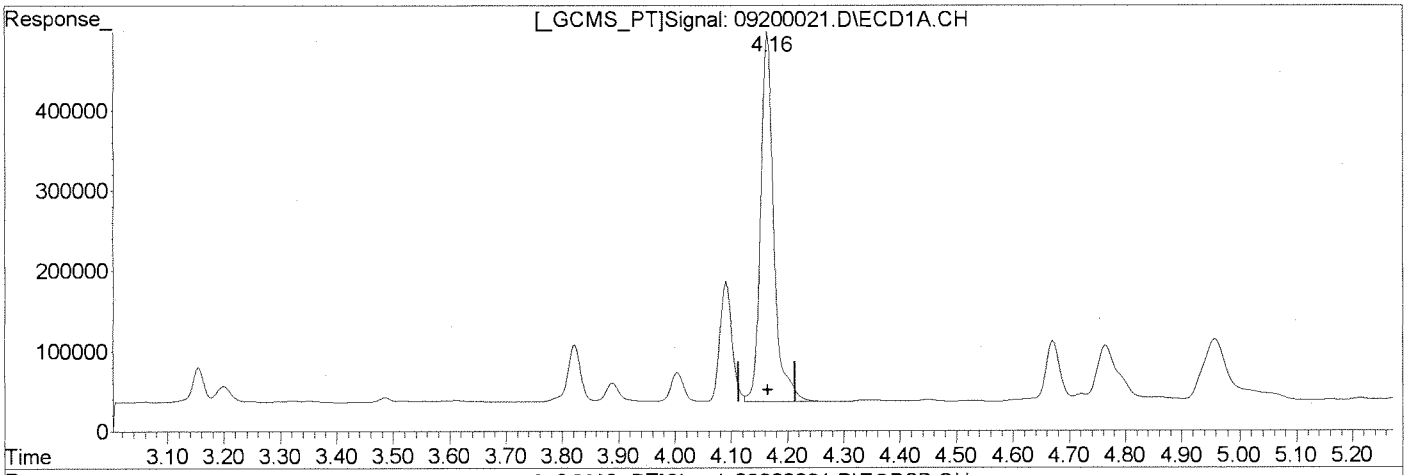


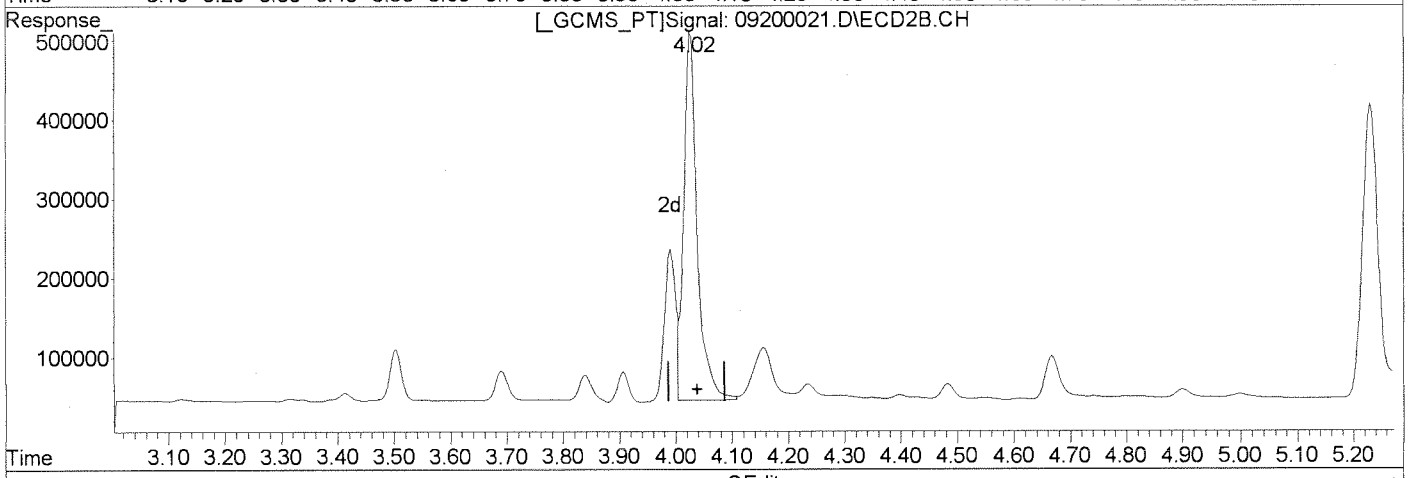


Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 48.907ppb

response 749869

(2) Dalapon #2 (m)

4.02min 59.319ppb

response 762885

Manual Integration:

Before

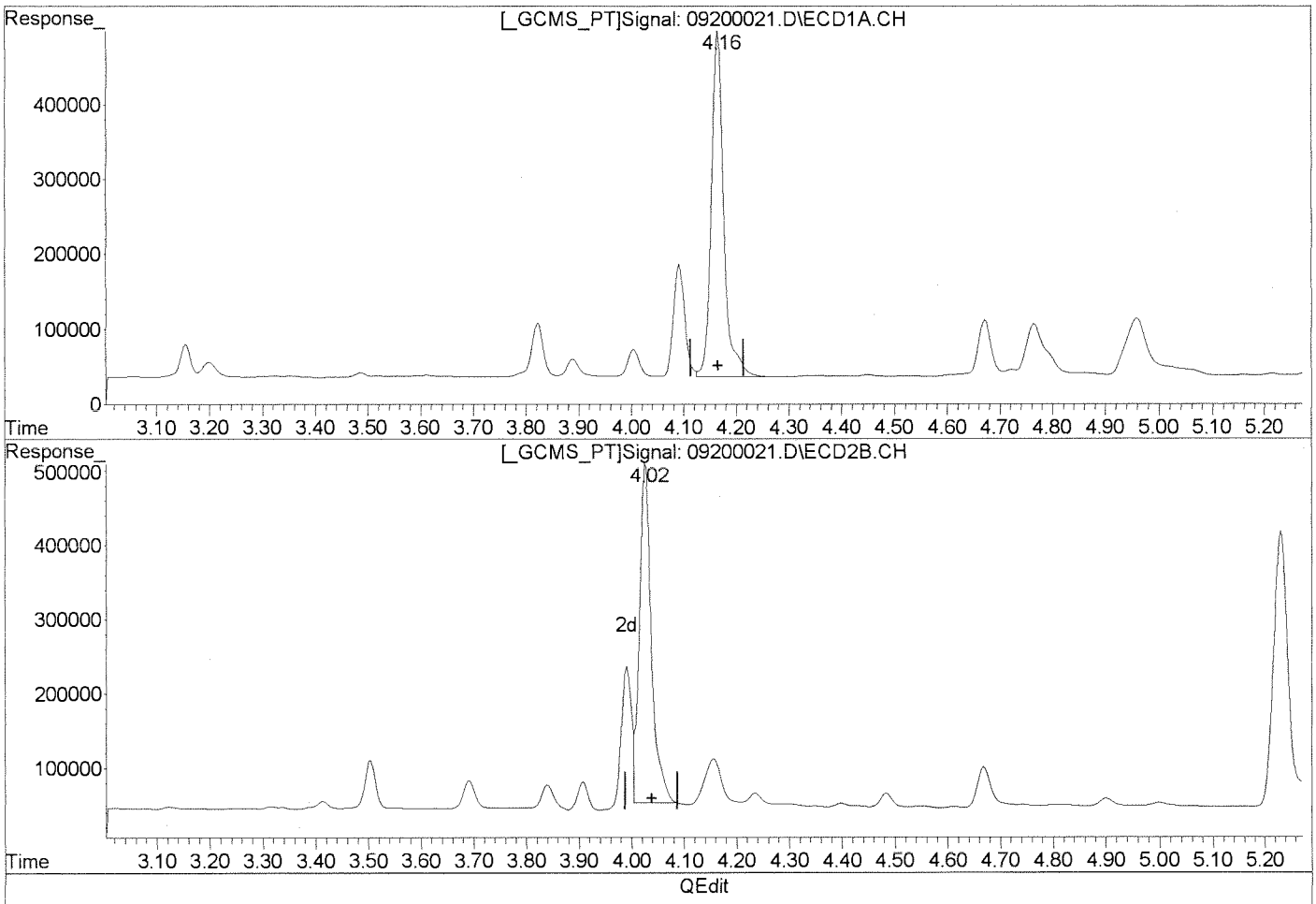
(+) = Expected Retention Time

09200021.D 092013_515.M Tue Oct 01 13:23:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

4.16min 48.907ppb

response 749869

(2) Dalapon #2 (m)

4.02min 56.027ppb m

response 721831

Manual Integration:

After

Baseline/Shoulder

10/01/13

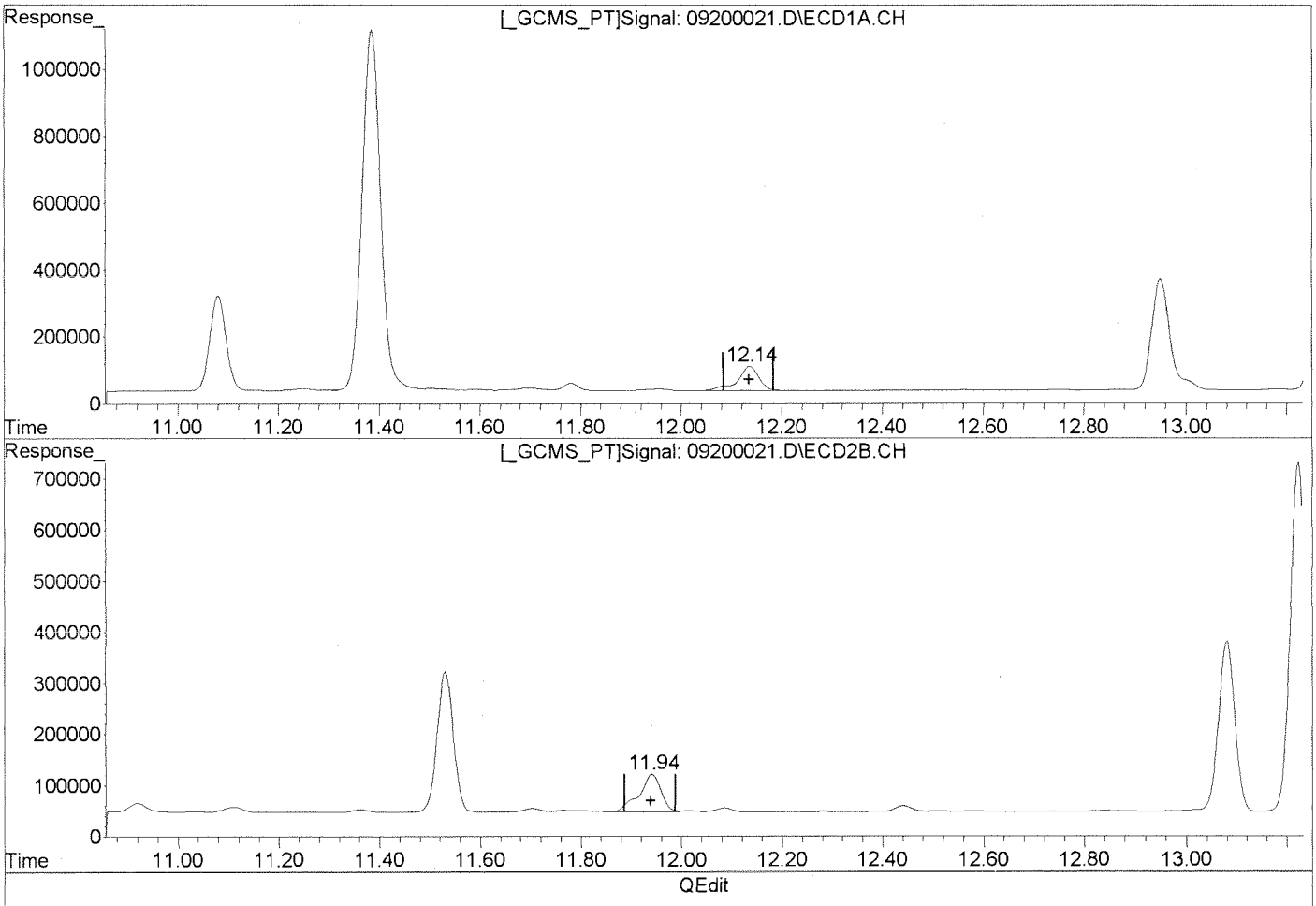
(+) = Expected Retention Time

09200021.D 092013_515.M Tue Oct 01 13:24:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.14min 58.392ppb

response 214529

(4) 4-Nitrophenol #2 (m)

11.94min 62.410ppb

response 220984

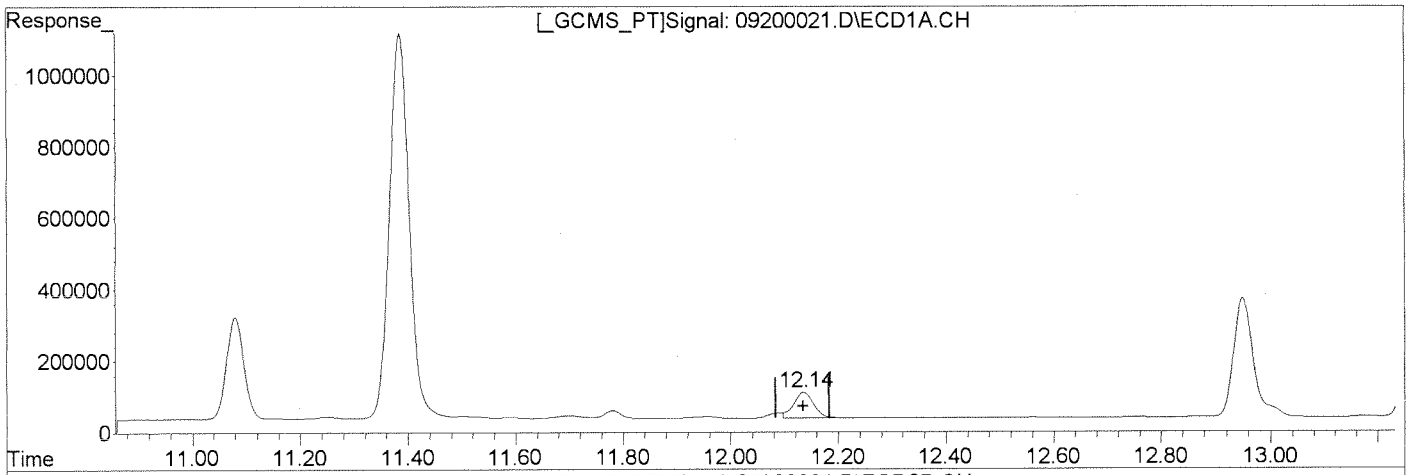
(+) = Expected Retention Time

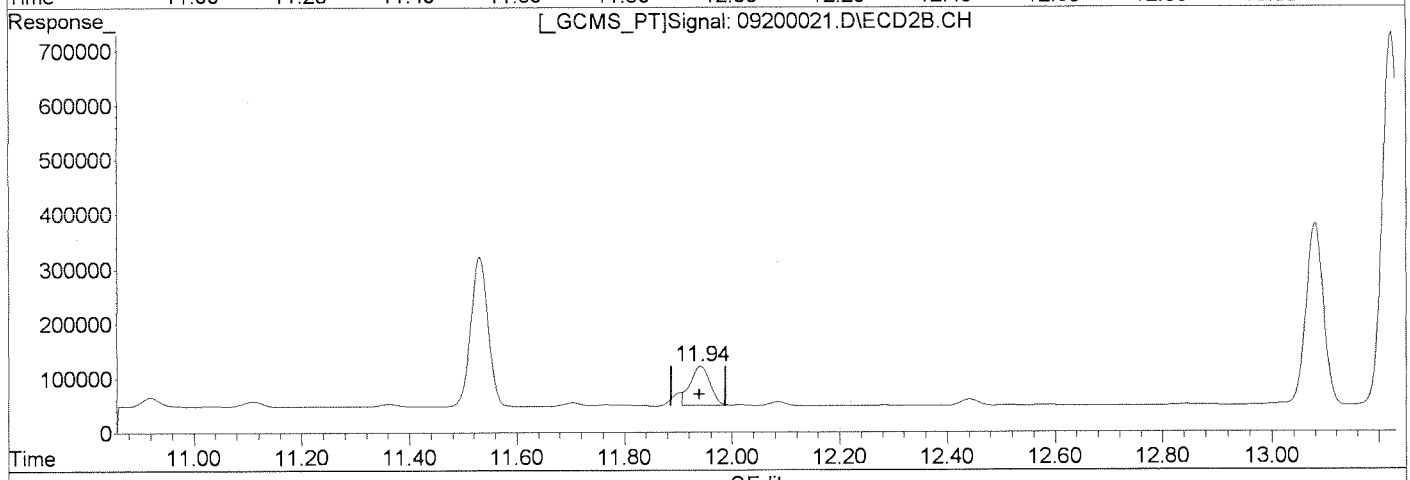
09200021.D 092013_515.M Tue Oct 01 13:24:49 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.14min 49.415ppb m

response 181548

(4) 4-Nitrophenol #2 (m)

11.94min 50.472ppb m

response 178712

Manual Integration:

After

Baseline/Shoulder

10/01/13

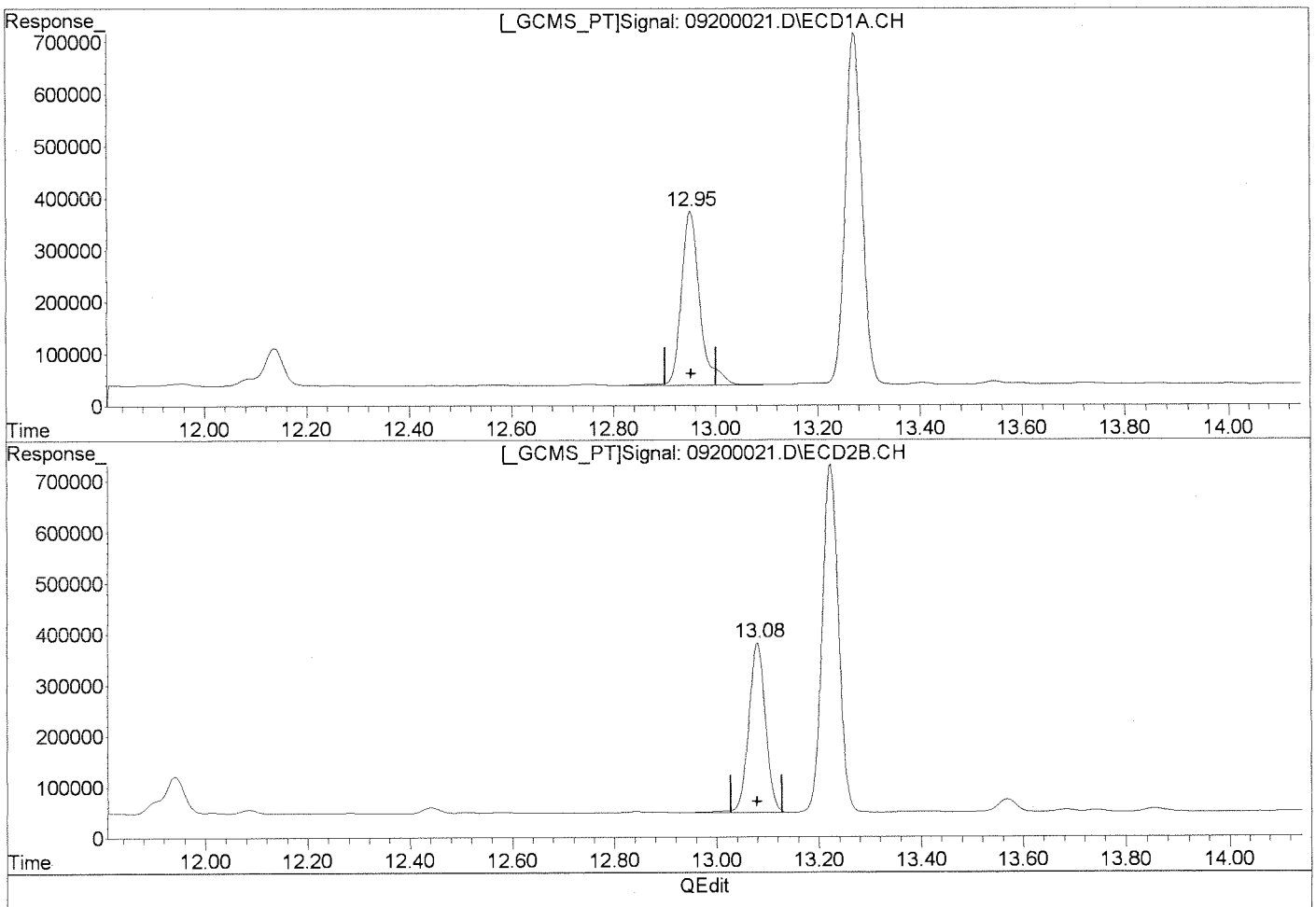
(+) = Expected Retention Time

09200021.D 092013_515.M Tue Oct 01 13:25:05 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 101.255ppb

response 845570

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 110.579ppb

response 771333

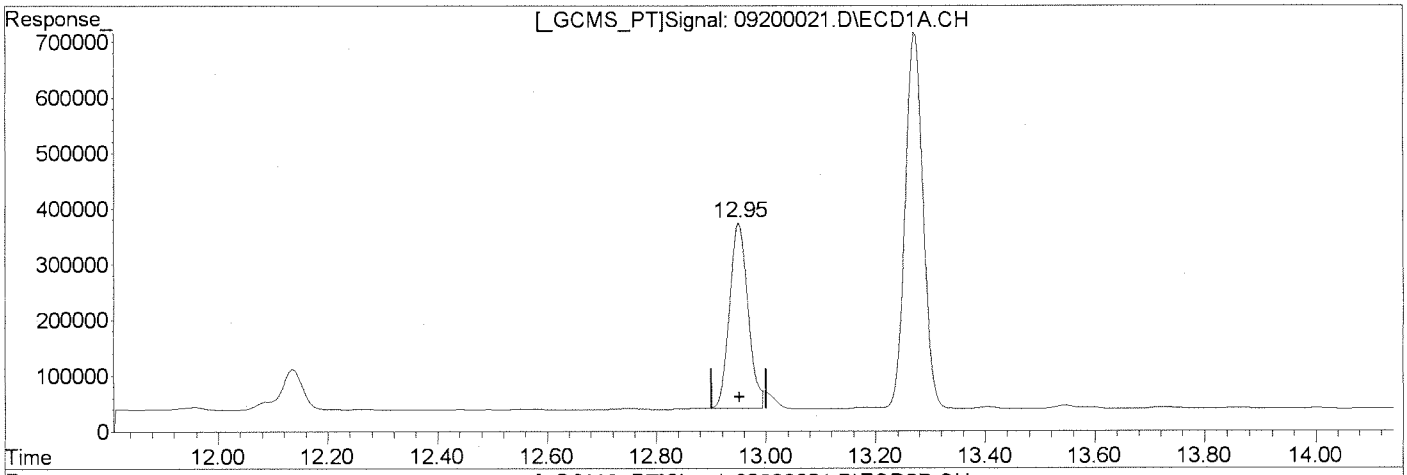
(+) = Expected Retention Time

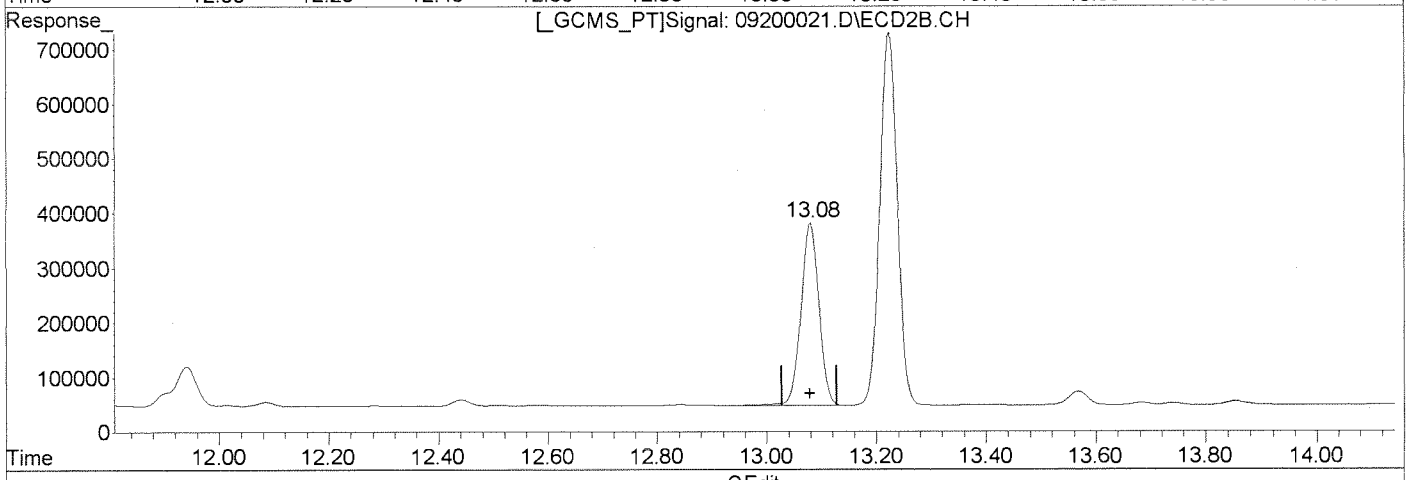
09200021.D 092013_515.M Tue Oct 01 13:25:09 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200021.D\ECD1A.CH Vial: 16
Signal #2 : J:\GC24\DATA\092013.515\09200021.D\ECD2B.CH
Acq On : 09-21-2013 02:03:31 AM Operator: JSCHWAB
Sample : K1309638-001 MS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 93.677ppb m

response 782288

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 110.579ppb

response 771333

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200021.D 092013_515.M Tue Oct 01 13:25:17 2013

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Chlorinated Acids by EPA Method 515.4

Sample Name: 13254-BW-4DMS
Lab Code: KWG1310098-2

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	**4.85**		1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	**4.61**		0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	**4.76**		0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	**3.86**		0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	**4.08**		0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	**4.42**		0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	109	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200022.D
Lab ID: KWG1310098-2 -- K1309638-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/21/2013 02:33
Date Quantitated: 10/01/2013 13:30
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	MRL
	Pentachlorophenol	216.1	NA	30	Dual CCV
	Dacthal Diacid	38.4	NA	30	MRL
Analyte Co-elution	Triclopyr	15.55	NA	NA	MRL
	Pentachlorophenol	15.55	NA	NA	RLO

Primary Review: JB 10-01-13

Secondary Review: MM

Exception Report

Data File: J:\GC24\DATA\092013.515\09200022.D\09200022C.D
Lab ID: KWG1310098-2 -- K1309638-001DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/21/2013 02:33
Date Quantitated: 10/01/2013 13:30
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	
Continuing Calibration Recovery (Closing)	Dacthal Diacid	-32.2	NA	30	MR

Primary Review: DRS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200022.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200022.D\09200022c.d			**Vial:**	17
Acqu Date:	09/21/2013 02:33	**Quant Date:**	10/01/2013 13:30	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-2 -- K1309638-001DMS				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282813	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M			**Calibration ID:**	CAL12806
Title:					
MB Ref:	J:\GC24\DATA\092013.515\09200018.D			**Method ID:**	MJ503
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1154787	1107971	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	788474m	781643	93.48	108.61			109OK
				%Recovery =		93 OK	109 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon	4.16		4.02	-0.01	757801	726981m	48.93	54.68	4.85	5.42	**4.85**
1	3,5-Dichlorobenzoic Acid	11.07	-0.01	11.53		643488	627813	46.00	53.51	4.56	5.31	**4.56**
1	4-Nitrophenol	12.13	-0.01	11.94		199469	188264m	53.75	51.56	5.33	5.11	**5.11**
1	Dicamba	13.27		13.22		1561005	1559344	47.82	49.24	4.74	4.88	**4.74**
1	Dichlorprop	14.37		14.47	+0.01	425791	409851	45.31	51.48	4.49	5.11	**4.49**
1	2,4-D	14.86		14.88		430817	410049	47.11	46.46	4.67	4.61	**4.61**
1	Triclopyr	15.55	c	15.64		6000894	1010792	45.60	47.85	4.52	4.75	**4.75**
1	Pentachlorophenol	15.55	c	16.18		6000894	5311608	51.19	47.96	5.08	4.76	**4.76**
1	2,4,5-TP (Silvex)	16.06		16.28	+0.01	1593418	1545404	38.97	45.34	3.86	4.50	**3.86**
1	2,4,5-T	16.62		16.77		1178632	1135370	39.25	39.40	3.89	3.91	**3.89**
1	Chloramben	16.73		16.62	+0.01	795172	758795	41.62	37.78	4.13	3.75	**3.75**
1	Dinoseb	17.76		17.72		945602	841320	45.06	41.09	4.47	4.08	**4.08**
1	2,4-DB	17.31		17.55	+0.01	190243	185328	41.60	47.36	4.13	4.70	**4.13**
1	Bentazon	18.47		18.08	+0.01	134427	133126	45.78	46.20	4.54	4.58	**4.54**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200022.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200022.D\09200022c.d			**Vial:**	17
Acqu Date:	09/21/2013 02:33	**Quant Date:**	10/01/2013 13:30	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-2 -- K1309638-001DMS				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid	18.86	18.82 $^{+0.01}$	1234965	1216372	54.63	52.35^{CCV}	5.42	5.19	**5.19**
1	Picloram	18.95	18.61	813098	758832	49.44	44.56	4.90	4.42	**4.42**
1	Acifluorfen	20.94	20.83	979904	897375	43.78	45.88	4.34	4.55	**4.34**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.33 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:38 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1154787	1107971	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	788474	781643	93.479m	108.611
		Target Compounds						
2)	m	Dalapon	4.16	4.02	757801	726981	48.933	54.681m
3)	m	3,5-Dichlorobenz	11.07	11.53	643488	627813	46.001	53.509
4)	m	4-Nitrophenol	12.13	11.94	199469	188264	53.753	51.564m
6)	m	Dicamba	13.27	13.22	1561005	1559344	47.815	49.242
7)	m	Dichloroprop	14.37	14.47	425791	409851	45.311	51.478
8)	m	2,4-D	14.86	14.88	430817	410049	47.113	46.459
9)	m	Trichlopyr	15.55	15.64	6000894	1010792	45.602	47.854
10)	m	Pentachloropheno	15.55	16.18	6000894	5311608	51.188	47.960
11)	m	2,4,5-TP (Silvex	16.06	16.28	1593418	1545404	38.966	45.336
12)	m	2,4,5-T	16.62	16.77	1178632	1135370	39.253	39.402
13)	m	Chloramben	16.73	16.62	795172	758795	41.616	37.781
14)	m	Dinoseb	17.76	17.72	945602	841320	45.061	41.094
15)	m	2,4-DB	17.31	17.55	190243	185328	41.595	47.356
16)	m	Bentazon	18.47	18.08	134427	133126	45.776	46.198
17)	m	DCPA (Dacthal)	18.86	18.82	1234965	1216372	54.627	52.353
18)	m	Picloram	18.95	18.61	813098	758832	49.436	44.559
19)	m	Acifluorfen	20.94	20.83	979904	897375	43.783	45.883

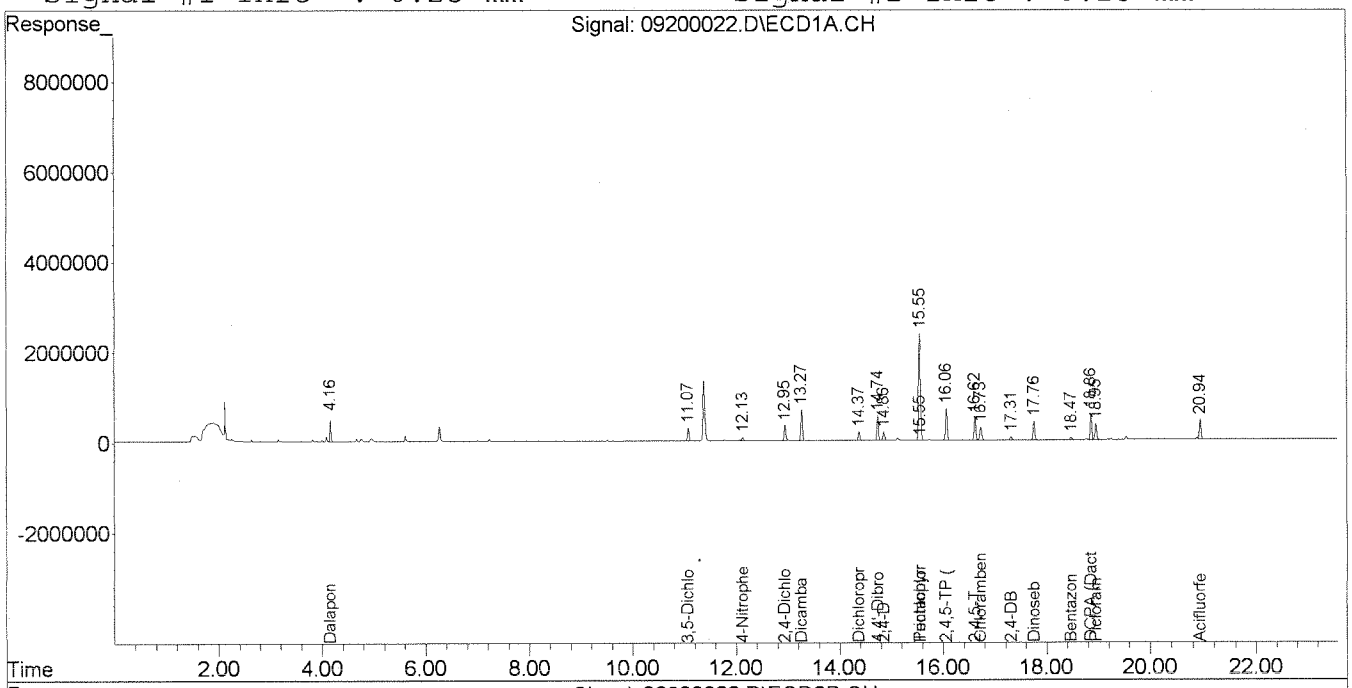
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

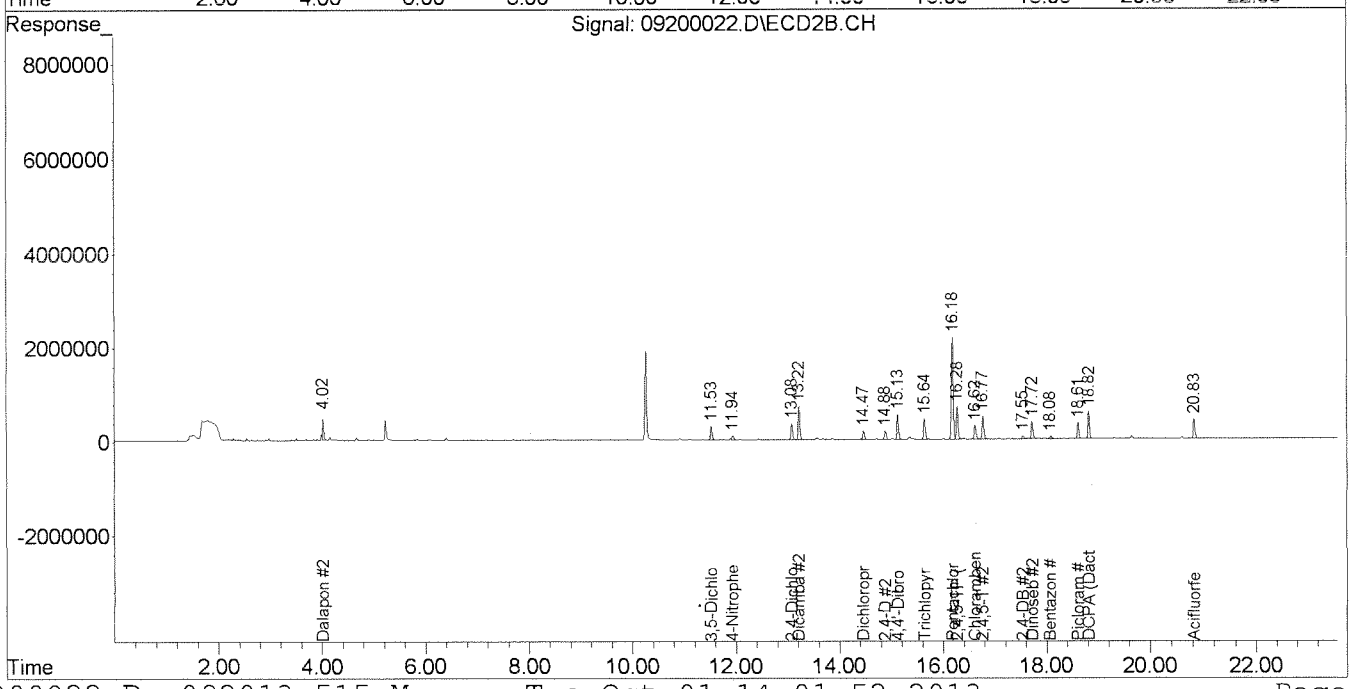
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:30 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

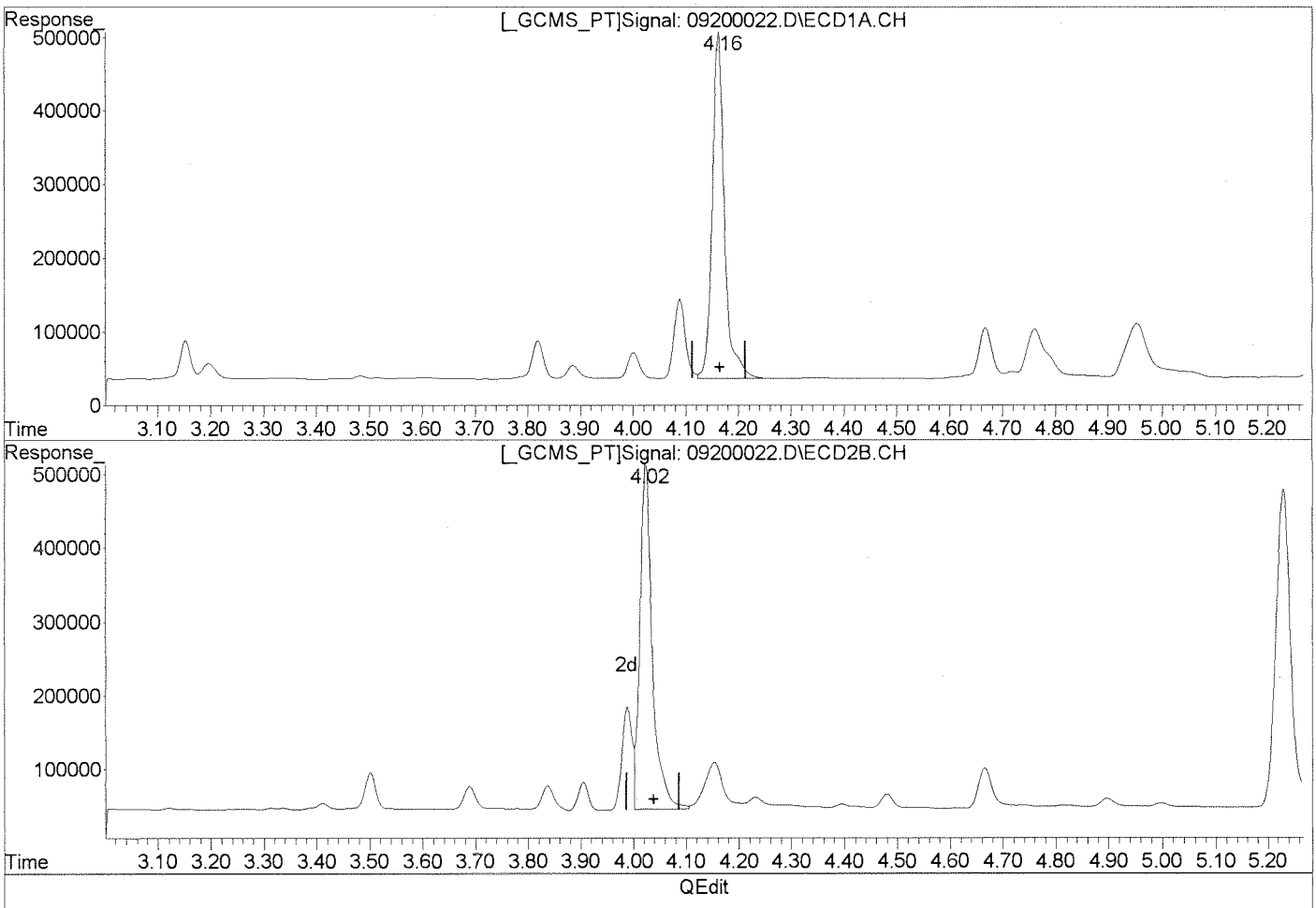




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 48.933ppb

response 757801

Manual Integration:

Before

(2) Dalapon #2 (m)

4.02min 57.162ppb

response 758889

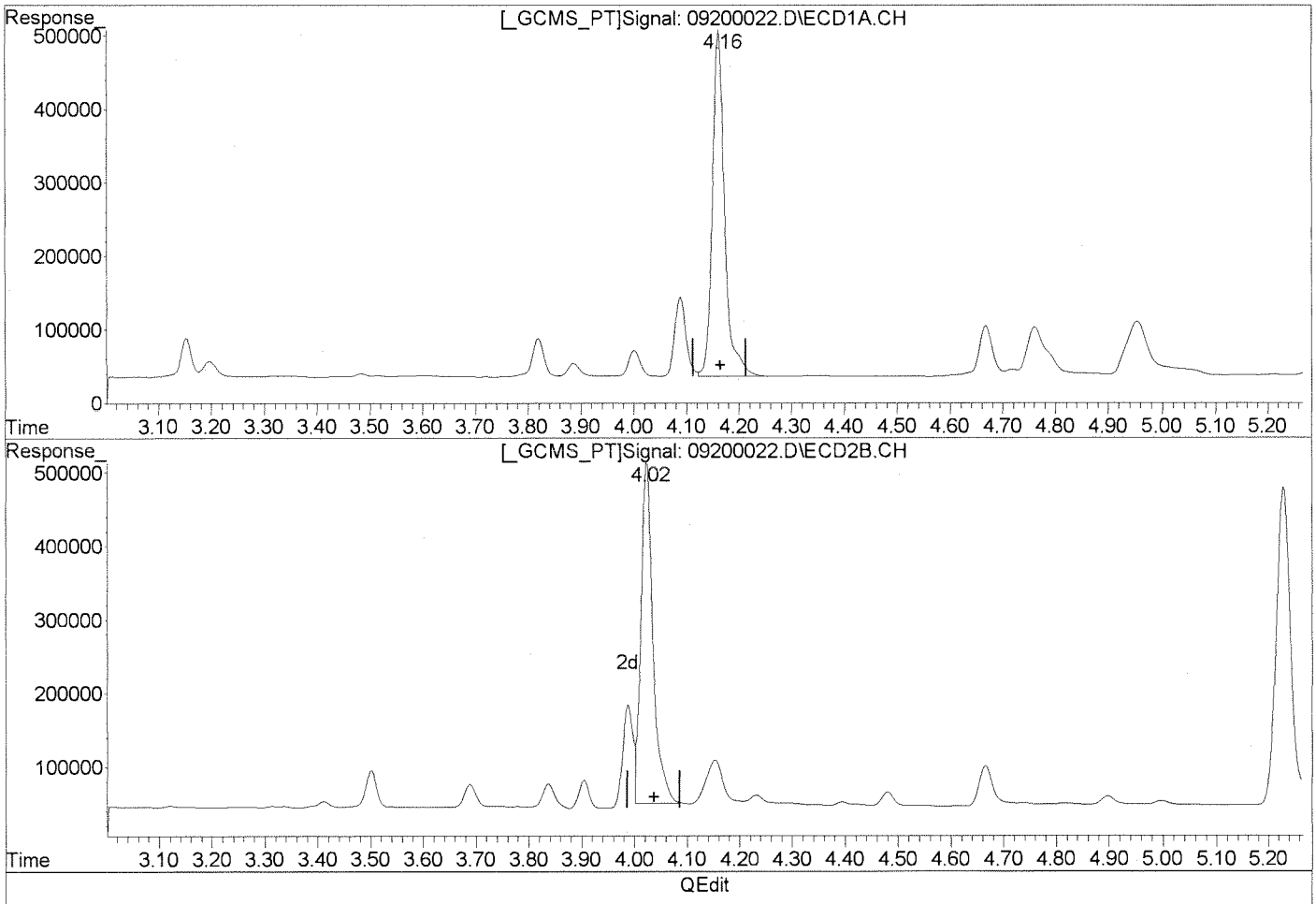
(+) = Expected Retention Time

09200022.D 092013_515.M Tue Oct 01 13:26:06 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 48.933ppb

response 757801

(2) Dalapon #2 (m)

4.02min 54.681ppb m

response 726981

Manual Integration:

After

Baseline/Shoulder

10/01/13

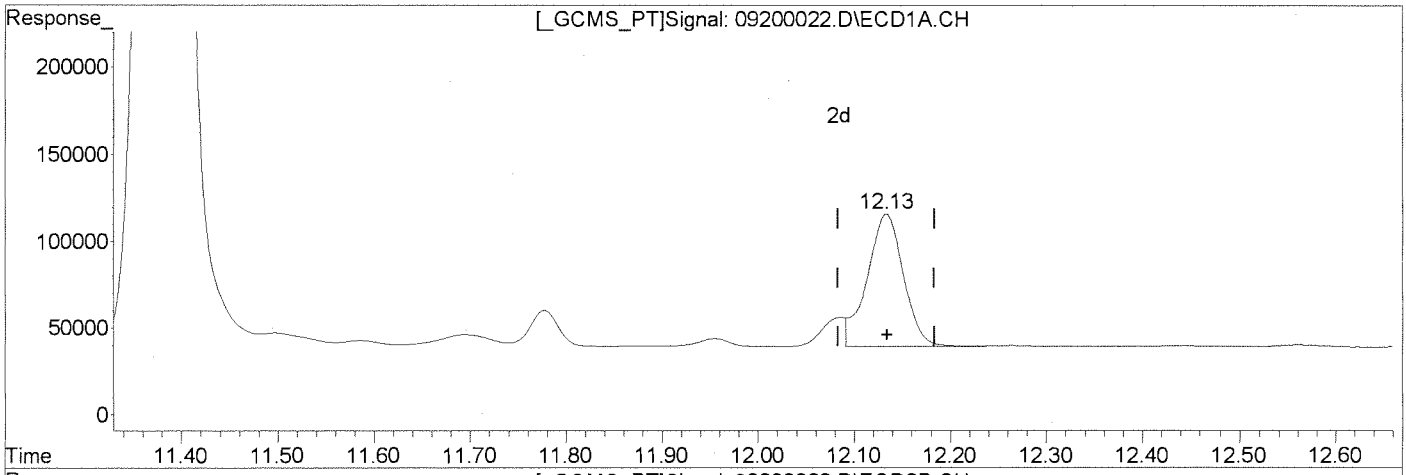
(+) = Expected Retention Time

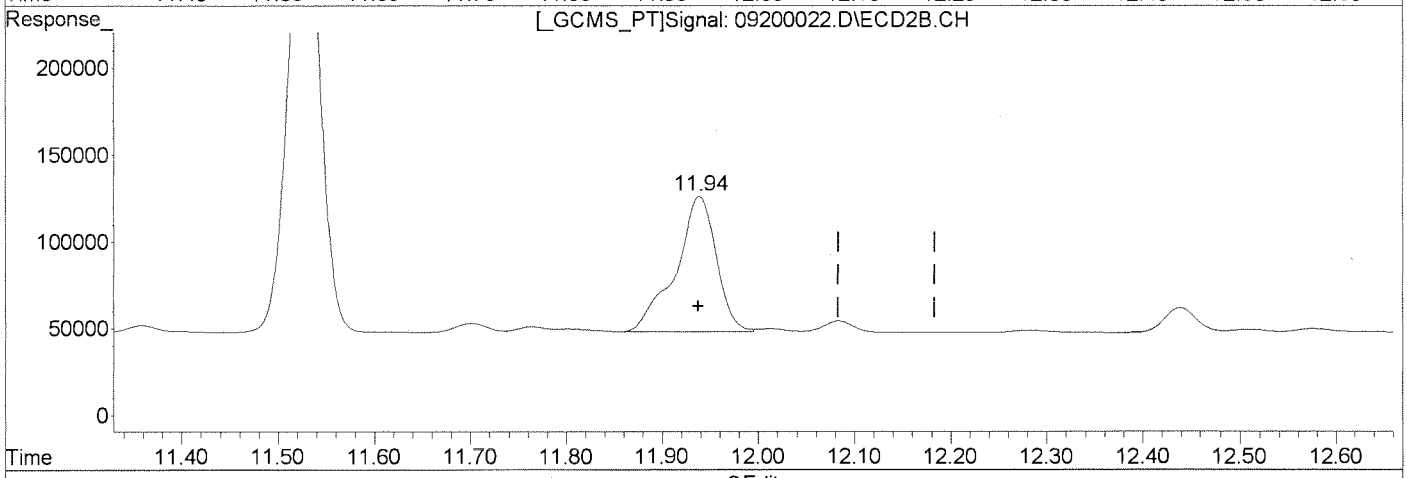
09200022.D 092013_515.M Tue Oct 01 13:26:19 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.13min 53.753ppb

response 199469

(4) 4-Nitrophenol #2 (m)

11.94min 63.276ppb

response 231023

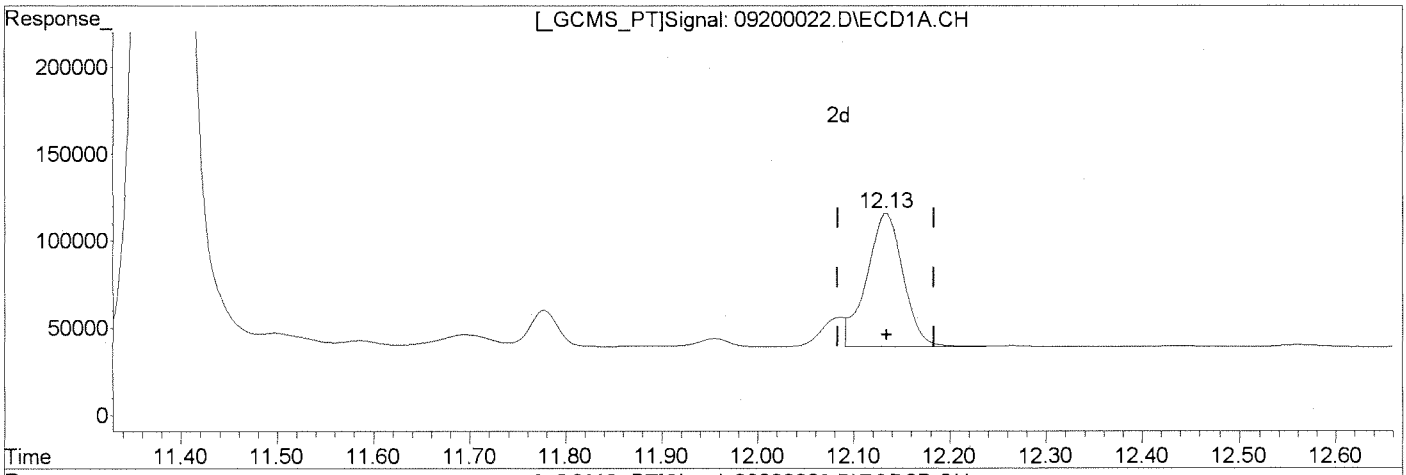
(+) = Expected Retention Time

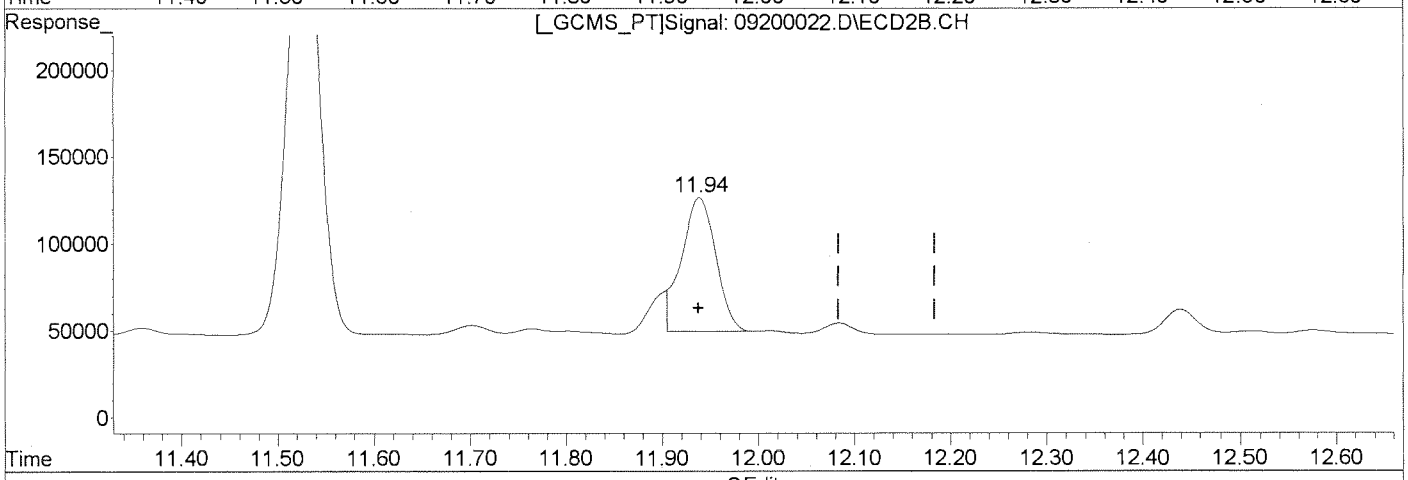
09200022.D 092013_515.M Tue Oct 01 13:26:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.13min 53.753ppb

response 199469

Manual Integration:

After

Baseline/Shoulder

10/01/13

(4) 4-Nitrophenol #2 (m)

11.94min 51.564ppb m

response 188264

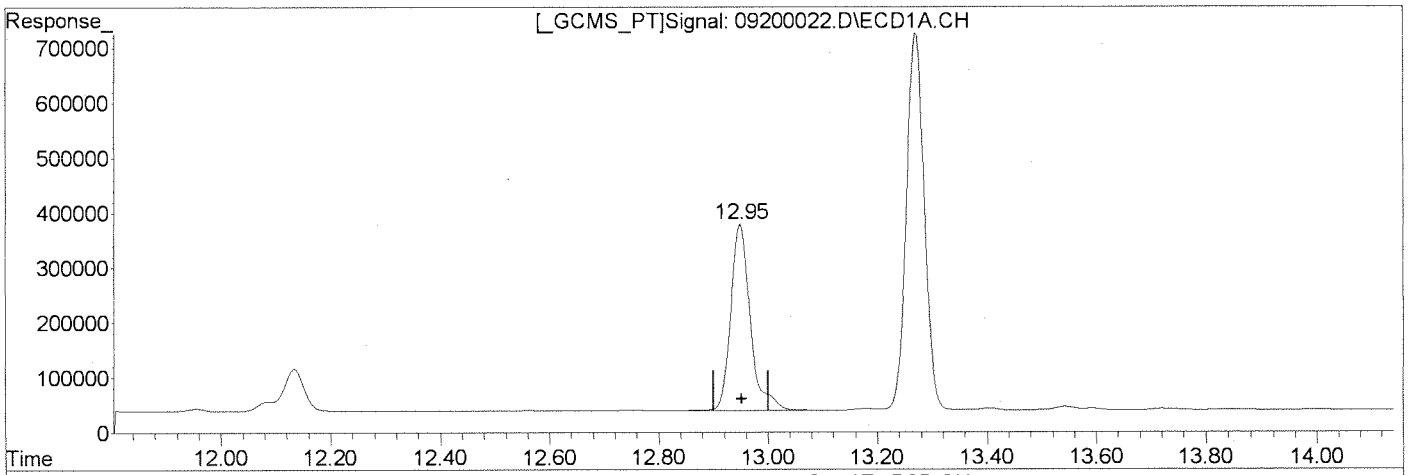
(+) = Expected Retention Time

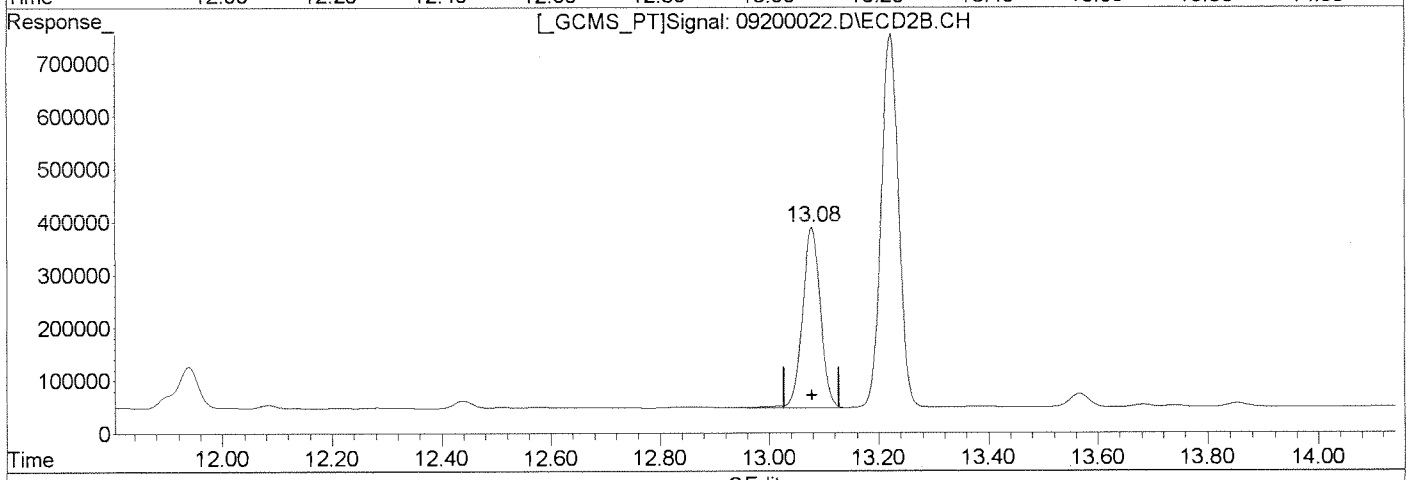
09200022.D 092013_515.M Tue Oct 01 13:26:38 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 101.359ppb

response 854945

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 108.611ppb

response 781643

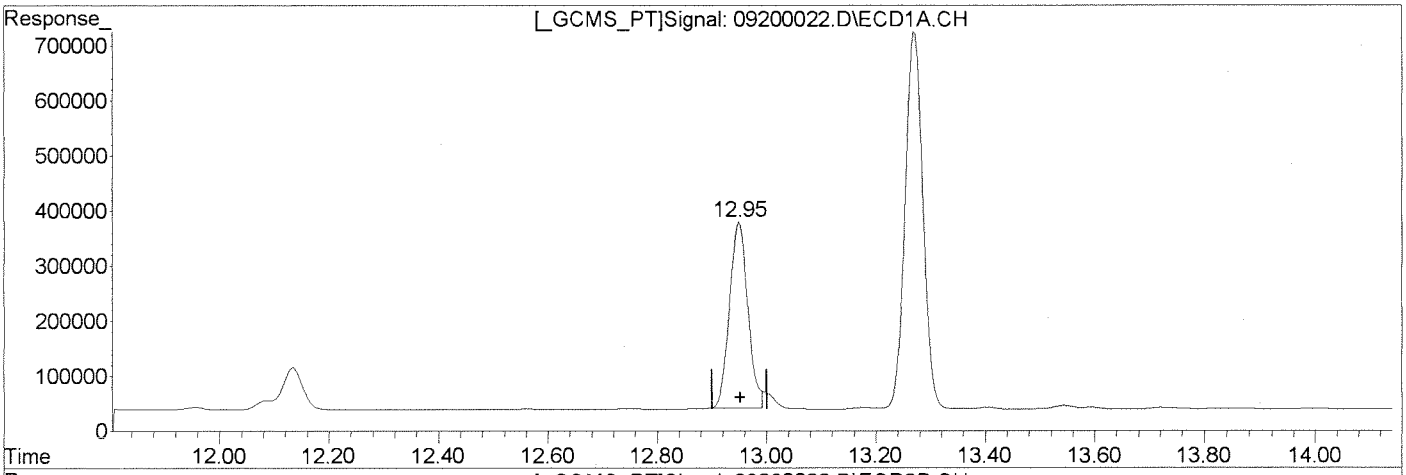
(+) = Expected Retention Time

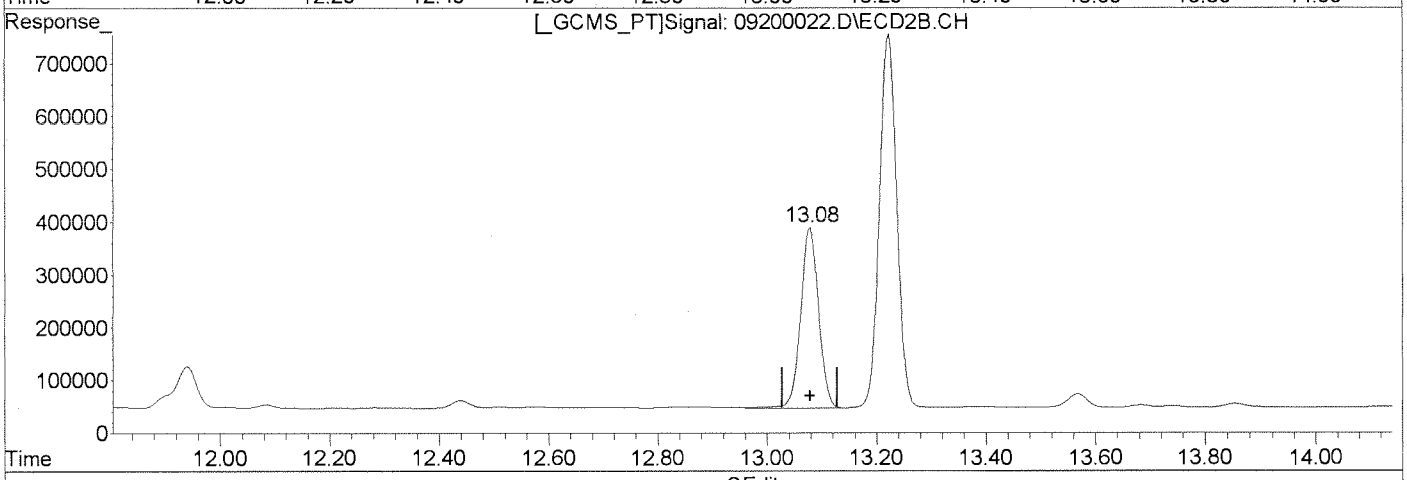
09200022.D 092013_515.M Tue Oct 01 13:26:44 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200022.D\ECD1A.CH Vial: 17
Signal #2 : J:\GC24\DATA\092013.515\09200022.D\ECD2B.CH
Acq On : 09-21-2013 02:33:06 AM Operator: JSCHWAB
Sample : K1309638-001 DMS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 93.479ppb m

response 788474

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 108.611ppb

response 781643

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200022.D 092013_515.M Tue Oct 01 13:26:54 2013

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Chlorinated Acids by EPA Method 515.4

Sample Name: Lab Control Sample
Lab Code: KWG1310098-3

Extraction Method: METHOD
Analysis Method: 515.4

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dalapon	**4.87**		1.0	0.040	1	09/17/13	09/21/13	KWG1310098	
2,4-D	**4.89**		0.10	0.089	1	09/17/13	09/21/13	KWG1310098	
Pentachlorophenol	**4.81**		0.040	0.016	1	09/17/13	09/21/13	KWG1310098	
2,4,5-TP (Silvex)	**4.15**		0.050	0.020	1	09/17/13	09/21/13	KWG1310098	
Dinoseb	**4.26**		0.20	0.048	1	09/17/13	09/21/13	KWG1310098	
Picloram	**4.46**		0.10	0.091	1	09/17/13	09/21/13	KWG1310098	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,4-Dichlorophenylacetic Acid	107	70-130	09/21/13	Acceptable

Comments:

Exception Report

Data File: J:\GC24\DATA\092013.515\09200017.D
Lab ID: KWG1310098-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/21/2013 00:03
Date Quantitated: 10/01/2013 13:15
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	NR
	Pentachlorophenol	216.1	NA	30	Dual ICV
	Dacthal Diacid	38.4	NA	30	NR
Analyte Co-elution	Triclopyr	15.55	NA	NA	NR
	Pentachlorophenol	15.55	NA	NA	NR

Primary Review: JD 10-01-13

Secondary Review: M

Exception Report

Data File: J:\GC24\DATA\092013.515\09200017.D\09200017C.D
Lab ID: KWG1310098-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/21/2013 00:03
Date Quantitated: 10/01/2013 13:15
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NR
Continuing Calibration Recovery (Closing)	Dacthal Diacid	-32.2	NA	30	

Primary Review: 10-01-13

Secondary Review:

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200017.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200017.D\09200017c.d			**Vial:**	12
Acqu Date:	09/21/2013 00:03	**Quant Date:**	10/01/2013 13:15	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-3				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310789	**Prep Lot:**	KWG1310098	**Report Group:**	
Analysis Method:	515.4	**Prep Method:**	METHOD		
Prep Ref:	1282814	**Prep Date:**	09/17/2013		

Quant Method:	J:\GC24\METHODS\092013_515.M			**Calibration ID:**	CAL12806
Title:					
MB Ref:	J:\GC24\DATA\092013.515\09200018.D			**Method ID:**	MJ503
				Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? 0.00	15.13? +0.00	1132578	1099330	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	768545m	766714	92.90	107.33			107OK
				%Recovery =		93 OK	107 OK	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon	4.16		4.02	-0.01	738974	711422	48.65	53.91	4.87	5.39	**4.87**
1	3,5-Dichlorobenzoic Acid	11.08		11.53		621668	621684	45.31	53.40	4.53	5.34	**4.53**
1	4-Nitrophenol	12.13	-0.01	11.94		177068	187706m	48.65	51.82	4.87	5.18	**4.87**
1	Dicamba	13.27		13.22		1483334	1518436	46.33	48.33	4.63	4.83	**4.63**
1	Dichlorprop	14.37		14.46		420892	415839	45.67	52.69	4.57	5.27	**4.57**
1	2,4-D	14.86		14.88		441122	427938	49.24	48.94	4.92	4.89	**4.89**
1	Triclopyr	15.55	c	15.64		5915836	1031014	45.84	49.22	4.58	4.92	**4.92**
1	Pentachlorophenol	15.55	c	16.18		5915836	5286018	51.45	48.10	5.15	4.81	**4.81**
1	2,4,5-TP (Silvex)	16.06		16.27		1662459	1638643	41.45	48.49	4.15	4.85	**4.15**
1	2,4,5-T	16.62		16.77		1214353	1185910	41.24	41.48	4.12	4.15	**4.12**
1	Chloramben	16.73		16.61		812715	808623	43.37	40.58	4.34	4.06	**4.06**
1	Dinoseb	17.76		17.72		1008962	864545	49.37	42.56	4.94	4.26	**4.26**
1	2,4-DB	17.31		17.54		194310	192439	43.32	49.81	4.33	4.98	**4.33**
1	Bentazon	18.47		18.07		139018	137186	48.27	48.30	4.83	4.83	**4.83**

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200017.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200017.D\09200017c.d			**Vial:**	12
Acqu Date:	09/21/2013 00:03	**Quant Date:**	10/01/2013 13:15	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310098-3				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds **Final Conc. Units:** ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid	18.86	18.81	1035456	1061890	46.48	45.96[CCV]	4.65	4.60	**4.60**
1	Picloram	18.95	18.61	787259	752918	48.80	44.56	4.88	4.46	**4.46**
1	Acifluorfen	20.94	20.83	961274	894606	43.79	46.10	4.38	4.61	**4.38**

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.00 ml	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:34 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1132578	1099330	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	768545	766714	92.903m	107.332
		Target Compounds						
2)	m	Dalapon	4.16	4.02	738974	711422	48.653	53.906
3)	m	3,5-Dichlorobenz	11.08	11.53	621668	621684	45.313	53.399
4)	m	4-Nitrophenol	12.13	11.94	177068	187706	48.652	51.816m
6)	m	Dicamba	13.27	13.22	1483334	1518436	46.327	48.327
7)	m	Dichloroprop	14.37	14.46	420892	415839	45.668	52.687
8)	m	2,4-D	14.86	14.88	441122	427938	49.235	48.938
9)	m	Trichlopyr	15.55	15.64	5915836	1031014	45.837	49.220
10)	m	Pentachloropheno	15.55	16.18	5915836	5286018	51.454	48.104
11)	m	2,4,5-TP (Silvex	16.06	16.27	1662459	1638643	41.452	48.489
12)	m	2,4,5-T	16.62	16.77	1214353	1185910	41.235	41.480
13)	m	Chloramben	16.73	16.61	812715	808623	43.368	40.579
14)	m	Dinoseb	17.76	17.72	1008962	864545	49.371	42.561
15)	m	2,4-DB	17.31	17.54	194310	192439	43.317	49.811
16)	m	Bentazon	18.47	18.07	139018	137186	48.268	48.296
17)	m	DCPA (Dacthal)	18.86	18.81	1035456	1061890	46.477	45.959
18)	m	Picloram	18.95	18.61	787259	752918	48.797	44.560
19)	m	Acifluorfen	20.94	20.83	961274	894606	43.793	46.101

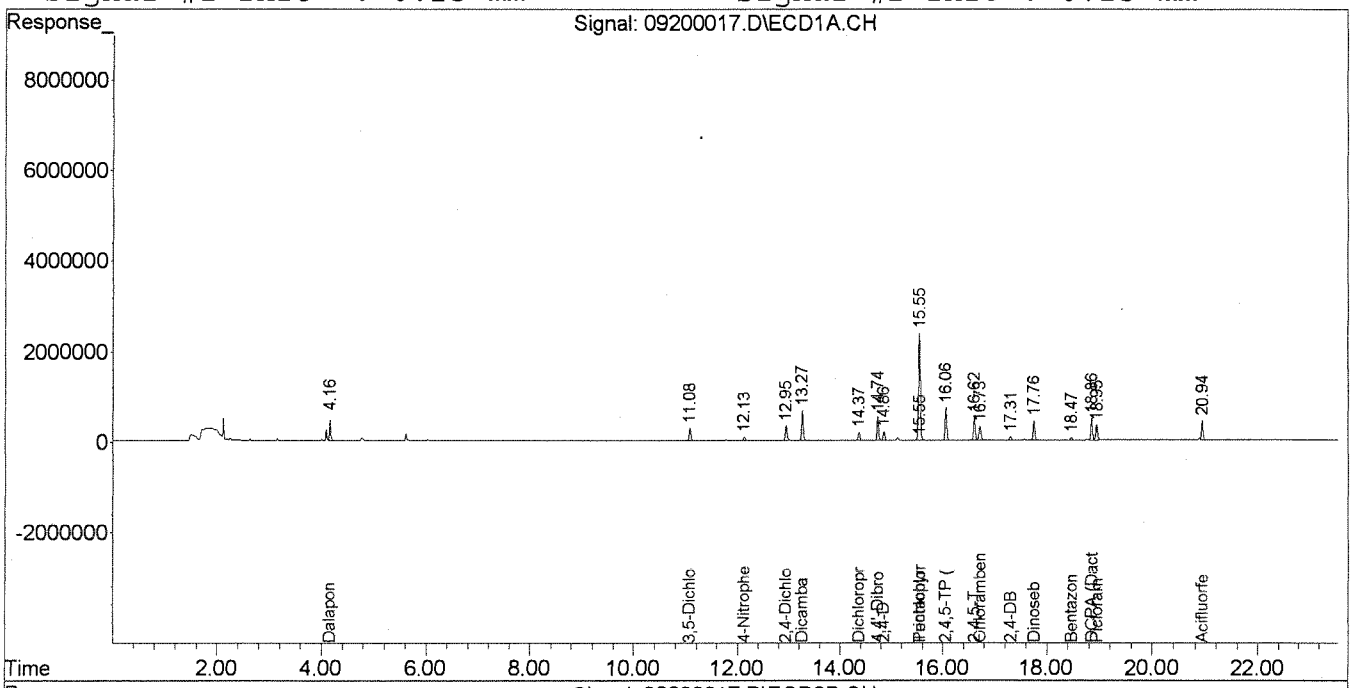
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

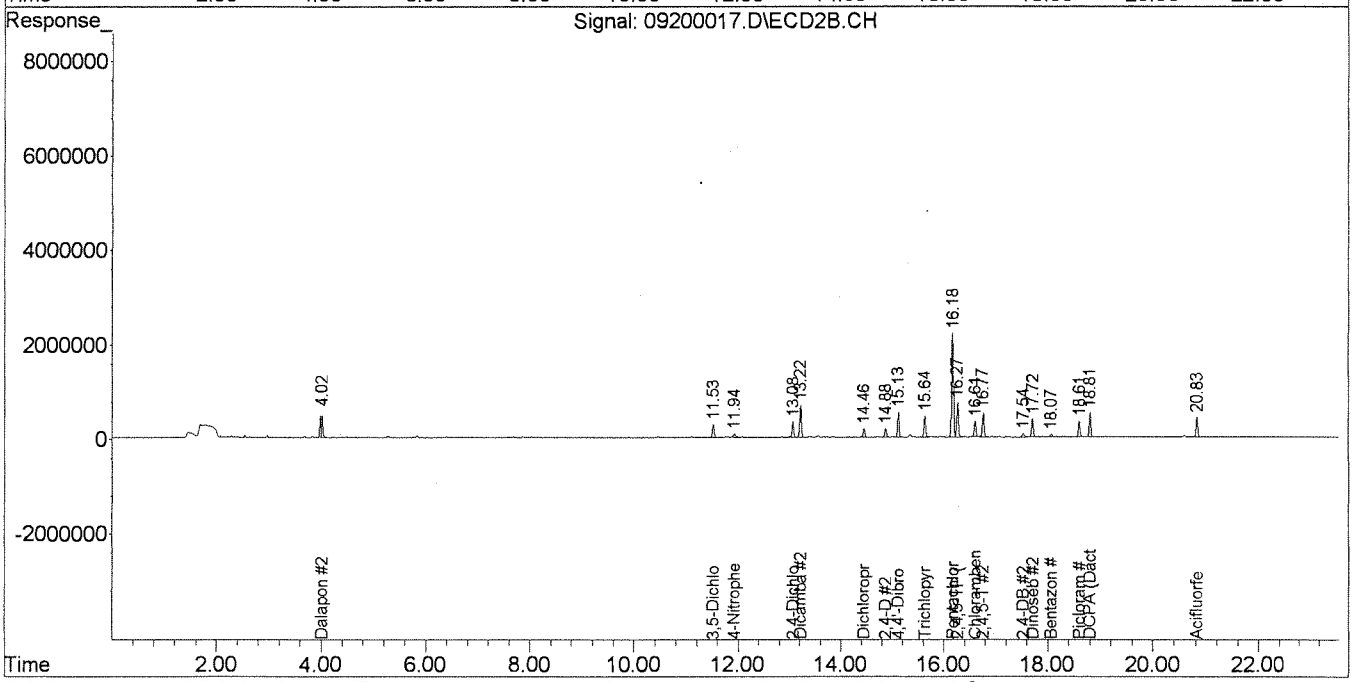
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:15 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

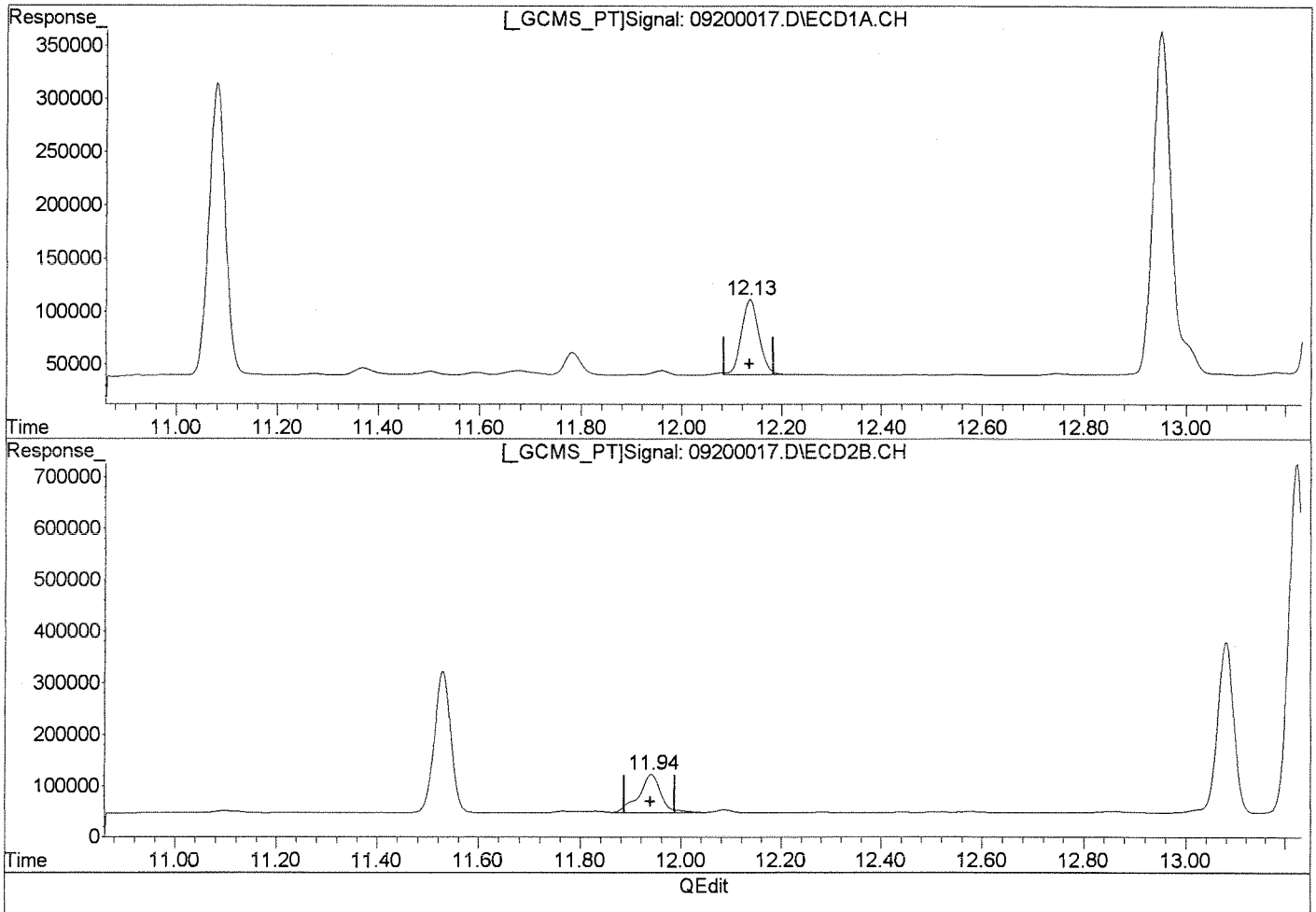




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.13min 48.652ppb

response 177068

(4) 4-Nitrophenol #2 (m)

11.94min 62.270ppb

response 225578

Manual Integration:

Before

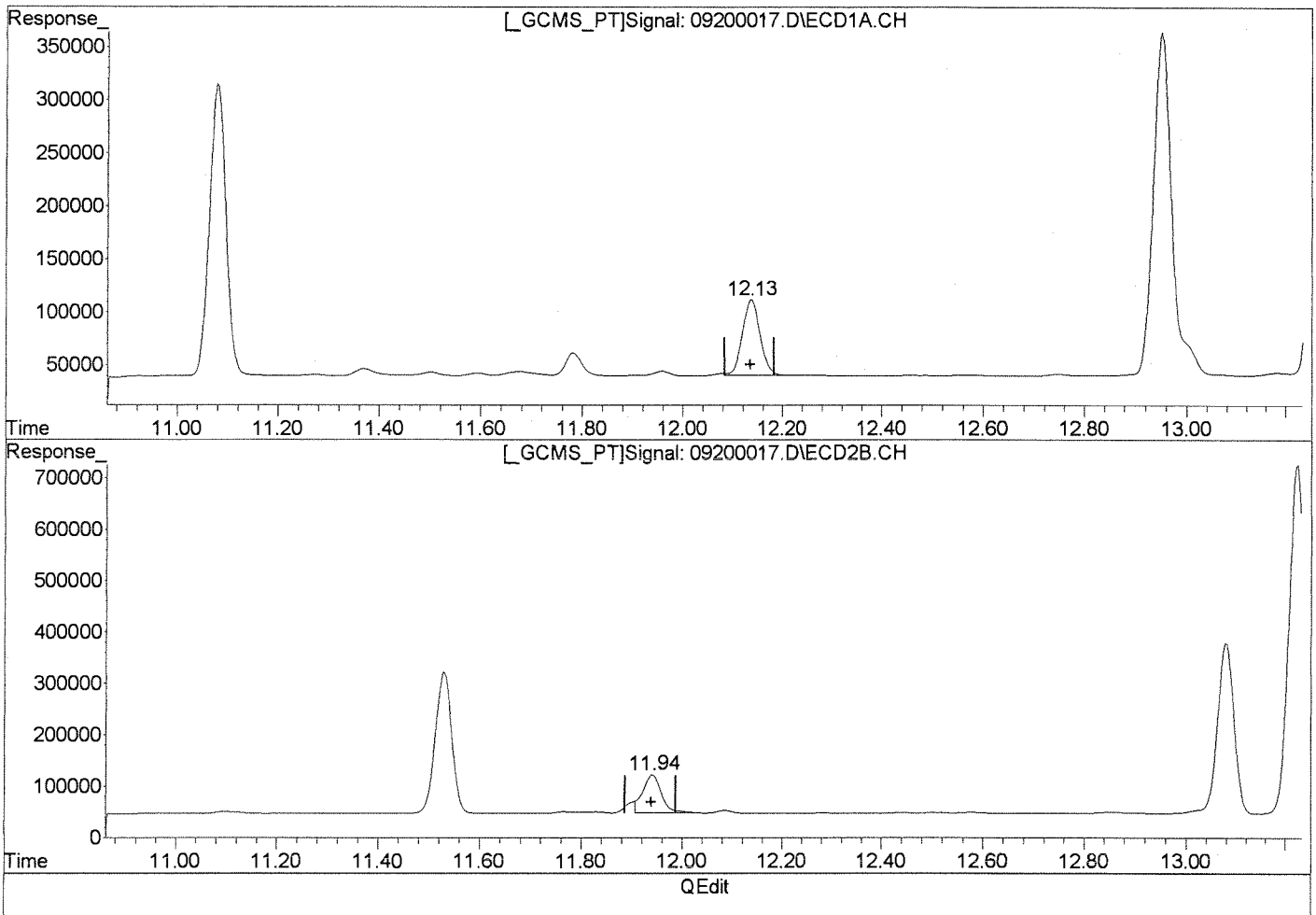
(+) = Expected Retention Time

09200017.D 092013_515.M Tue Oct 01 13:11:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(4) 4-Nitrophenol (m)

12.13min 48.652ppb

response 177068

Manual Integration:

After

Baseline/Shoulder

10/01/13

(4) 4-Nitrophenol #2 (m)

11.94min 51.816ppb m

response 187706

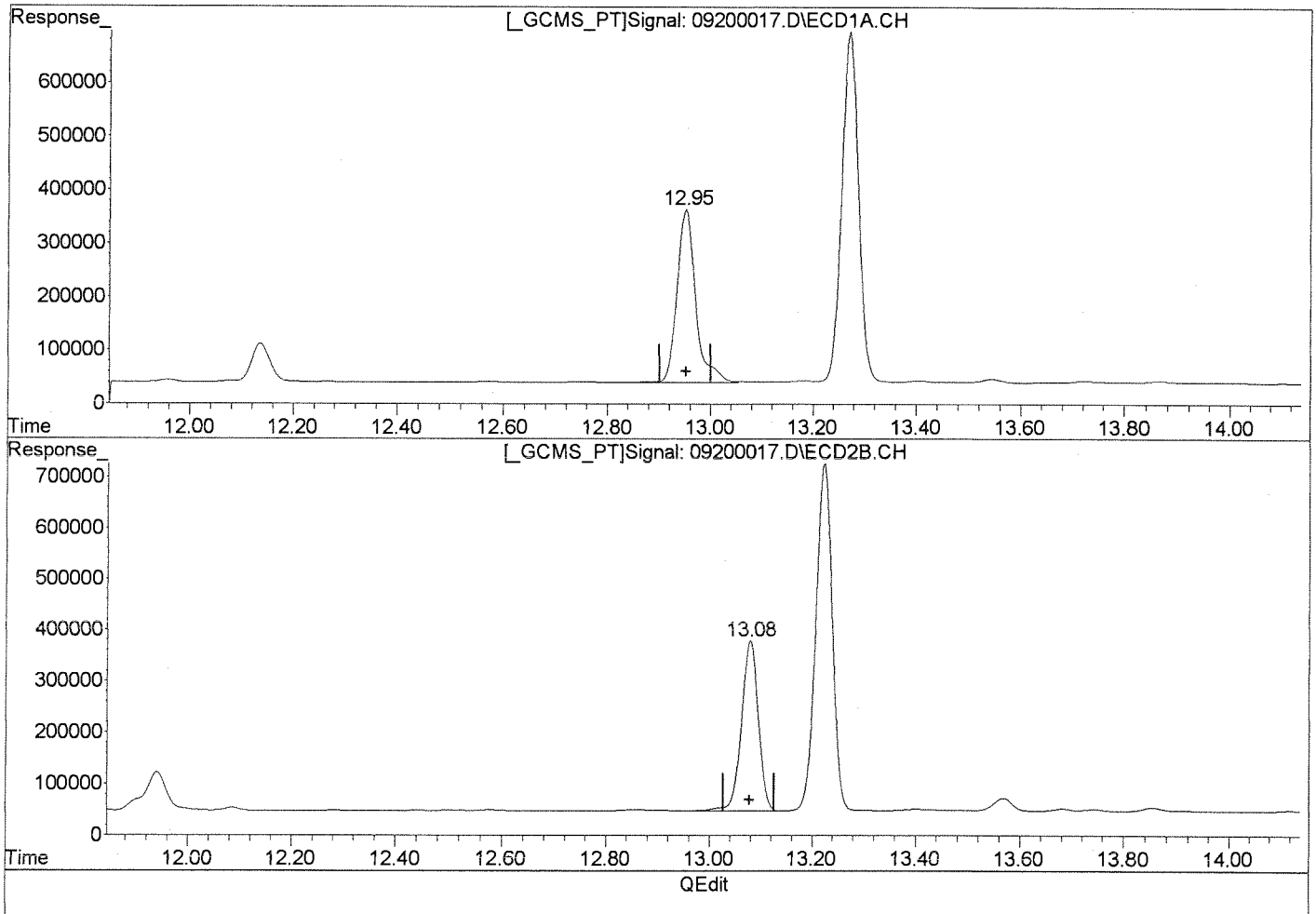
(+) = Expected Retention Time

09200017.D 092013_515.M Tue Oct 01 13:11:47 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 98.331ppb

response 813451

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.332ppb

response 766714

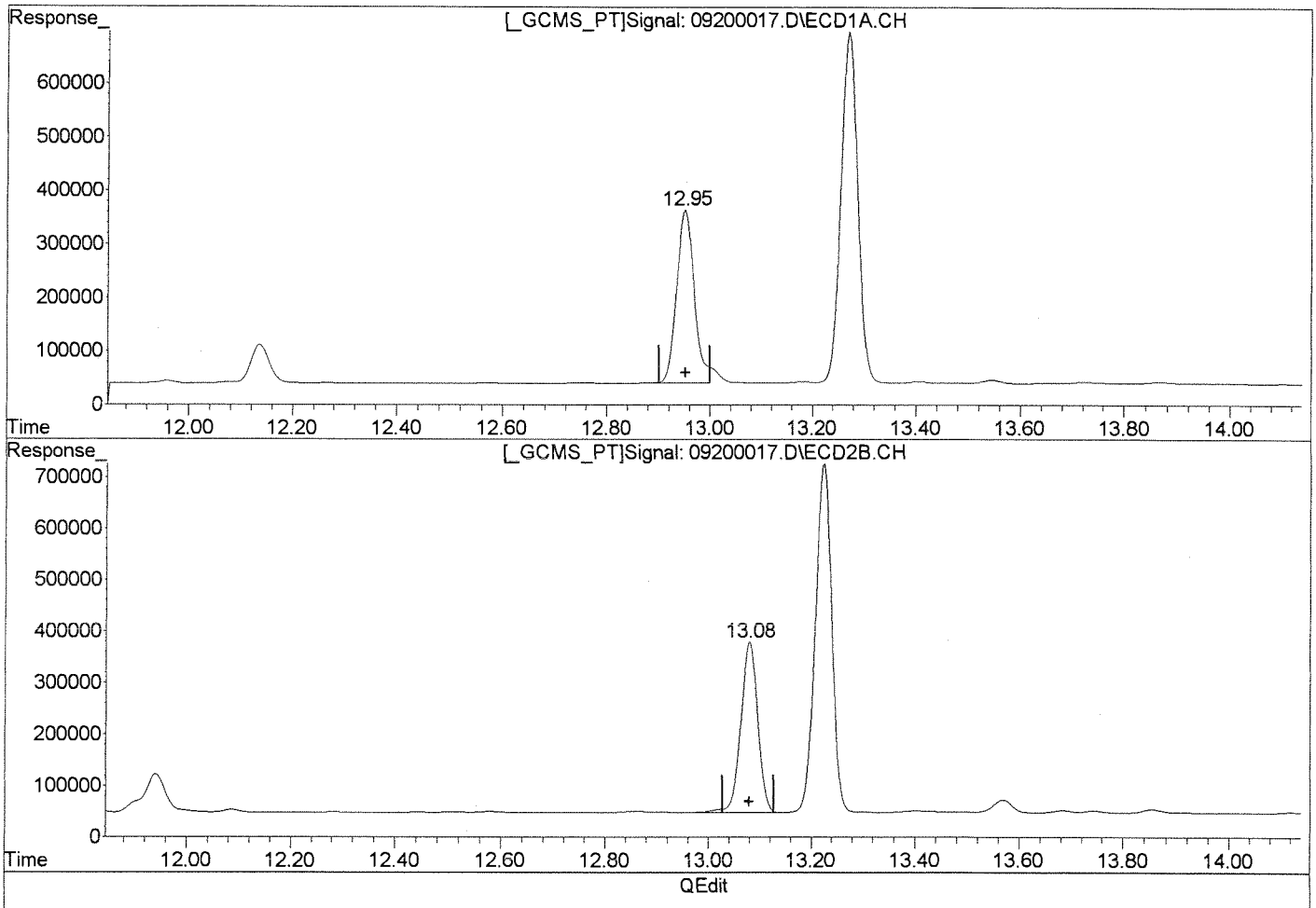
(+) = Expected Retention Time

09200017.D 092013_515.M Tue Oct 01 13:11:52 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200017.D\ECD1A.CH Vial: 12
Signal #2 : J:\GC24\DATA\092013.515\09200017.D\ECD2B.CH
Acq On : 21 Sep 2013 12:03 am Operator: JSCHWAB
Sample : KWG-0098-3 LCS Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 92.903ppb m

response 768545

Manual Integration:

After

Baseline/Shoulder

10/01/13

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 107.332ppb

response 766714

(+) = Expected Retention Time

09200017.D 092013_515.M Tue Oct 01 13:12:07 2013

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Validation Package

Standards Data

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: RTX-CLP2

Level ID	File ID
A	J:\GC24\DATA\092013.515\09200003.D
B	J:\GC24\DATA\092013.515\09200004.D
C	J:\GC24\DATA\092013.515\09200005.D
D	J:\GC24\DATA\092013.515\09200006.D
E	J:\GC24\DATA\092013.515\09200007.D
F	J:\GC24\DATA\092013.515\09200008.D
G	J:\GC24\DATA\092013.515\09200009.D
H	J:\GC24\DATA\092013.515\09200010.D
I	J:\GC24\DATA\092013.515\09200011.D
J	J:\GC24\DATA\092013.515\09200012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dalapon							C	2.0	0.381	D	5.0	0.304	E	10	0.261
	F	20	0.225	G	50	0.240	H	60	0.230	I	100	0.236			
2,4-Dichlorophenylacetic Acid							C	4.0	0.195	D	10	0.170	E	20	0.158
	F	40	0.142	G	100	0.130	H	120	0.128	I	200	0.125	J	400	0.120
2,4-D				B	1.0	0.255	C	2.0	0.263	D	5.0	0.214	E	10	0.195
	F	20	0.172	G	50	0.162	H	60	0.153	I	100	0.152			
Pentachlorophenol	A	0.40	3.63	B	1.0	2.76	C	2.0	2.71	D	5.0	2.40	E	10	2.29
	F	20	2.21	G	50	2.10	H	60	2.06	I	100	2.04	J	200	1.95
2,4,5-TP (Silvex)	A	0.40	0.982	B	1.0	0.804	C	2.0	0.850	D	5.0	0.724	E	10	0.688
	F	20	0.652	G	50	0.633	H	60	0.599	I	100	0.598	J	200	0.552
Dinoseb							C	2.0	0.974	D	5.0	0.545	E	10	0.497
	F	20	0.418	G	50	0.389	H	60	0.359	I	100	0.355	J	200	0.327
Picloram				B	1.0	0.362	C	2.0	0.416	D	5.0	0.340	E	10	0.313
	F	20	0.276	G	50	0.295	H	60	0.278	I	100	0.282			

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: RTX-CLP2

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dalapon	MS	AverageRF	% RSD	21.0		≤ 30	0.268		
2,4-Dichlorophenylacetic Acid	SURR	AverageRF	% RSD	18.0		≤ 30	0.146		
2,4-D	MS	Linear	R2	0.996		≥ 0.99	0.196		
Pentachlorophenol	MS	Linear	R2	0.999		≥ 0.99	2.41		
2,4,5-TP (Silvex)	MS	AverageRF	% RSD	19.0		≤ 30	0.708		
Dinoseb	MS	Linear	R2	0.997		≥ 0.99	0.483		
Picloram	MS	Linear	R2	0.998		≥ 0.99	0.320		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013
Date Analyzed: 09/20/2013

Second Source Calibration Verification
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration ID: CAL12806
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200013.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift		Criteria	Curve Fit
Dalapon	25	27	0.268	0.293	9	NA		± 30 %	AverageRF
2,4-D	25	30	0.196	0.193	NA	20		± 30 %	Linear
Pentachlorophenol	2.5	7.9	2.41	6.73	NA	216	*	± 30 %	Linear
2,4,5-TP (Silvex)	6.3	6.9	0.708	0.785	11	NA		± 30 %	AverageRF
Dinoseb	25	27	0.483	0.419	NA	10		± 30 %	Linear
Picloram	25	31	0.320	0.350	NA	22		± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: ZB-XLB-HT

Level ID	File ID
A	J:\GC24\DATA\092013.515\09200003.D\09200003c.d
B	J:\GC24\DATA\092013.515\09200004.D\09200004c.d
C	J:\GC24\DATA\092013.515\09200005.D\09200005c.d
D	J:\GC24\DATA\092013.515\09200006.D\09200006c.d
E	J:\GC24\DATA\092013.515\09200007.D\09200007c.d
F	J:\GC24\DATA\092013.515\09200008.D\09200008c.d
G	J:\GC24\DATA\092013.515\09200009.D\09200009c.d
H	J:\GC24\DATA\092013.515\09200010.D\09200010c.d
I	J:\GC24\DATA\092013.515\09200011.D\09200011c.d
J	J:\GC24\DATA\092013.515\09200012.D\09200012c.d

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dalapon							C	2.0	0.384	D	5.0	0.334	E	10	0.340
	F	20	0.243	G	50	0.236	H	60	0.233	I	100	0.239			
2,4-Dichlorophenylacetic Acid							C	4.0	0.228	D	10	0.175	E	20	0.154
	F	40	0.140	G	100	0.132	H	120	0.130	I	200	0.128	J	400	0.126
2,4-D				B	1.0	0.297	C	2.0	0.288	D	5.0	0.219	E	10	0.196
	F	20	0.170	G	50	0.161	H	60	0.154	I	100	0.155			
Pentachlorophenol	A	0.40	2.47	B	1.0	2.04	C	2.0	2.04	D	5.0	1.90	E	10	1.89
	F	20	1.91	G	50	1.93	H	60	1.90	I	100	1.95	J	200	1.95
2,4,5-TP (Silvex)	A	0.40	1.35	B	1.0	0.917	C	2.0	0.864	D	5.0	0.711	E	10	0.673
	F	20	0.641	G	50	0.635	H	60	0.611	I	100	0.620	J	200	0.596
Dinoseb							C	2.0	0.461	D	5.0	0.412	E	10	0.375
	F	20	0.351	G	50	0.354	H	60	0.330	I	100	0.343	J	200	0.331
Picloram				B	1.0	0.384	C	2.0	0.394	D	5.0	0.311	E	10	0.288
	F	20	0.253	G	50	0.284	H	60	0.272	I	100	0.286	J	200	0.296

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013

Initial Calibration Summary
Chlorinated Acids by EPA Method 515.4

Calibration ID: CAL12806
Instrument ID: GC24

Column: ZB-XLB-HT

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dalapon	MS	Linear	R2	0.994		≥ 0.99	0.287		
2,4-Dichlorophenylacetic Acid	SURR	Linear	R2	1.000		≥ 0.99	0.152		
2,4-D	MS	Linear	R2	0.997		≥ 0.99	0.205		
Pentachlorophenol	MS	AverageRF	% RSD	8.8		≤ 30	2.00		
2,4,5-TP (Silvex)	MS	Linear	R2	0.999		≥ 0.99	0.762		
Dinoseb	MS	AverageRF	% RSD	12.3		≤ 30	0.370		
Picloram	MS	AverageRF	% RSD	15.9		≤ 30	0.307		

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 09/20/2013
Date Analyzed: 09/20/2013

Second Source Calibration Verification
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration ID: CAL12806
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200013.D\09200013c.d

Column ID: ZB-XLB-HT

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	25	31	0.287	0.310	NA	26	± 30 %	Linear
2,4-D	25	30	0.205	0.193	NA	19	± 30 %	Linear
Pentachlorophenol	2.5	2.7	2.00	2.17	8	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	6.3	7.2	0.762	0.757	NA	15	± 30 %	Linear
Dinoseb	25	27	0.370	0.397	8	NA	± 30 %	AverageRF
Picloram	25	28	0.307	0.343	12	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Injection Log

Directory: J:\GC24\DATA\092013.515

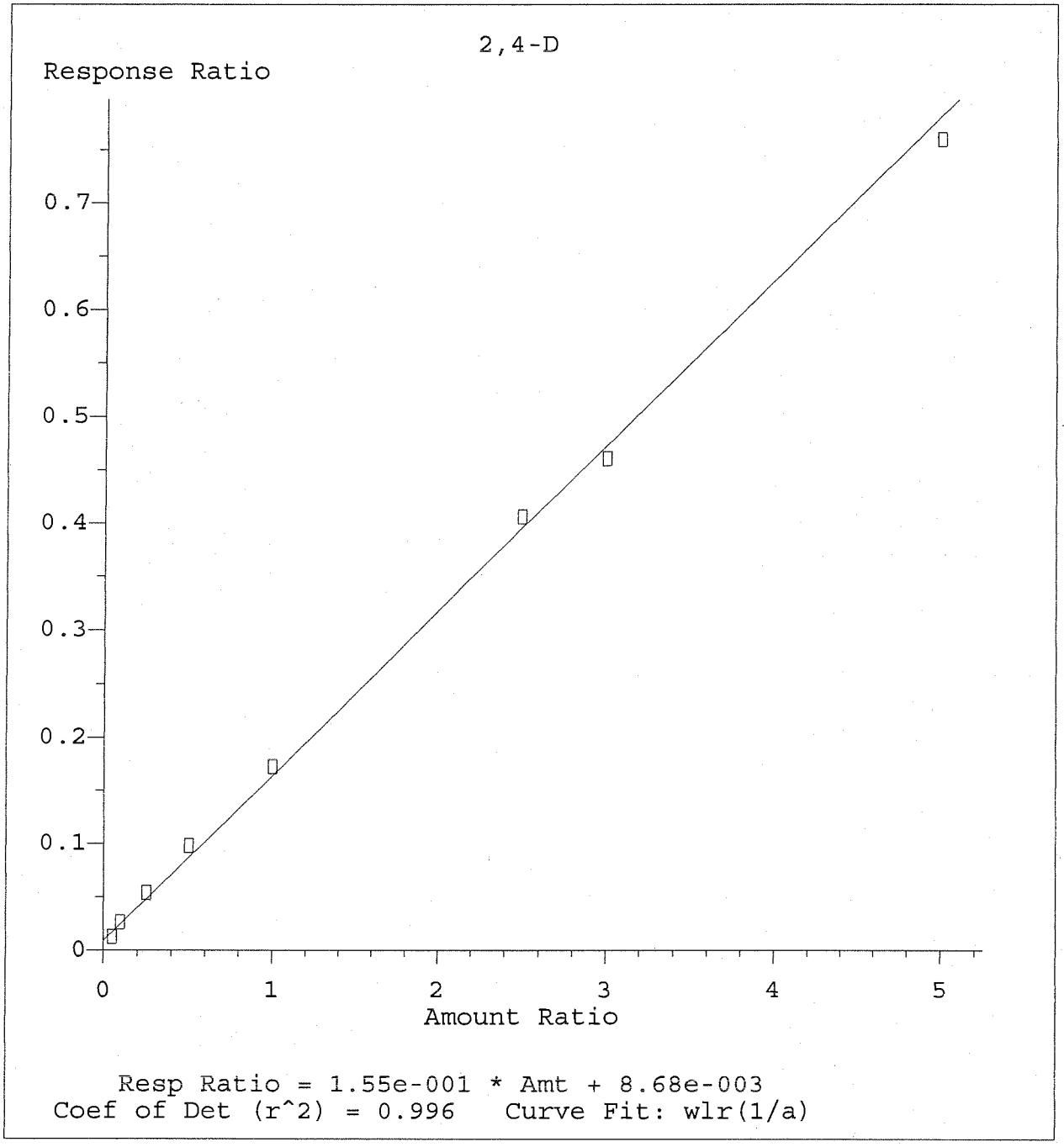
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	95	09200001.D	1.	PRIMER BLANK		09/20/22013 04:0
2	95	09200002.D	1.	PRIMER BLANK		09/20/22013 04:3
3	1	09200003.D	1.	091713-LEV1		09/20/22013 05:0
4	2	09200004.D	1.	091713-LEV2		09/20/22013 05:3
5	3	09200005.D	1.	091713-LEV3		09/20/22013 06:0
6	4	09200006.D	1.	091713-LEV4		09/20/22013 06:3
7	5	09200007.D	1.	091713-LEV5		09/20/22013 07:0
8	6	09200008.D	1.	091713-LEV6		09/20/22013 07:3
9	7	09200009.D	1.	091713-LEV7		09/20/22013 08:0
10	8	09200010.D	1.	091713-LEV8		09/20/22013 08:3
11	9	09200011.D	1.	091713-LEV9		09/20/22013 09:0
12	10	09200012.D	1.	091713-LEV10		09/20/22013 09:3
13	11	09200013.D	1.	091173-ICV		09/20/22013 10:0
14	94	09200014.D	1.	PRIMER		09/20/22013 10:3
15	5	09200015.D	1.	091713-LEV5 CCV		09/20/22013 11:0
16	94	09200016.D	1.	IB		09/20/22013 11:3
17	12	09200017.D	1.	KWG-0098-3 LCS		09/21/22013 12:0
18	13	09200018.D	1.	KWG-0098-4 MB		09/21/22013 12:3
19	14	09200019.D	1.	K1309458-001		09/21/22013 01:0
20	15	09200020.D	1.	K1309638-001		09/21/22013 01:3
21	16	09200021.D	1.	K1309638-001 MS		09/21/22013 02:0
22	17	09200022.D	1.	K1309638-001 DMS		09/21/22013 02:3
23	18	09200023.D	1.	K1309638-002		09/21/22013 03:0
24	19	09200024.D	1.	K1309638-004		09/21/22013 03:3
25	20	09200025.D	1.	K1309638-005		09/21/22013 04:0
26	21	09200026.D	1.	K1309638-008		09/21/22013 04:3
27	22	09200027.D	1.	K1309638-010		09/21/22013 05:0
28	23	09200028.D	1.	K1309638-011		09/21/22013 05:3
29	6	09200029.D	1.	091713-LEV6 CCV		09/21/22013 06:0
30	93	09200030.D	1.	IB		09/21/22013 06:3
31	255	09200031.D	1.	REST		09/21/22013 07:0

CAL 12806

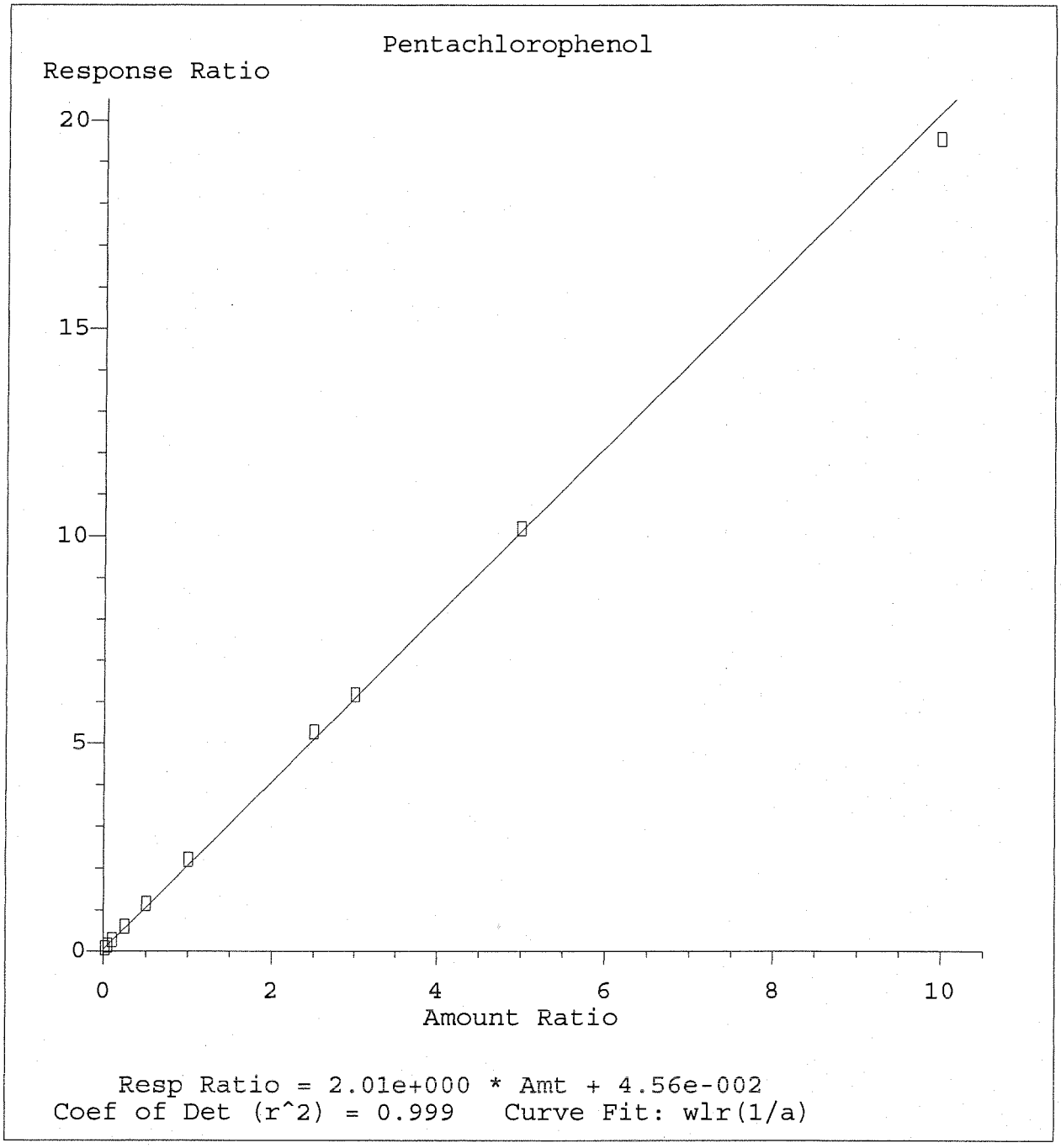
10/1/13

Not valid for Diethal Diacid (DCPA).

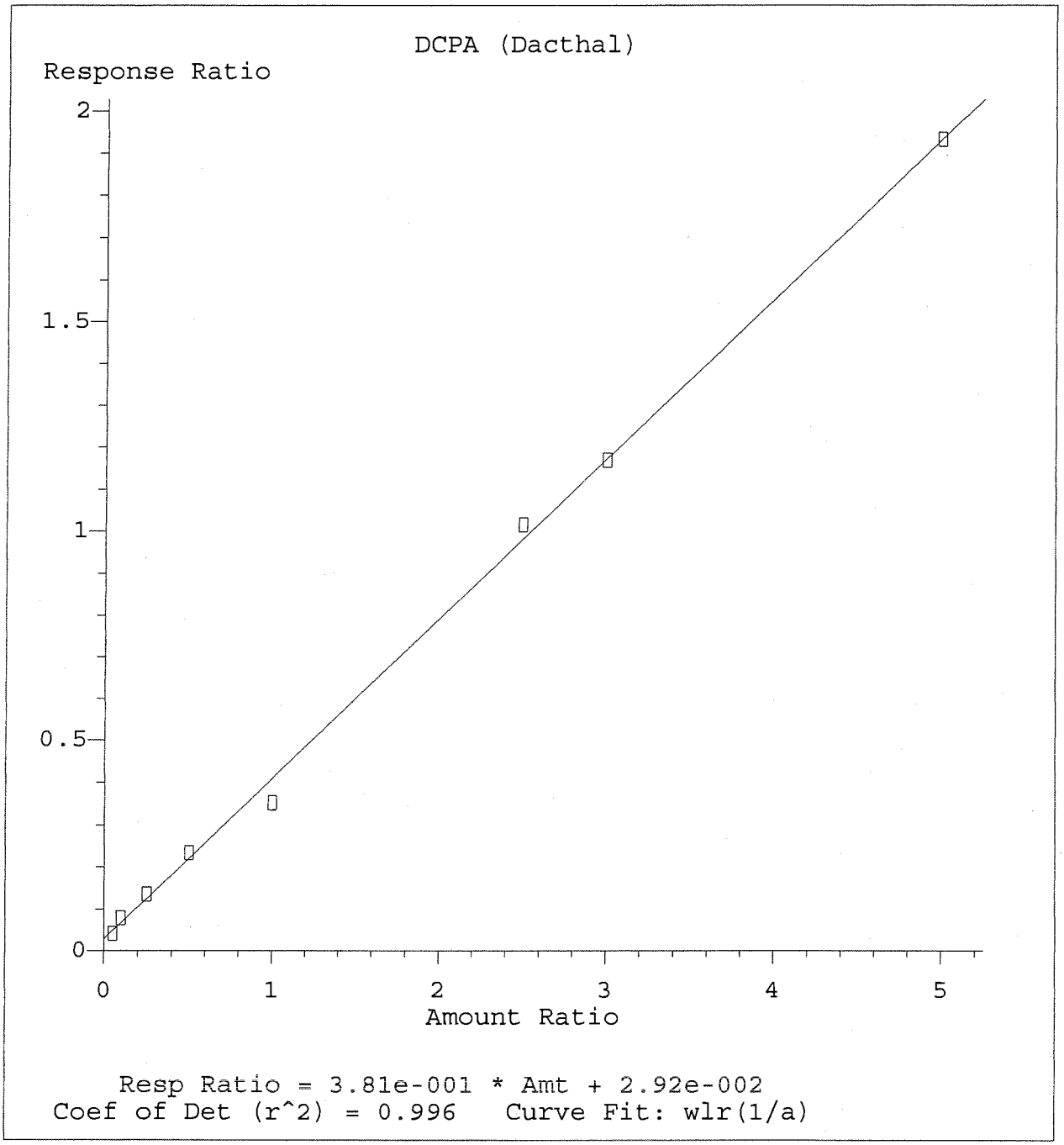
10/1/13



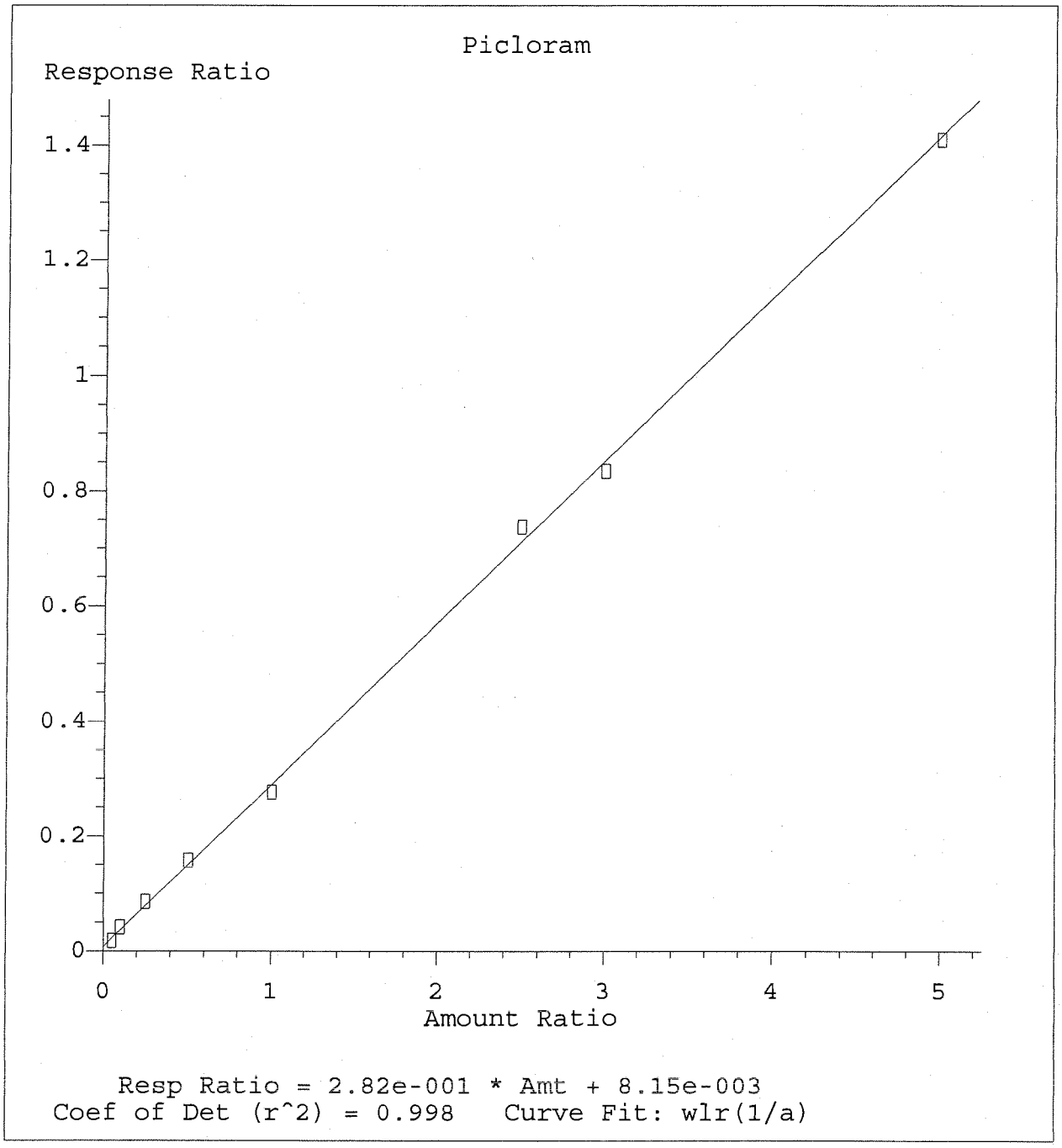
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 17:41:04 2013



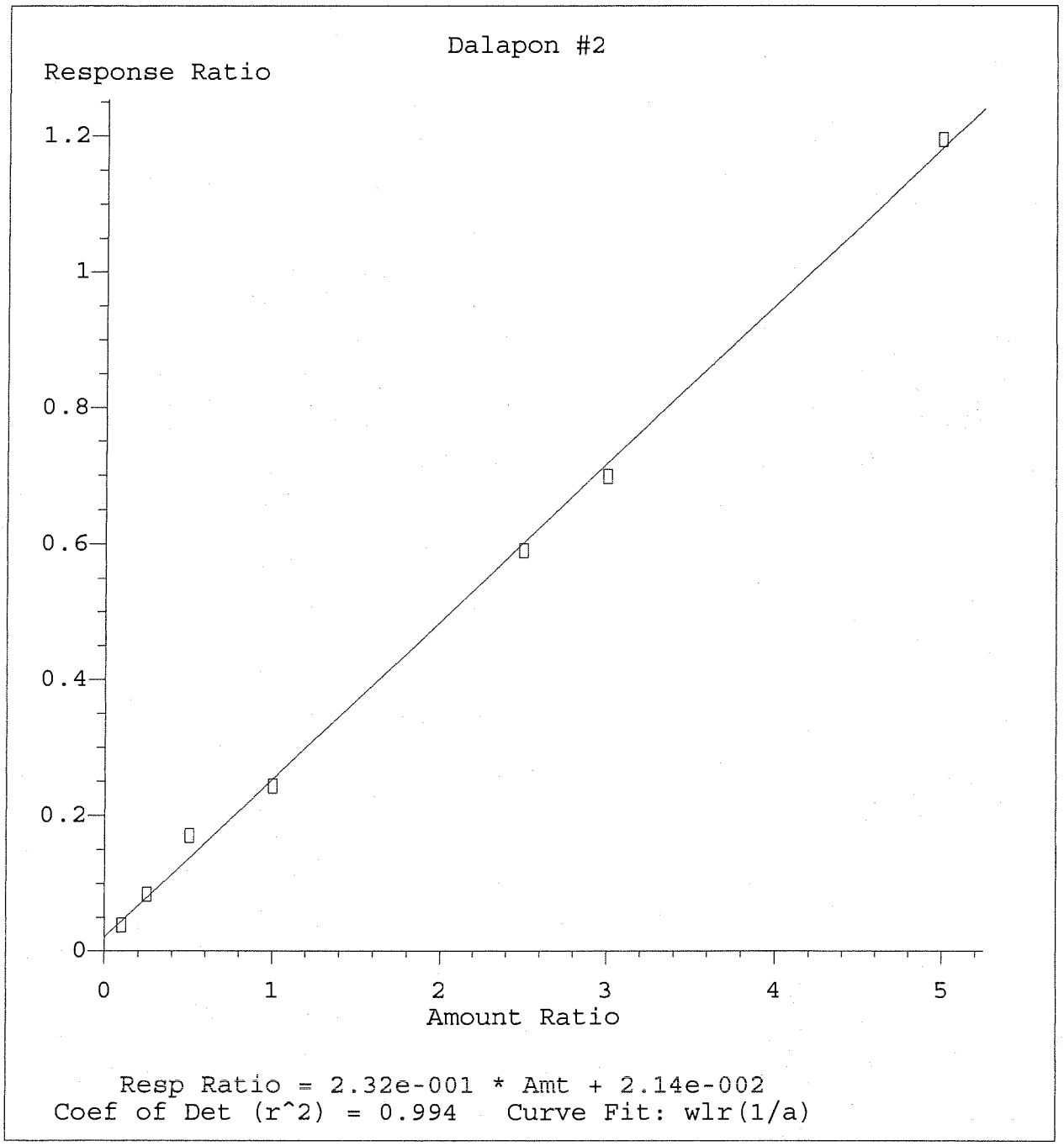
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:11:51 2013



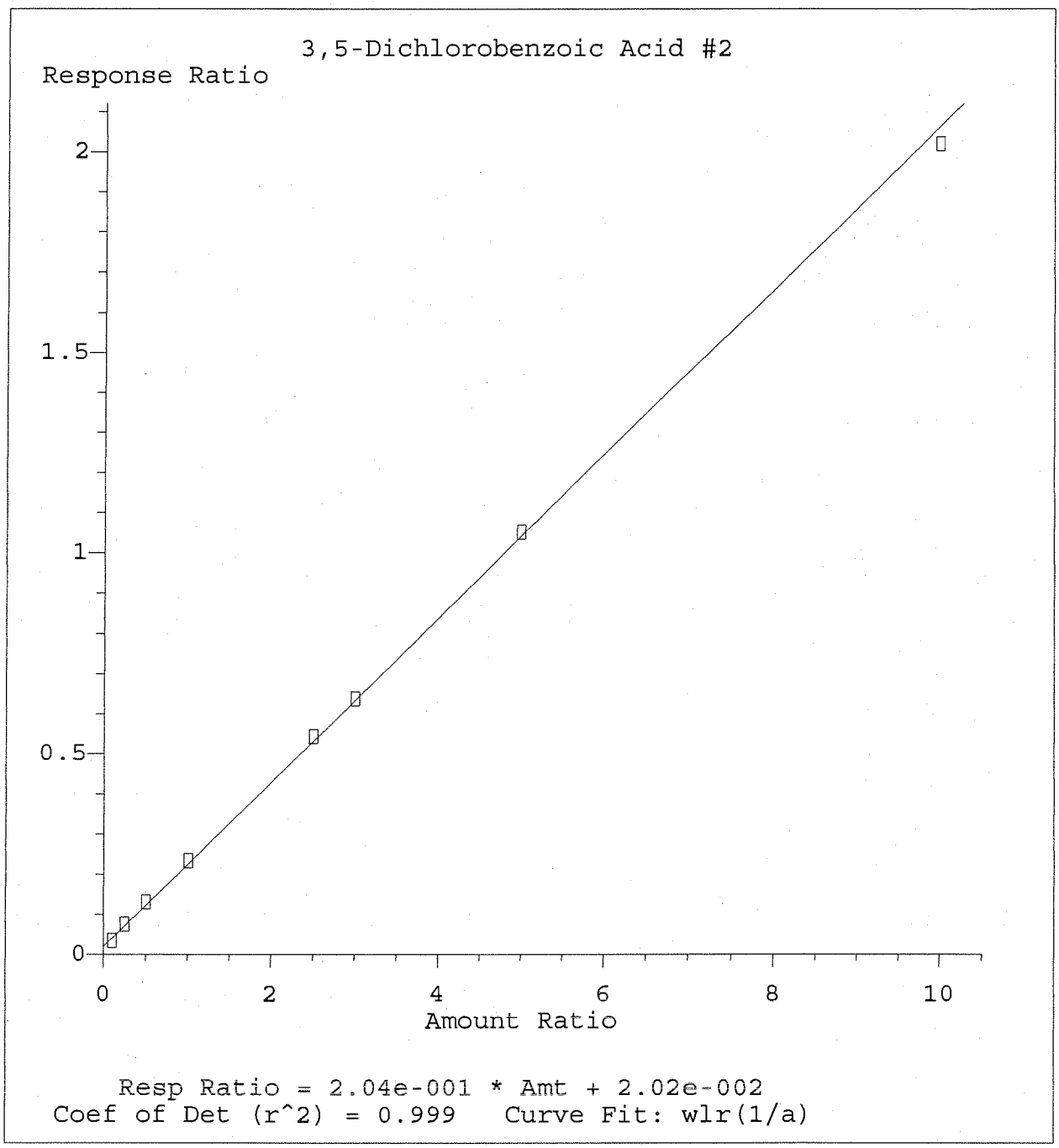
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:21:40 2013



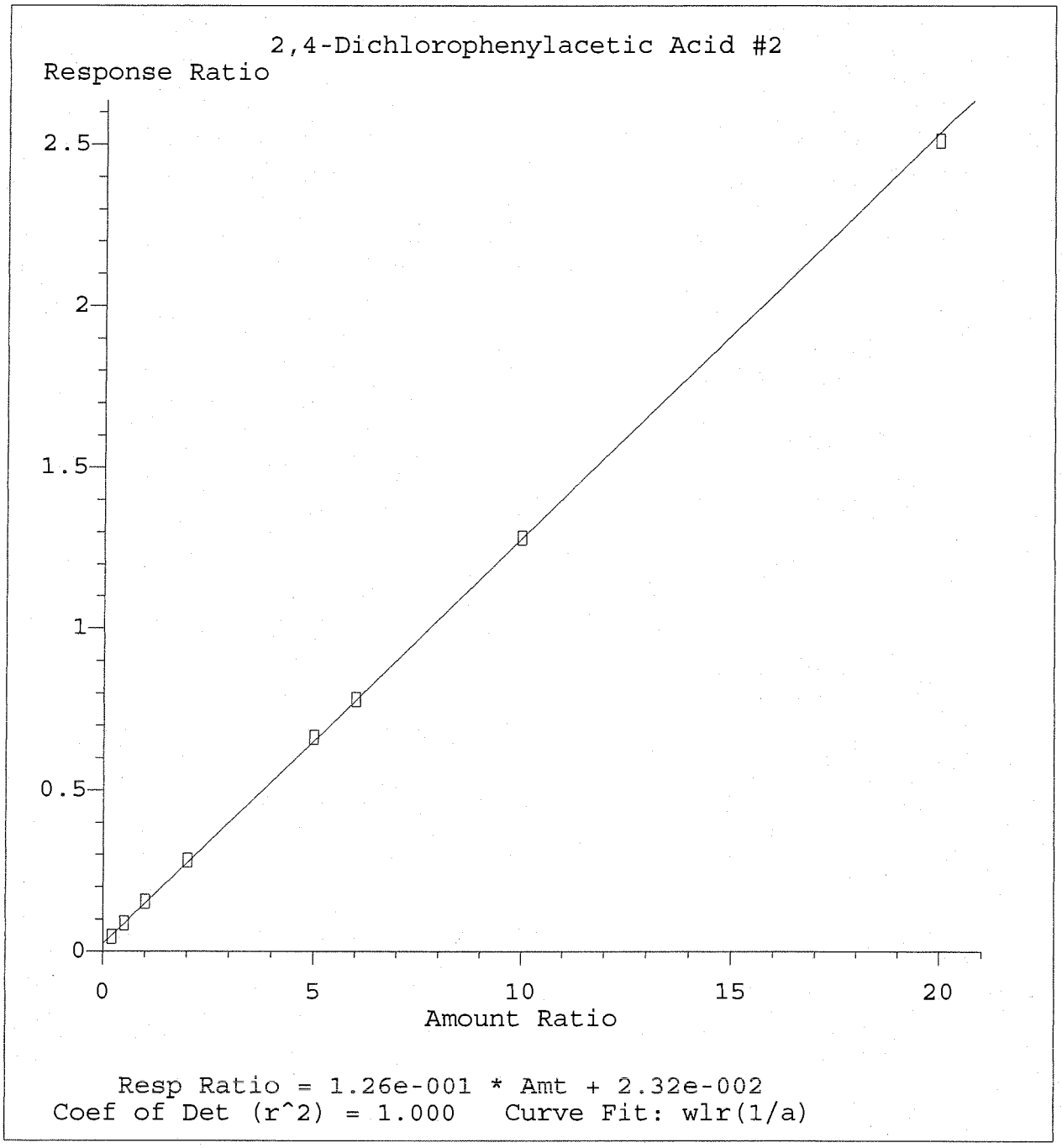
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:23:33 2013



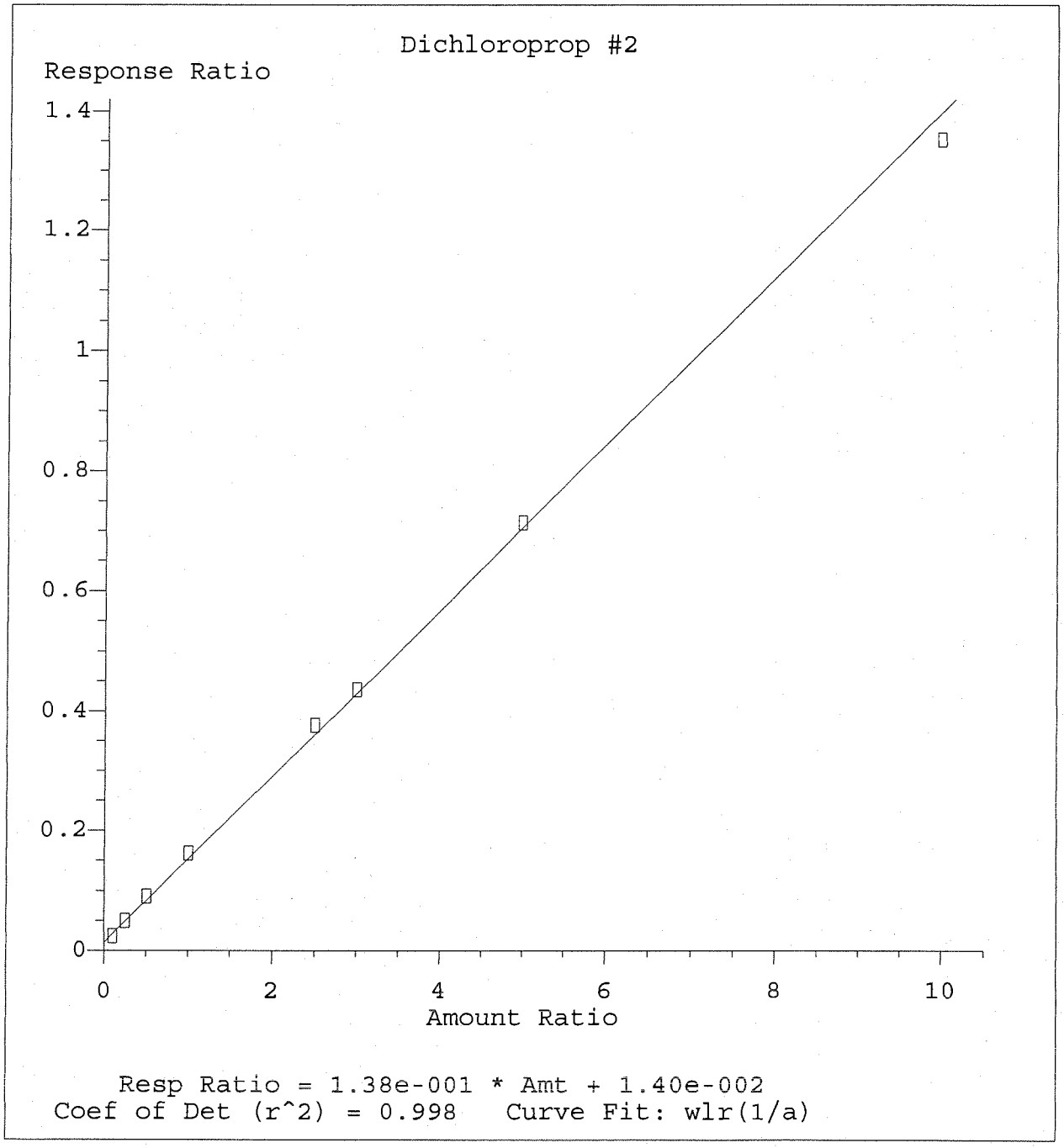
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



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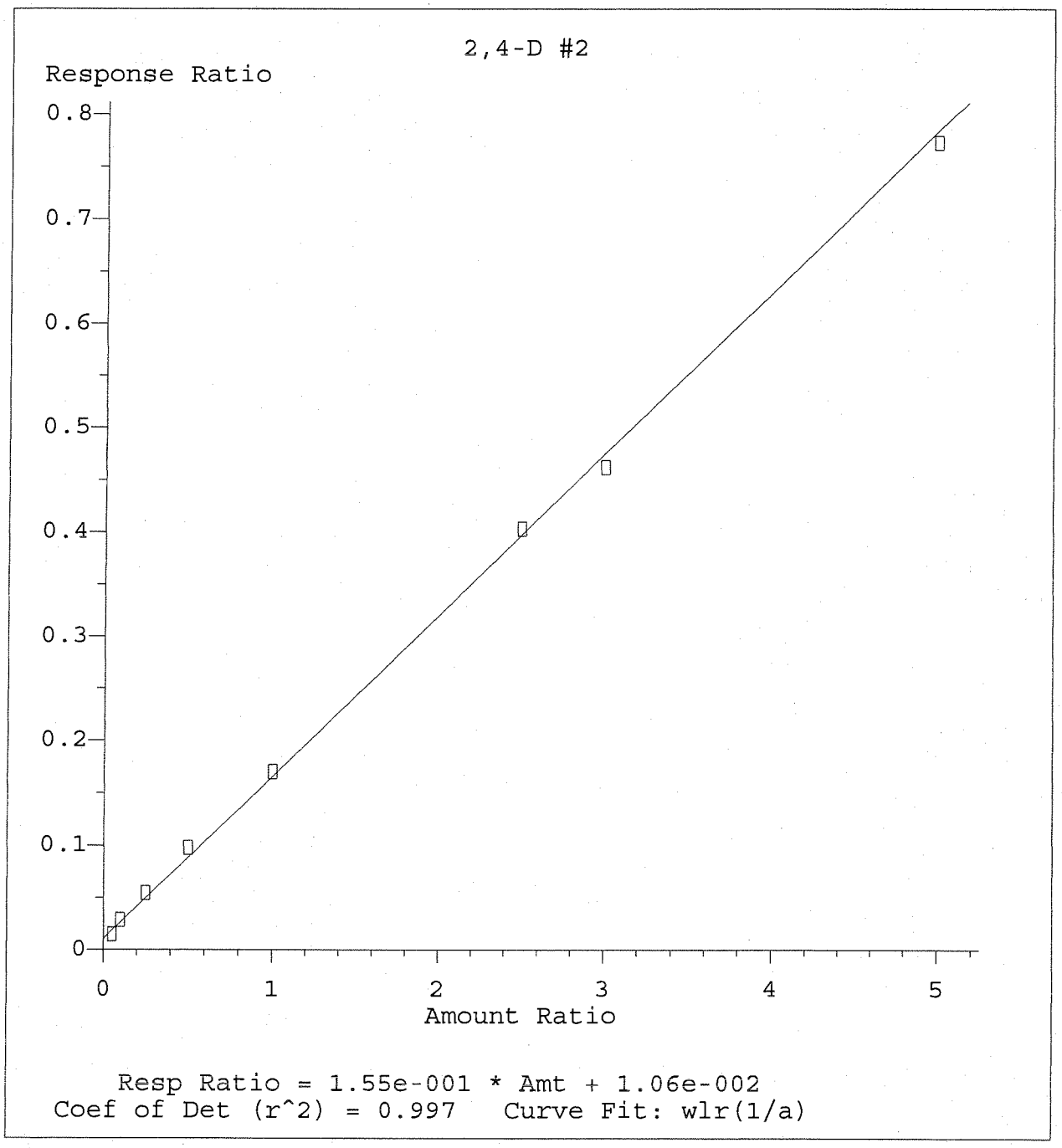
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



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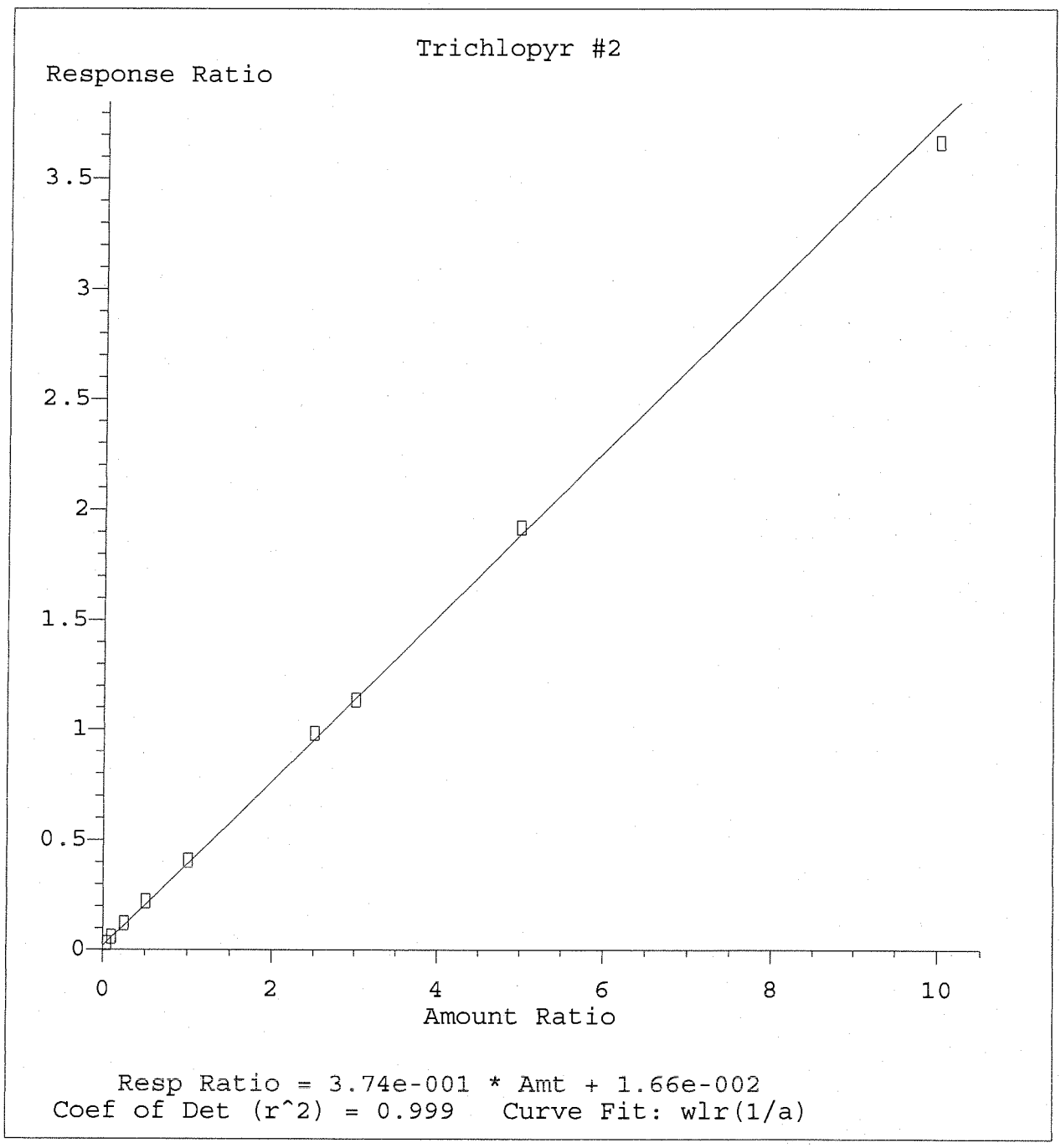
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



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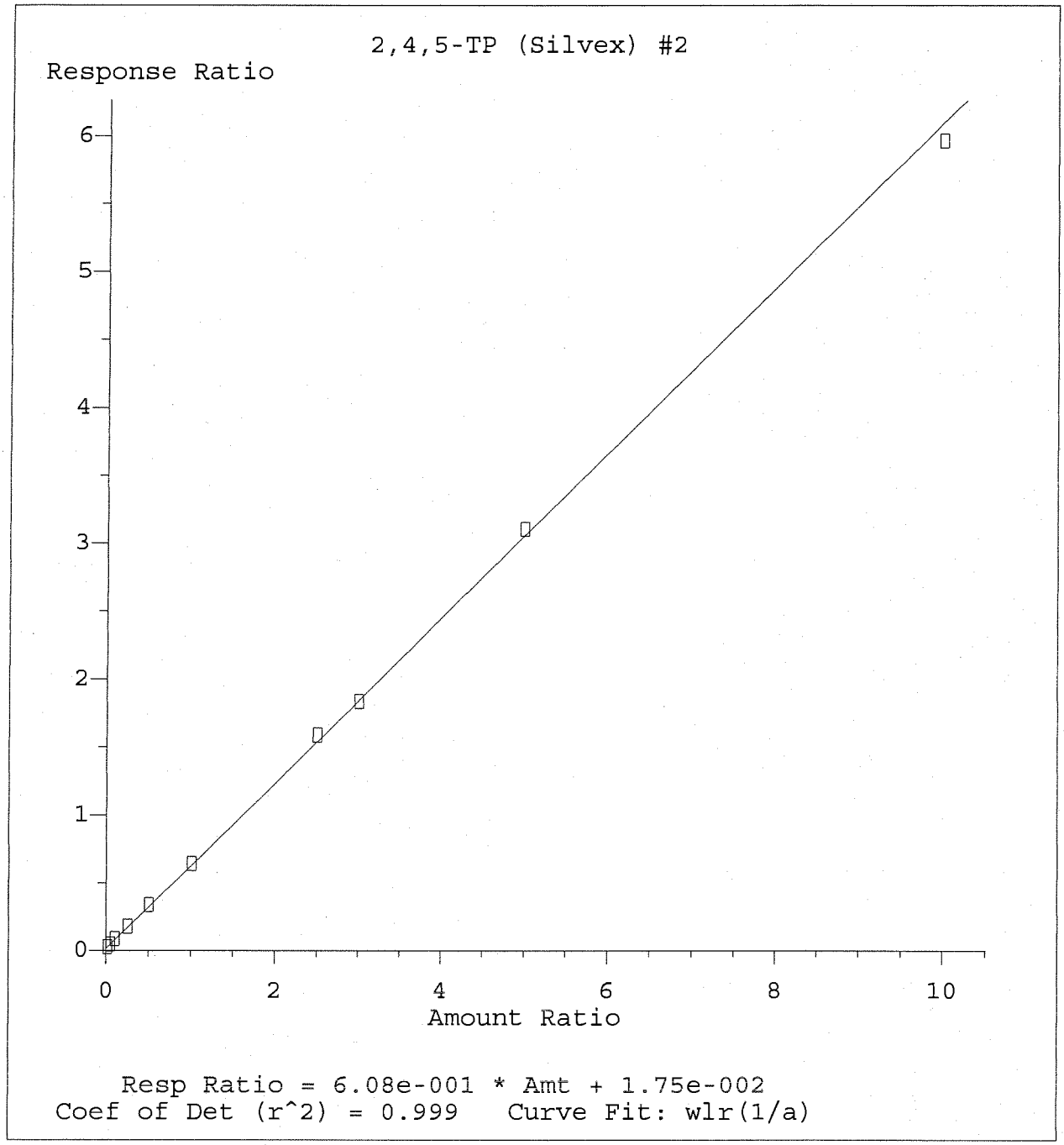
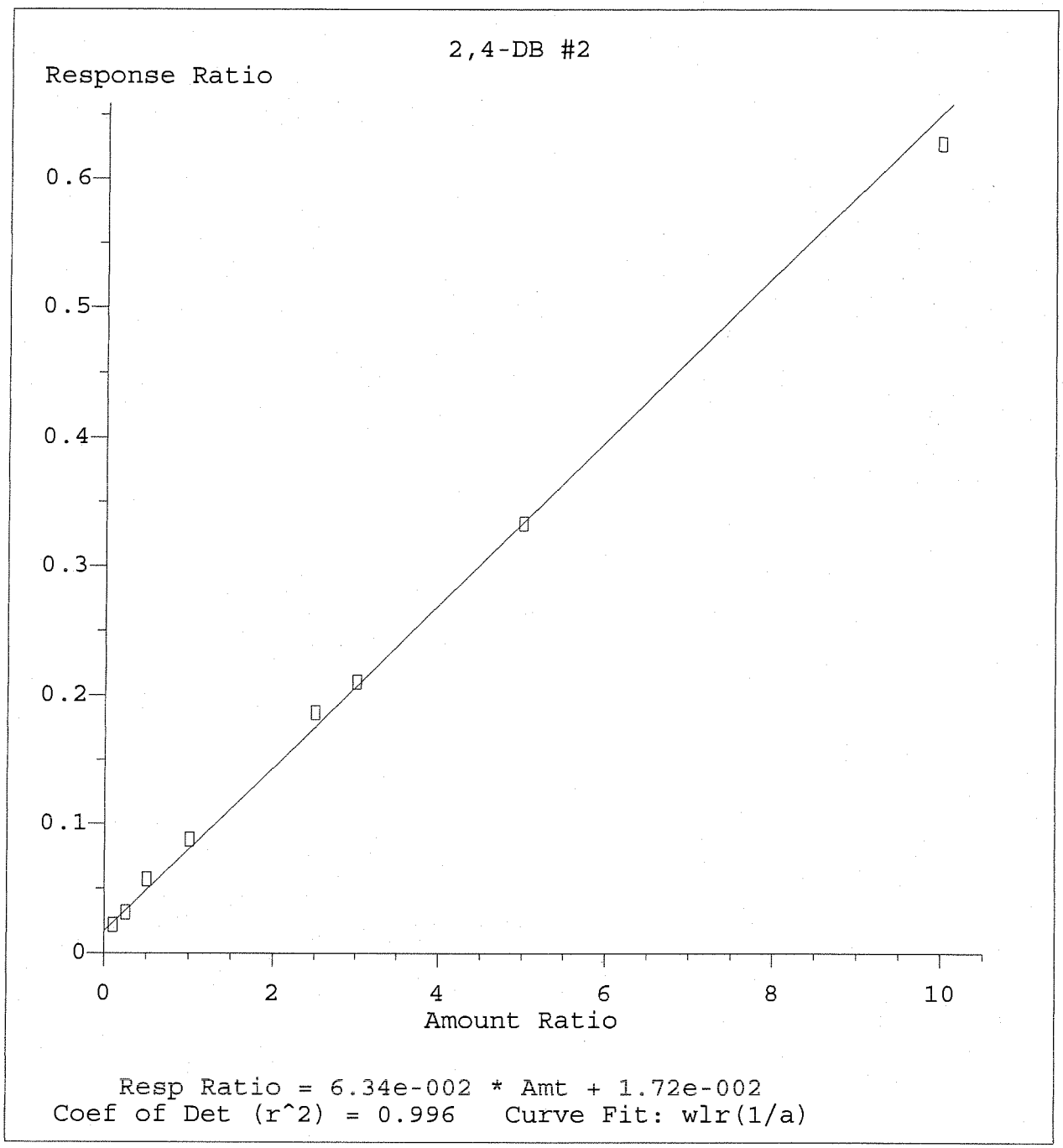
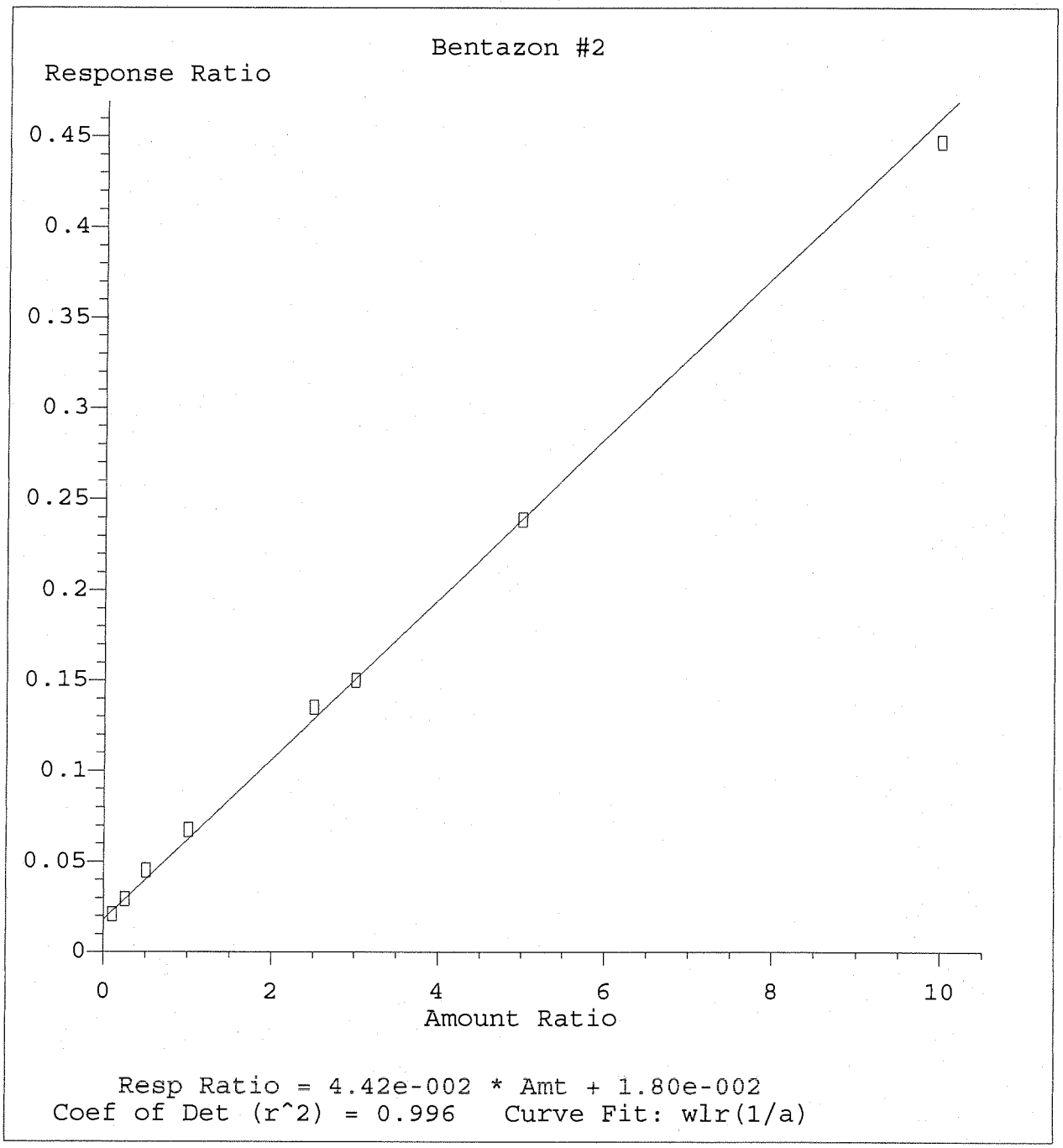
Calibration Table Last Updated: Mon Sep 30 18:24:15 2013



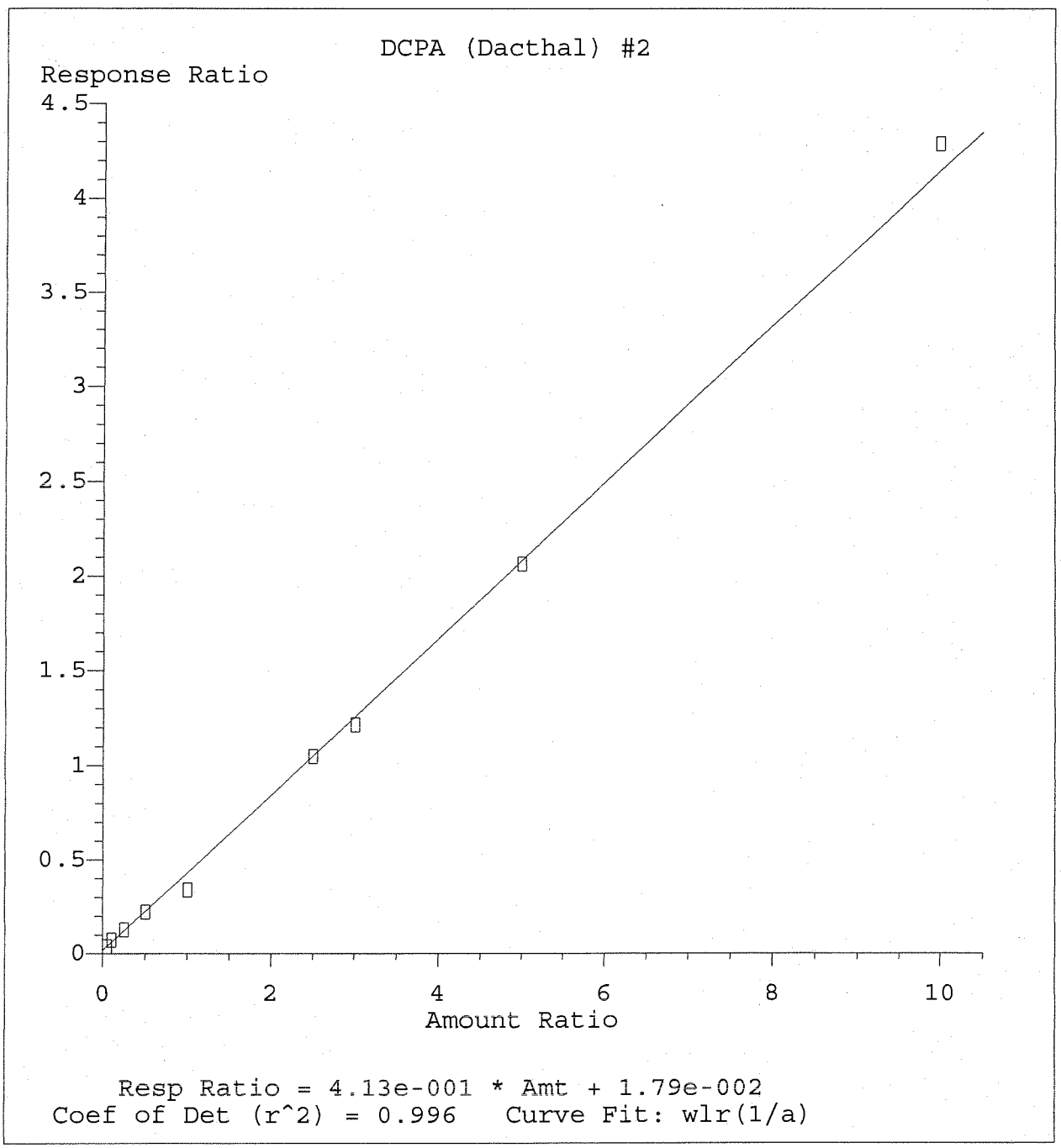
Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:25:20 2013



Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:25:20 2013



Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:25:20 2013



Method Name: J:\GC24\METHODS\092013_515.M
Calibration Table Last Updated: Mon Sep 30 18:25:20 2013

Quantitation Report (Not Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200003.D\ECD1A.CH Vial: 1
Signal #2 : J:\GC24\DATA\092013.515\09200003.D\ECD2B.CH
Acq On : 09-20-2013 05:01:26 PM Operator: JSCHWAB
Sample : 091713-LEV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:08 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 23 17:46:54 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Internal Standards							
1)	I	4,4'-Dibromoocta	14.74	15.13	1184449	1139555	20.000	20.000	
		System Monitoring Compounds							
		Target Compounds							
10)	m	Pentachloropheno	15.55	16.18	85932	56358	0.601	0.495	
11)	m	2,4,5-TP (Silvex	16.07	16.28	23260	30731	0.541	0.708	#

SS 10/1/13

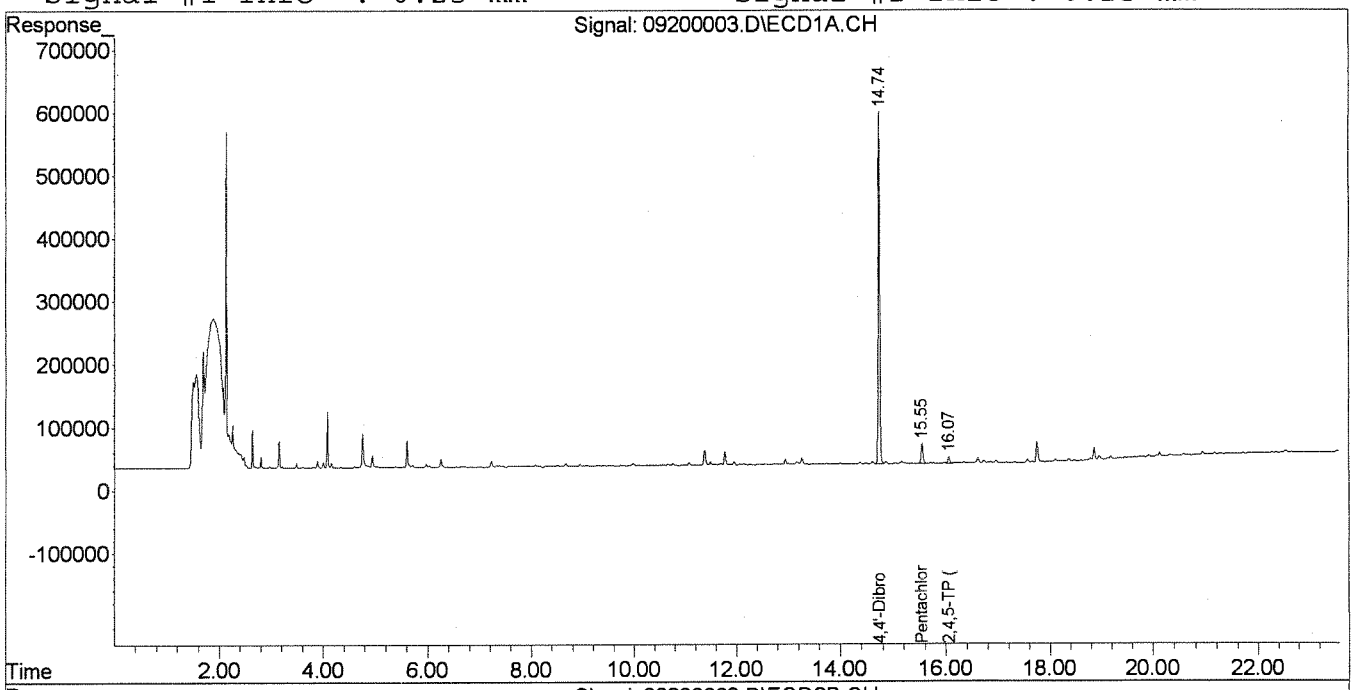
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

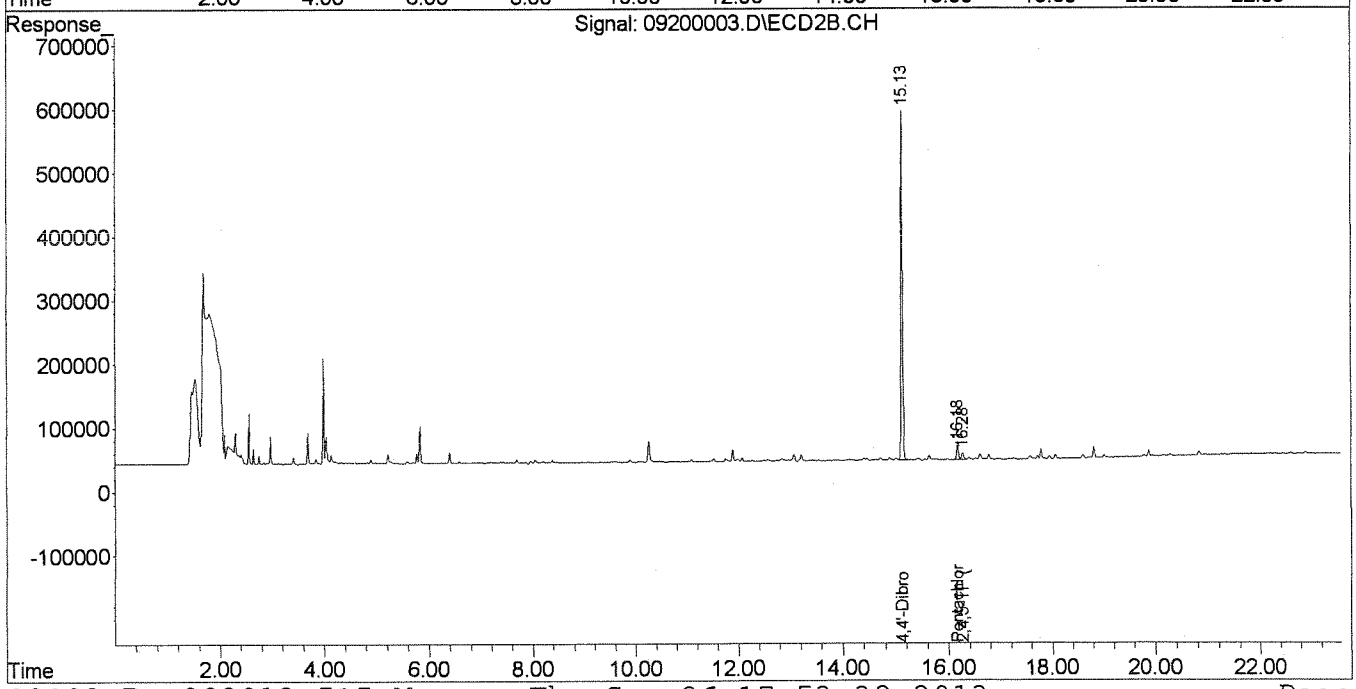
Quantitation Report (Not Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200003.D\ECD1A.CH Vial: 1
Signal #2 : J:\GC24\DATA\092013.515\09200003.D\ECD2B.CH
Acq On : 09-20-2013 05:01:26 PM Operator: JSCHWAB
Sample : 091713-LEV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:35 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 23 17:46:54 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:09 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1202551	1146393	20.000	20.000
		System Monitoring Compounds						
		Target Compounds						
8)	m	2,4-D	14.87	14.89	15322	16997	1.353	1.529
9)	m	Trichlopyr	15.56	15.64	165683	32639	1.209	1.281
10)	m	Pentachloropheno	15.56	16.18	165683	117196	1.142	1.023
11)	m	2,4,5-TP (Silvex	16.07	16.28	48363	52587	1.109	1.204
12)	m	2,4,5-T	16.62	16.77	37237	36362	1.191	1.221m
17)	m	DCPA (Dacthal)	18.86	18.82	49827	42228	1.677	1.509
18)	m	Picloram	18.95	18.61	21794	22008	1.154m	1.249

SS 10/2/13

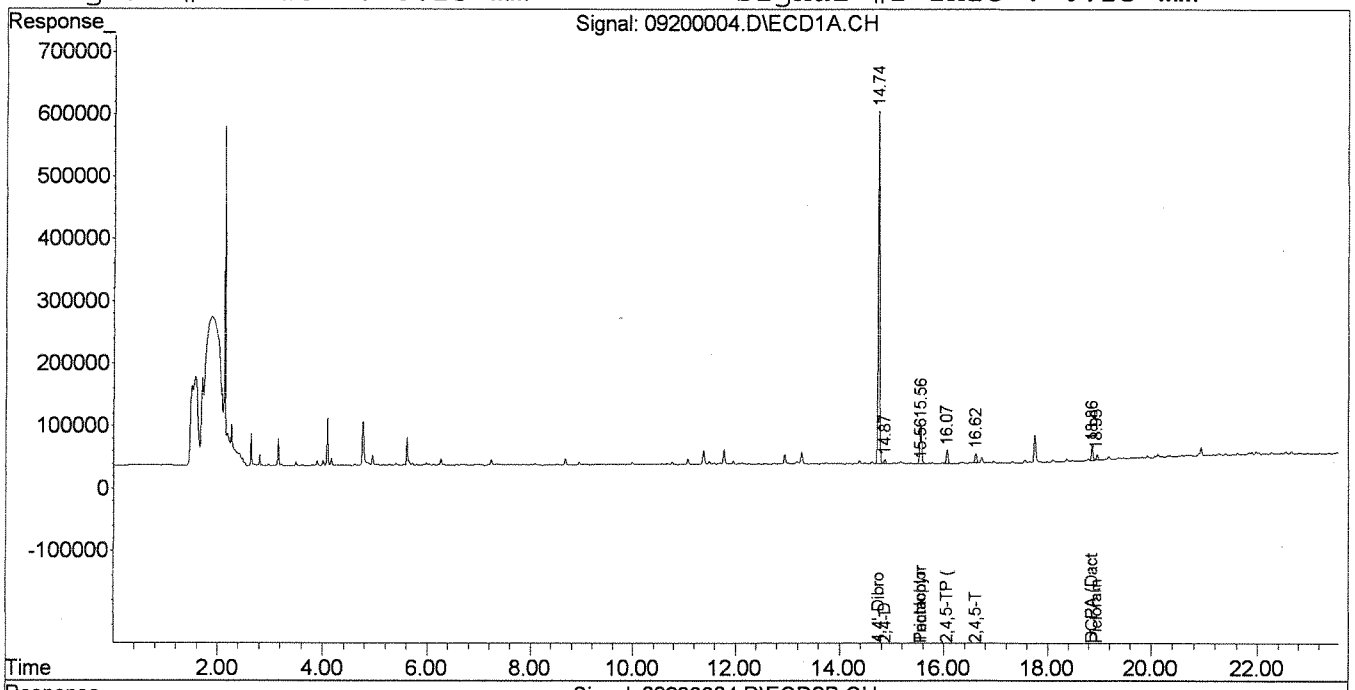
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

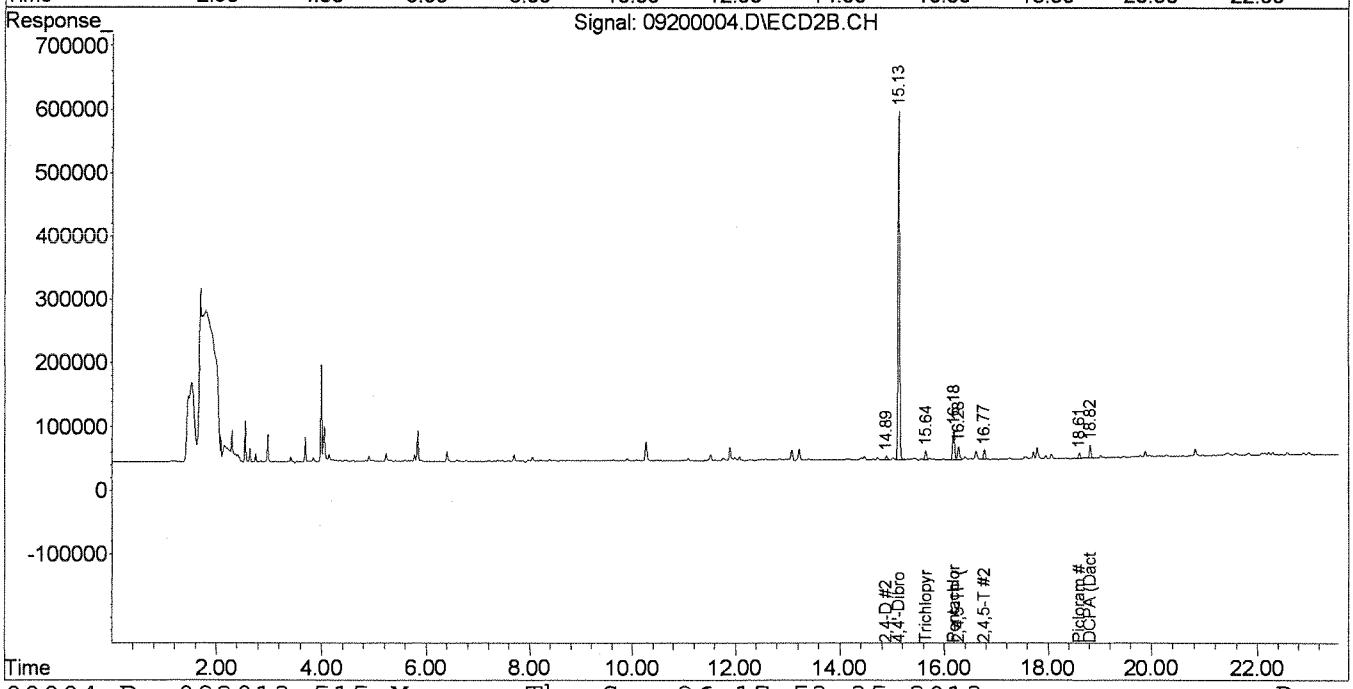
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:37 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

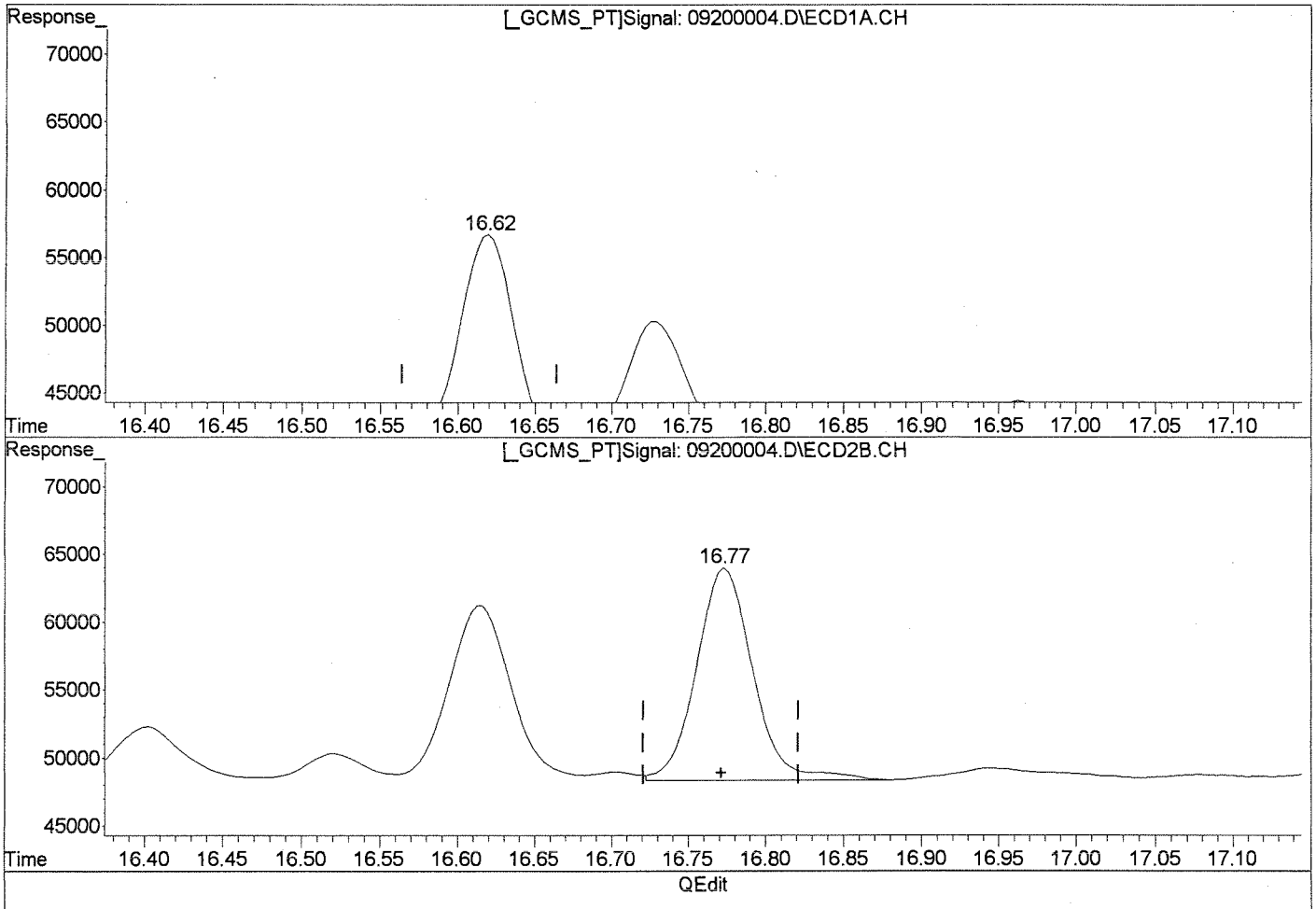




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(12) 2,4,5-T (m)

16.62min 1.191ppb

response 37237

Manual Integration:

Before

(12) 2,4,5-T #2 (m)

16.77min 1.323ppb

response 39417

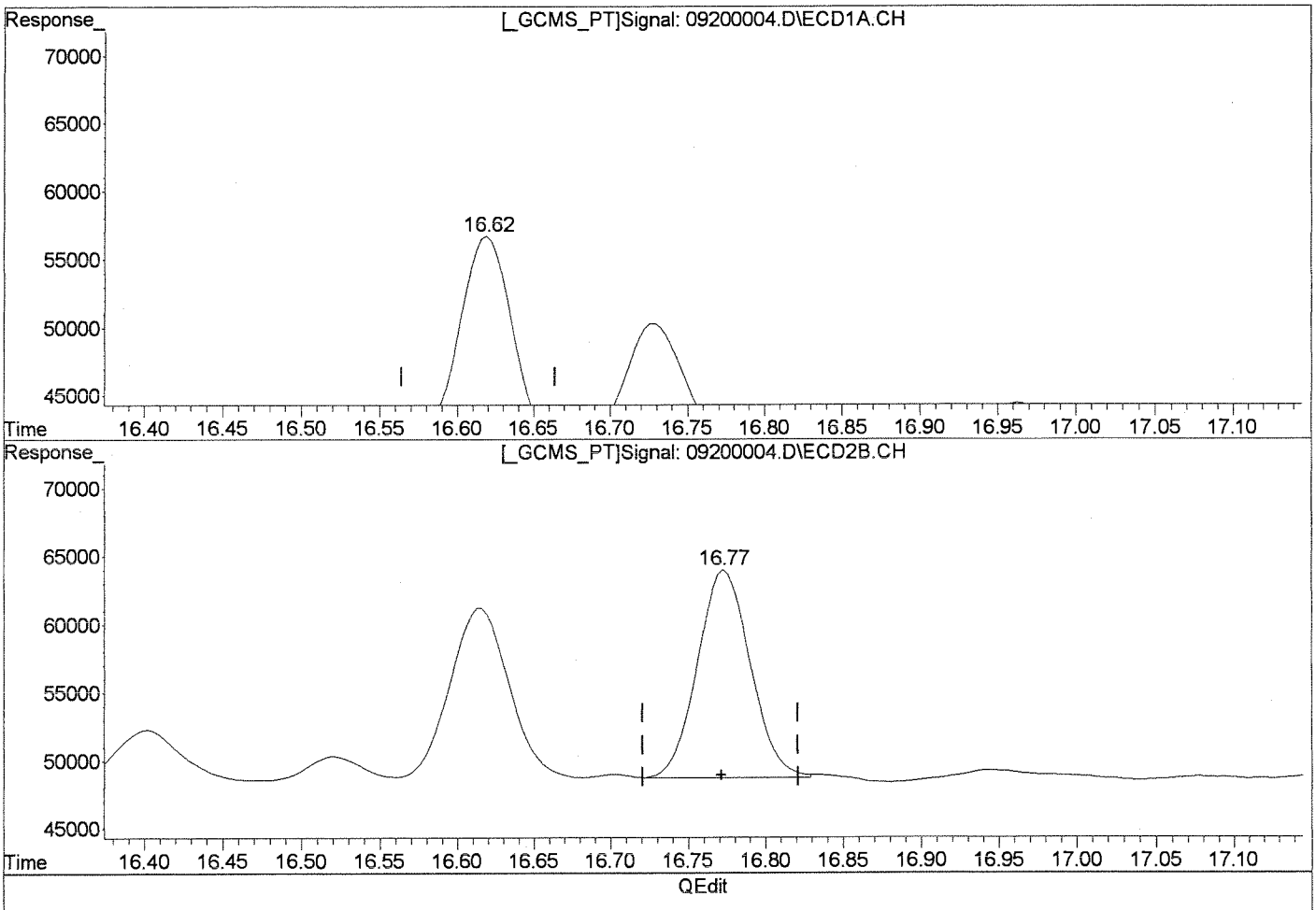
(+) = Expected Retention Time

09200004.D 092013_515.M Thu Sep 26 17:32:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(12) 2,4,5-T (m)

16.62min 1.191ppb

response 37237

(12) 2,4,5-T #2 (m)

16.77min 1.221ppb m

response 36362

Manual Integration:

After

Baseline/Shoulder

09/26/13

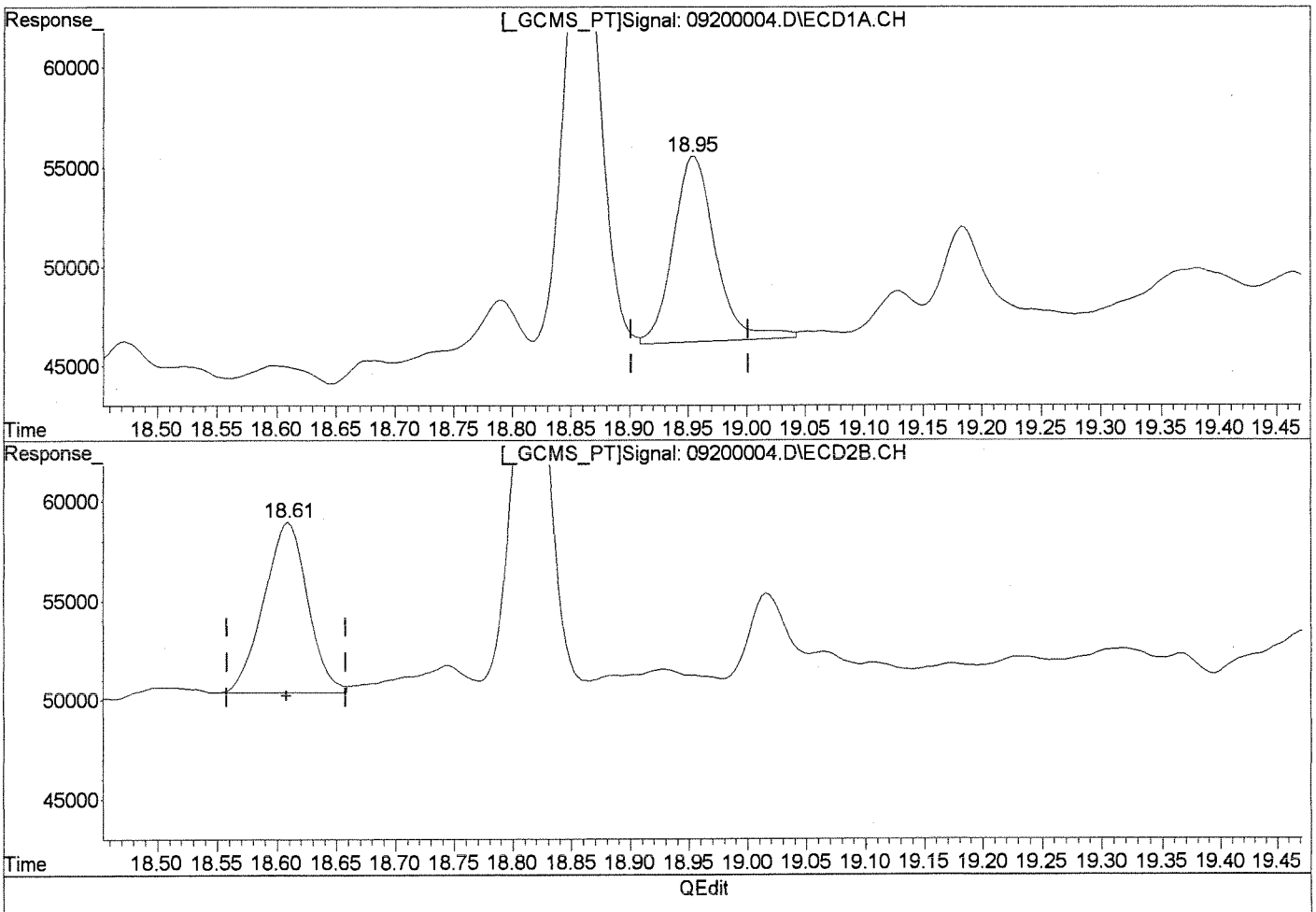
(+) = Expected Retention Time

09200004.D 092013_515.M Thu Sep 26 17:33:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(18) Picloram (m)

18.95min 1.257ppb

response 23743

(18) Picloram #2 (m)

18.61min 1.249ppb

response 22008

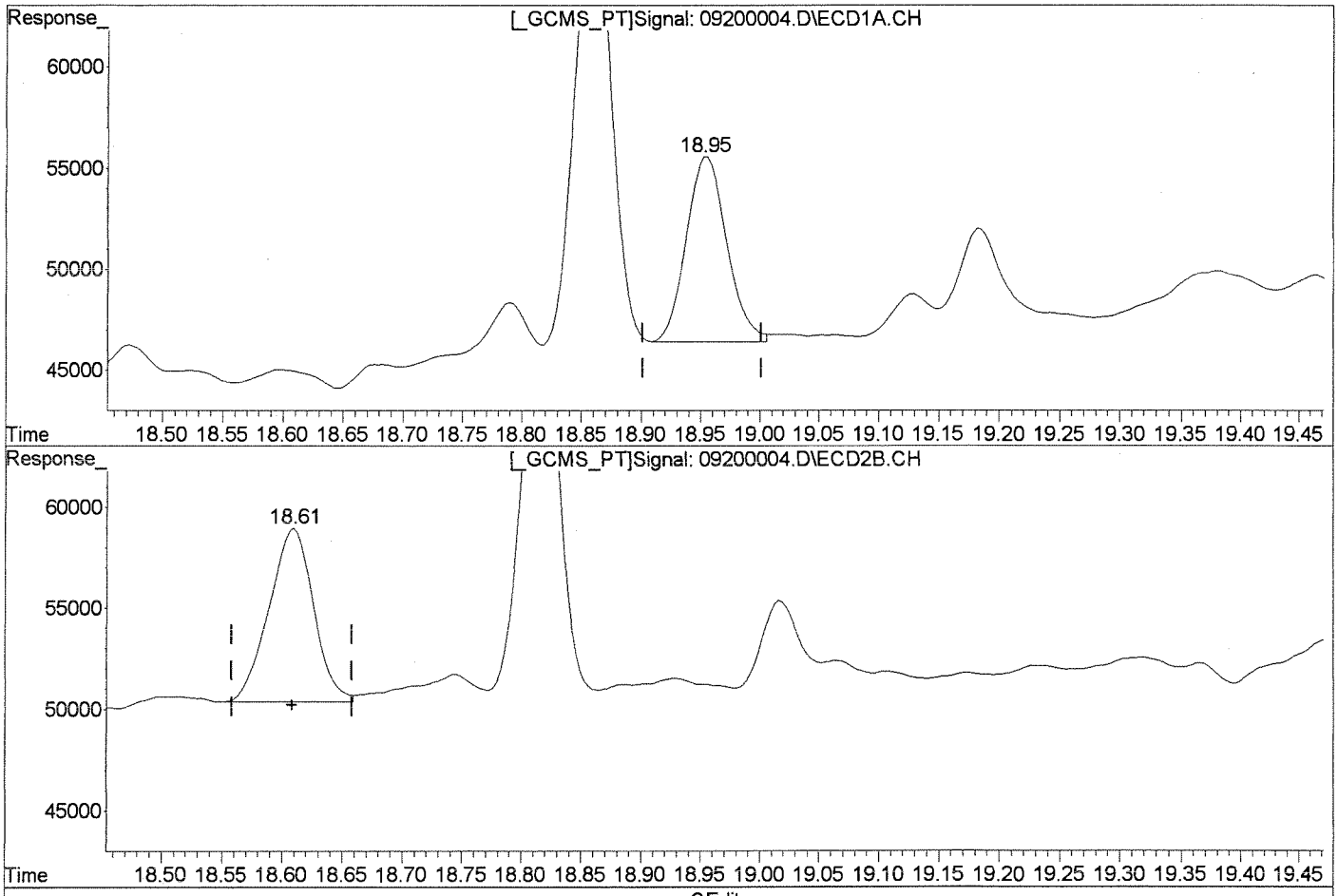
(+) = Expected Retention Time

09200004.D 092013_515.M Thu Sep 26 17:33:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200004.D\ECD1A.CH Vial: 2
Signal #2 : J:\GC24\DATA\092013.515\09200004.D\ECD2B.CH
Acq On : 09-20-2013 05:32:04 PM Operator: JSCHWAB
Sample : 091713-LEV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(18) Picloram (m)

18.95min 1.154ppb m

response 21794

(18) Picloram #2 (m)

18.61min 1.249ppb

response 22008

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200004.D 092013_515.M Thu Sep 26 17:33:26 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:10 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1183533	1151453	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	46220	52581	5.317m	5.915m
		Target Compounds						
2)	m	Dalapon	4.17	4.04	45047	44246	2.881	1.934m#
3)	m	3,5-Dichlorobenz	11.08	11.53	39694	41059	2.688	2.831m
4)	m	4-Nitrophenol	12.14	11.94	10141	8182	2.666	2.439m
6)	m	Dicamba	13.27	13.22	90675	83336	2.712m	2.509m
7)	m	Dichloroprop	14.38	14.47	25201	28062	2.617	2.855
8)	m	2,4-D	14.86	14.88	31117	33125	2.792	2.967
9)	m	Trichlopyr	15.55	15.64	320756	67203	2.378	2.626
10)	m	Pentachloropheno	15.55	16.18	320756	235240	2.245	2.044
11)	m	2,4,5-TP (Silvex	16.07	16.28	100575	99452	2.342	2.268
12)	m	2,4,5-T	16.62	16.77	79350	74153	2.578	2.478m
13)	m	Chloramben	16.73	16.61	48261	59619	2.464	2.856
14)	m	Dinoseb	17.76	17.72	115322	53098	4.040m	2.588m#
15)	m	2,4-DB	17.32	17.55	11417	24936	2.436	4.797m#
16)	m	Bentazon	18.47	18.07	6350	23990	2.084m	4.924 #
17)	m	DCPA (Dacthal)	18.86	18.82	93116	82017	3.184	2.918
18)	m	Picloram	18.96	18.61	49194	45323	2.646	2.561
19)	m	Acifluorfen	20.94	20.83	62120	50918	2.705m	2.505

SS 10/1/13

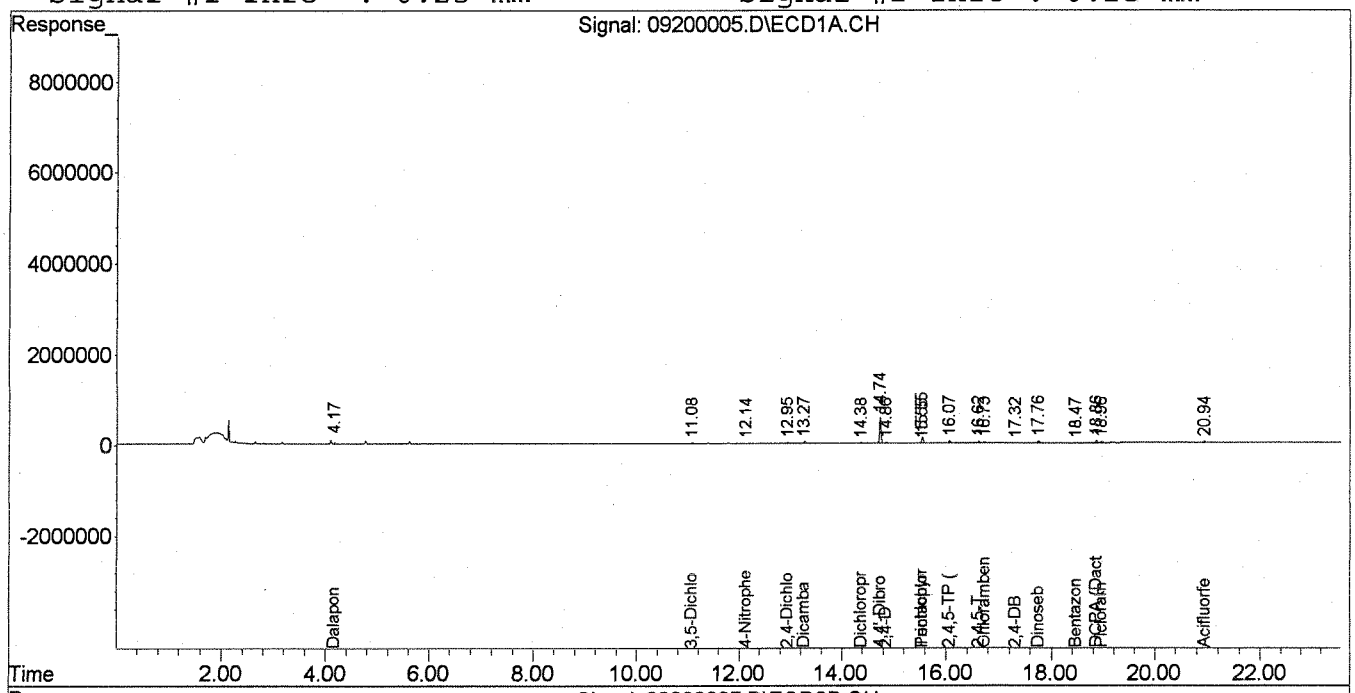
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

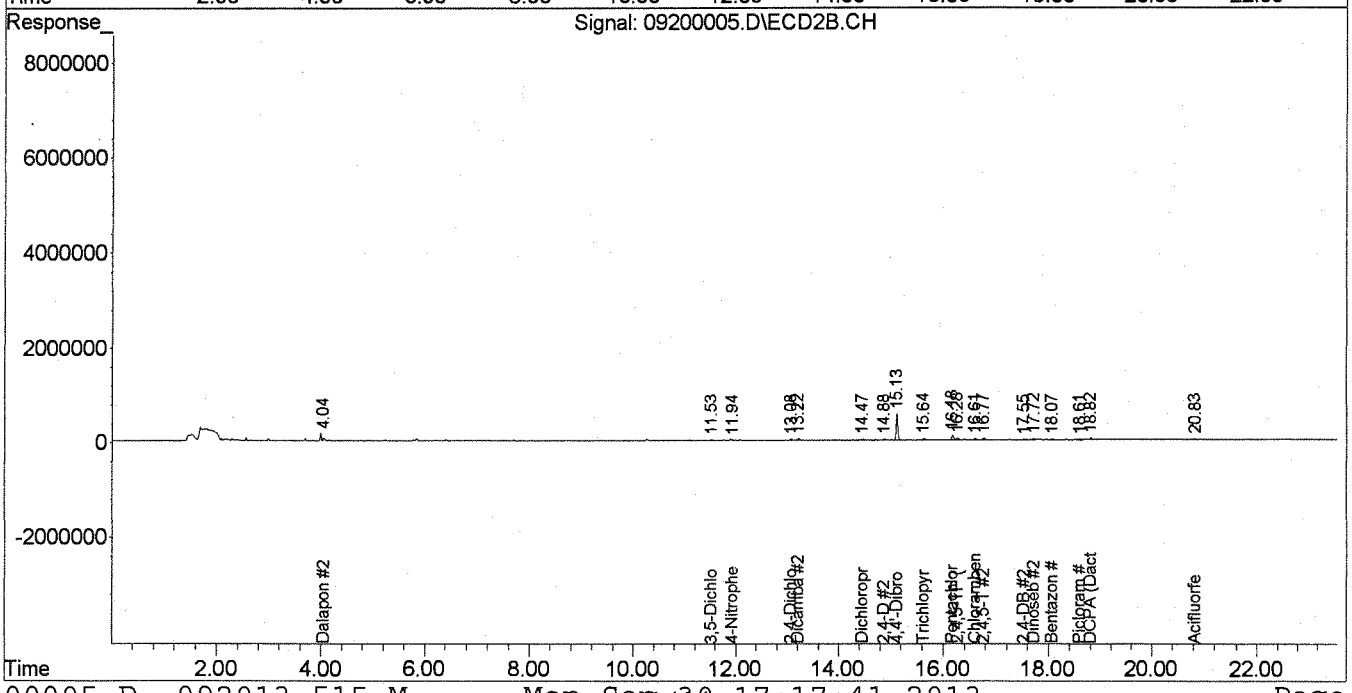
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:17 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

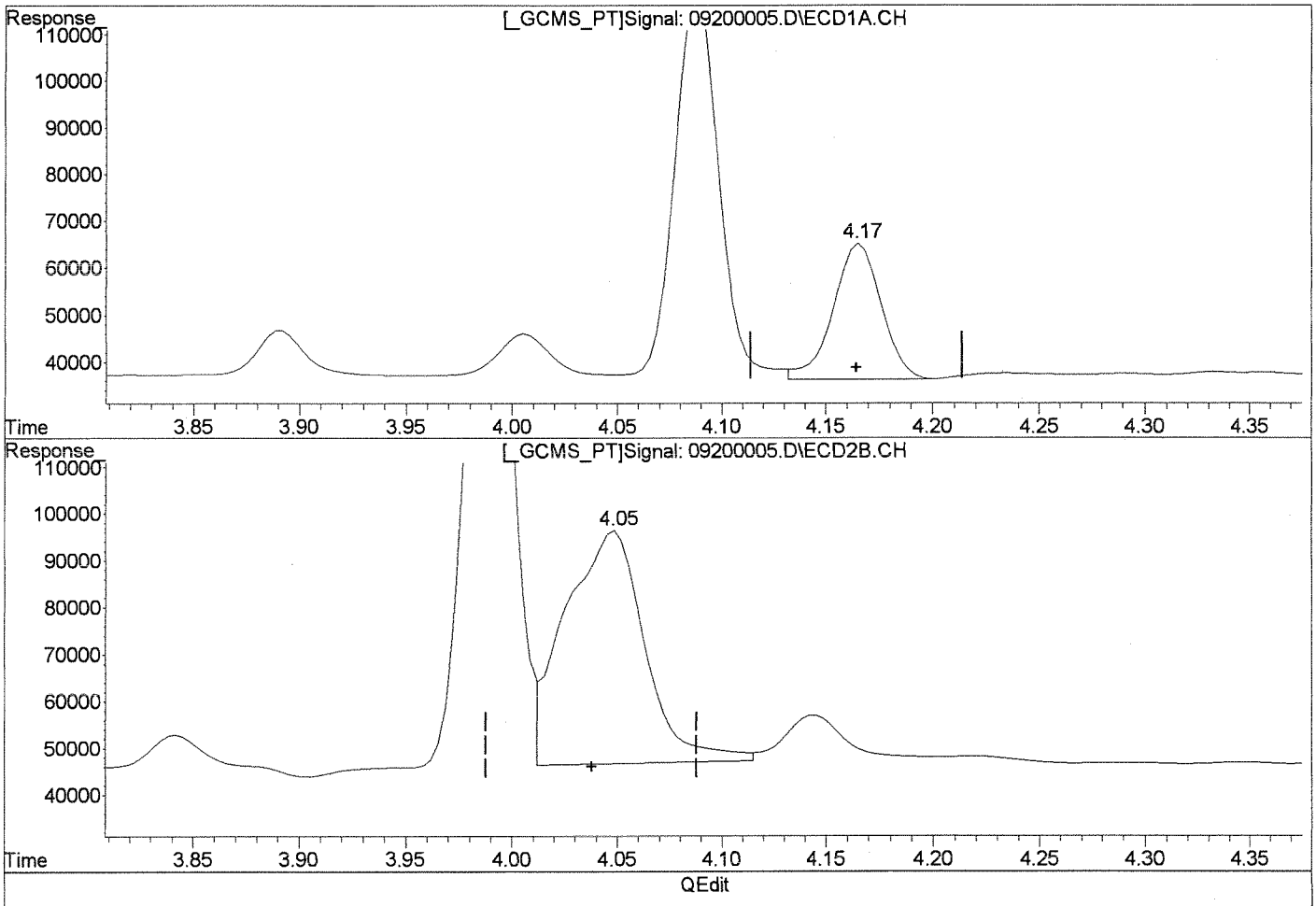




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.17min 2.881ppb

response 45047

(2) Dalapon #2 (m)

4.05min 5.679ppb

response 129913

Manual Integration:

Before

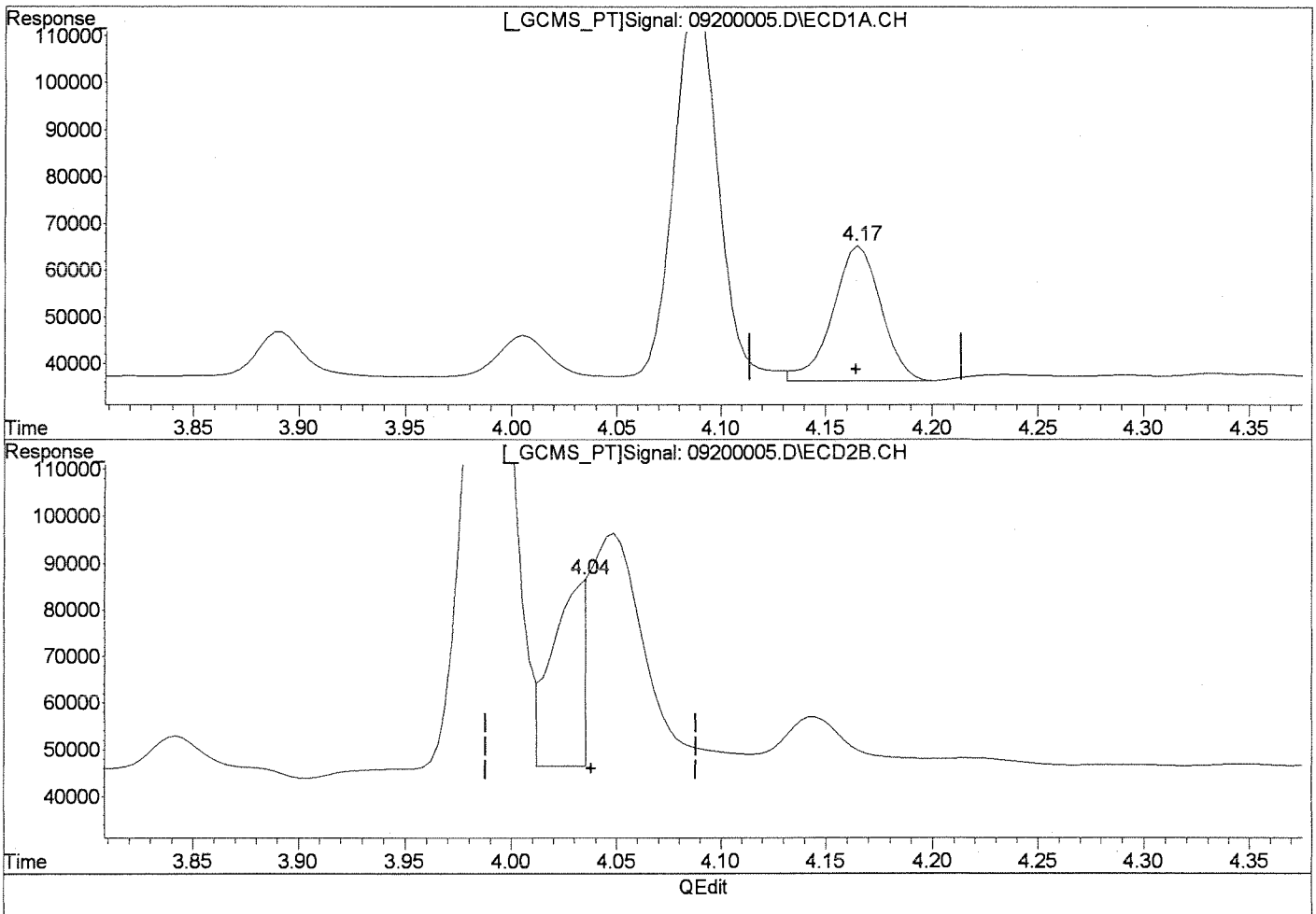
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:33:38 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.17min 2.881ppb

response 45047

(2) Dalapon #2 (m)

4.04min 1.934ppb m

response 44246

Manual Integration:

After

Baseline/Shoulder

09/26/13

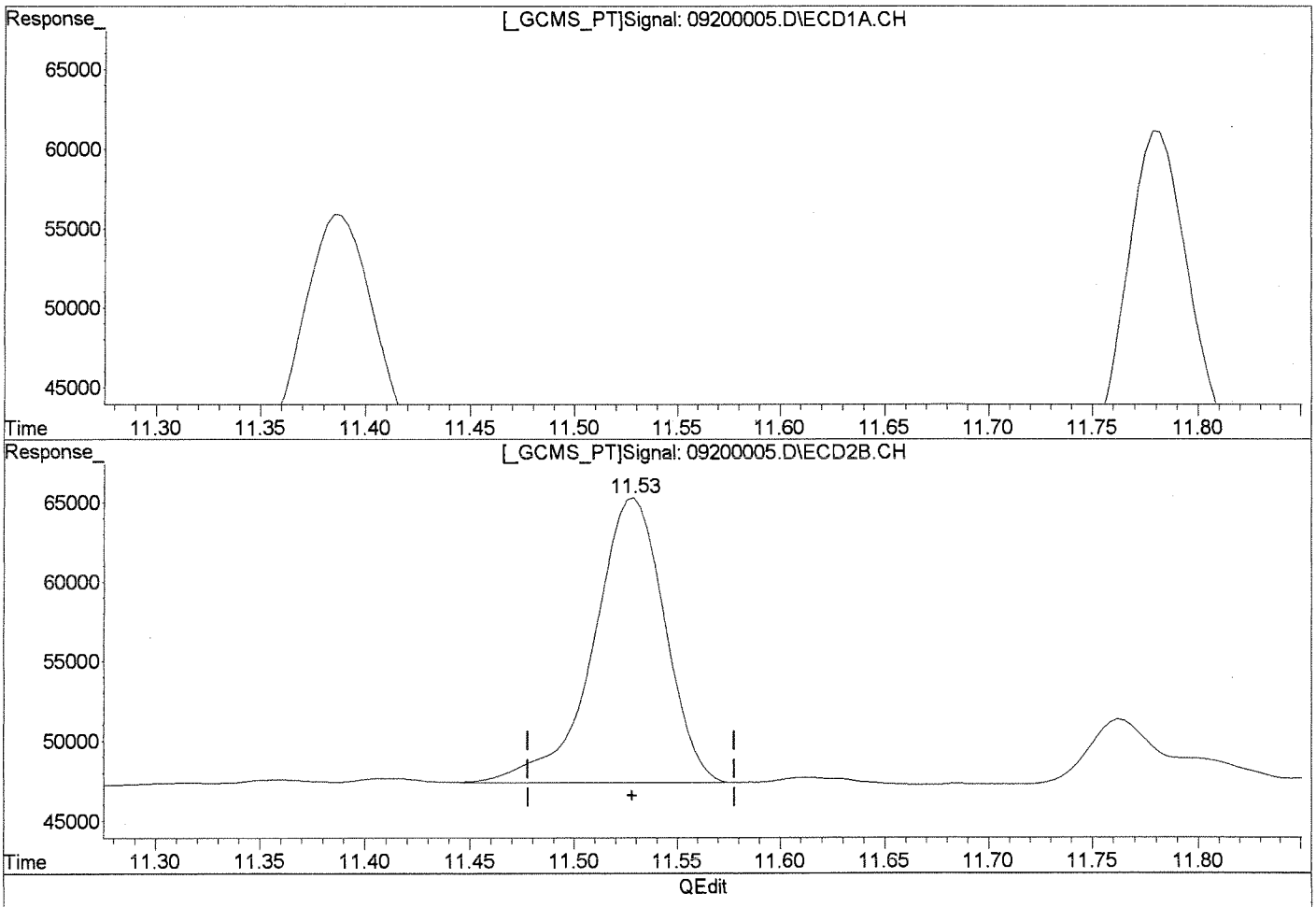
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:34:00 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(3) 3,5-Dichlorobenzoic Acid (m)

11.08min 2.688ppb

response 39694

Manual Integration:

Before

(3) 3,5-Dichlorobenzoic Acid #2 (m)

11.53min 2.973ppb

response 43113

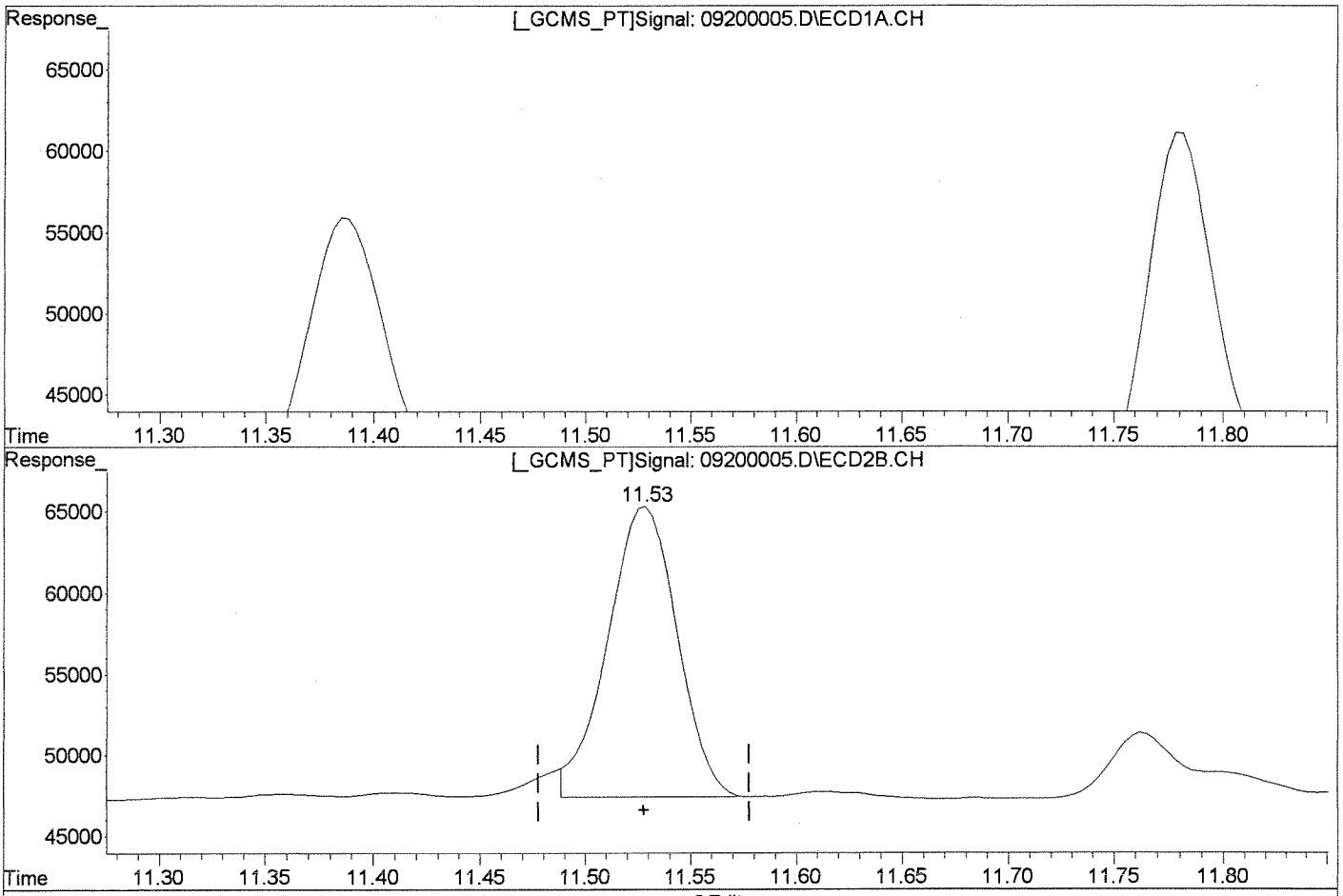
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:34:08 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(3) 3,5-Dichlorobenzoic Acid (m)

11.08min 2.688ppb

response 39694

(3) 3,5-Dichlorobenzoic Acid #2 (m)

11.53min 2.831ppb m

response 41059

Manual Integration:

After

Baseline/Shoulder

09/26/13

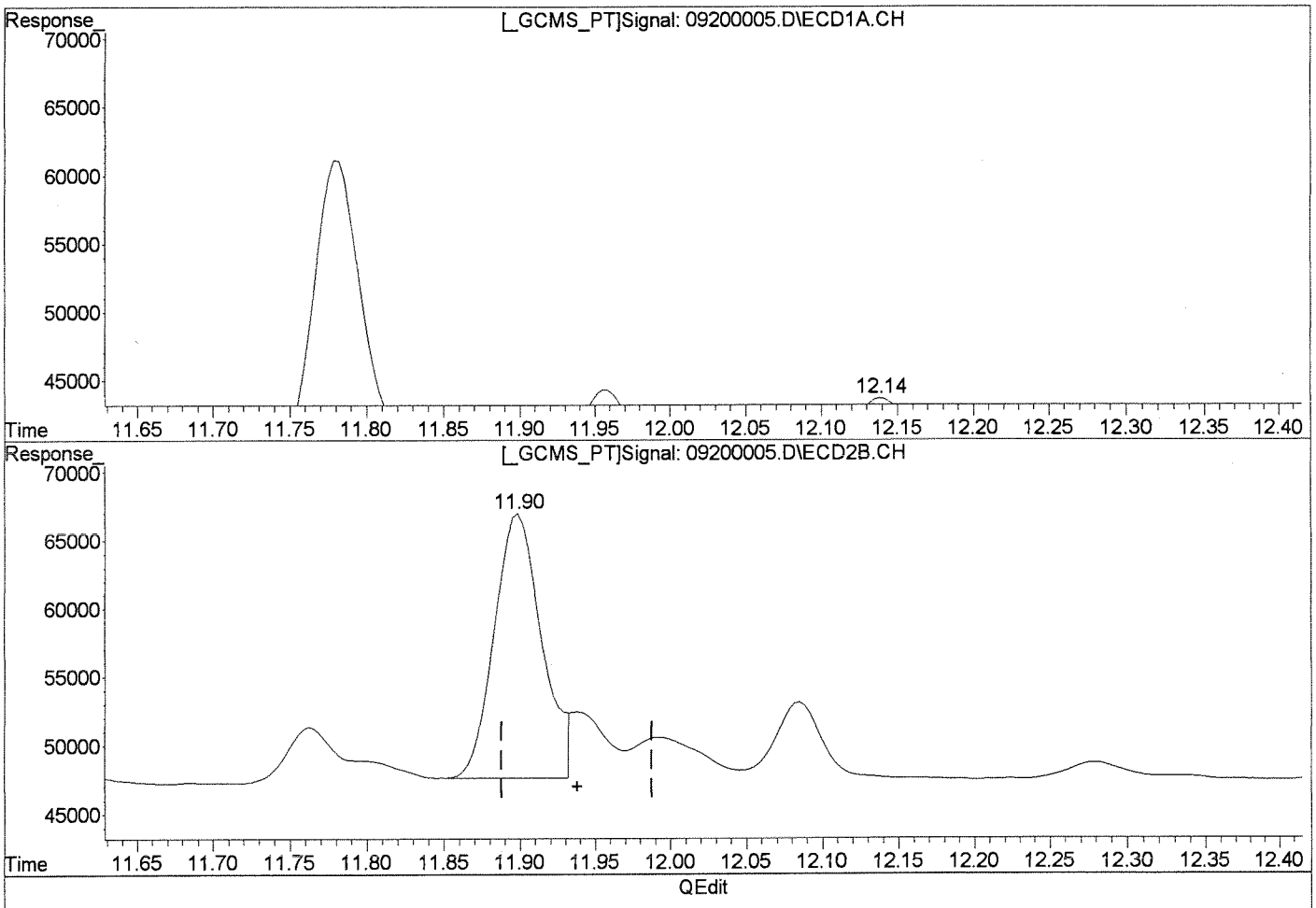
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:34:15 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.14min 2.666ppb

response 10141

(4) 4-Nitrophenol #2 (m)

11.90min 12.563ppb

response 42139

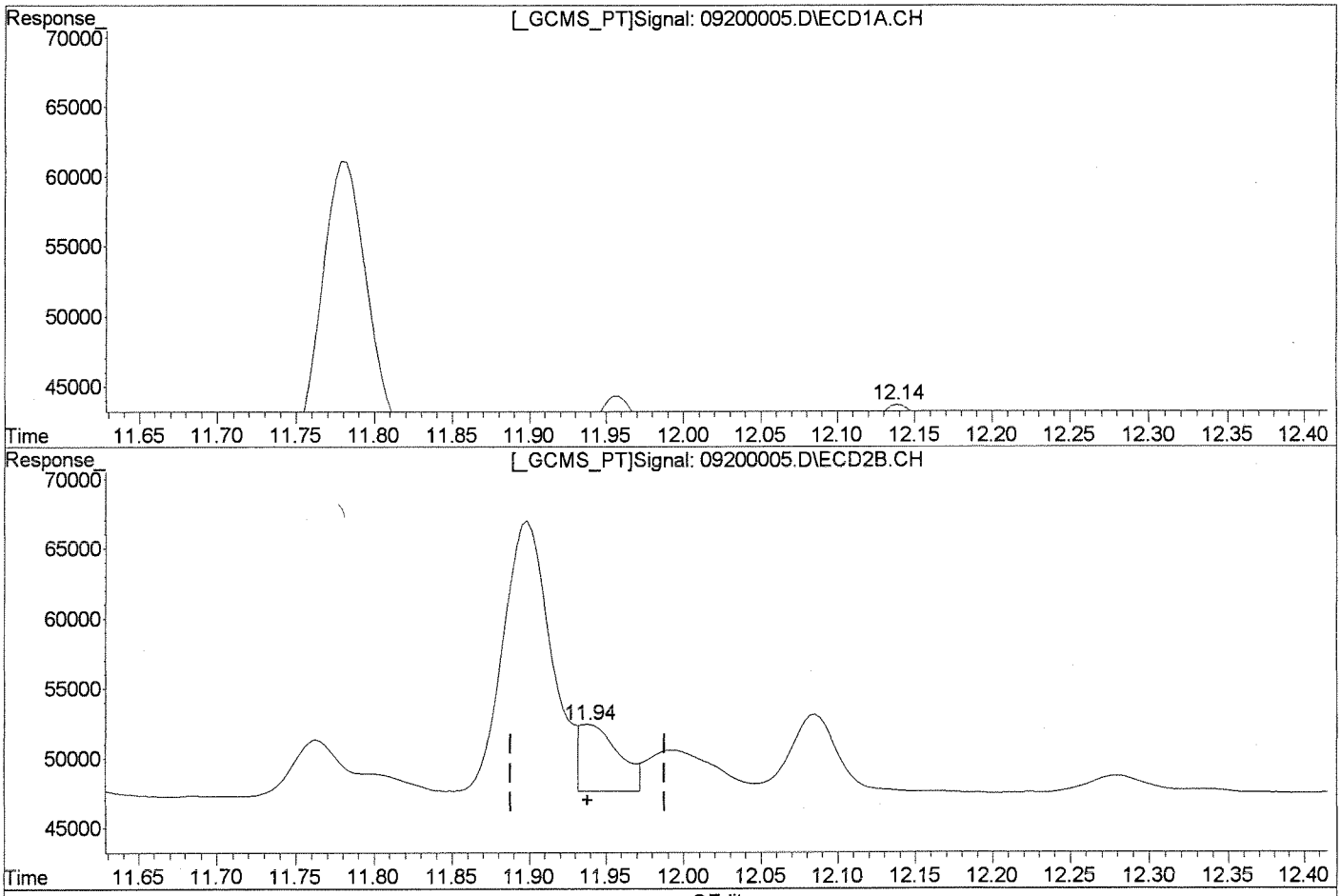
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:34:22 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.14min 2.666ppb

response 10141

(4) 4-Nitrophenol #2 (m)

11.94min 2.439ppb m

response 8182

Manual Integration:

After

Wrong Peak

09/26/13

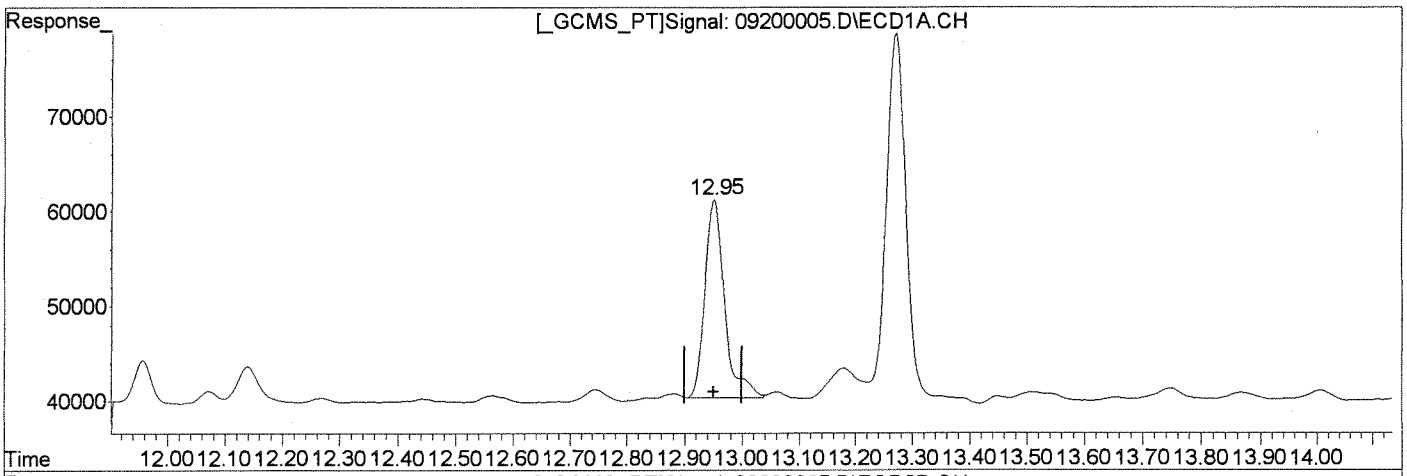
(+) = Expected Retention Time

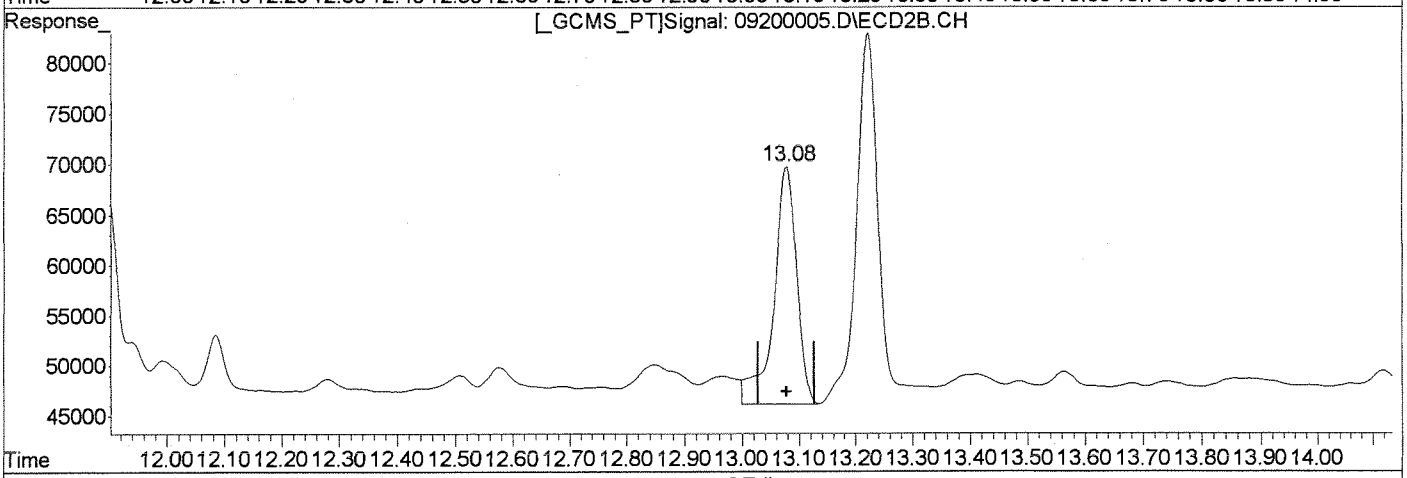
09200005.D 092013_515.M Thu Sep 26 17:34:30 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 5.764ppb

response 50105

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 7.419ppb

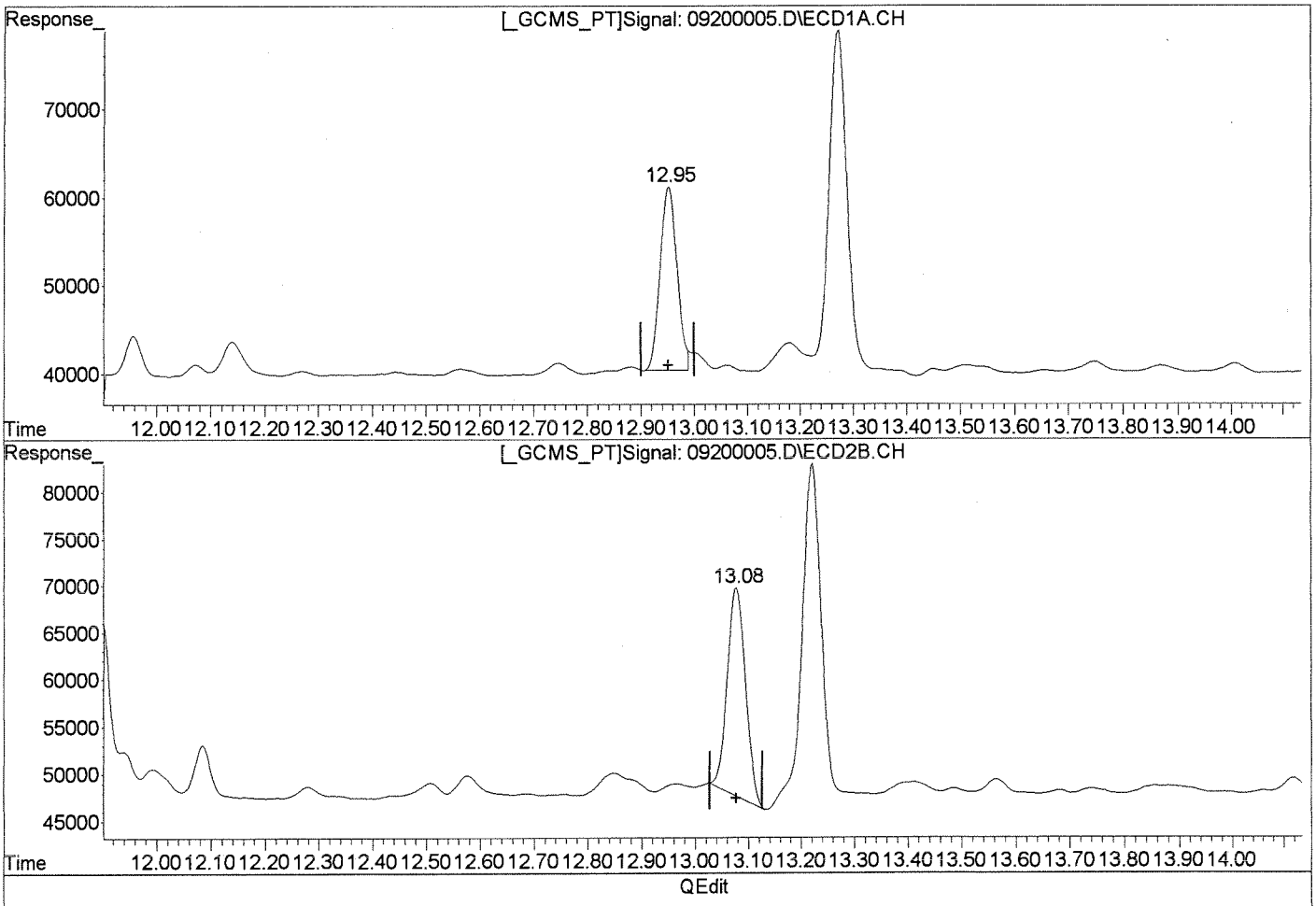
response 65948

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 5.317ppb m

response 46220

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 5.915ppb m

response 52581

Manual Integration:

After

Baseline/Shoulder

09/26/13

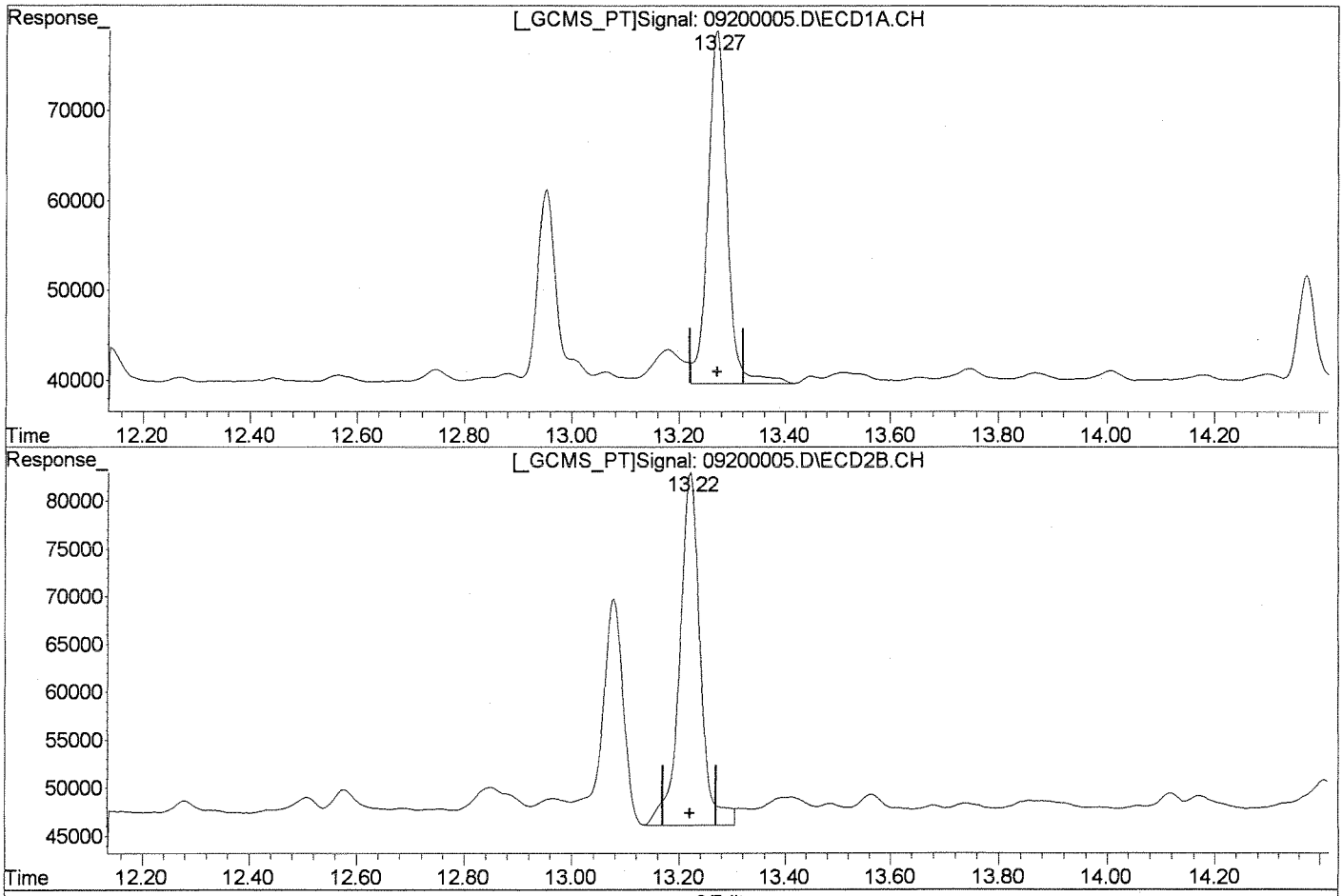
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:35:00 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(6) Dicamba (m)

13.27min 2.934ppb

response 98115

(6) Dicamba #2 (m)

13.22min 2.990ppb

response 99306

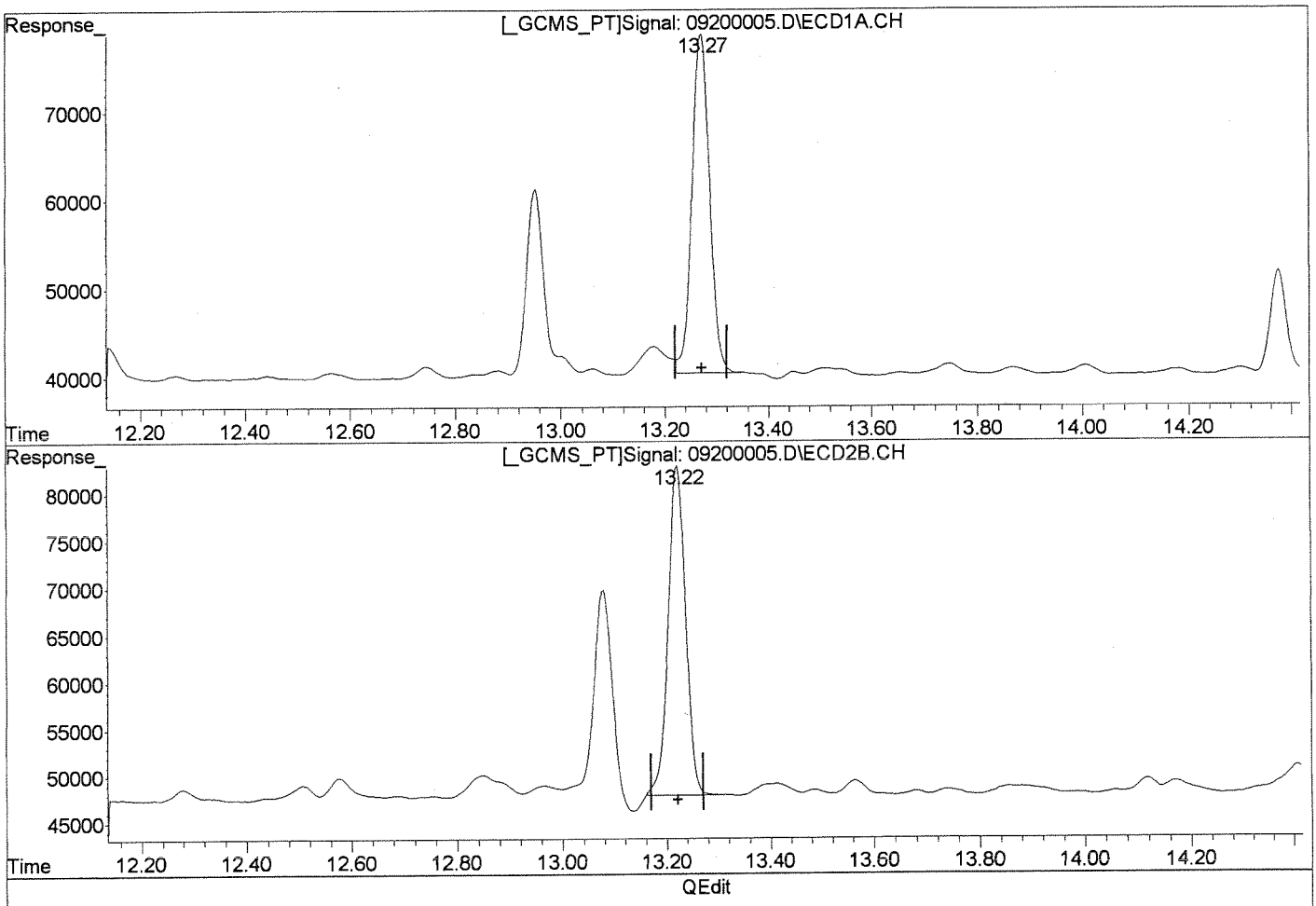
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:35:07 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(6) Dicamba (m)

13.27min 2.712ppb m

response 90675

(6) Dicamba #2 (m)

13.22min 2.509ppb m

response 83336

Manual Integration:

After

Baseline/Shoulder

09/26/13

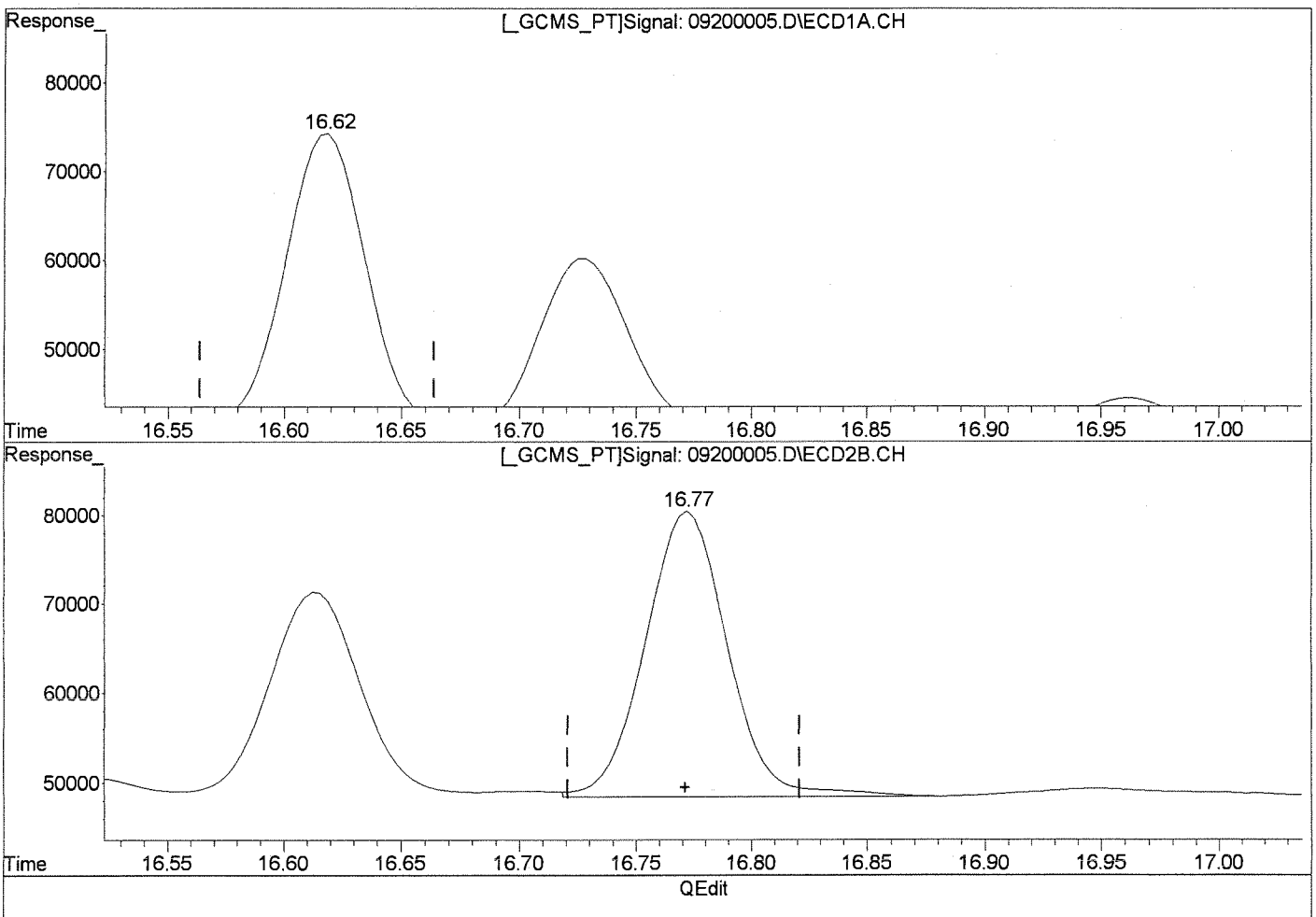
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:35:24 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(12) 2,4,5-T (m)

16.62min 2.578ppb

response 79350

(12) 2,4,5-T #2 (m)

16.77min 2.628ppb

response 78624

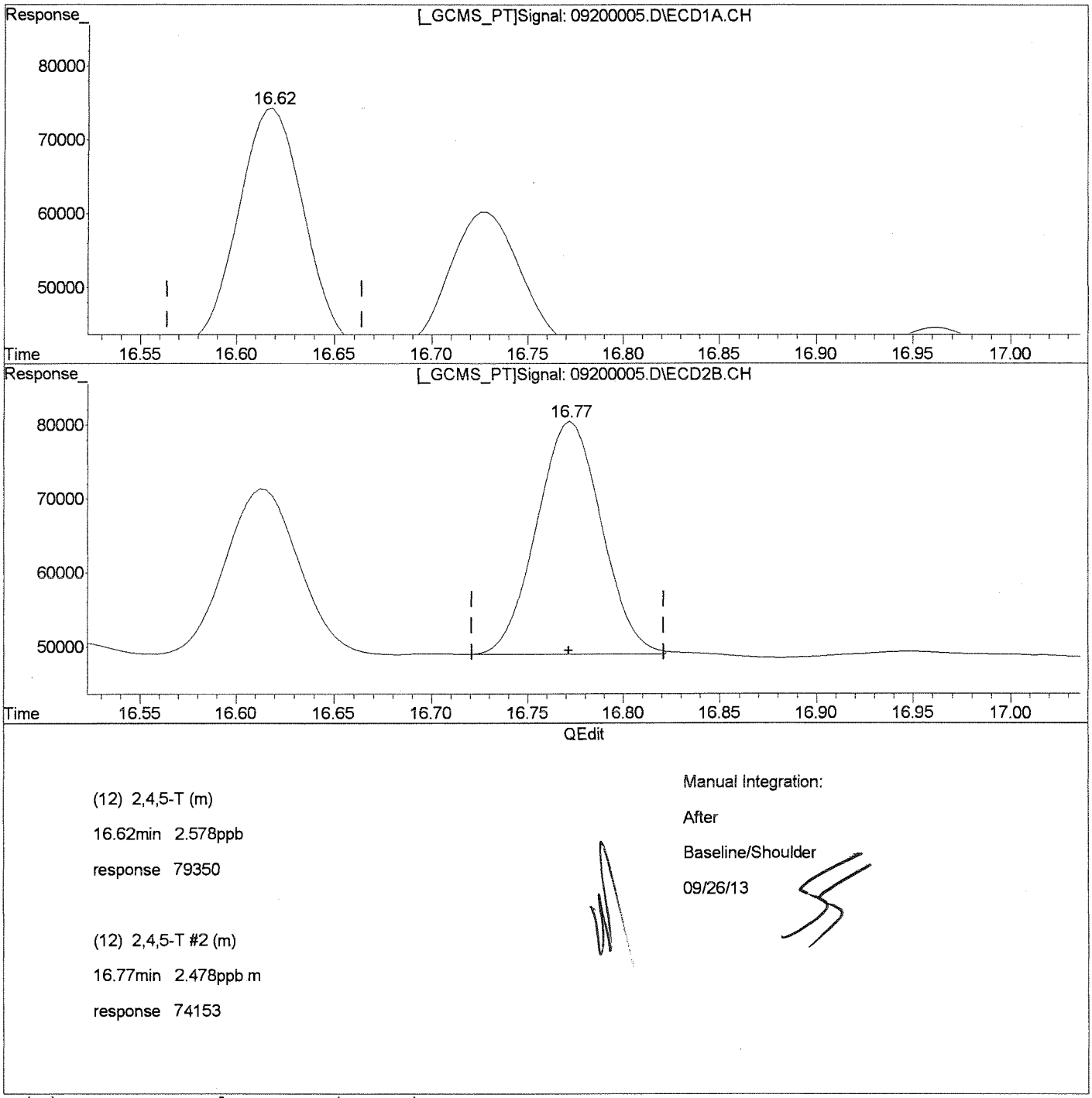
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:35:42 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



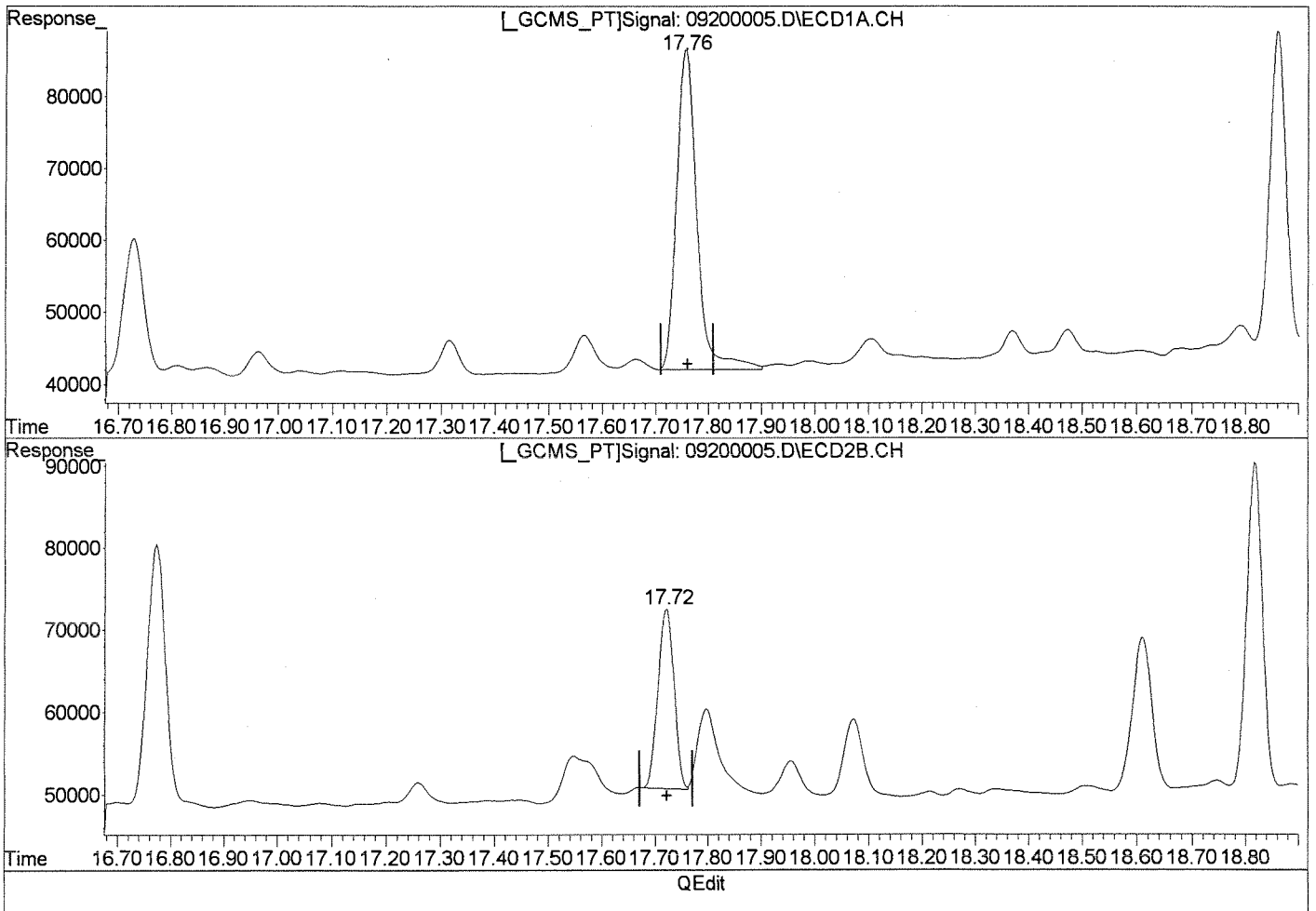
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:35:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(14) Dinoseb (m)

17.76min 4.200ppb

response 119916

Manual Integration:

Before

(14) Dinoseb #2 (m)

17.72min 2.276ppb

response 46701

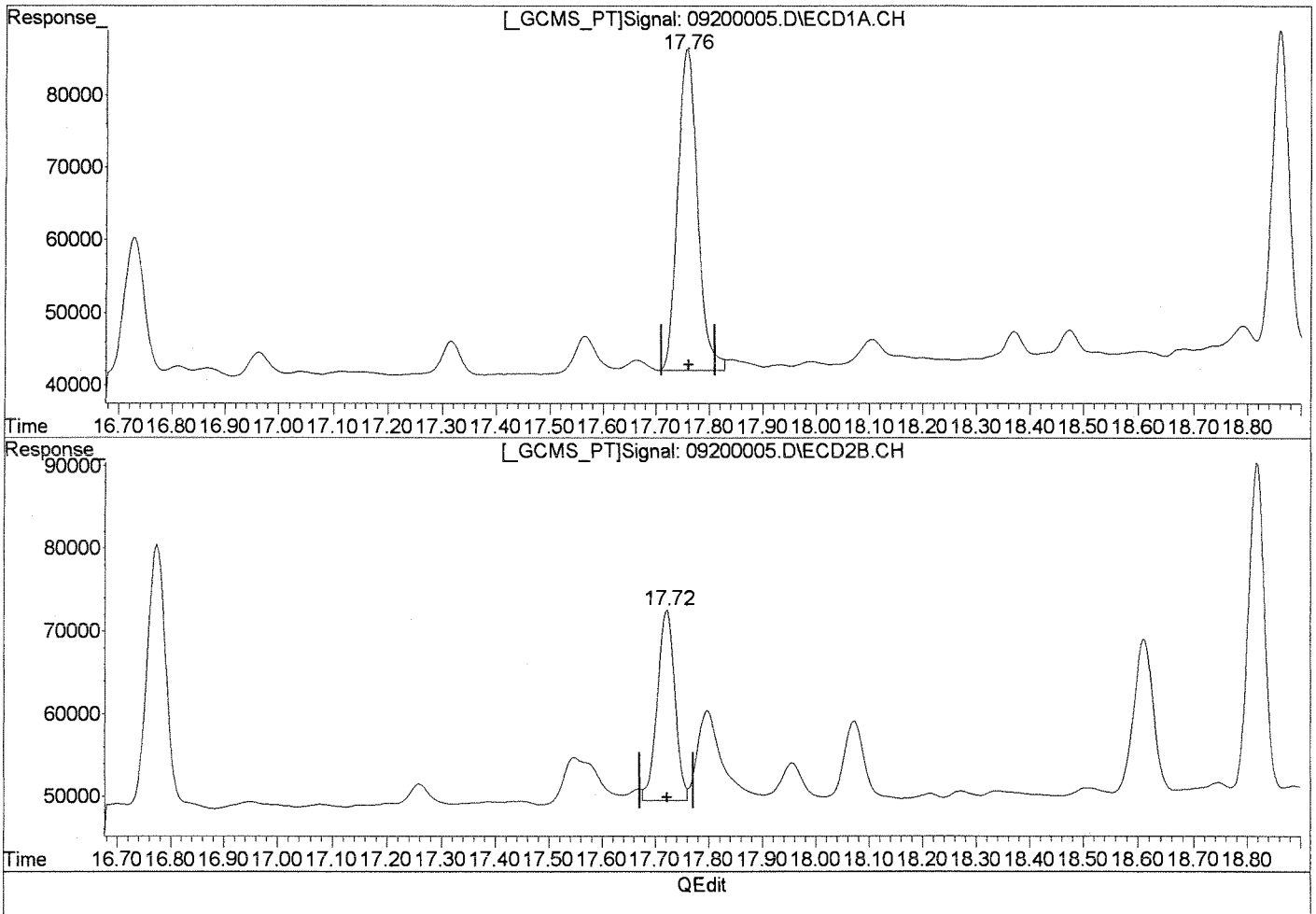
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:36:09 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(14) Dinoseb (m)

17.76min 4.040ppb m

response 115322

(14) Dinoseb #2 (m)

17.72min 2.588ppb m

response 53098

Manual Integration:

After

Baseline/Shoulder

09/26/13

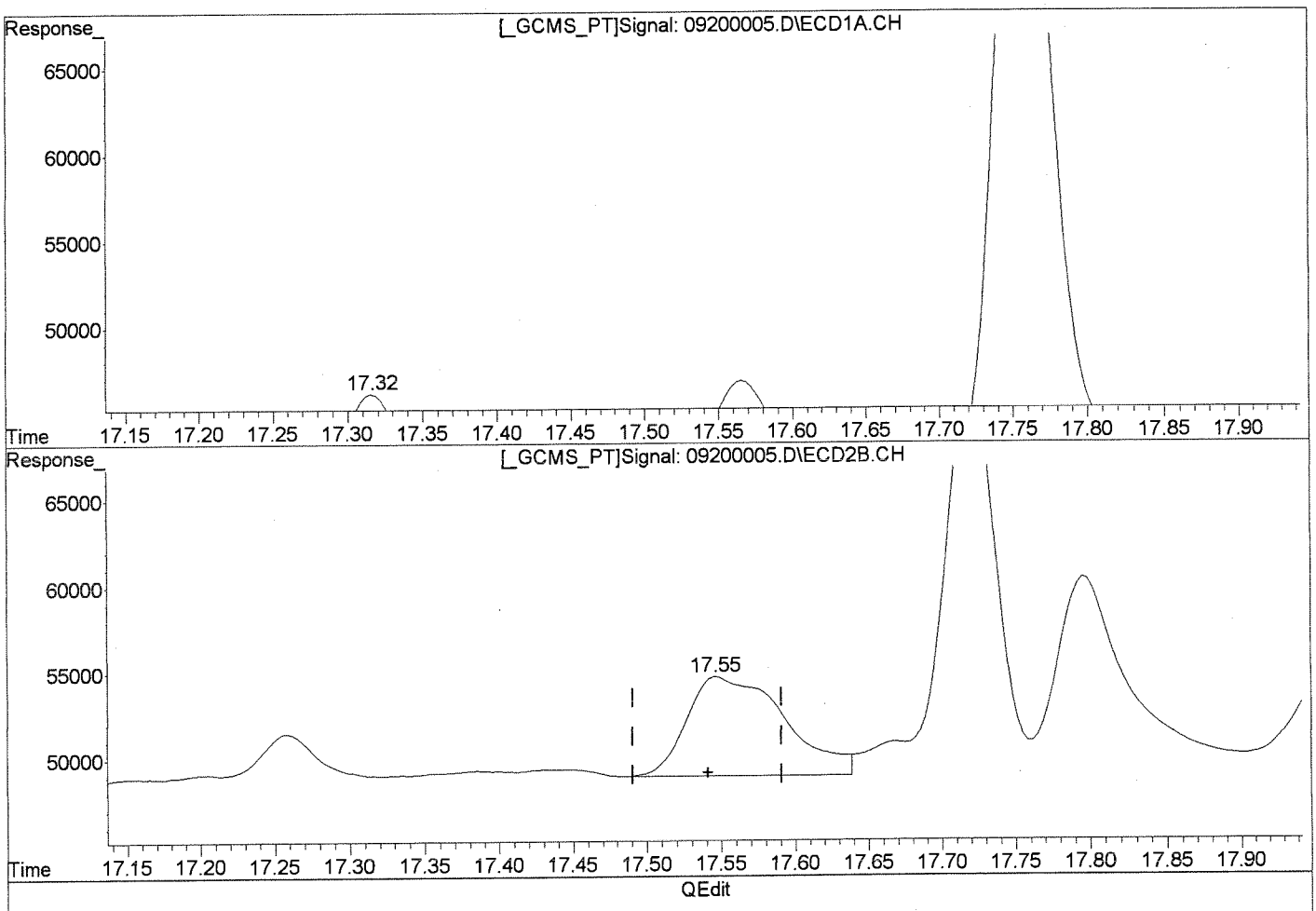
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:36:27 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



Manual Integration:

Before

(15) 2,4-DB (m)

17.32min 2.436ppb

response 11417

(15) 2,4-DB #2 (m)

17.55min 5.127ppb

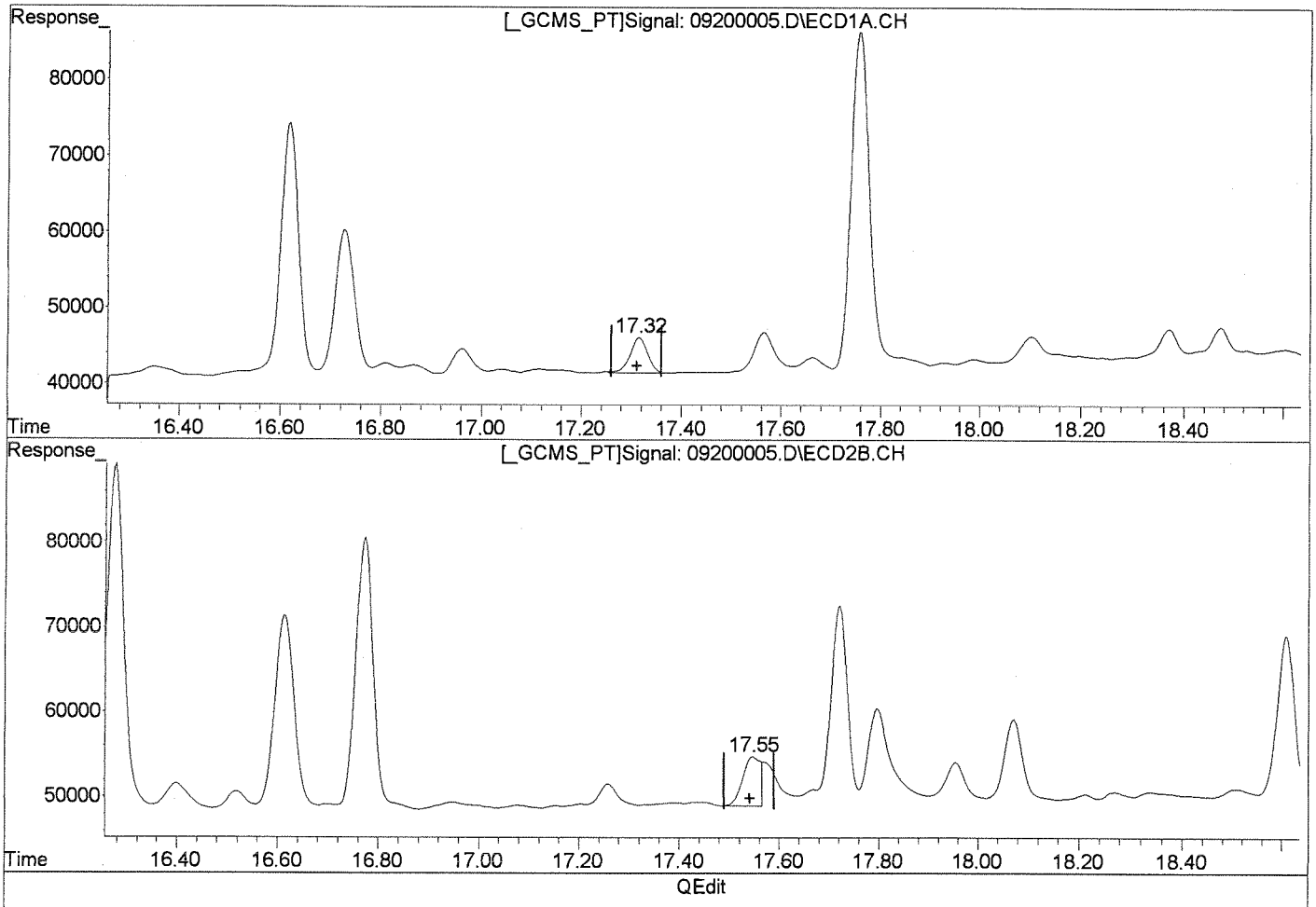
response 26649

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(15) 2,4-DB (m)

17.32min 2.436ppb

response 11417

(15) 2,4-DB #2 (m)

17.55min 2.798ppb m

response 14546

Manual Integration:

After

Baseline/Shoulder

09/26/13

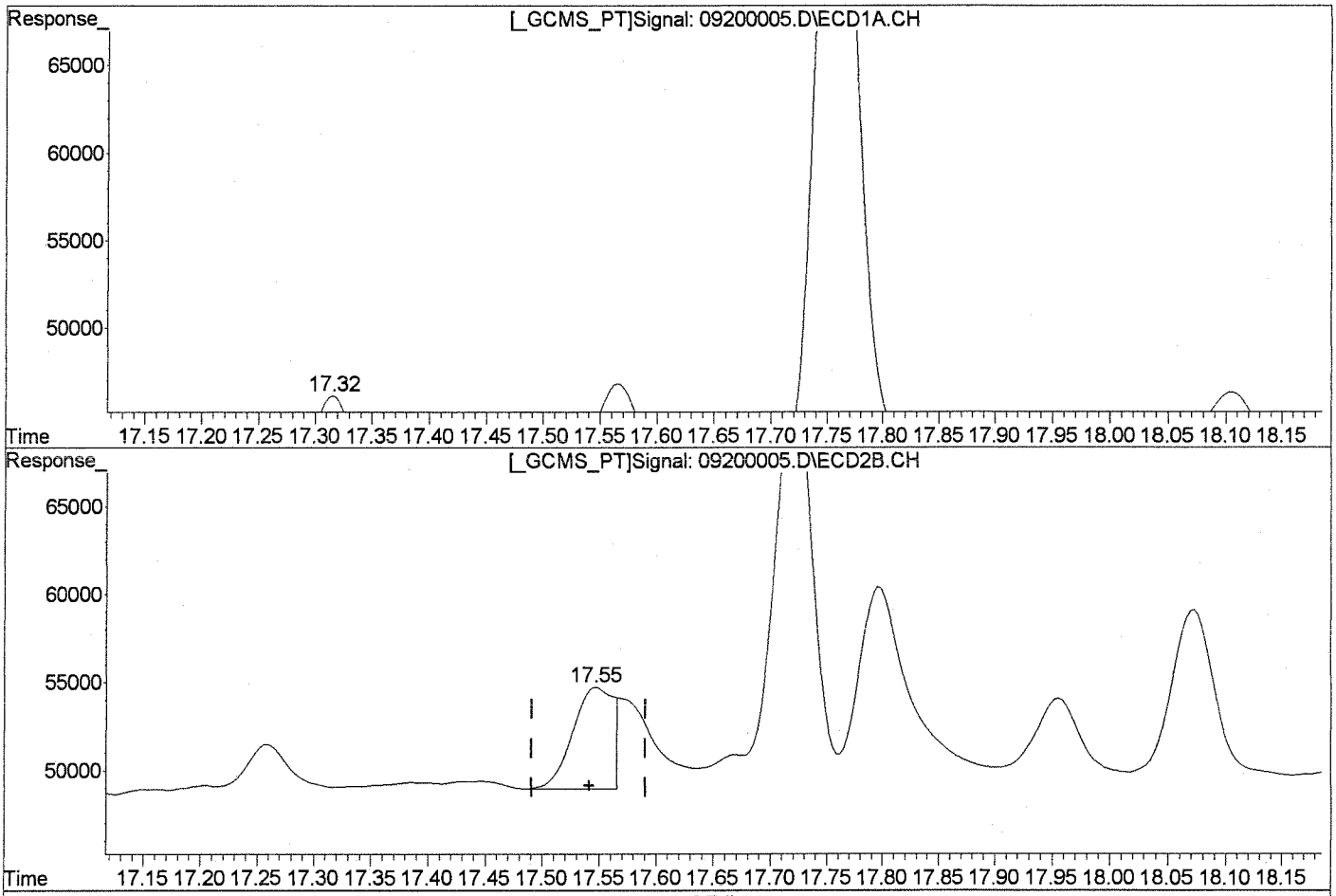
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:36:51 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:40 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:52:07 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(15) 2,4-DB (m)

17.32min 2.436ppb

response 11417

(15) 2,4-DB #2 (m)

17.55min 2.798ppb m

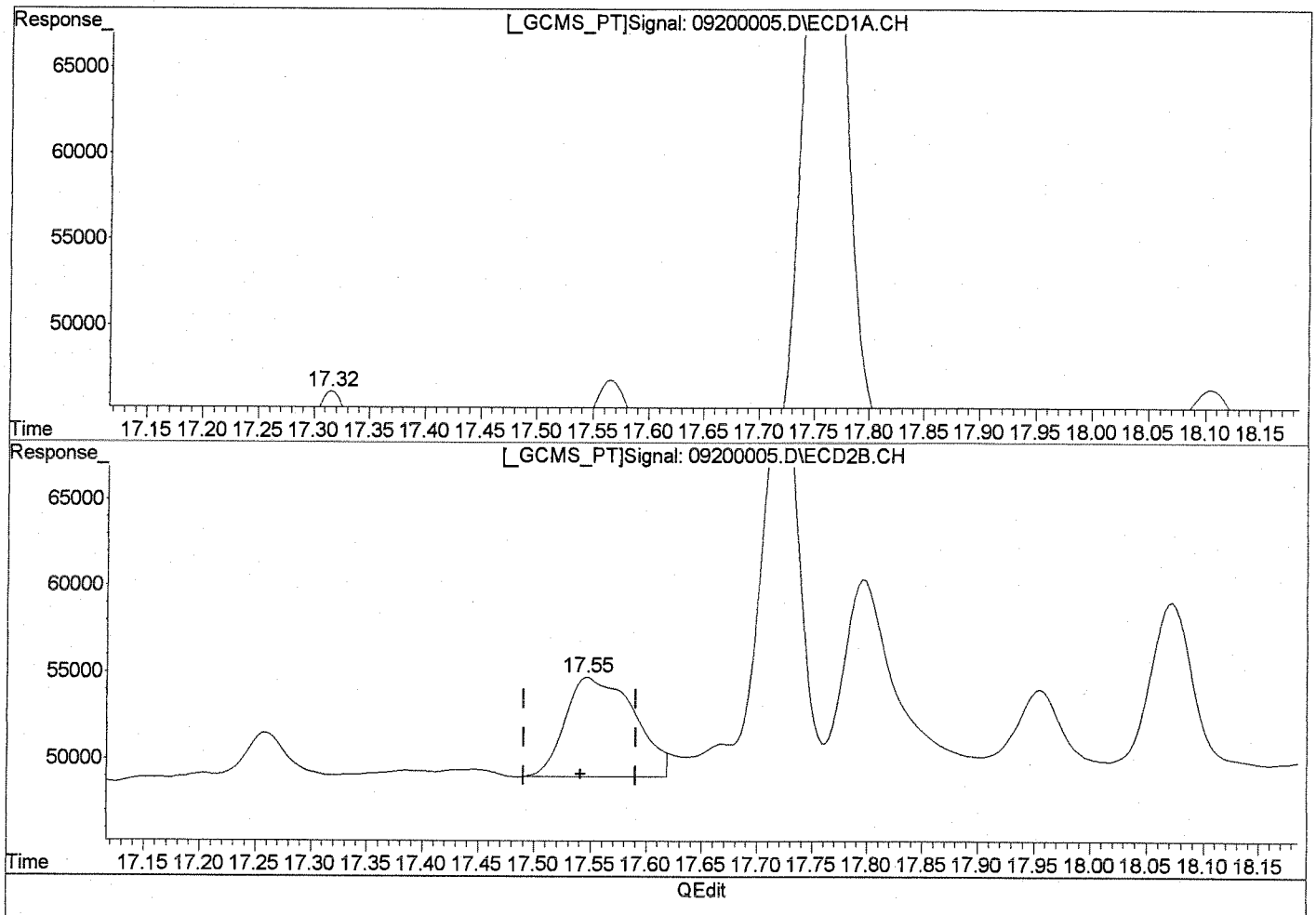
response 14546

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:40 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:52:07 2013
Response via : Multiple Level Calibration



QEdit

(15) 2,4-DB (m)

17.32min 2.436ppb

response 11417

(15) 2,4-DB #2 (m)

17.55min 4.797ppb m

response 24936

Manual Integration:

After

Baseline/Shoulder

09/30/13

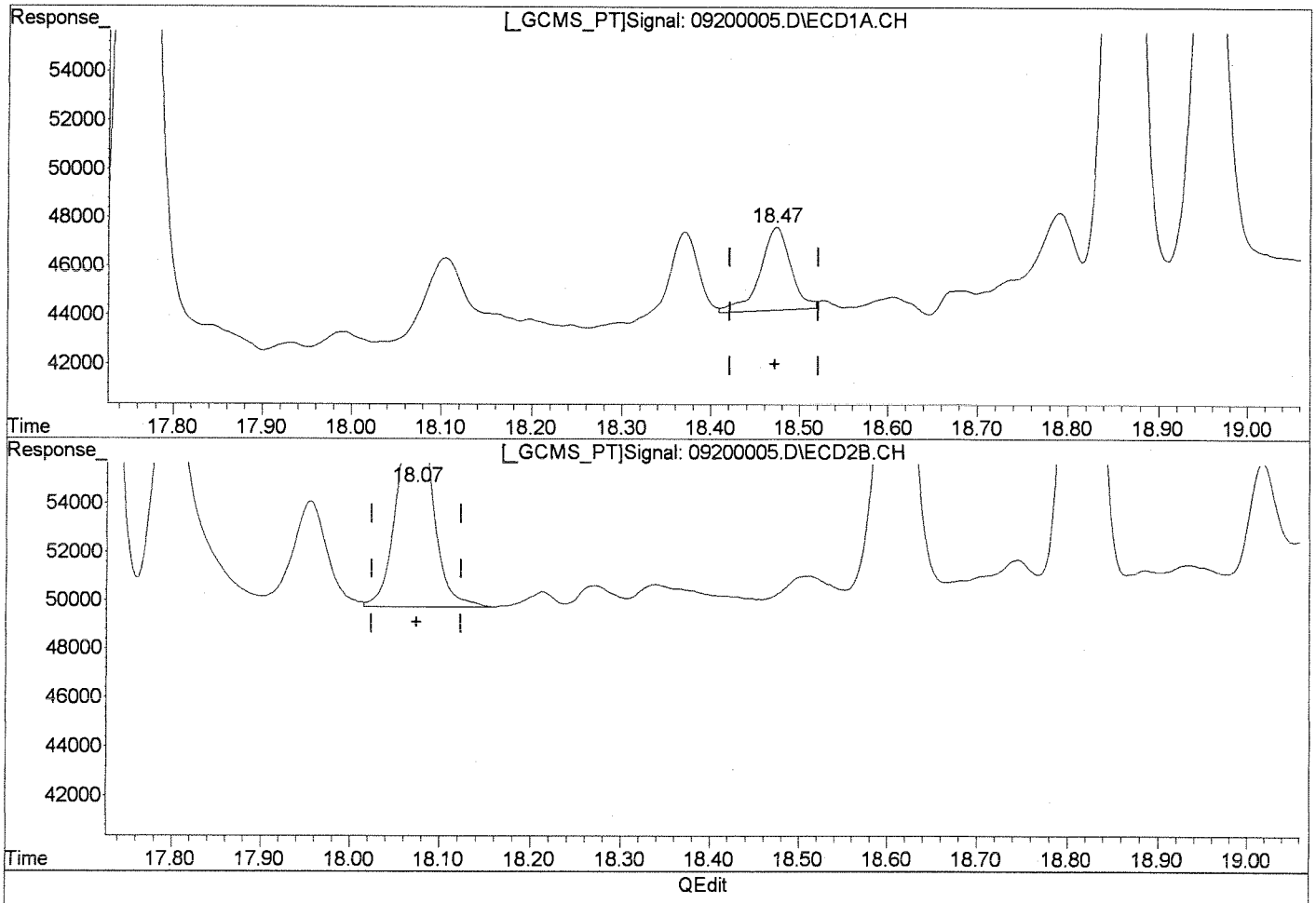
(+) = Expected Retention Time

09200005.D 092013_515.M Mon Sep 30 17:13:40 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(16) Bentazon (m)

18.47min 2.732ppb

response 8325

Manual Integration:

Before

(16) Bentazon #2 (m)

18.07min 4.924ppb

response 23990

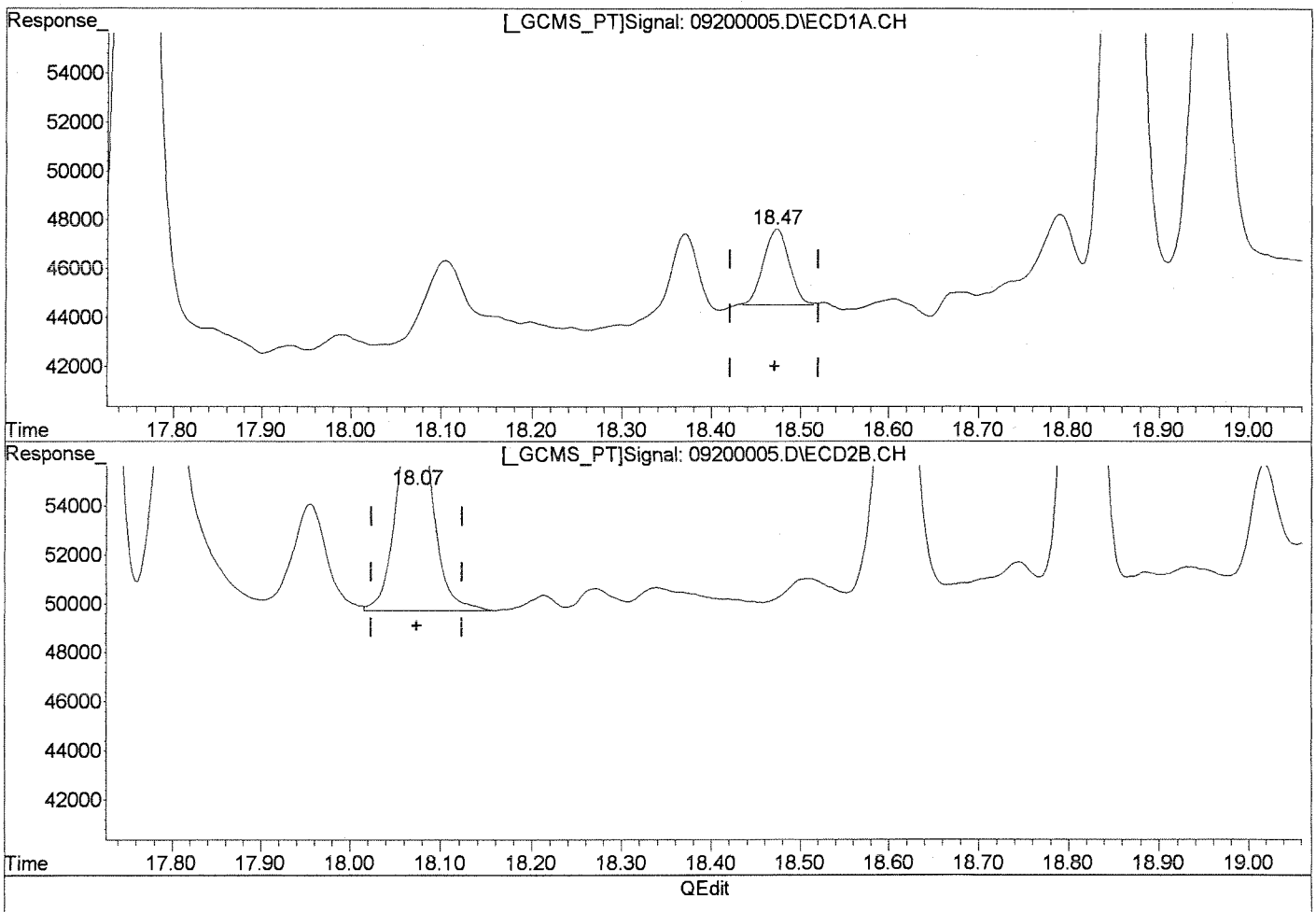
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:36:59 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(16) Bentazon (m)

18.47min 2.084ppb m

response 6350

(16) Bentazon #2 (m)

18.07min 4.924ppb

response 23990

Manual Integration:

After

Baseline/Shoulder

09/26/13

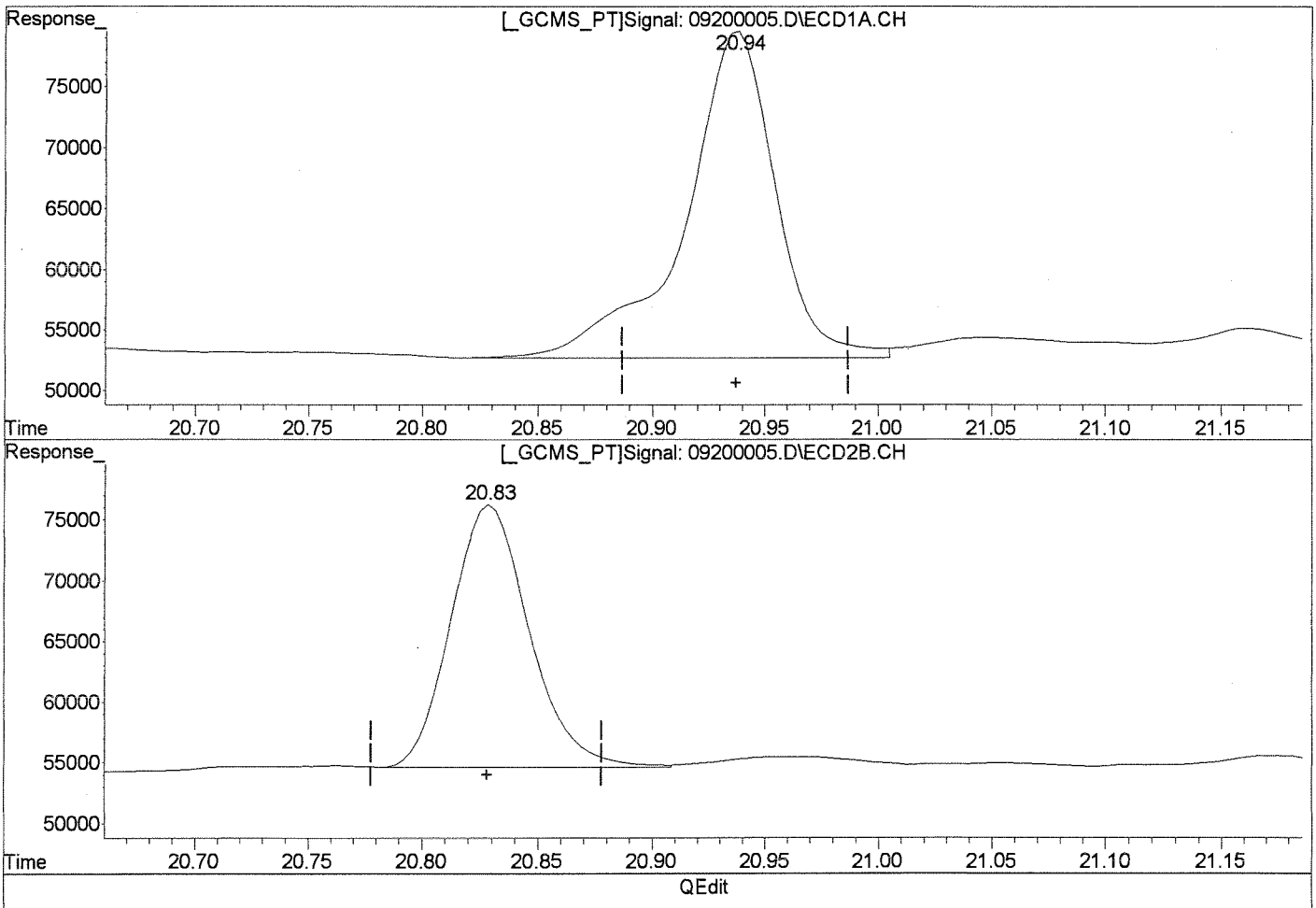
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:37:05 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



Manual Integration:

Before

(19) Acifluorfen (m)

20.94min 3.289ppb

response 75507

(19) Acifluorfen #2 (m)

20.83min 2.505ppb

response 50918

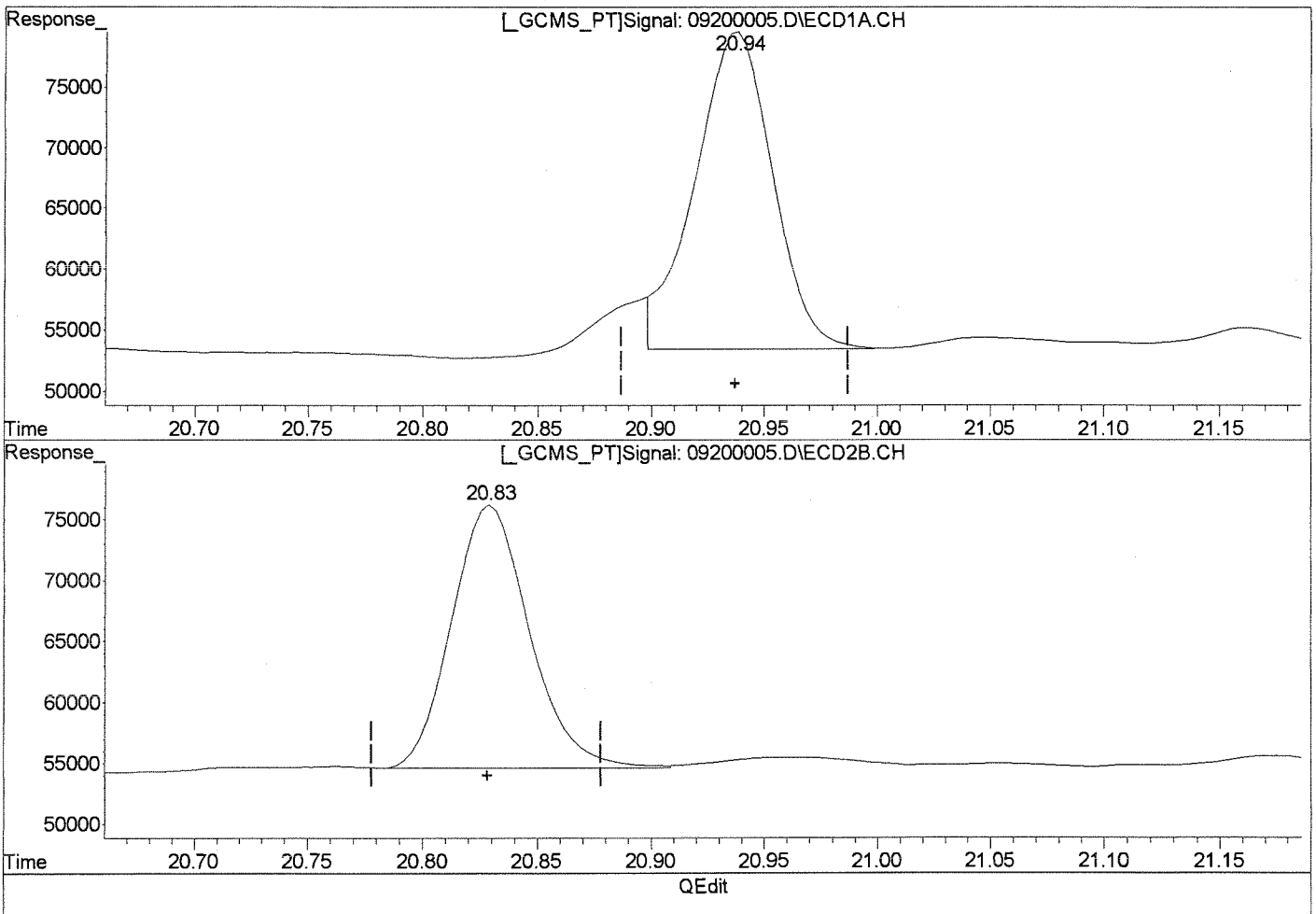
(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:37:15 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200005.D\ECD1A.CH Vial: 3
Signal #2 : J:\GC24\DATA\092013.515\09200005.D\ECD2B.CH
Acq On : 09-20-2013 06:02:35 PM Operator: JSCHWAB
Sample : 091713-LEV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(19) Acifluorfen (m)

20.94min 2.705ppb m

response 62120

(19) Acifluorfen #2 (m)

20.83min 2.505ppb

response 50918

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200005.D 092013_515.M Thu Sep 26 17:37:25 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:10 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1193336	1154798	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	101414	101121	11.571m	11.343m
		Target Compounds						
2)	m	Dalapon	4.16	4.03	90669	96307	5.750	4.198m#
3)	m	3,5-Dichlorobenz	11.08	11.53	87011	87789	5.843	6.035
4)	m	4-Nitrophenol	12.14	11.94	19819	19035	5.168	5.658
6)	m	Dicamba	13.27	13.22	190842	175001	5.661	5.254m
7)	m	Dichloroprop	14.37	14.46	56076	57727	5.775	5.857
8)	m	2,4-D	14.86	14.88	63935	63338	5.689	5.657
9)	m	Trichlopyr	15.55	15.64	716810	137943	5.271	5.374
10)	m	Pentachloropheno	15.55	16.18	716810	549083	4.977	4.757
11)	m	2,4,5-TP (Silvex	16.06	16.27	216083	205297	4.991	4.668
12)	m	2,4,5-T	16.61	16.77	168422	159731	5.428	5.323
13)	m	Chloramben	16.72	16.61	107952	112903	5.467	5.394
14)	m	Dinoseb	17.76	17.72	162485	118831	5.645m	5.775m
15)	m	2,4-DB	17.31	17.54	27096	36029	5.733	6.911m
16)	m	Bentazon	18.47	18.07	15849	33799	5.158m	6.918 #
17)	m	DCPA (Dacthal)	18.86	18.81	161292	144012	5.470	5.109
18)	m	Picloram	18.95	18.61	101566	89666	5.419	5.052
19)	m	Acifluorfen	20.93	20.82	130700	105715	5.646	5.186

SS 10/1/13

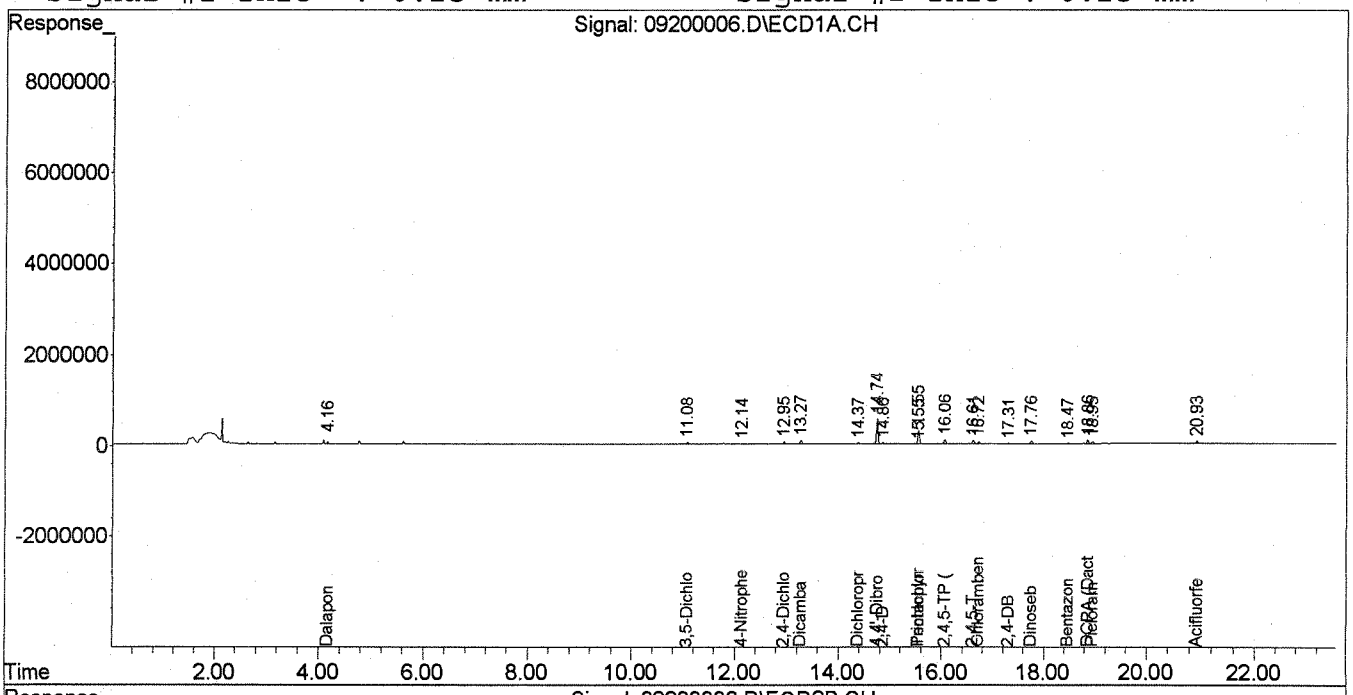
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

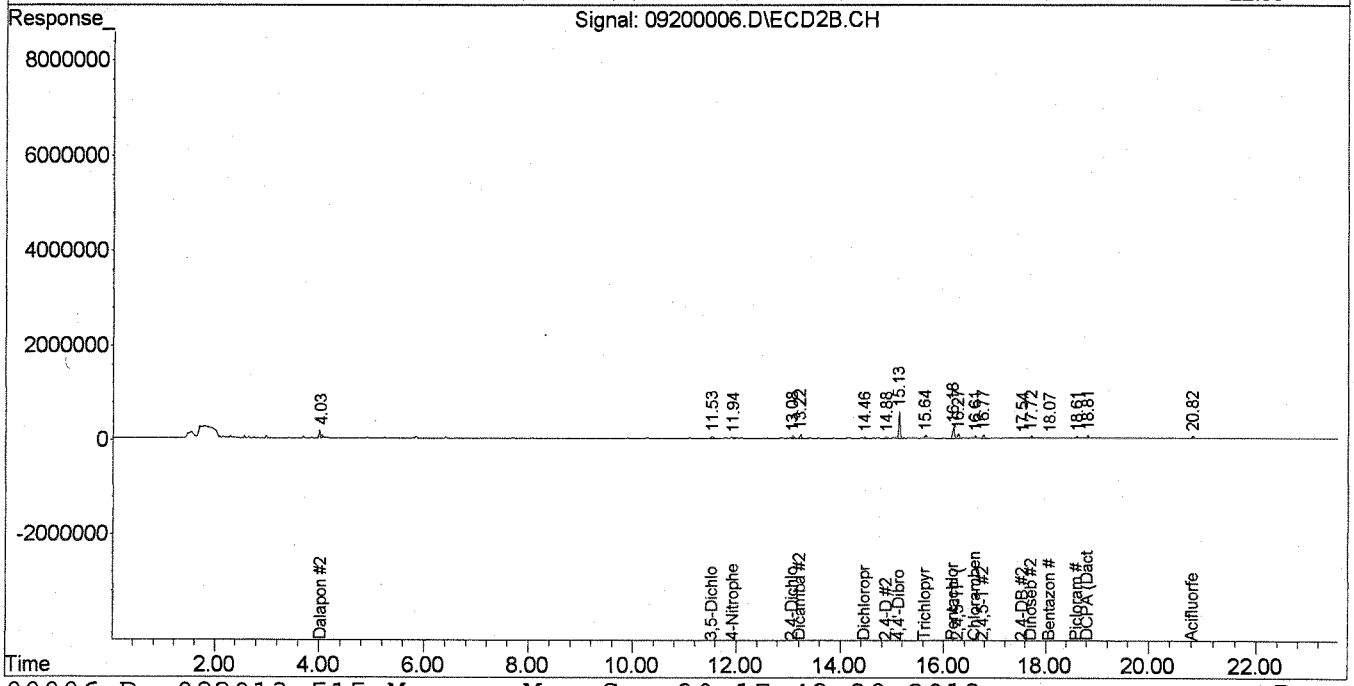
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:42 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

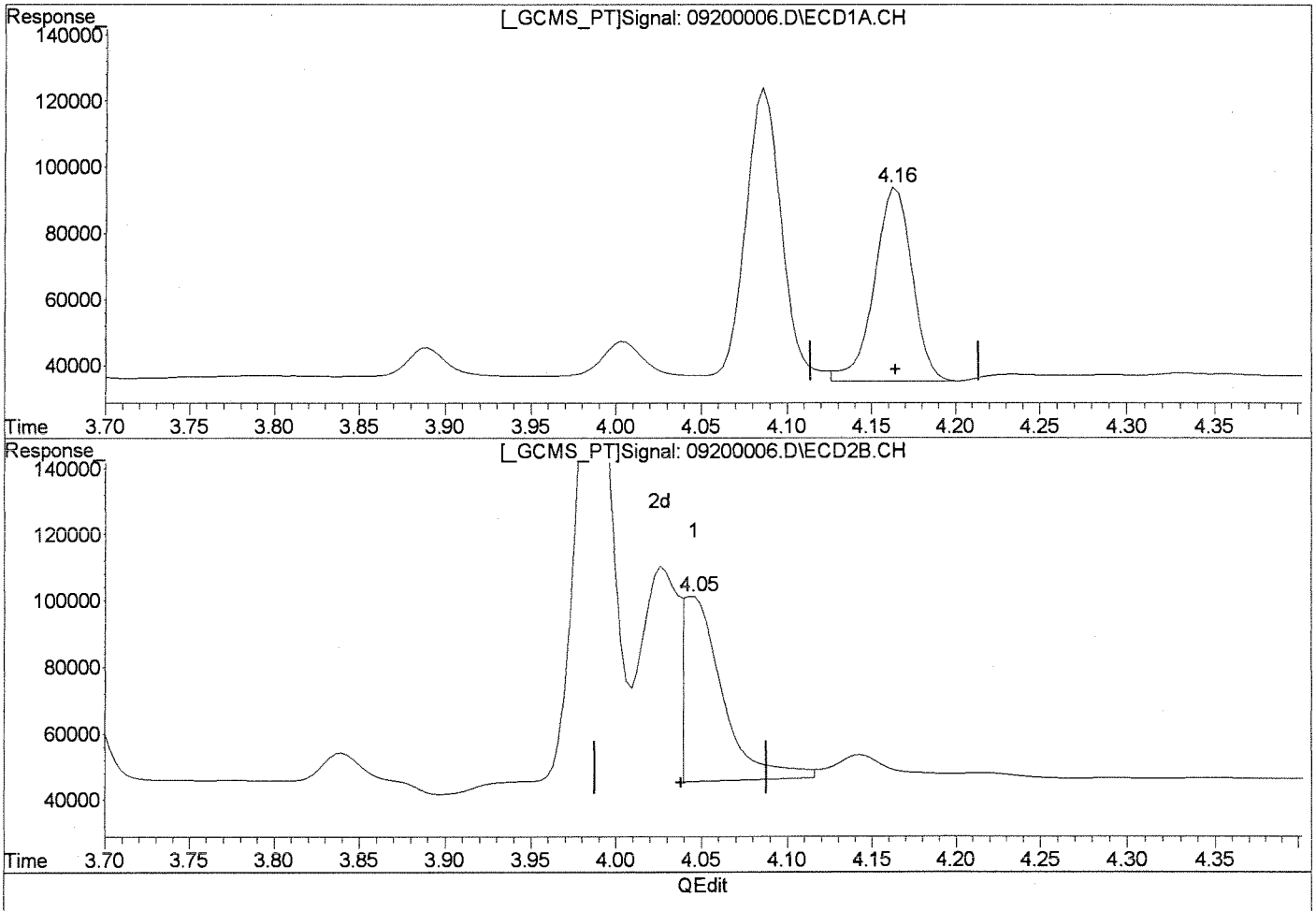




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 5.750ppb

response 90669

(2) Dalapon #2 (m)

4.05min 3.517ppb

response 80697

Manual Integration:

Before

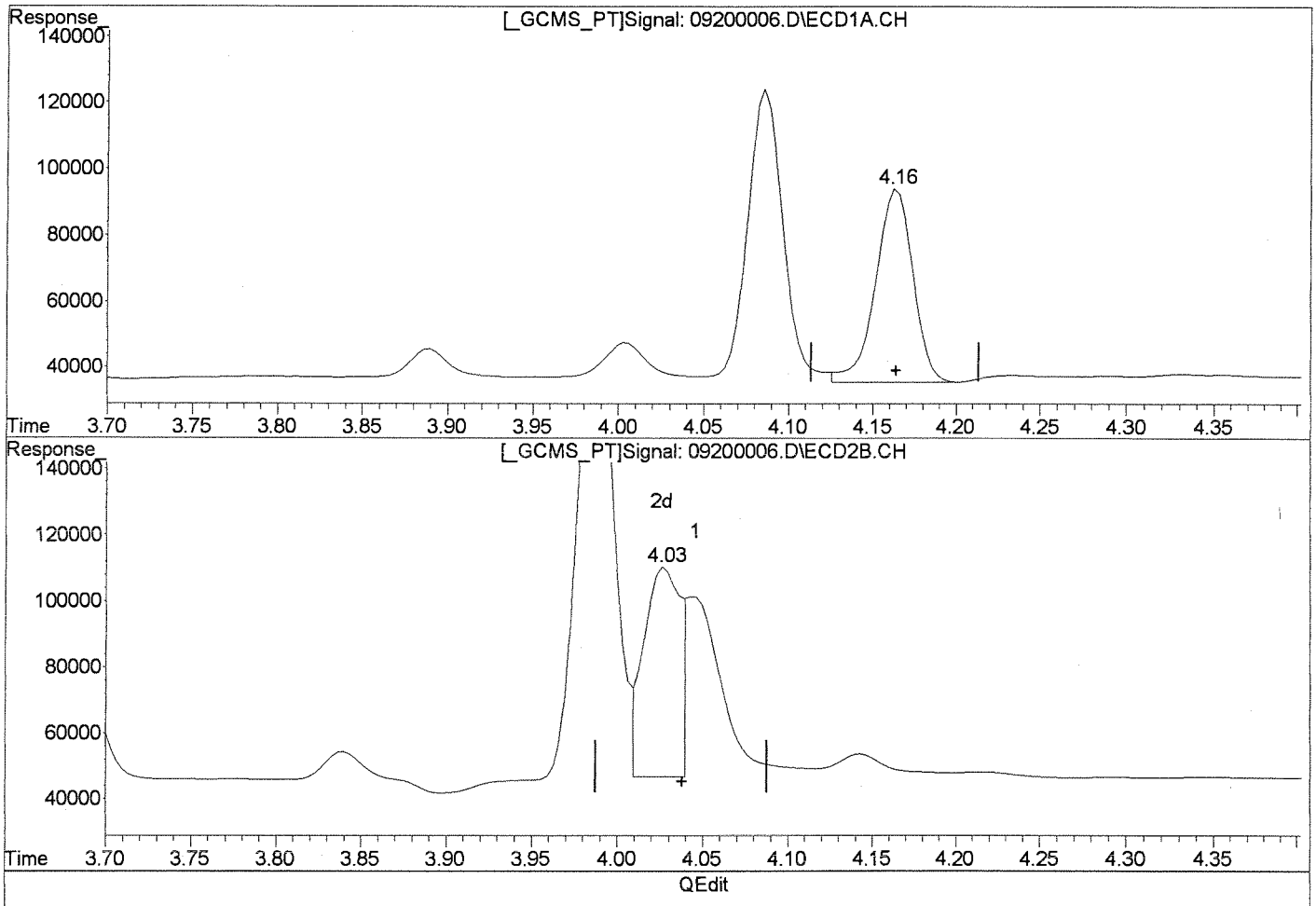
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:37:37 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 5.750ppb

response 90669

(2) Dalapon #2 (m)

4.03min 4.198ppb m

response 96307

Manual Integration:

After

Wrong Peak

09/26/13

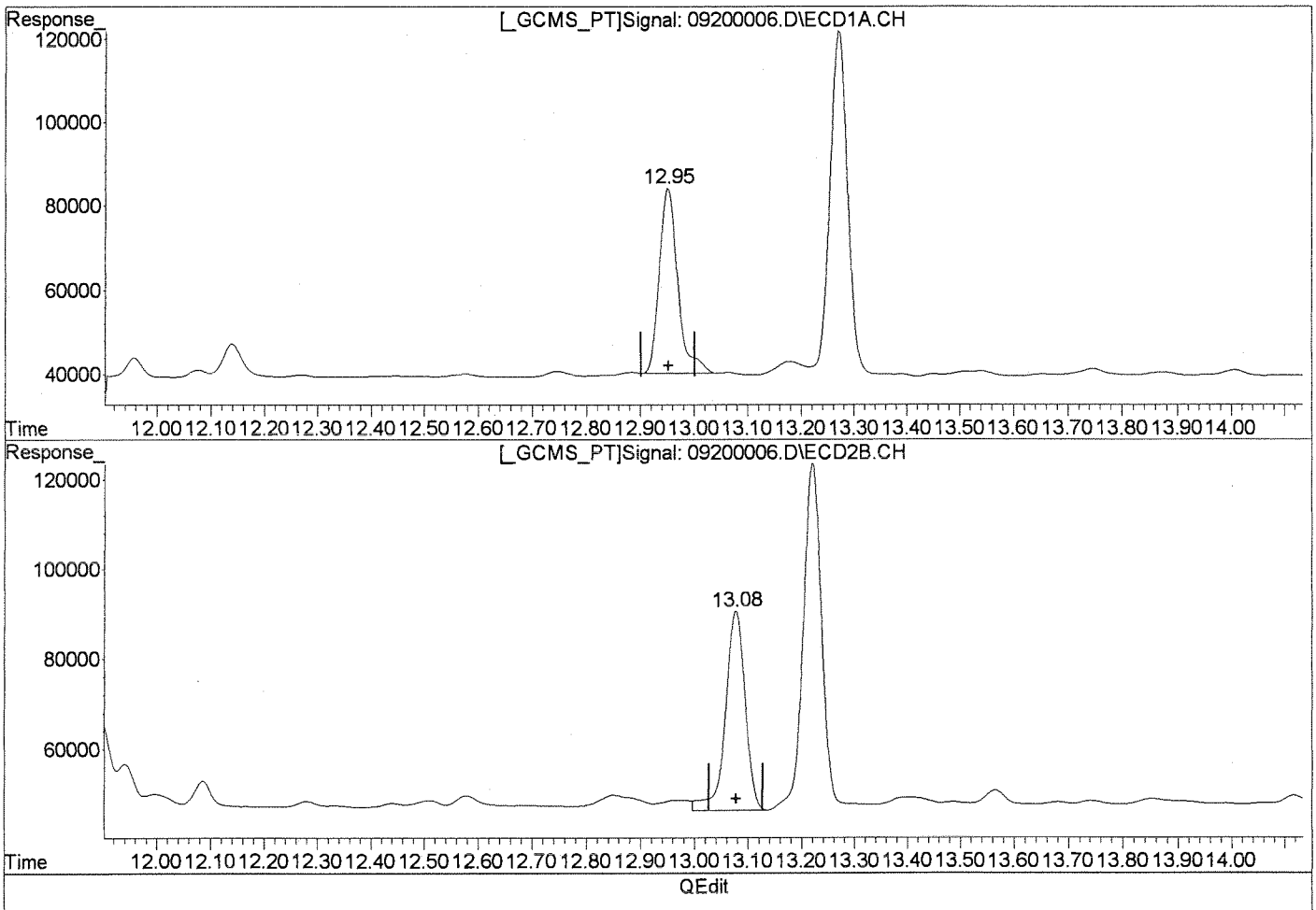
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:37:50 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 12.169ppb

response 106655

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 12.858ppb

response 114626

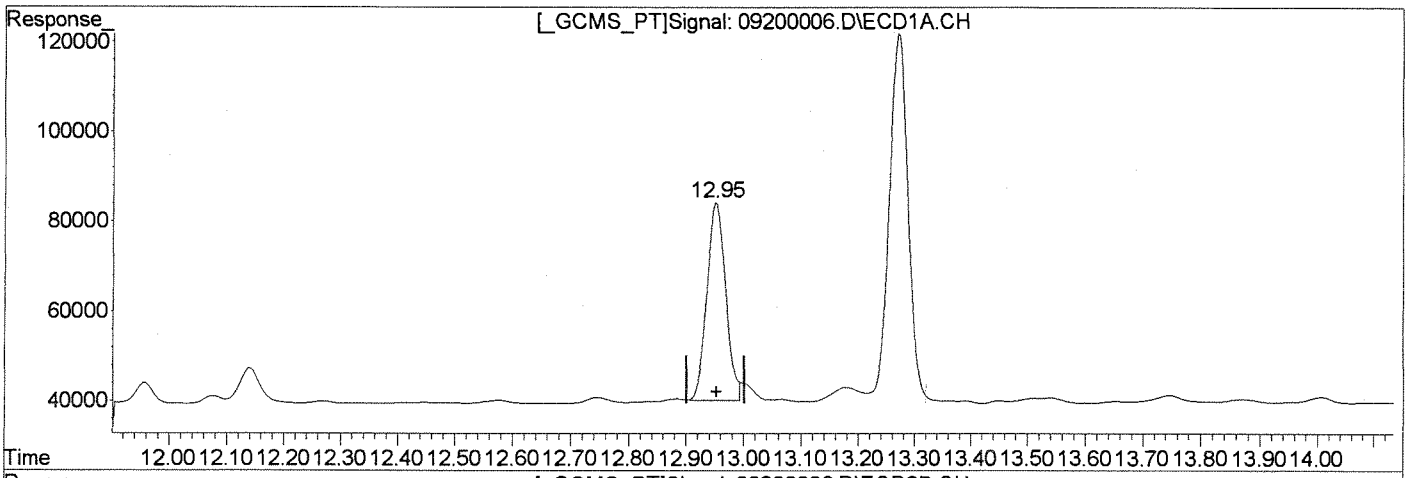
(+) = Expected Retention Time

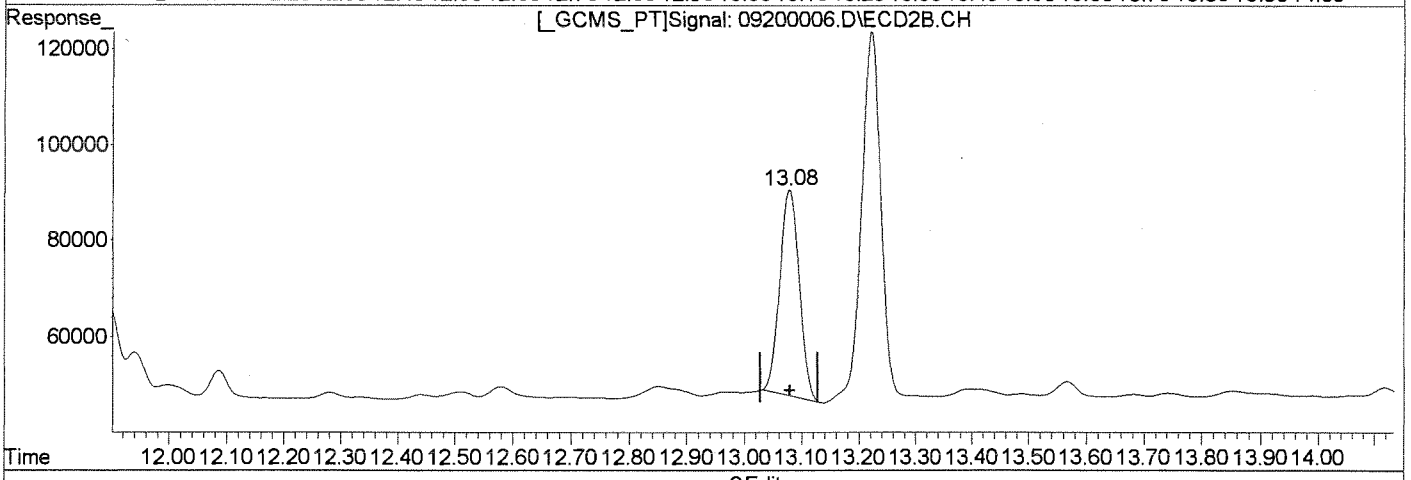
09200006.D 092013_515.M Thu Sep 26 17:37:58 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 11.571ppb m

response 101414

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 11.343ppb m

response 101121

Manual Integration:

After

Baseline/Shoulder

09/26/13

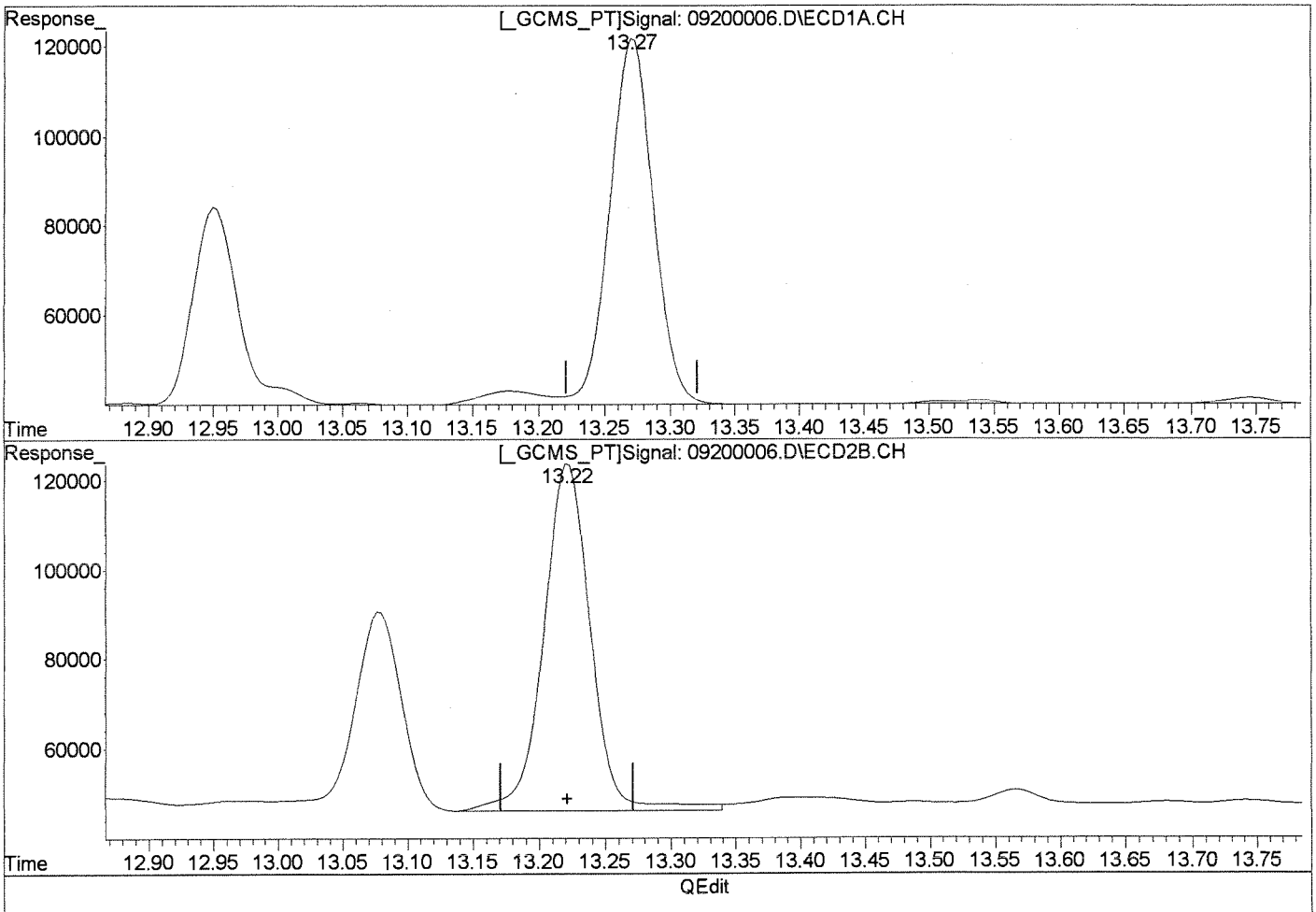
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:38:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(6) Dicamba (m)

13.27min 5.661ppb

response 190842

Manual Integration:

Before

(6) Dicamba #2 (m)

13.22min 5.727ppb

response 190738

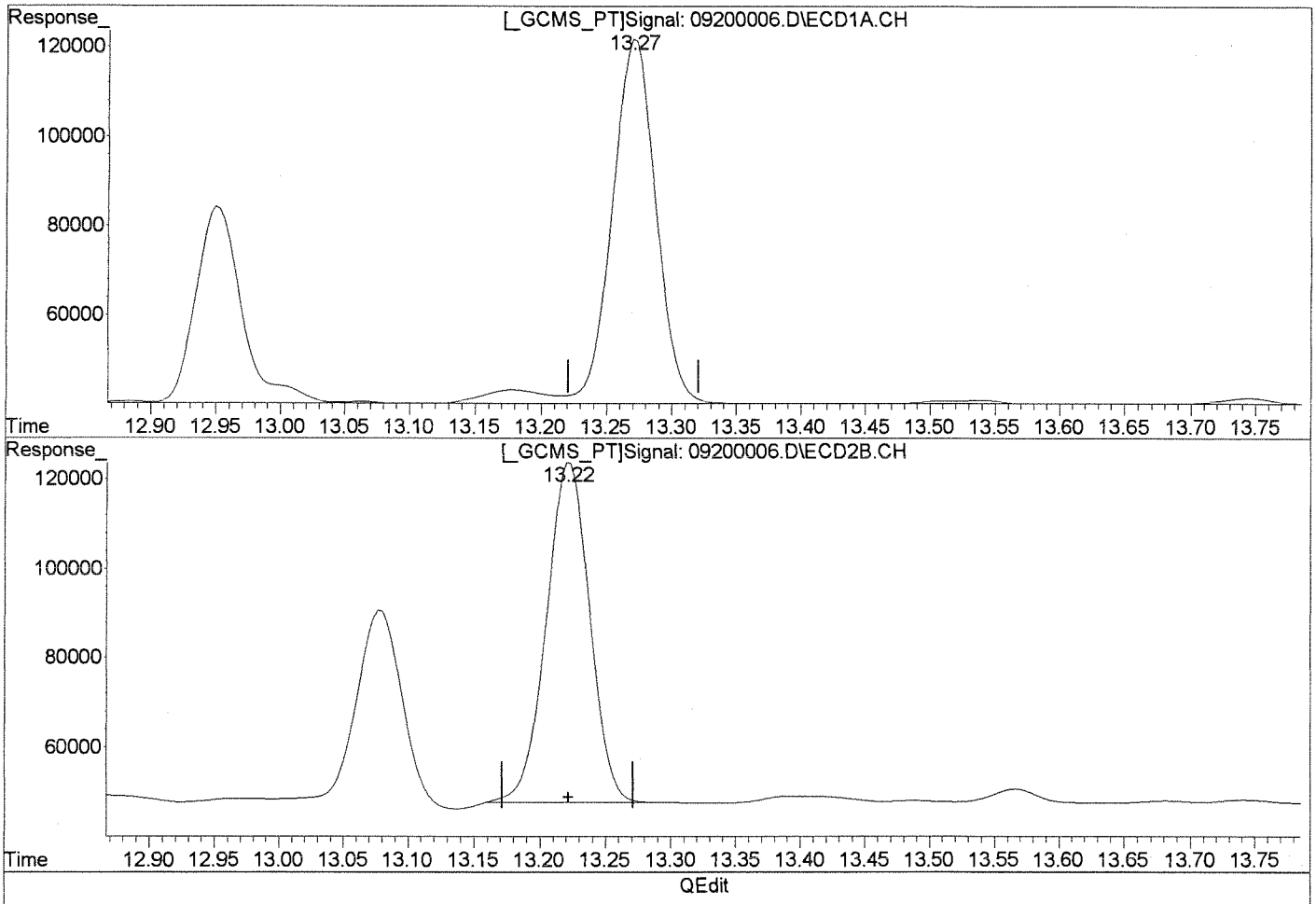
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:38:19 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(6) Dicamba (m)

13.27min 5.661ppb

response 190842

(6) Dicamba #2 (m)

13.22min 5.254ppb m

response 175001

Manual Integration:

After

Baseline/Shoulder

09/26/13

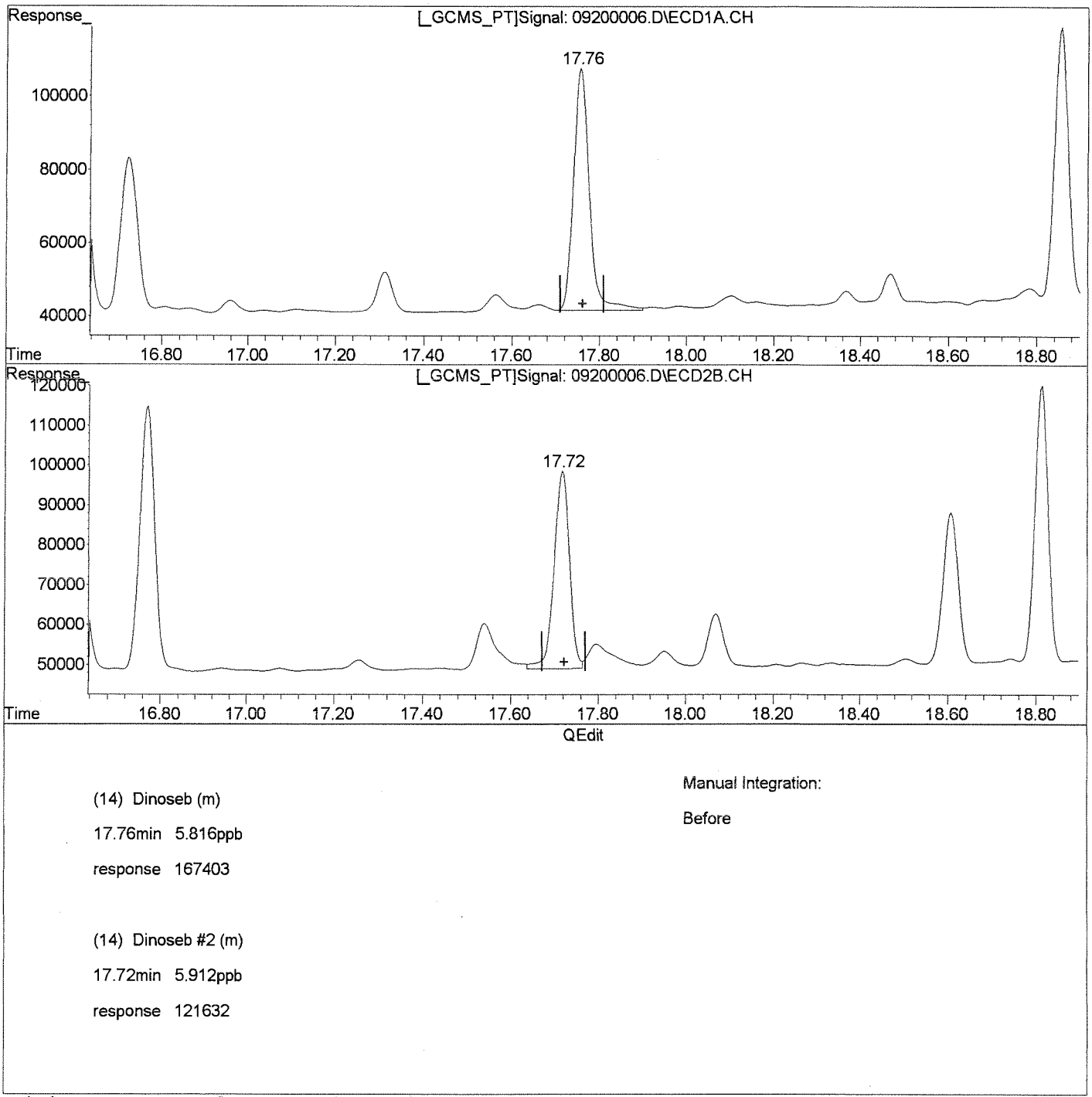
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:38:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration

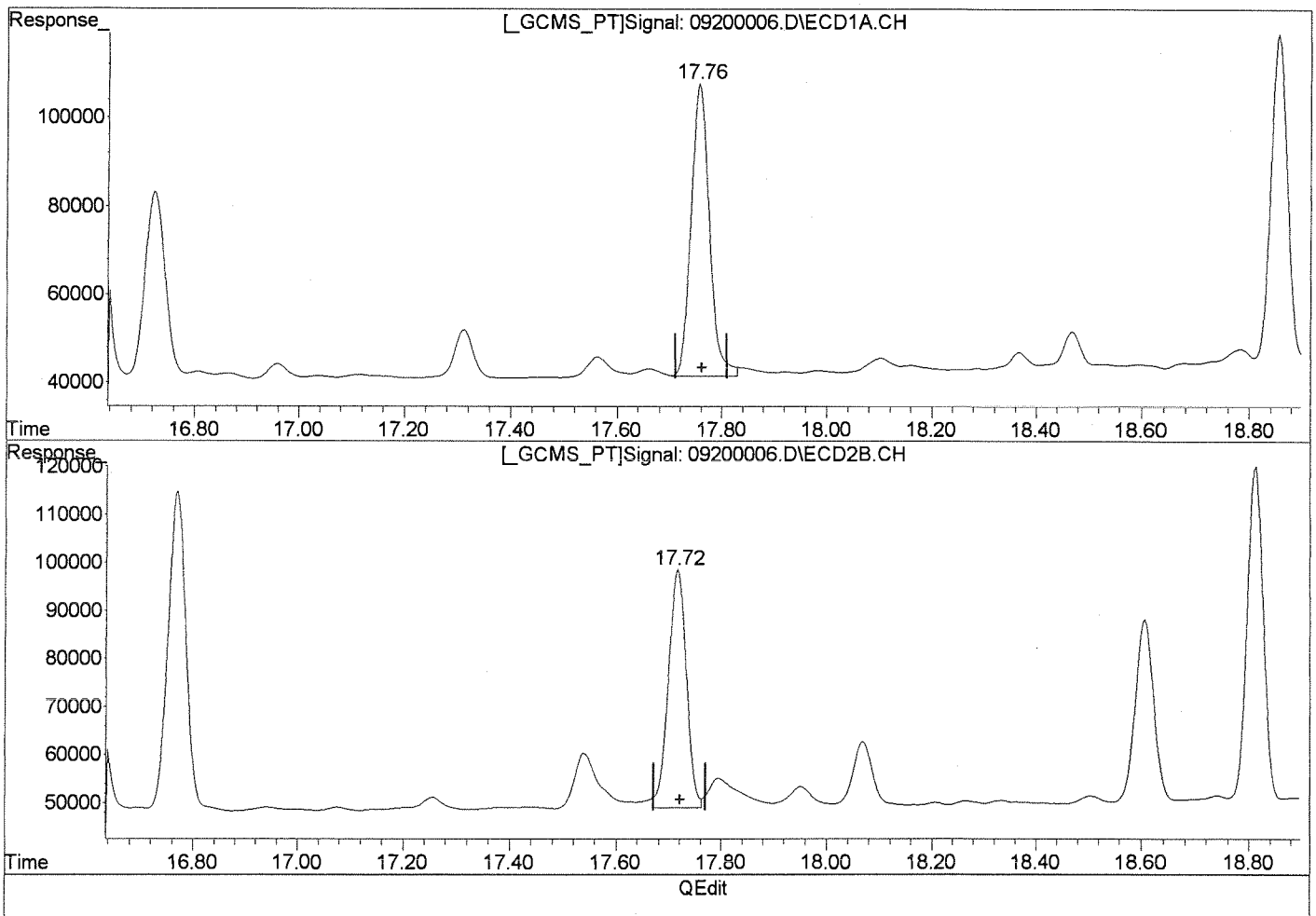


(+) = Expected Retention Time
09200006.D 092013_515.M Thu Sep 26 17:38:45 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(14) Dinoseb (m)

17.76min 5.645ppb m

response 162485

(14) Dinoseb #2 (m)

17.72min 5.775ppb m

response 118831

Manual Integration:

After

Baseline/Shoulder

09/26/13

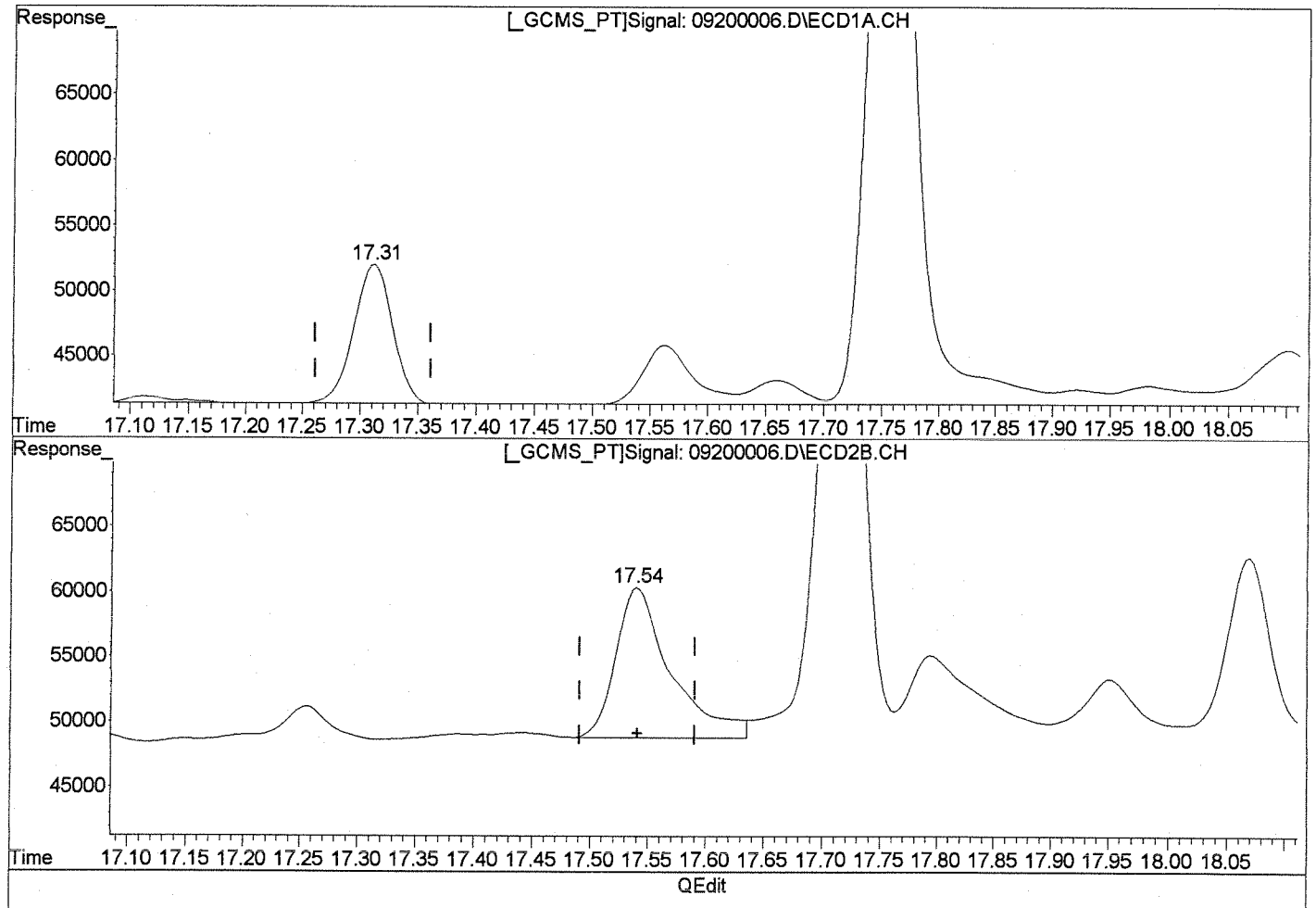
(+) = Expected Retention Time

09200006.D 092013_515.M Thu Sep 26 17:39:05 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:42 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:52:07 2013
Response via : Multiple Level Calibration



QEdit

(15) 2,4-DB (m)

17.31min 5.733ppb

response 27096

(15) 2,4-DB #2 (m)

17.54min 7.367ppb

response 38404

Manual Integration:

Before

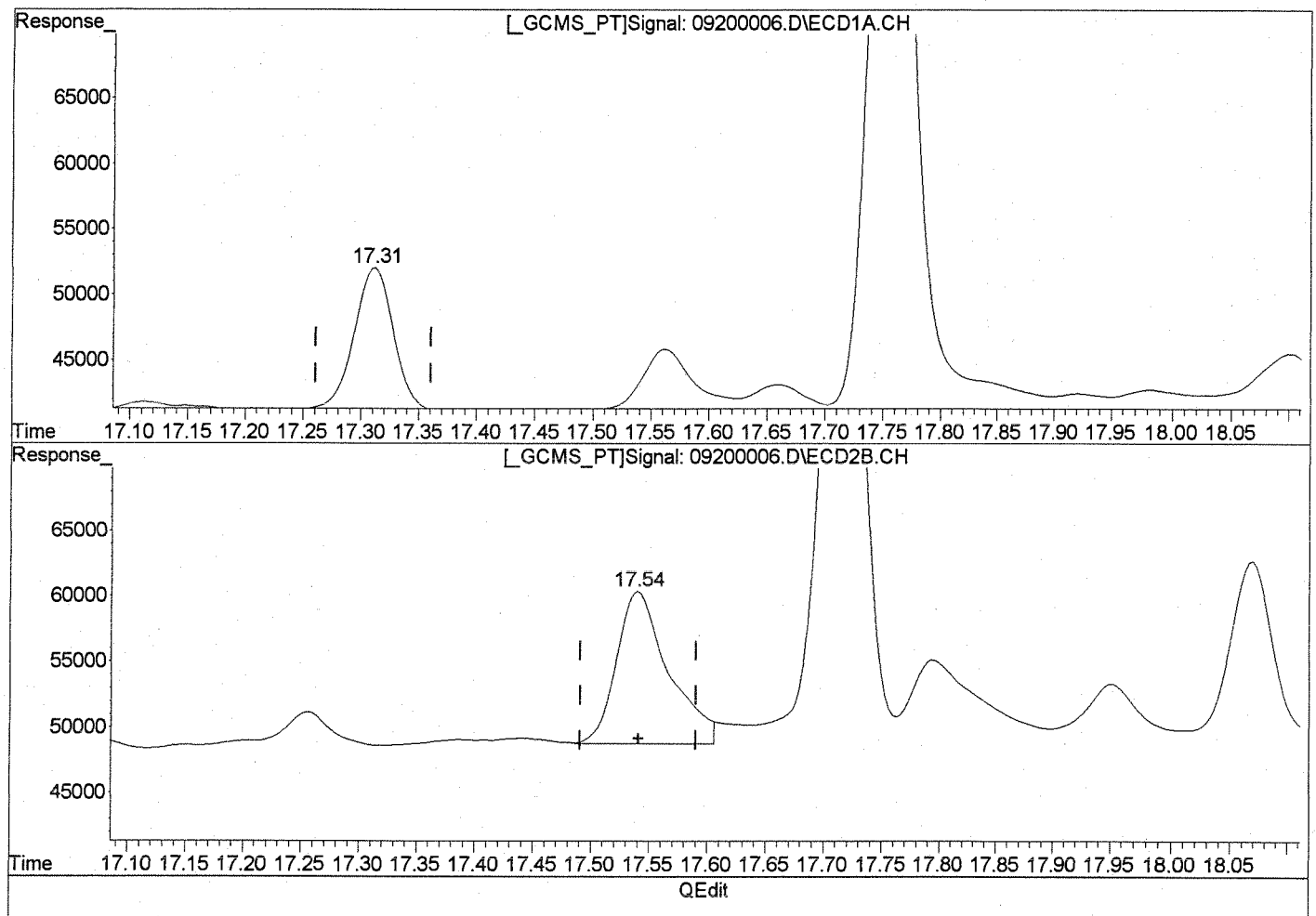
(+) = Expected Retention Time

09200006.D 092013_515.M Mon Sep 30 17:15:17 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:42 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:52:07 2013
Response via : Multiple Level Calibration



(15) 2,4-DB (m)

17.31min 5.733ppb

response 27096

(15) 2,4-DB #2 (m)

17.54min 6.911ppb m

response 36029

Manual Integration:

After

Baseline/Shoulder

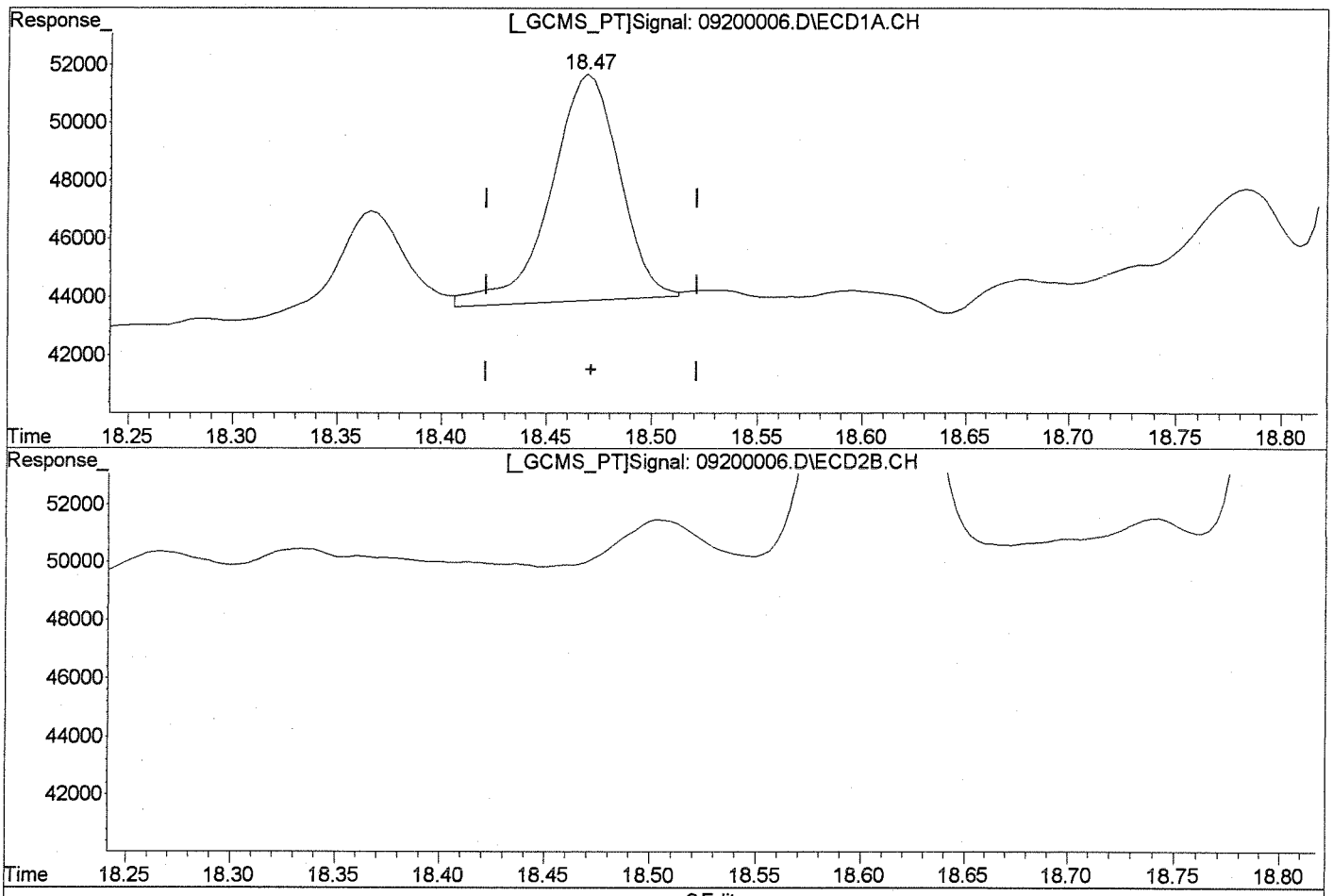
09/30/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:19 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration



QEdit

(16) Bentazon (m)

18.47min 5.779ppb

response 17757

(16) Bentazon #2 (m)

18.07min 6.918ppb

response 33799

Manual Integration:

Before

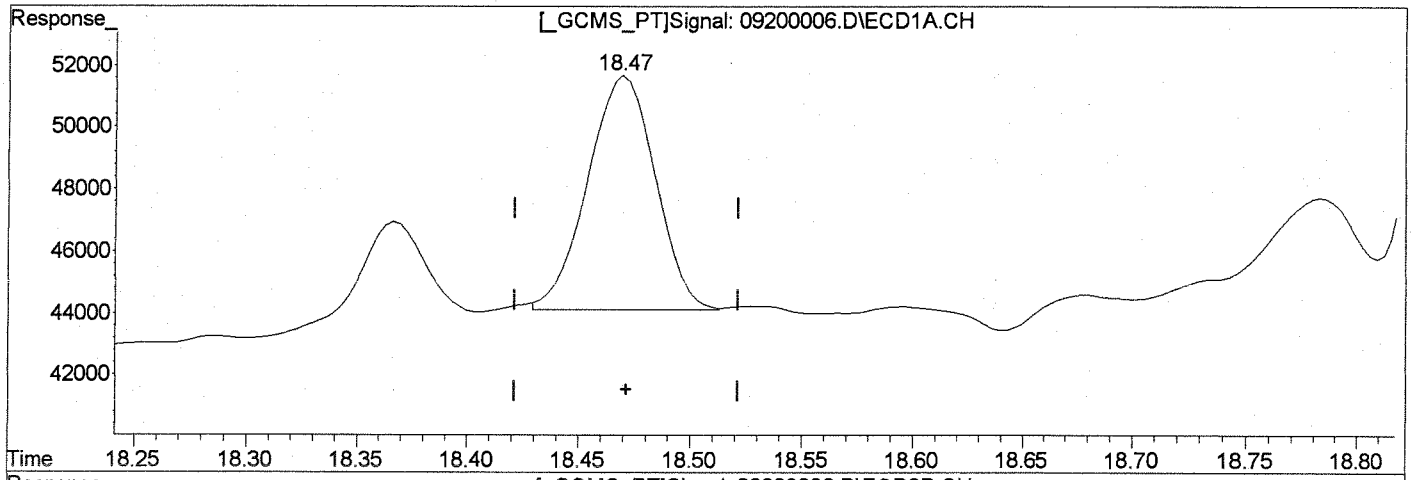
(+) = Expected Retention Time

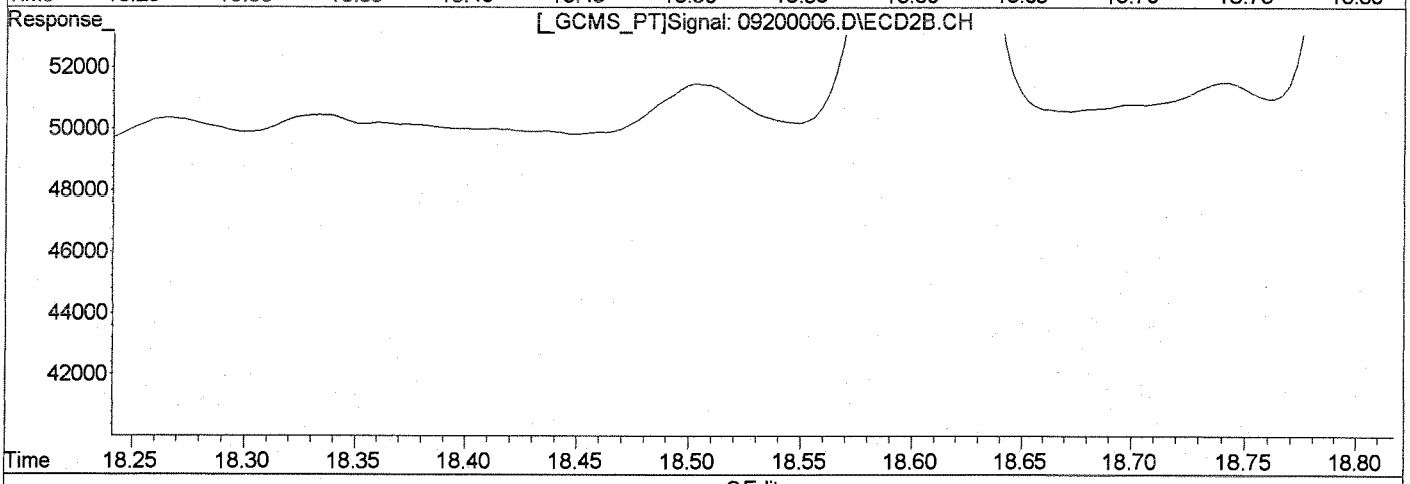
09200006.D 092013_515.M Mon Sep 30 17:39:15 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200006.D\ECD1A.CH Vial: 4
Signal #2 : J:\GC24\DATA\092013.515\09200006.D\ECD2B.CH
Acq On : 09-20-2013 06:32:55 PM Operator: JSCHWAB
Sample : 091713-LEV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:19 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration





QEdit

(16) Bentazon (m)

18.47min 5.158ppb m

response 15849

(16) Bentazon #2 (m)

18.07min 6.918ppb

response 33799

Manual Integration:

After

Baseline/Shoulder

09/30/13

(+) = Expected Retention Time

09200006.D 092013_515.M Mon Sep 30 17:39:23 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:11 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.12	1202189	1165766	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	189422	180091	21.454m	20.011m
		Target Compounds						
2)	m	Dalapon	4.16	4.03	156955	198417	9.881	8.567m
3)	m	3,5-Dichlorobenz	11.08	11.53	156662	152653	10.442	10.396
4)	m	4-Nitrophenol	12.14	11.94	37025	42241	9.584	12.439m#
6)	m	Dicamba	13.27	13.22	348601	327566	10.264	9.742m
7)	m	Dichloroprop	14.37	14.46	106357	105236	10.872	10.576
8)	m	2,4-D	14.86	14.88	117226	113962	10.354	10.082
9)	m	Trichlopyr	15.55	15.64	1374503	257642	10.033	9.943
10)	m	Pentachloropheno	15.55	16.18	1374503	1098876	9.473	9.430
11)	m	2,4,5-TP (Silvex	16.06	16.27	413478	392503	9.480	8.840
12)	m	2,4,5-T	16.61	16.77	317785	302267	10.166	9.978
13)	m	Chloramben	16.72	16.61	199027	211517	10.005	10.010
14)	m	Dinoseb	17.76	17.72	298881	218570	10.307	10.523m
15)	m	2,4-DB	17.31	17.54	53465	66084	11.229	12.557
16)	m	Bentazon	18.47	18.07	33324	52306	10.765m	10.605
17)	m	DCPA (Dacthal)	18.86	18.81	279681	258330	9.415	9.078
18)	m	Picloram	18.95	18.61	188030	167747	9.958	9.362
19)	m	Acifluorfen	20.94	20.83	238156	201891	10.211	9.811

SS 10/1/13

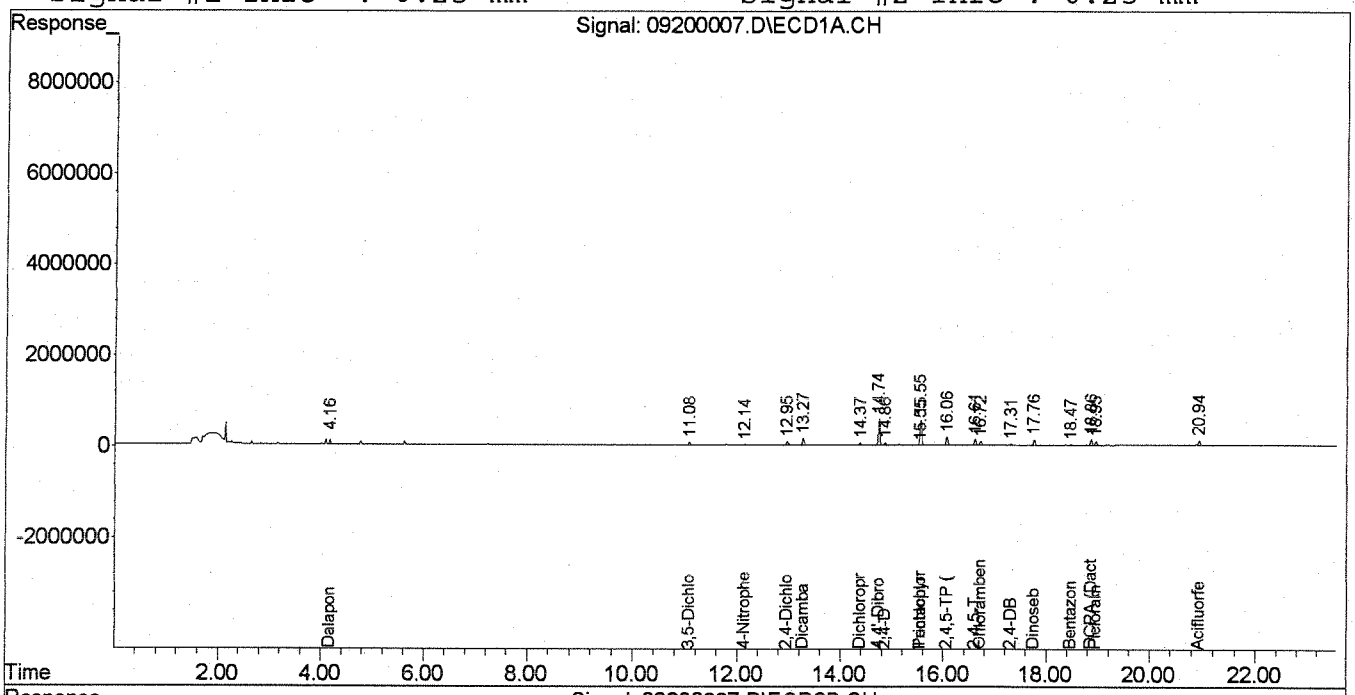
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

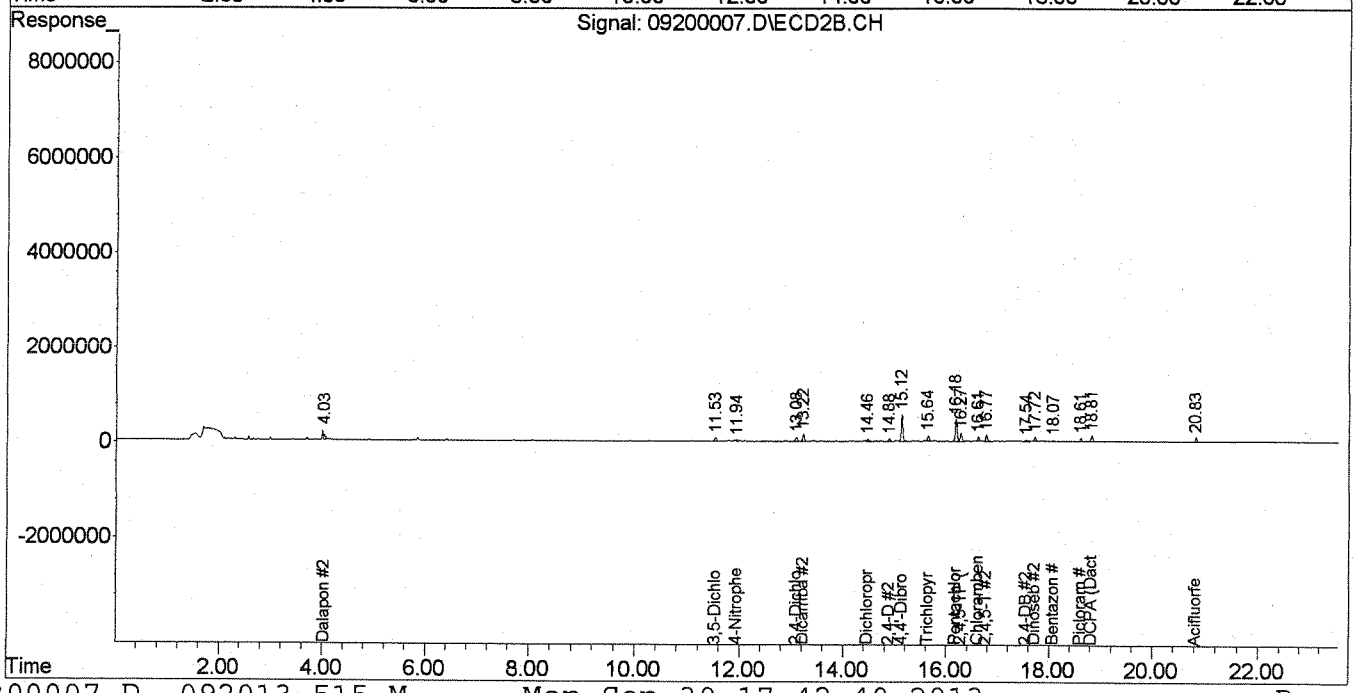
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:43 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

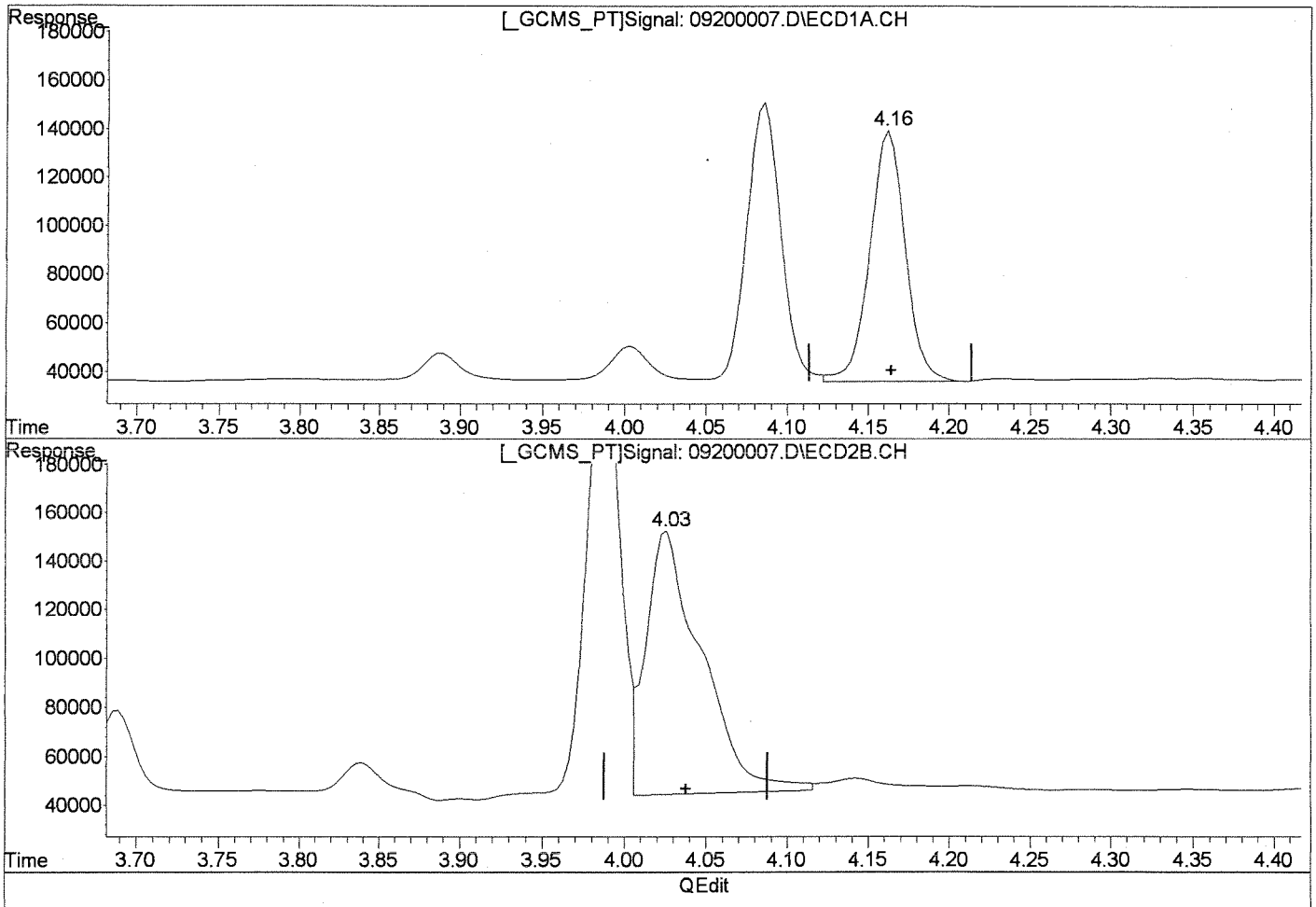




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 9.881ppb

response 156955

(2) Dalapon #2 (m)

4.03min 10.869ppb

response 251721

Manual Integration:

Before

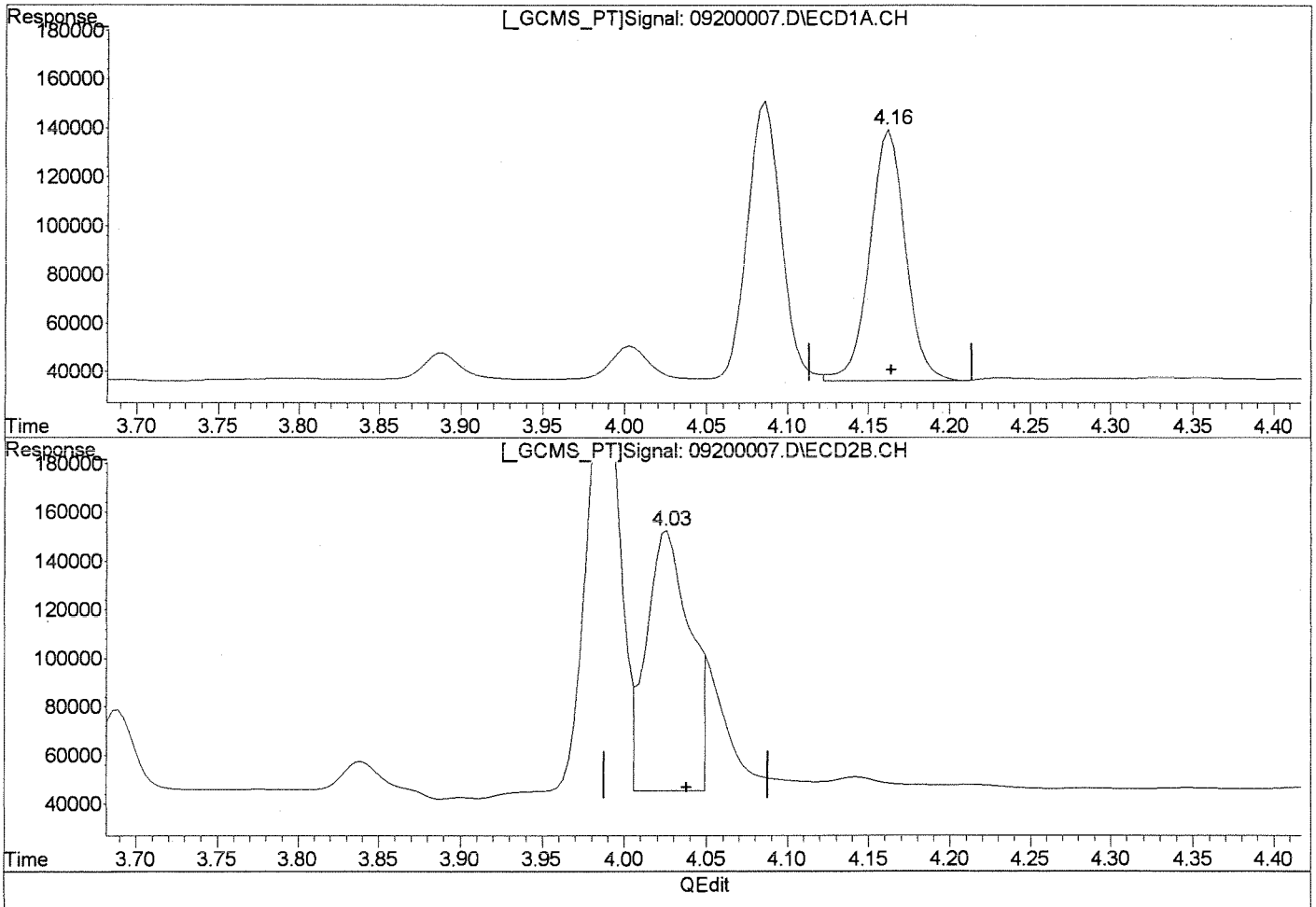
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:39:37 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)
4.16min 9.881ppb
response 156955

(2) Dalapon #2 (m)
4.03min 8.567ppb m
response 198417

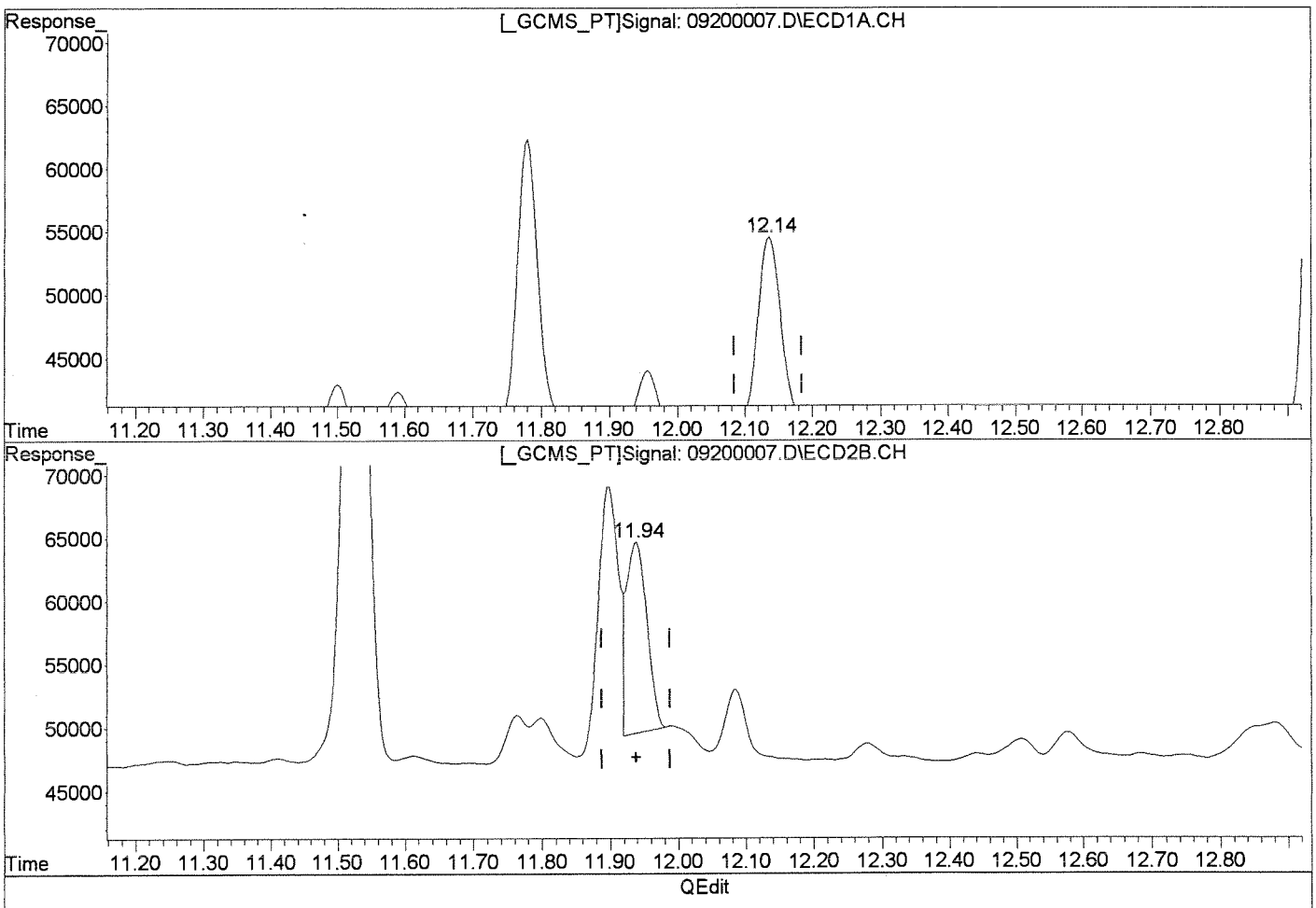
Manual Integration:
After
Baseline/Shoulder
09/26/13

(+) = Expected Retention Time
09200007.D 092013_515.M Thu Sep 26 17:39:48 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.14min 9.584ppb

response 37025

Manual Integration:

Before

(4) 4-Nitrophenol #2 (m)

11.94min 9.085ppb

response 30853

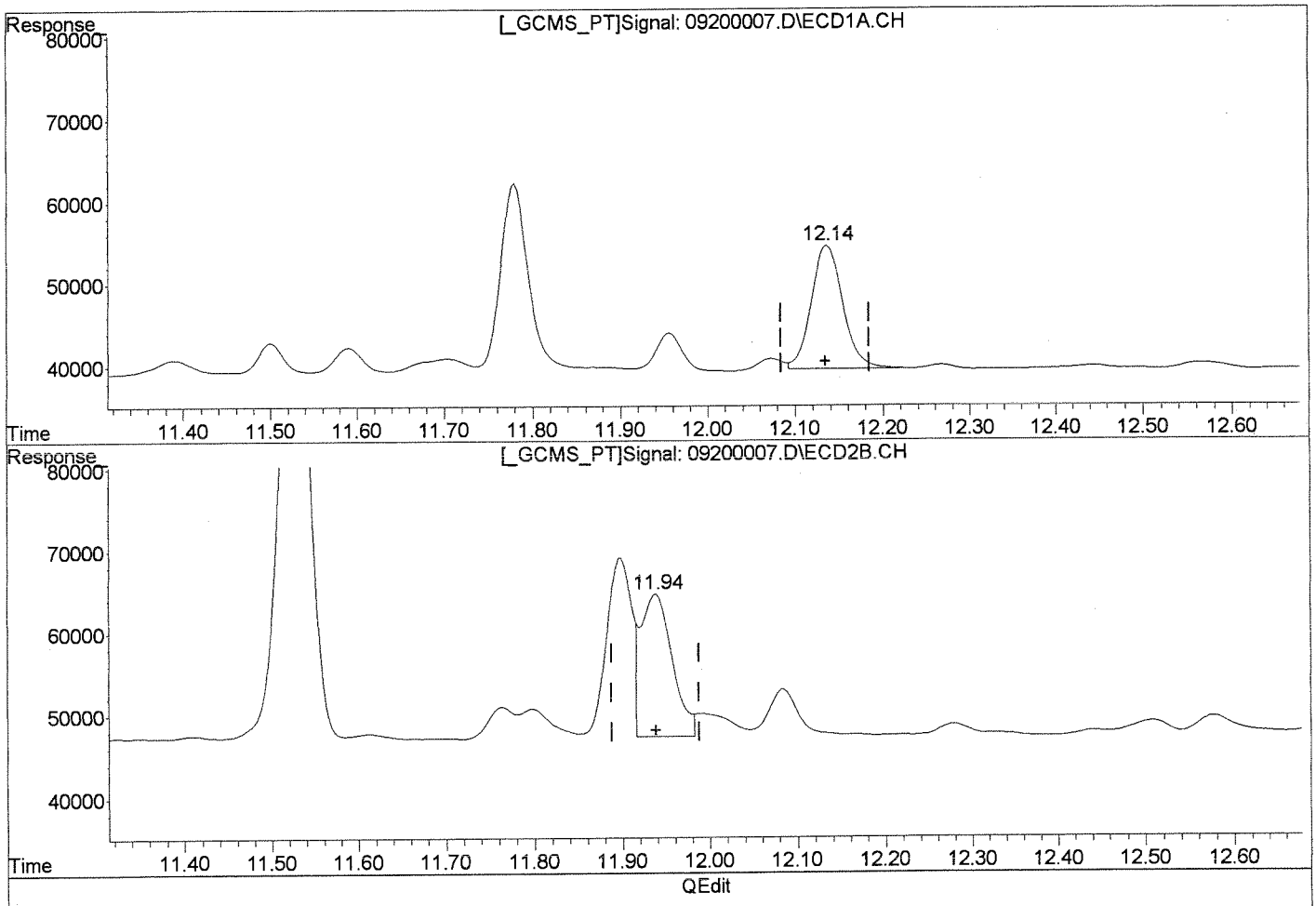
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:39:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.14min 9.584ppb

response 37025

(4) 4-Nitrophenol #2 (m)

11.94min 12.439ppb m

response 42241

Manual integration:

After

Baseline/Shoulder

09/26/13

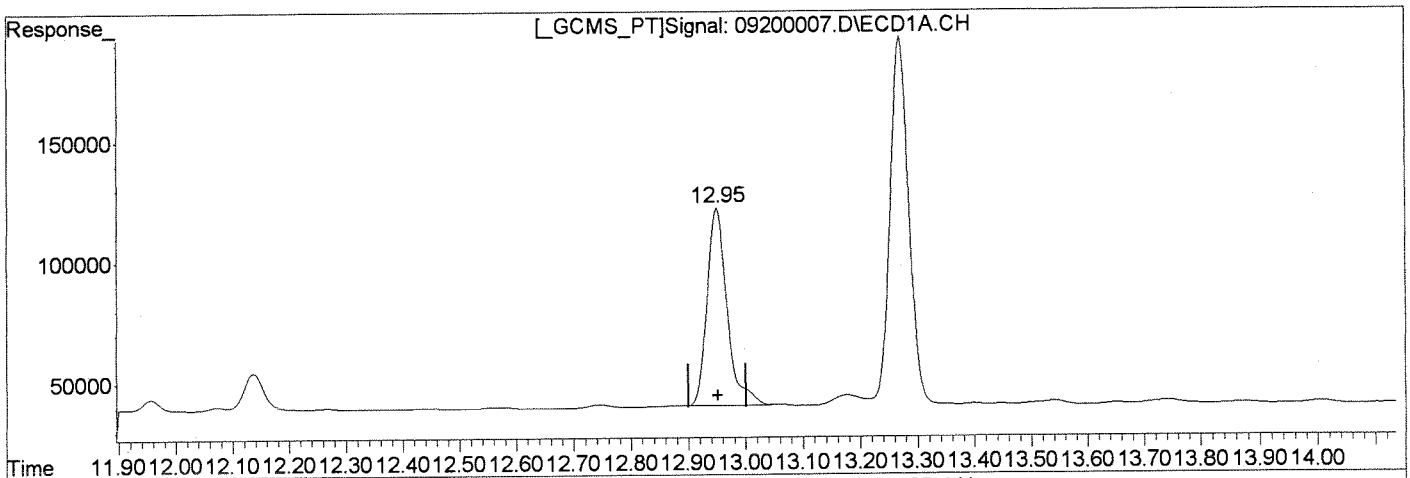
(+) = Expected Retention Time

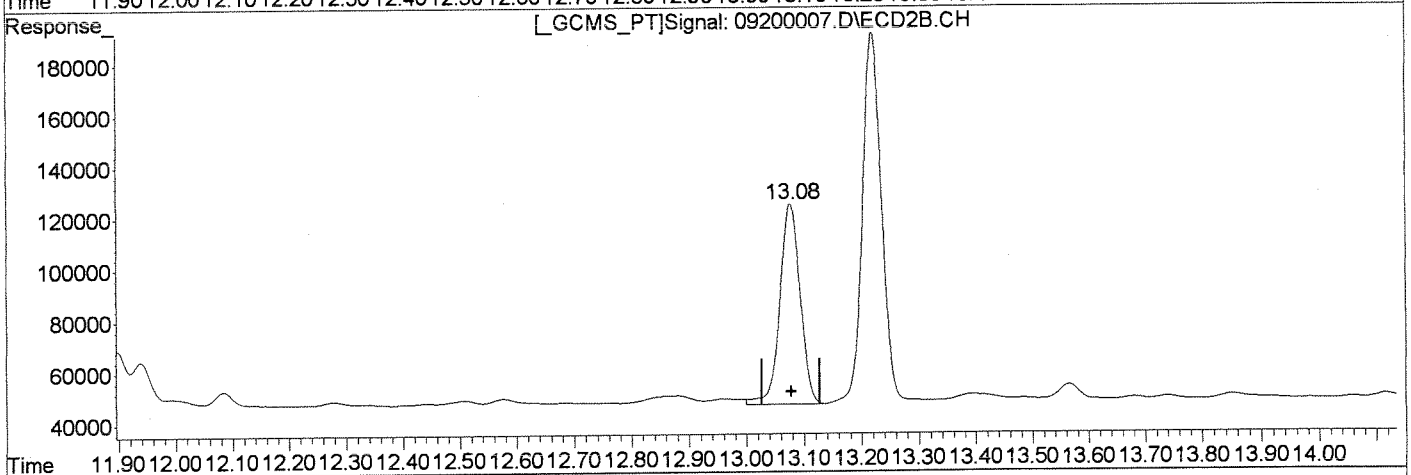
09200007.D 092013_515.M Thu Sep 26 17:40:07 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 22.541ppb

response 199022

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 21.213ppb

response 190913

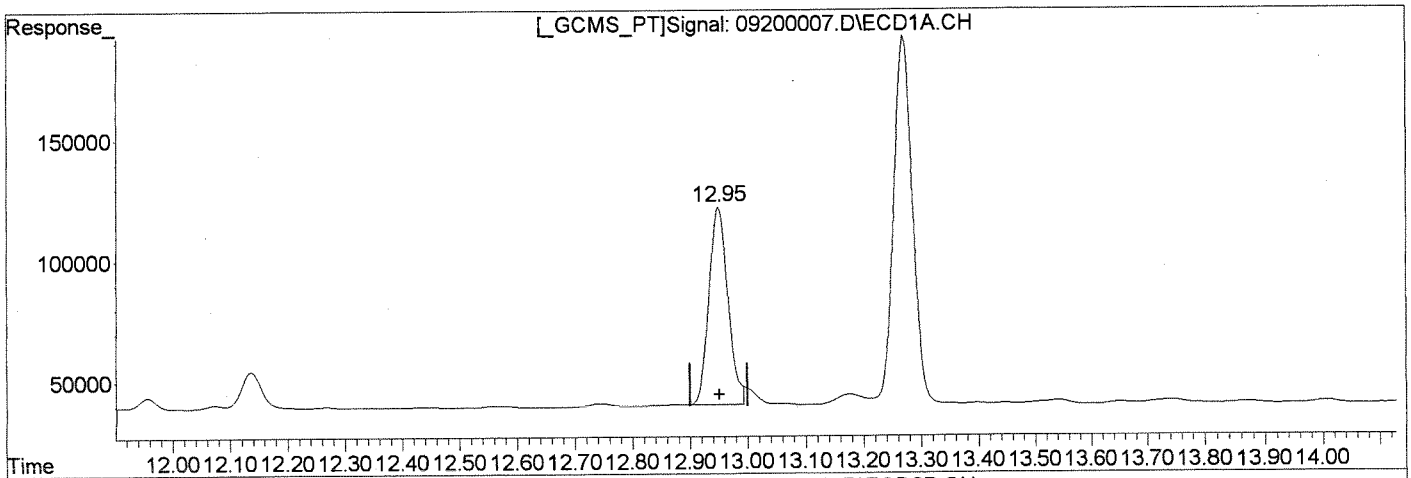
(+) = Expected Retention Time

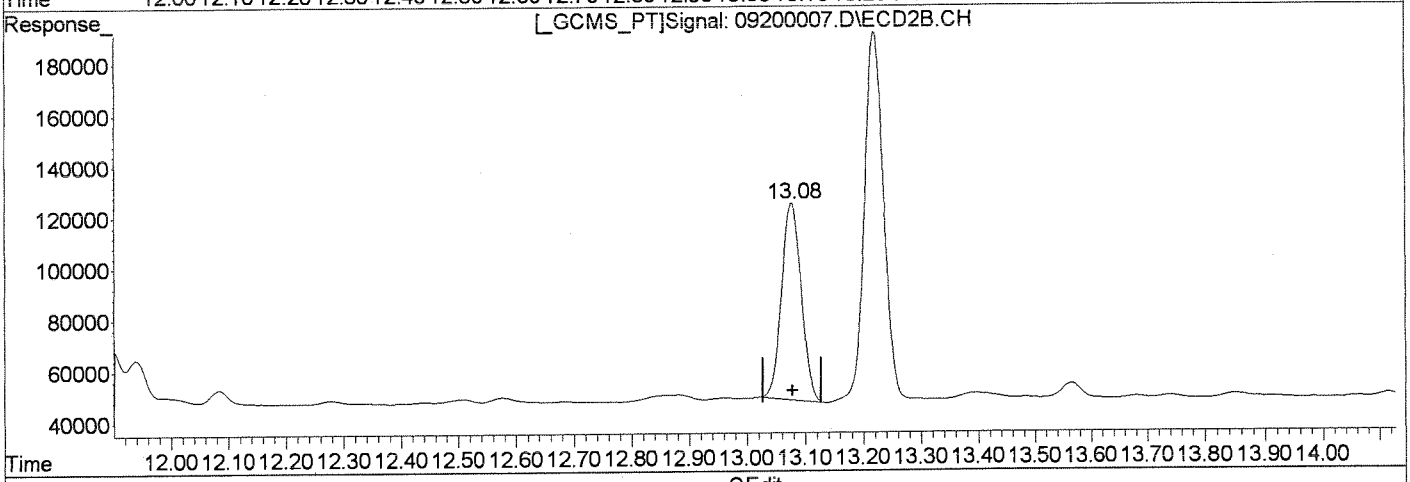
09200007.D 092013_515.M Thu Sep 26 17:40:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 21.454ppb m

response 189422

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 20.011ppb m

response 180091

Manual Integration:

After

Baseline/Shoulder

09/26/13

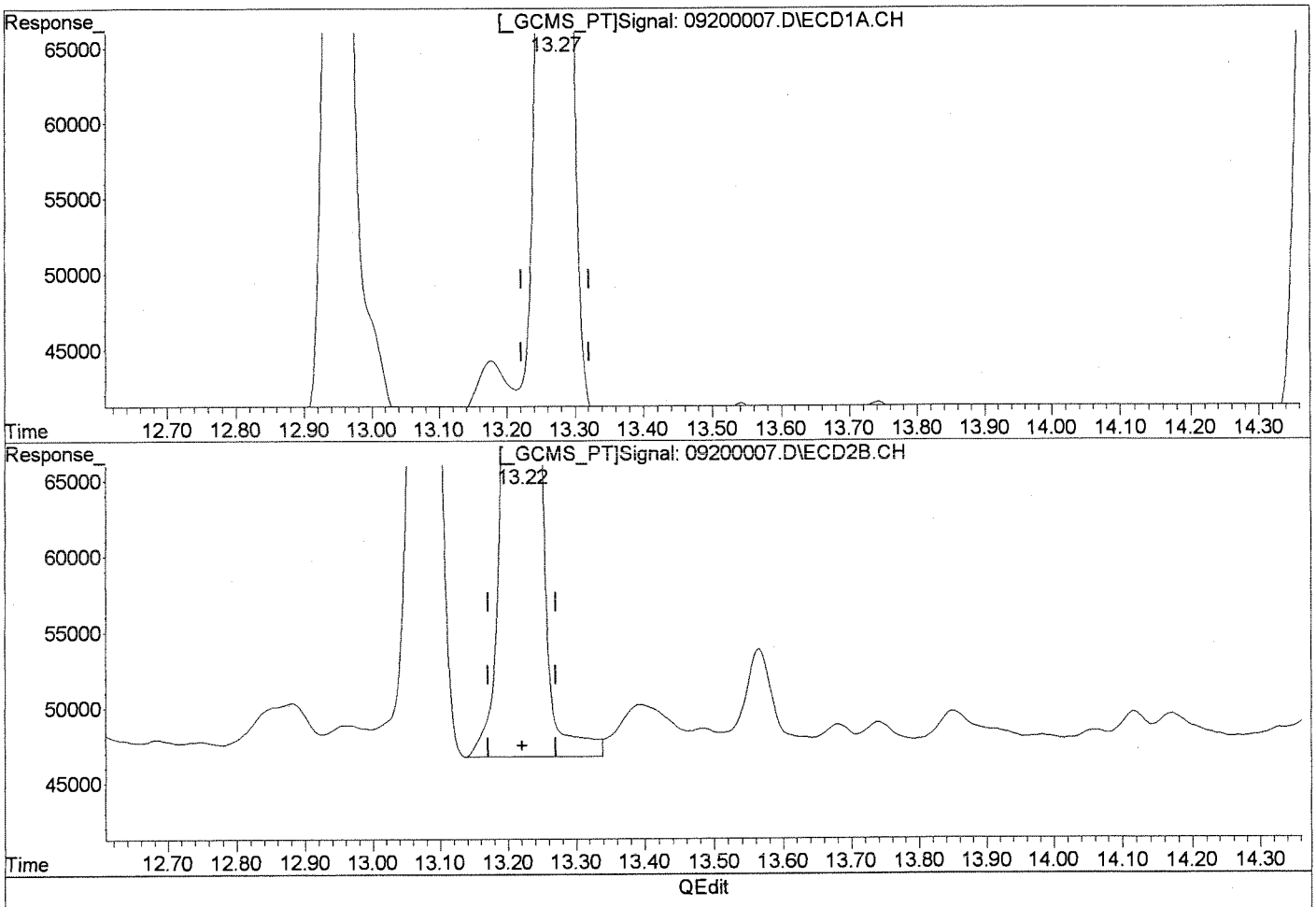
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:40:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.27min 10.264ppb

response 348601

(6) Dicamba #2 (m)

13.22min 10.125ppb

response 340422

Manual Integration:

Before

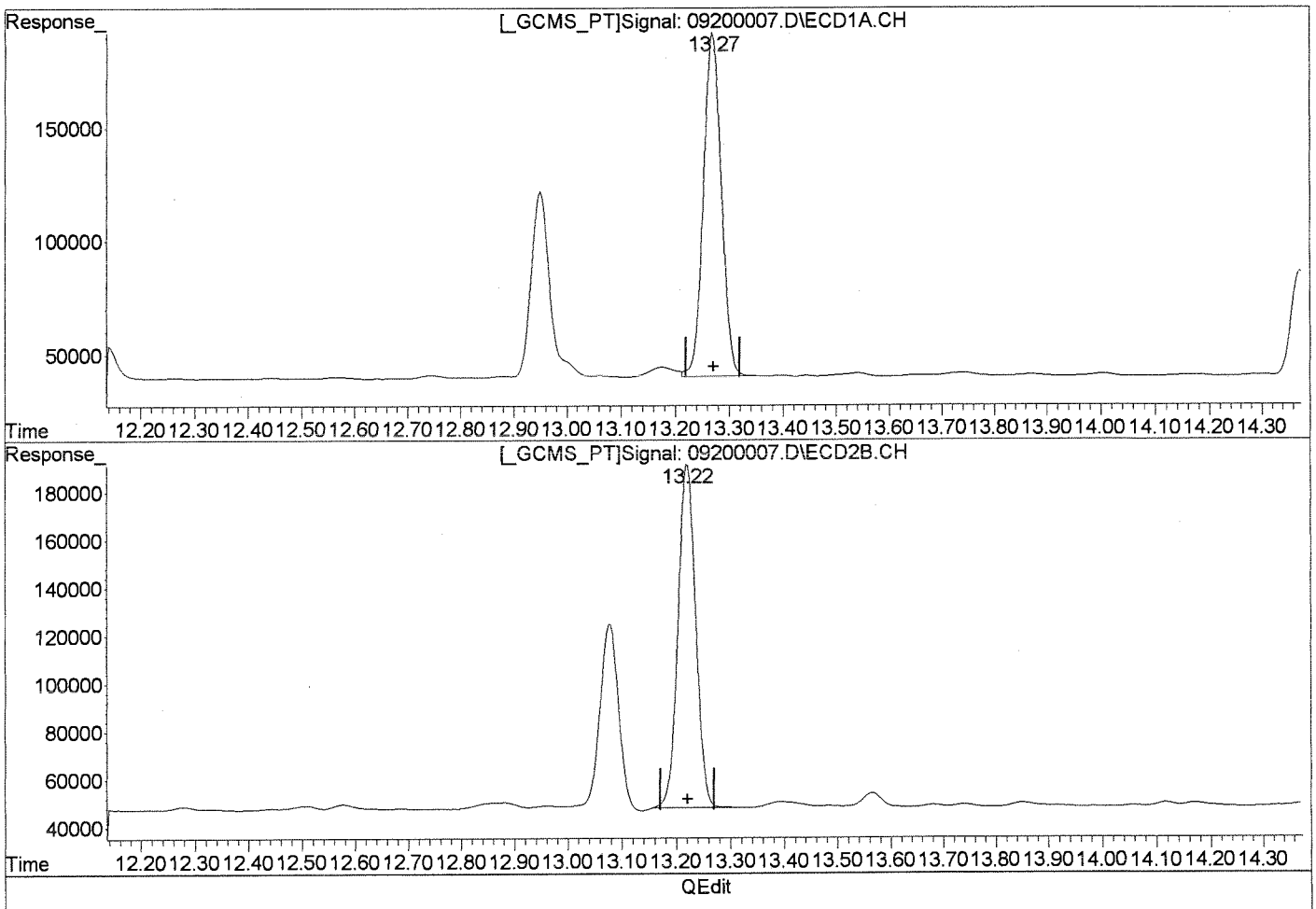
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:40:36 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(6) Dicamba (m)

13.27min 10.264ppb

response 348601

(6) Dicamba #2 (m)

13.22min 9.742ppb m

response 327566

Manual Integration:

After

Baseline/Shoulder

09/26/13

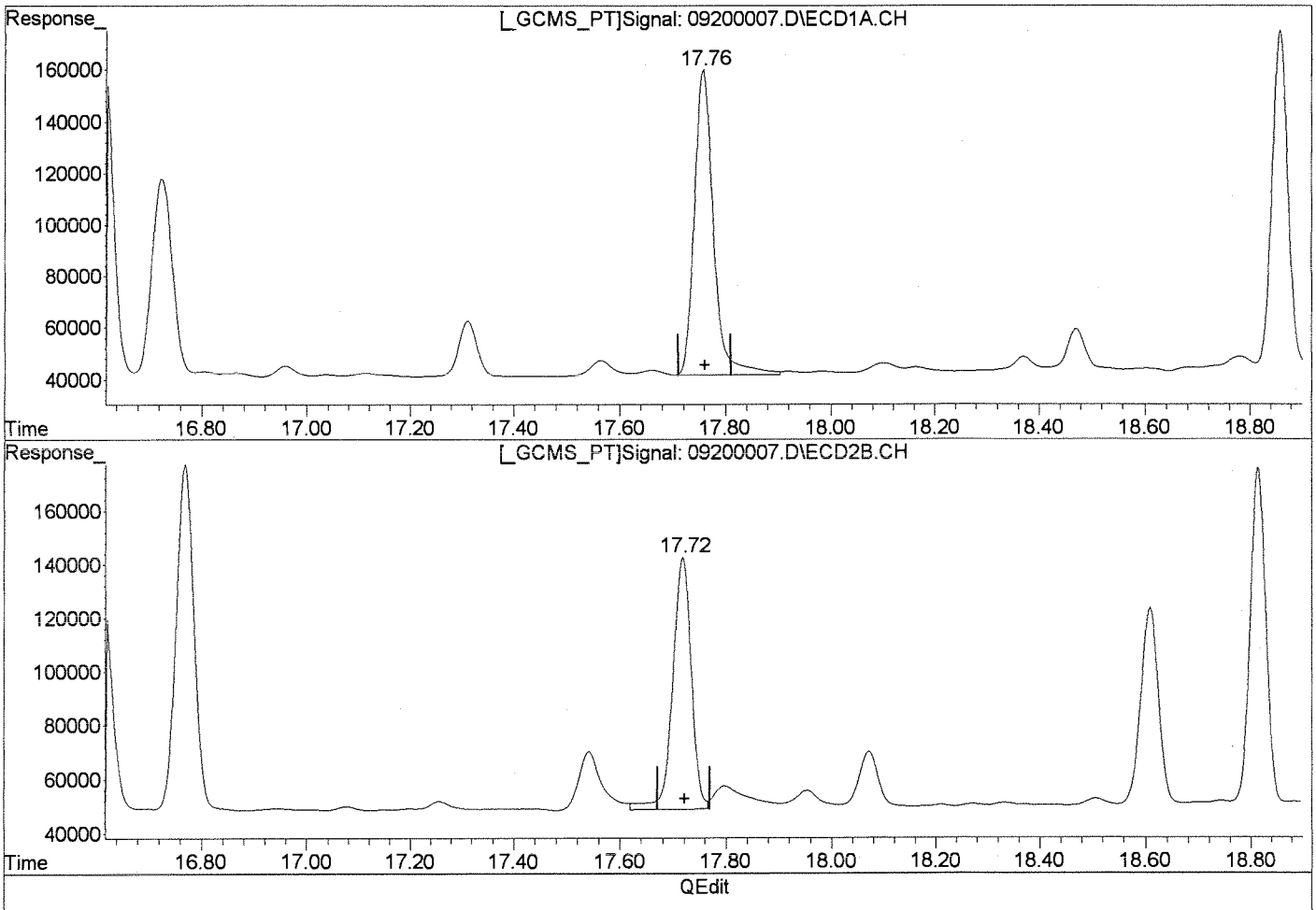
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:40:42 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(14) Dinoseb (m)

17.76min 10.307ppb

response 298881

Manual Integration:

Before

(14) Dinoseb #2 (m)

17.72min 11.086ppb

response 230266

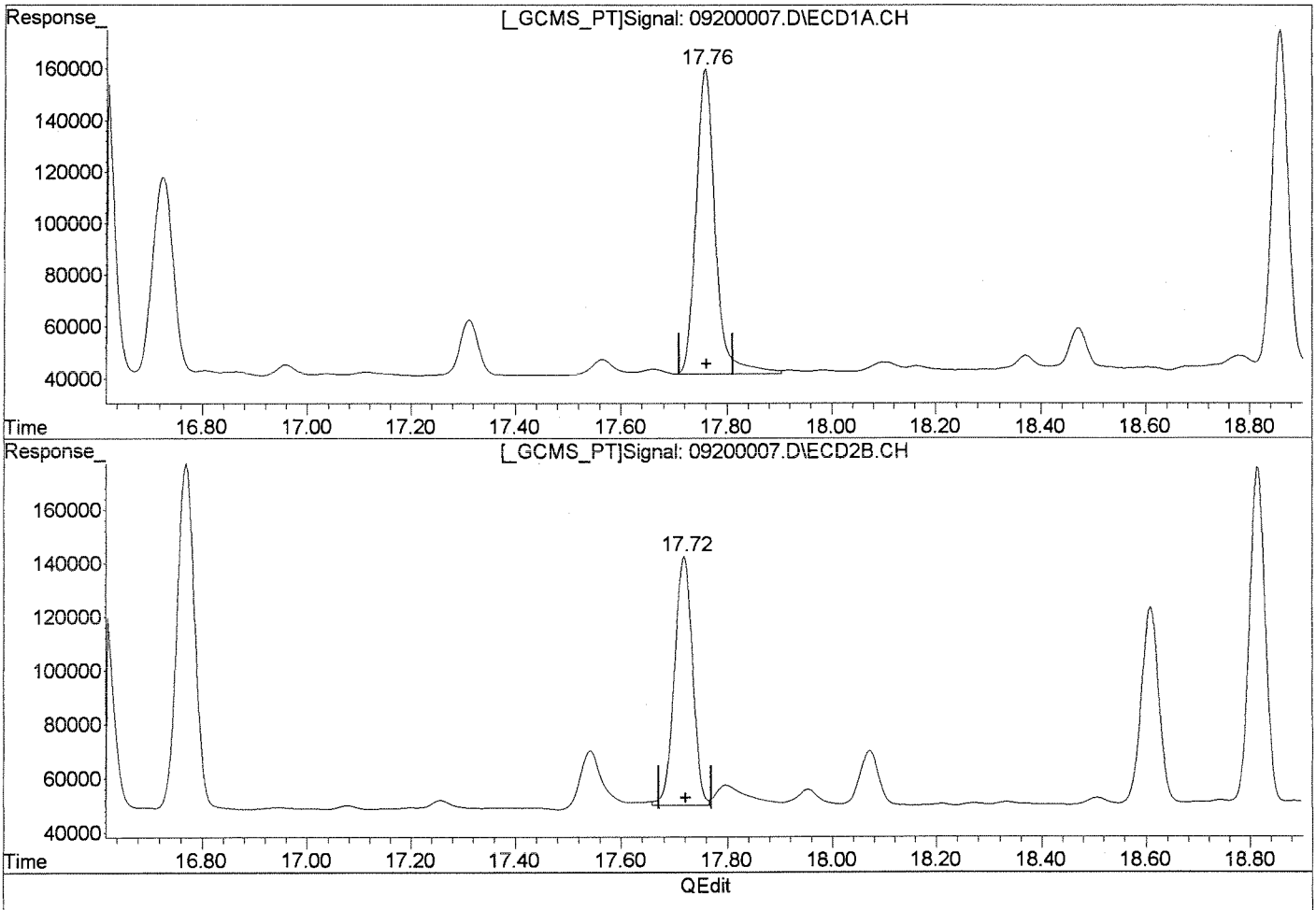
(+) = Expected Retention Time

09200007.D 092013_515.M Thu Sep 26 17:40:52 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(14) Dinoseb (m)

17.76min 10.307ppb

response 298881

(14) Dinoseb #2 (m)

17.72min 10.523ppb m

response 218570

Manual Integration:

After

Baseline/Shoulder

09/26/13

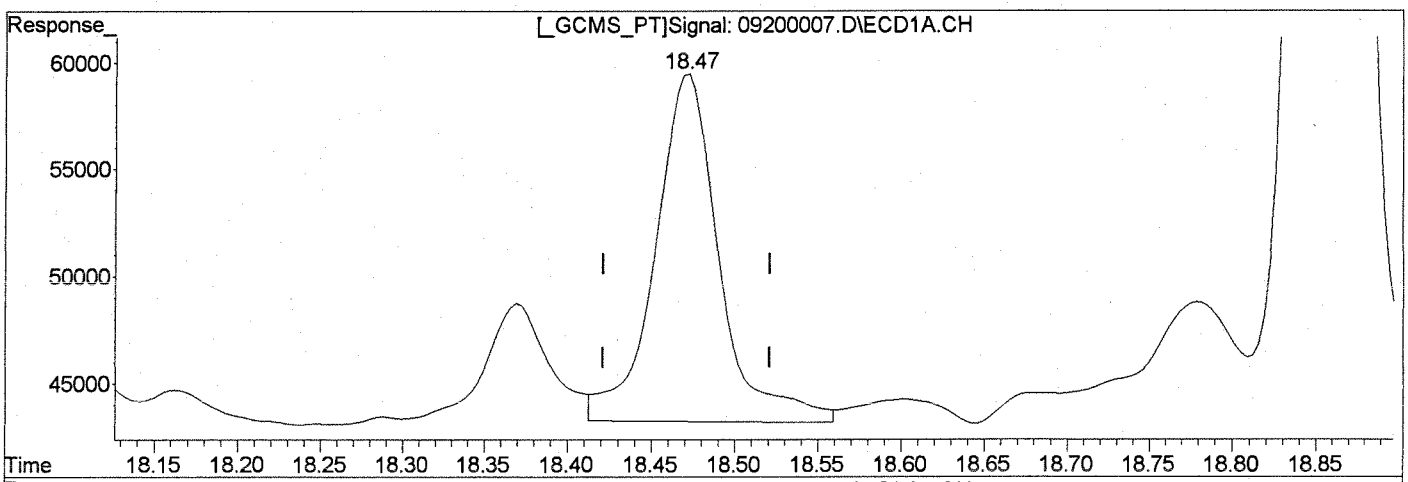
(+) = Expected Retention Time

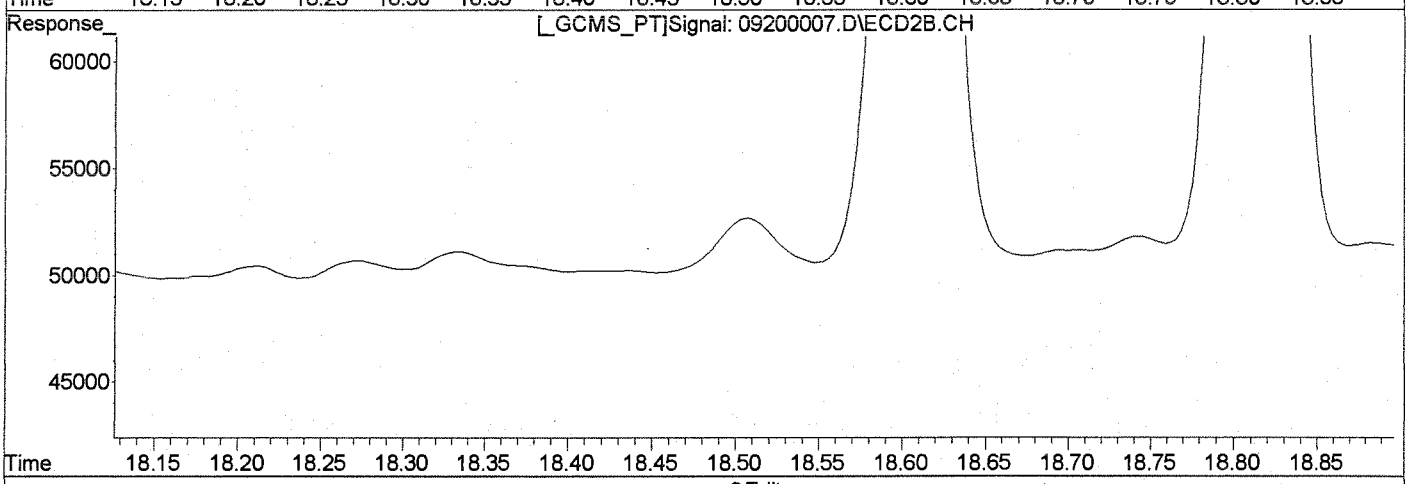
09200007.D 092013_515.M Thu Sep 26 17:41:08 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:44 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(16) Bentazon (m)

18.47min 14.020ppb

response 43400

(16) Bentazon #2 (m)

18.07min 10.605ppb

response 52306

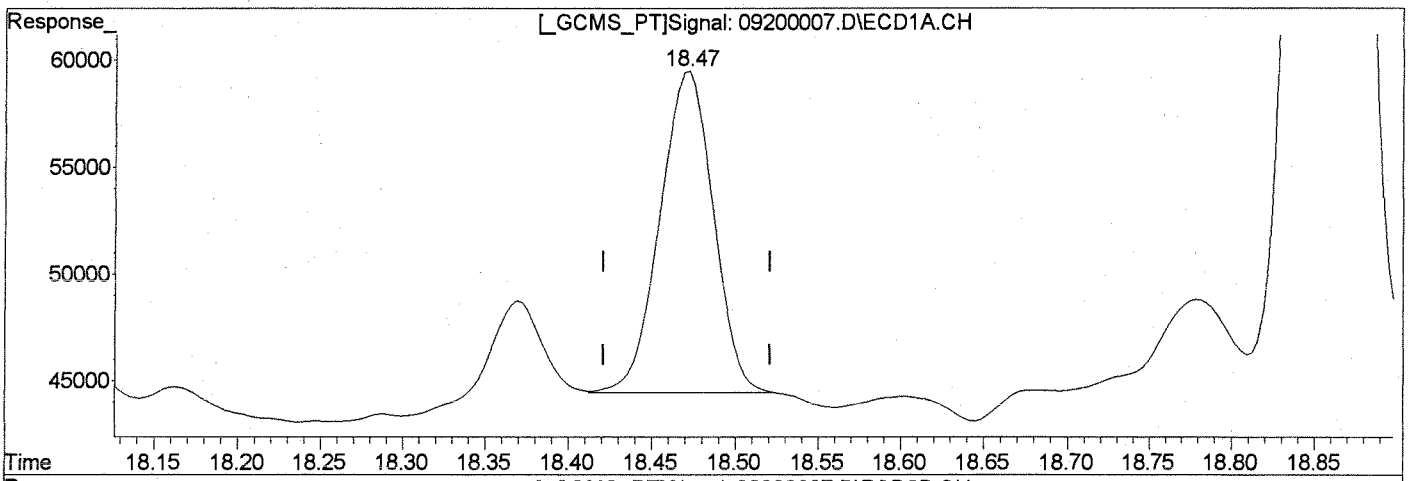
(+) = Expected Retention Time

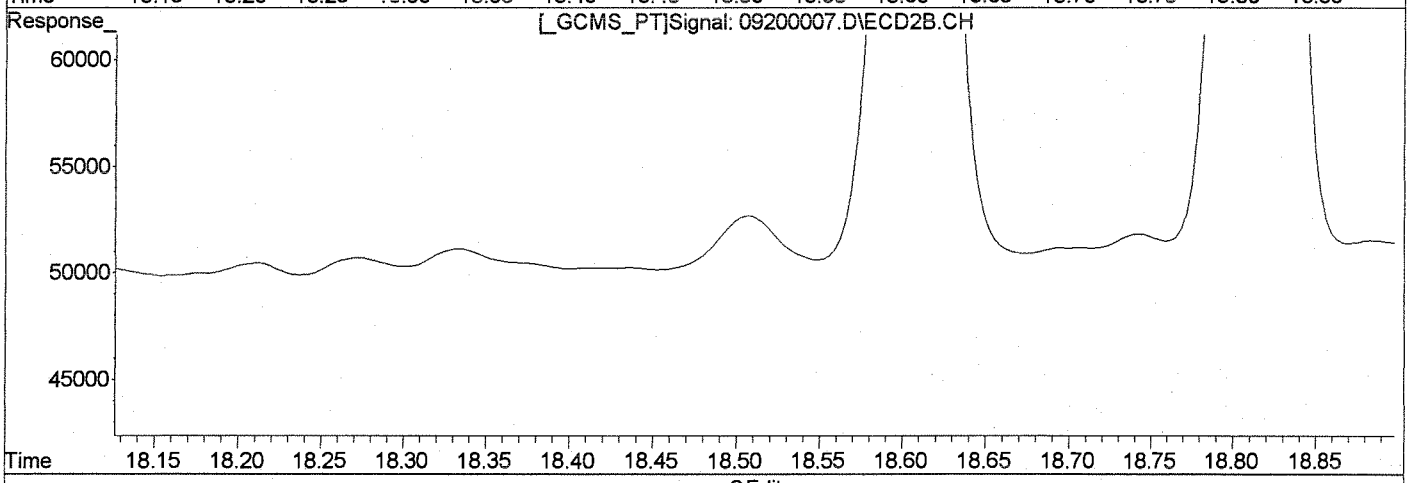
09200007.D 092013_515.M Mon Sep 30 17:39:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200007.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200007.D\ECD2B.CH
Acq On : 09-20-2013 07:03:18 PM Operator: JSCHWAB
Sample : 091713-LEV5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:44 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration





QEdit

(16) Bentazon (m)

18.47min 10.765ppb m

response 33324

(16) Bentazon #2 (m)

18.07min 10.605ppb

response 52306

Manual Integration:

After

Baseline/Shoulder

09/30/13

(+) = Expected Retention Time

09200007.D 092013_515.M Mon Sep 30 17:39:46 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:12 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1208701	1157939	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	344132	325007	38.767m	36.357m
		Target Compounds						
2)	m	Dalapon	4.16	4.03	272271	281008	17.048	12.215m#
3)	m	3,5-Dichlorobenz	11.08	11.53	280867	269947	18.621	18.508
4)	m	4-Nitrophenol	12.13	11.94	73399	75852	18.897	22.487m
6)	m	Dicamba	13.27	13.22	651487	631134	19.078	18.898
7)	m	Dichloroprop	14.37	14.46	196587	187178	19.987	18.938m
8)	m	2,4-D	14.86	14.88	207949	197100	18.269	17.556
9)	m	Trichlopyr	15.55	15.64	2668731	470753	19.375	18.290
10)	m	Pentachloropheno	15.55	16.18	2668731	2208644	18.293	19.082
11)	m	2,4,5-TP (Silvex	16.06	16.28	788313	741729	17.977	16.819
12)	m	2,4,5-T	16.61	16.77	592607	550542	18.856	18.296
13)	m	Chloramben	16.72	16.62	390004	395761	19.501	18.855
14)	m	Dinoseb	17.76	17.72	504731	406003	17.312	19.679
15)	m	2,4-DB	17.31	17.54	98720	101756	20.621	19.466
16)	m	Bentazon	18.47	18.07	63399	77903	20.369m	15.901
17)	m	DCPA (Dacthal)	18.86	18.82	425041	391572	14.232	13.853
18)	m	Picloram	18.95	18.61	333164	292750	17.549	16.449
19)	m	Acifluorfen	20.94	20.83	454582	385356	19.386	18.853

SS 10/1/13

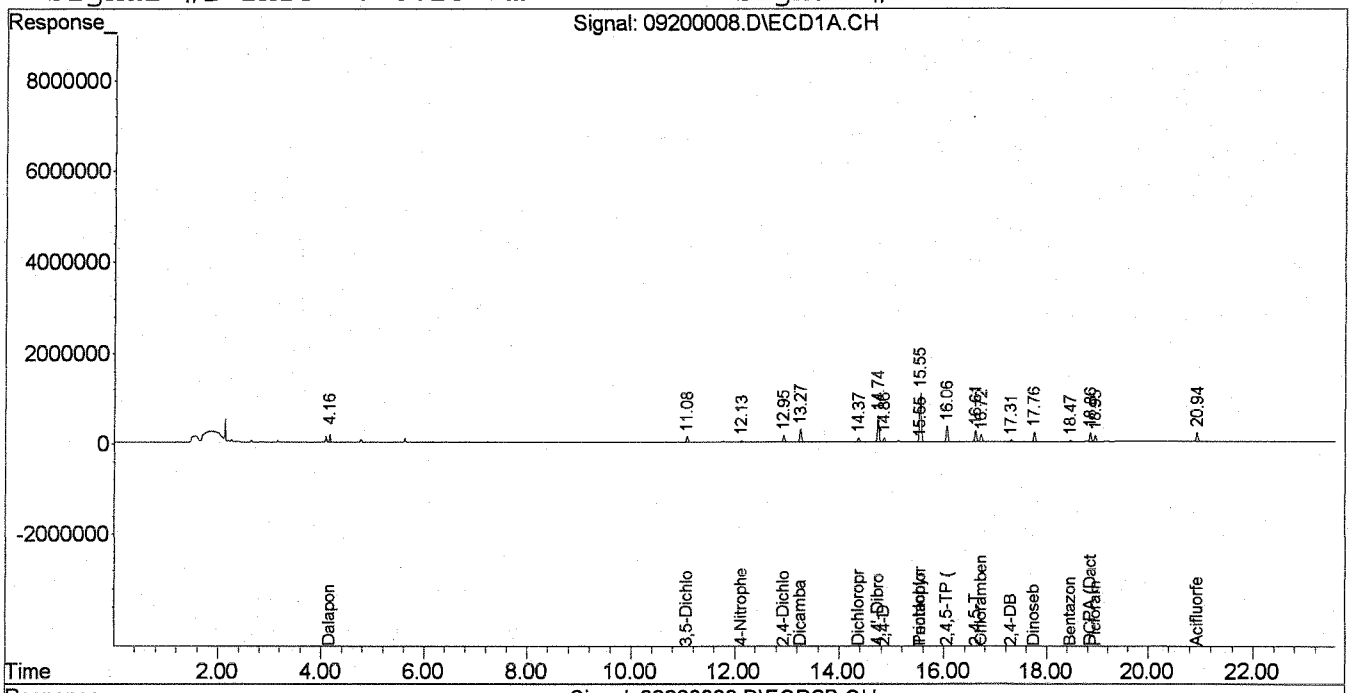
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

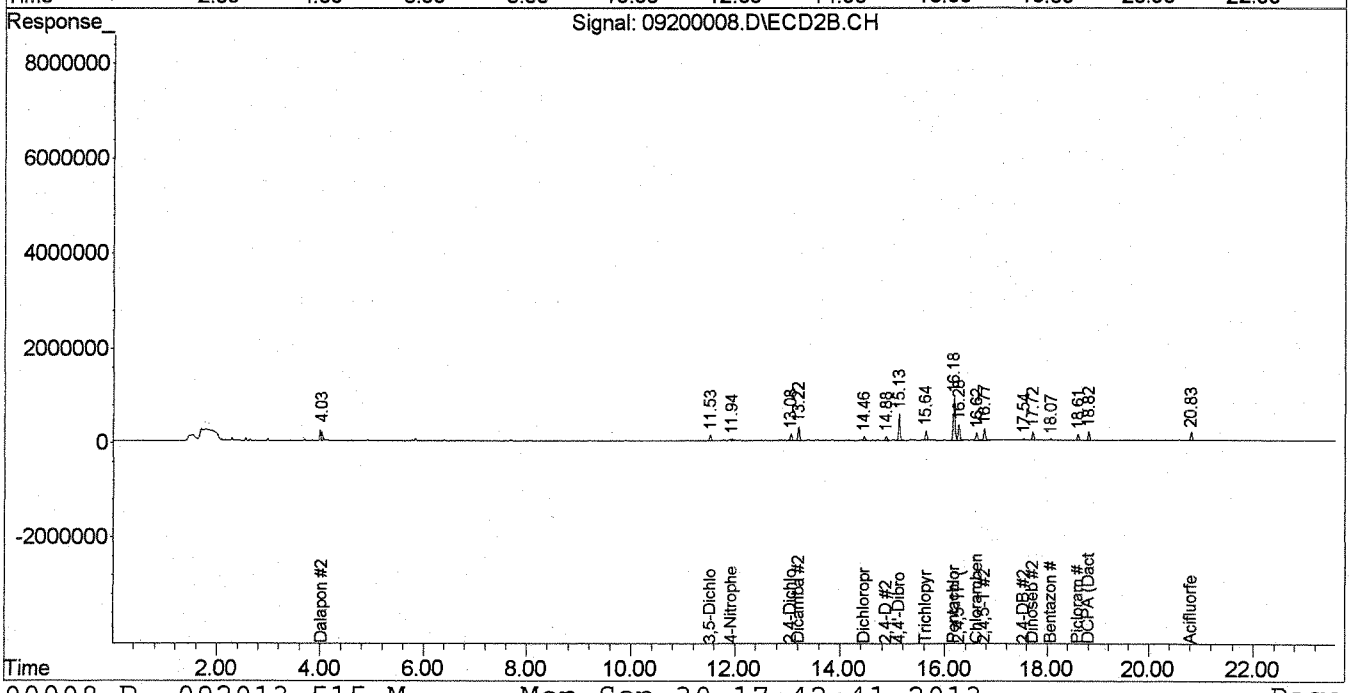
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 17:43 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

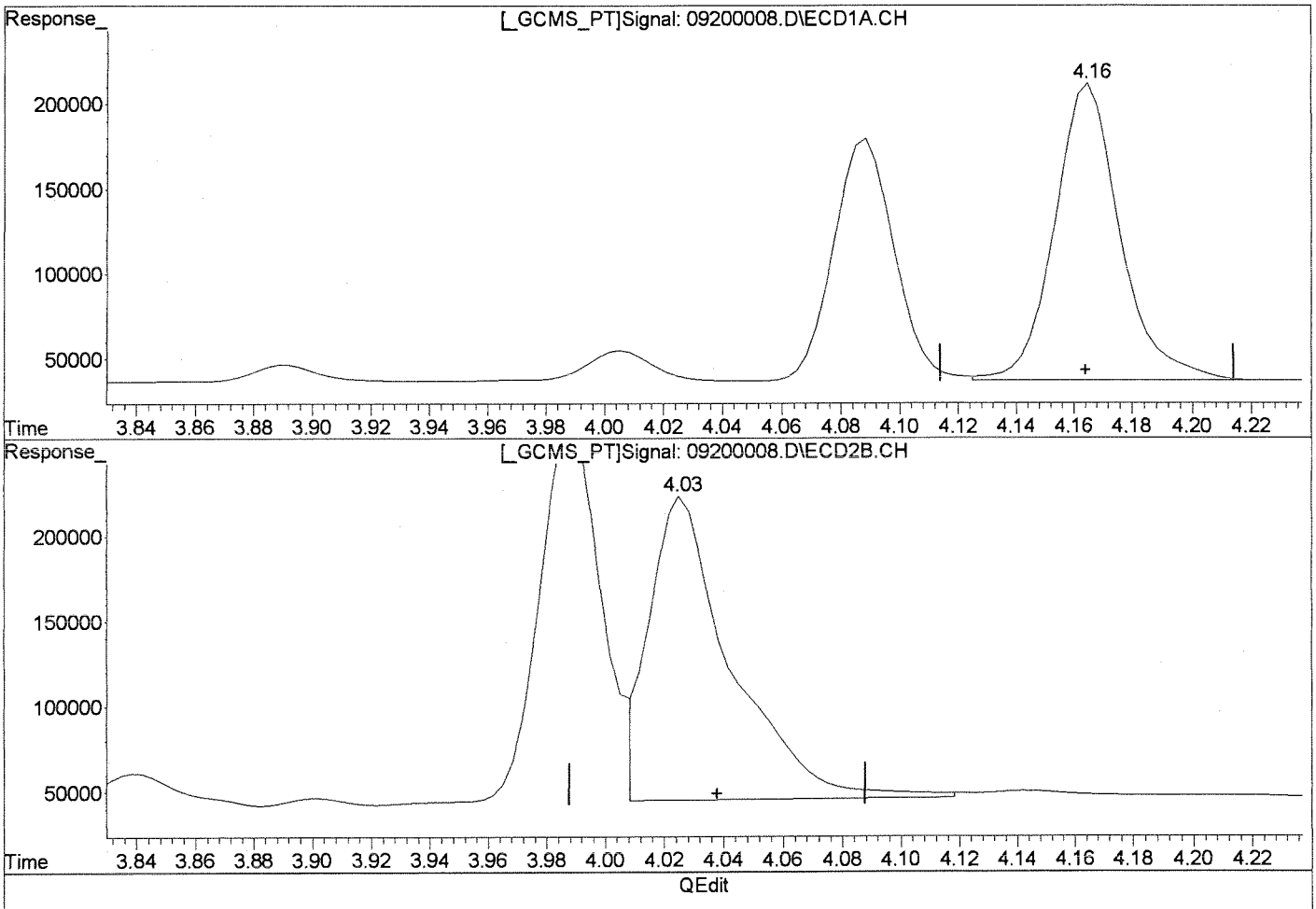




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(2) Dalapon (m)

4.16min 17.048ppb

response 272271

(2) Dalapon #2 (m)

4.03min 14.651ppb

response 337039

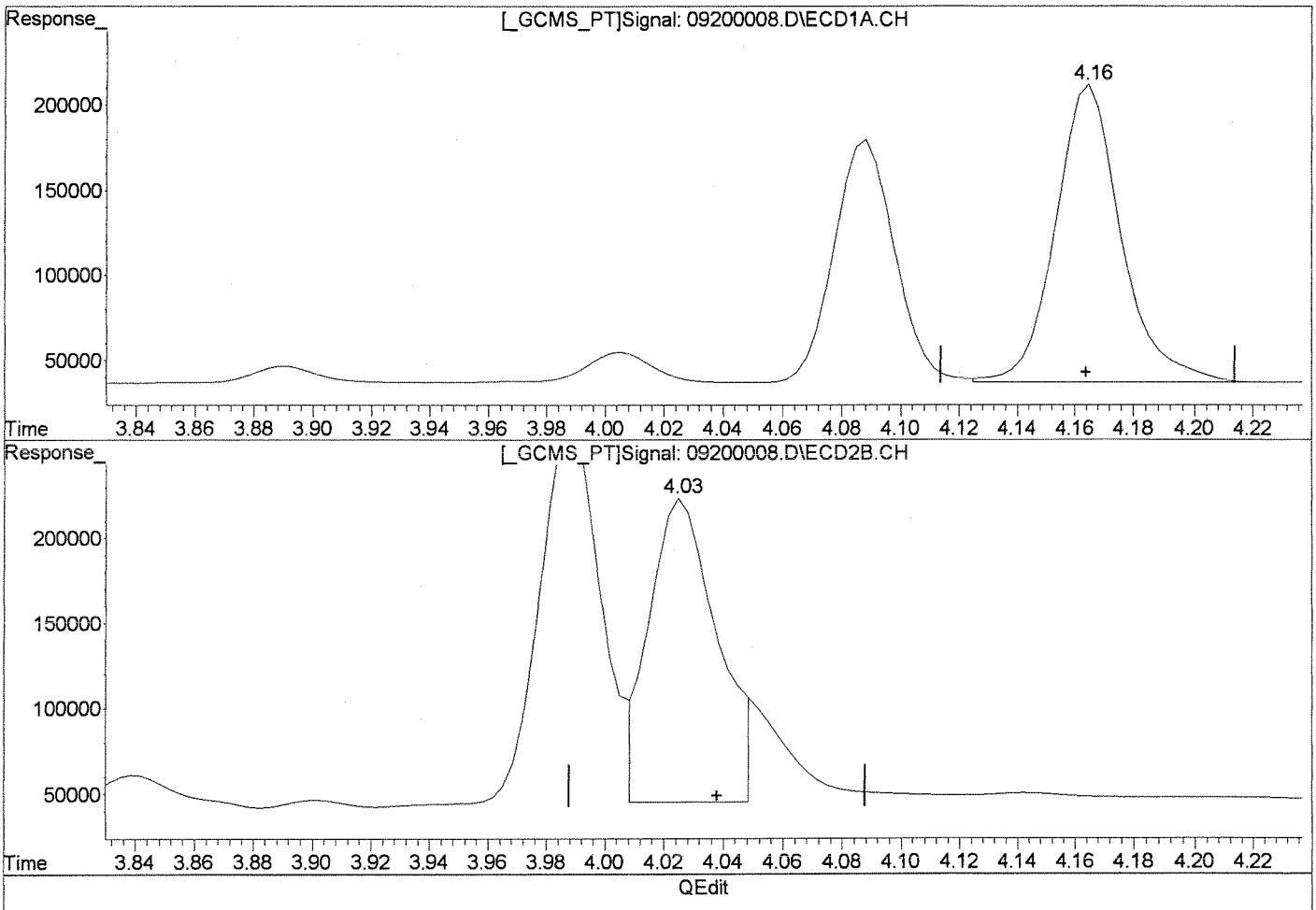
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:41:27 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

4.16min 17.048ppb

response 272271

(2) Dalapon #2 (m)

4.03min 12.215ppb m

response 281008

Manual Integration:

After

Baseline/Shoulder

09/26/13

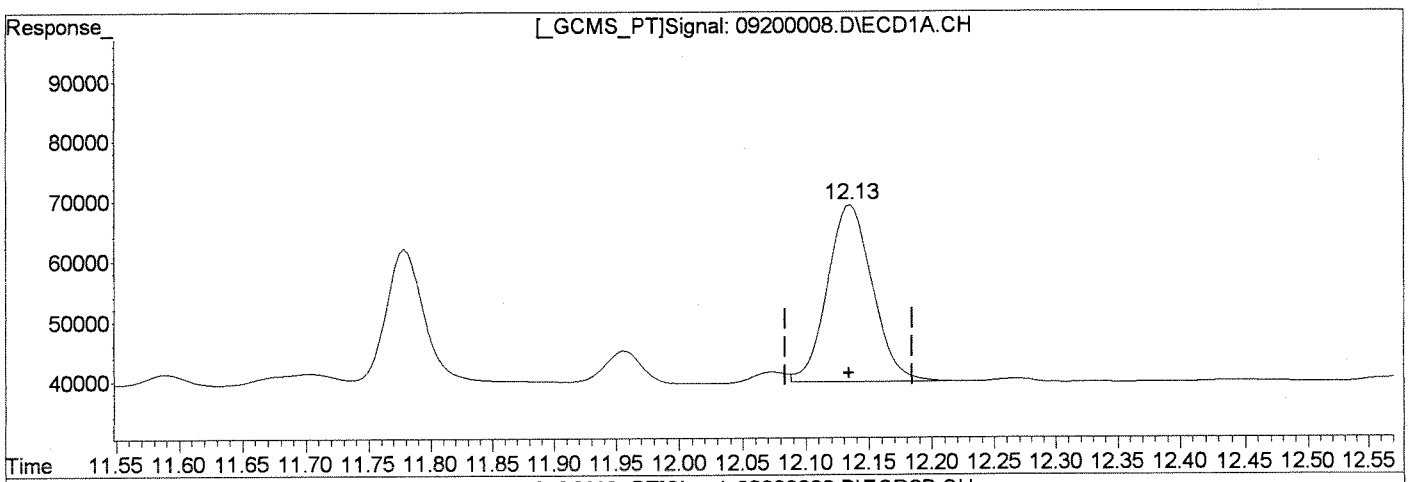
(+) = Expected Retention Time

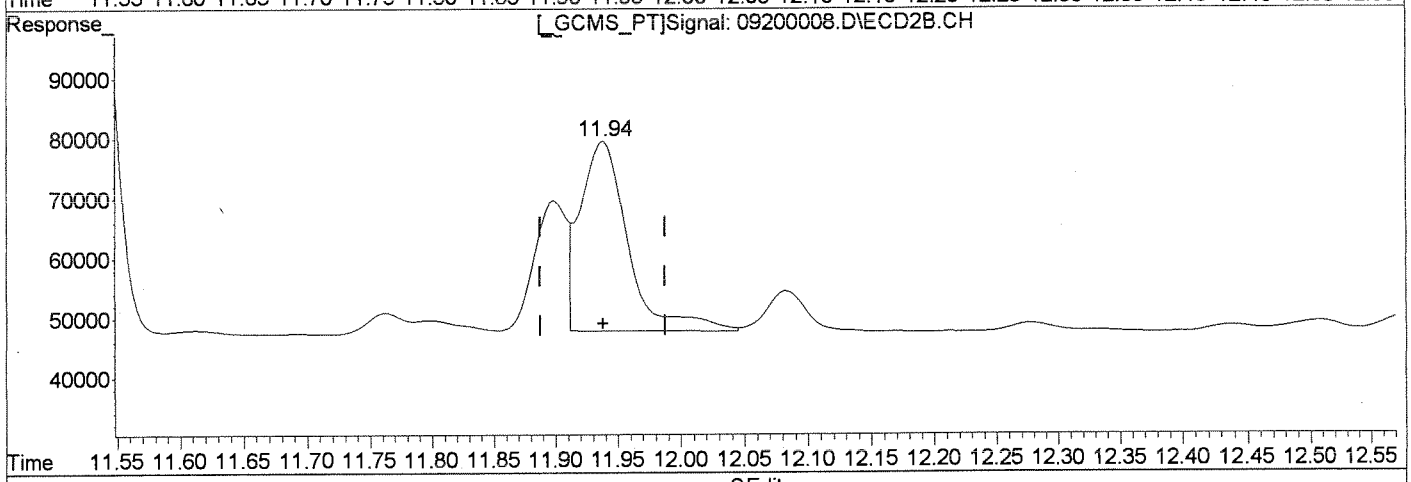
09200008.D 092013_515.M Thu Sep 26 17:41:36 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.13min 18.897ppb

response 73399

(4) 4-Nitrophenol #2 (m)

11.94min 24.555ppb

response 82826

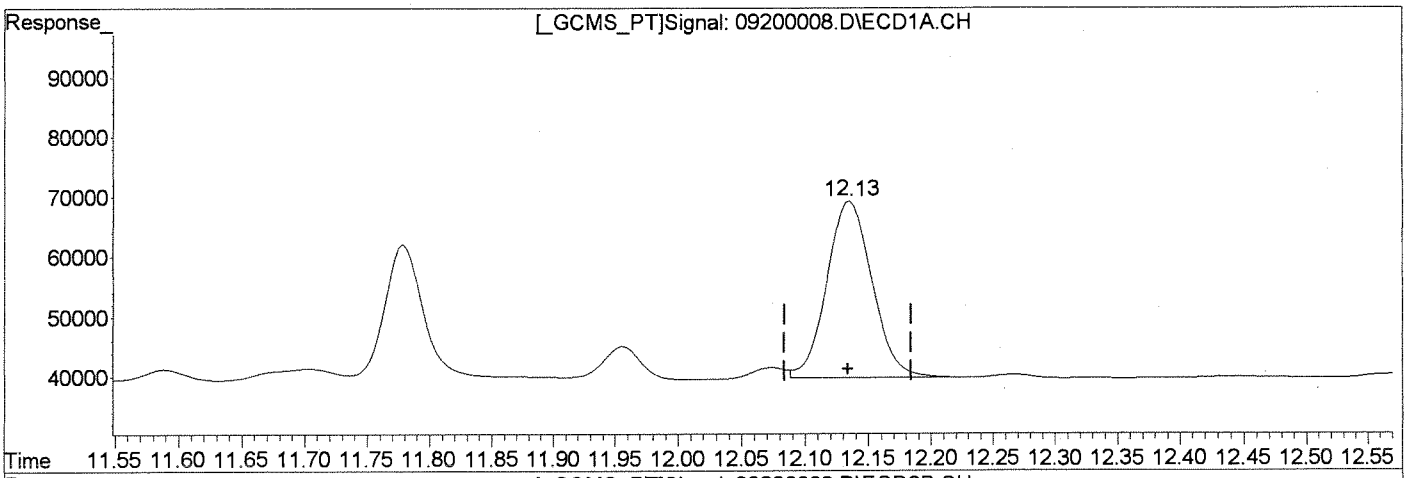
(+) = Expected Retention Time

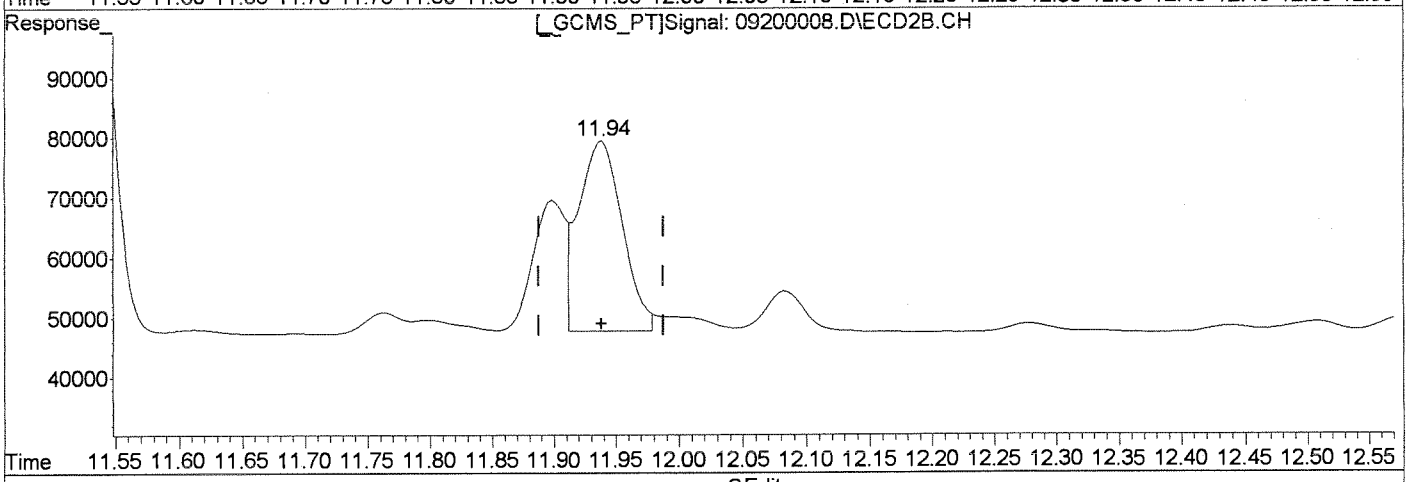
09200008.D 092013_515.M Thu Sep 26 17:41:44 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.13min 18.897ppb

response 73399

(4) 4-Nitrophenol #2 (m)

11.94min 22.487ppb m

response 75852

Manual Integration:

After

Baseline/Shoulder

09/26/13

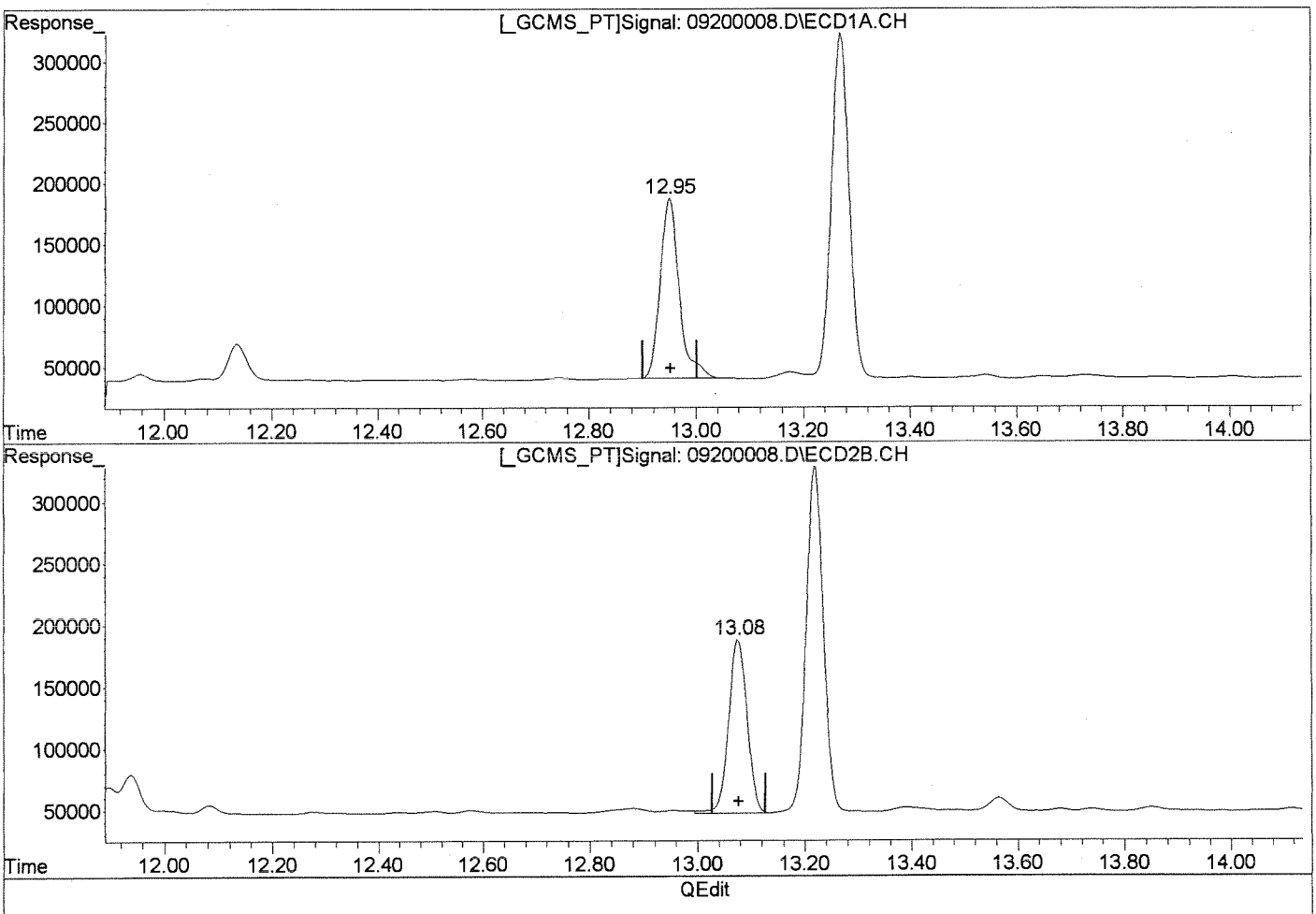
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:41:50 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 41.190ppb

response 365646

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 37.519ppb

response 335394

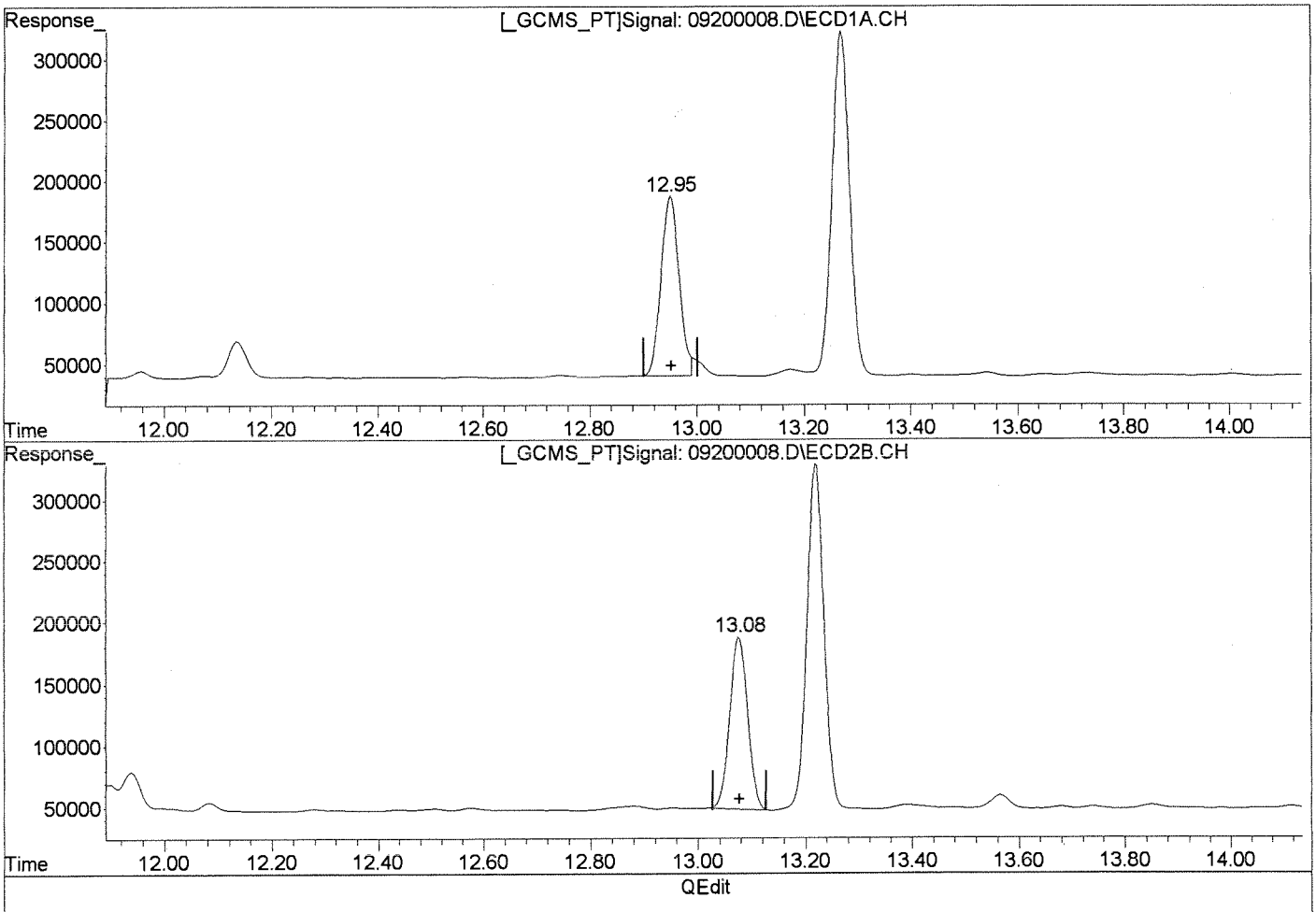
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:41:54 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 38.767ppb m

response 344132

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 36.357ppb m

response 325007

Manual Integration:

After

Baseline/Shoulder

09/26/13

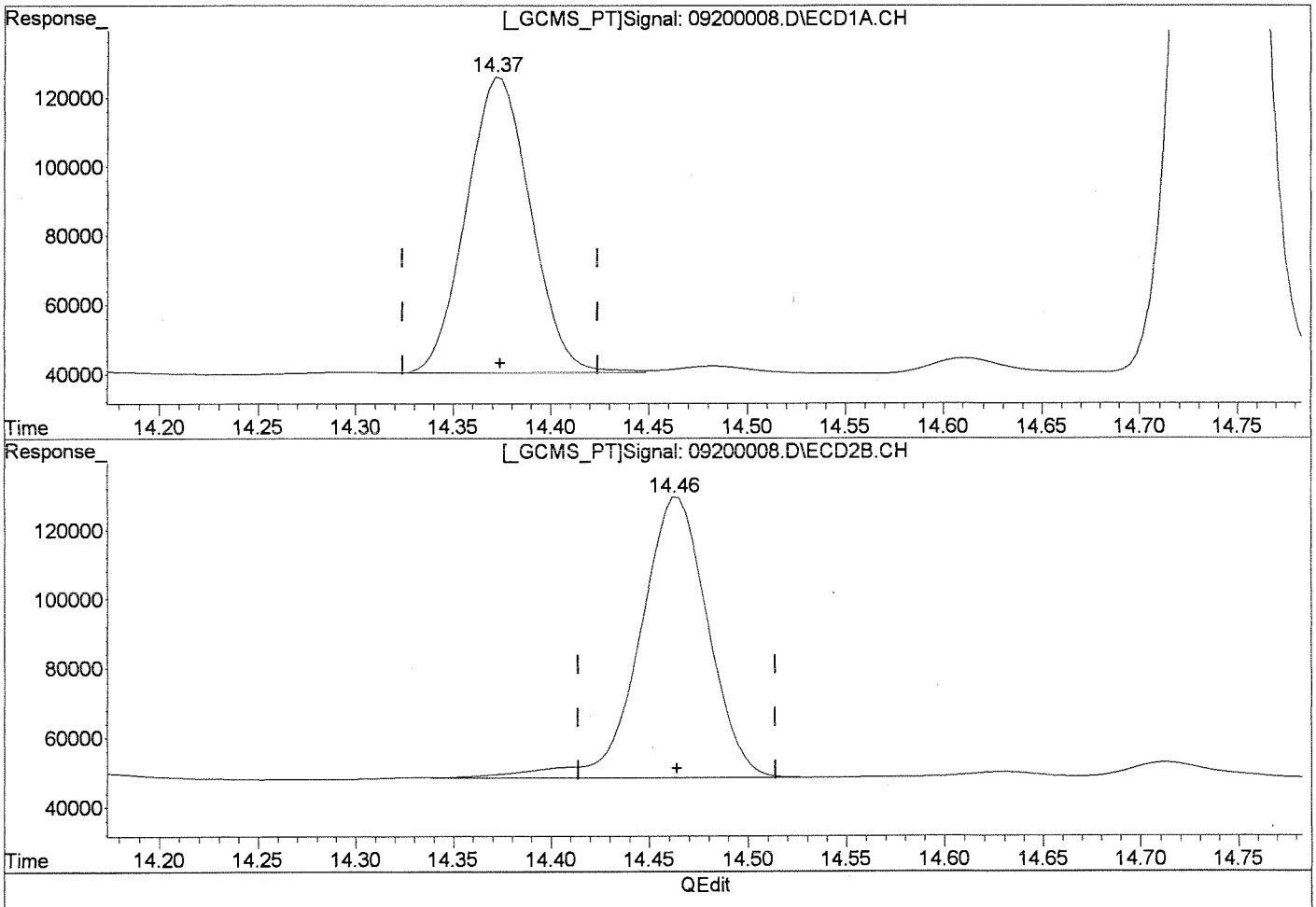
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:42:11 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(7) Dichloroprop (m)

14.37min 19.987ppb

response 196587

(7) Dichloroprop #2 (m)

14.46min 19.696ppb

response 194669

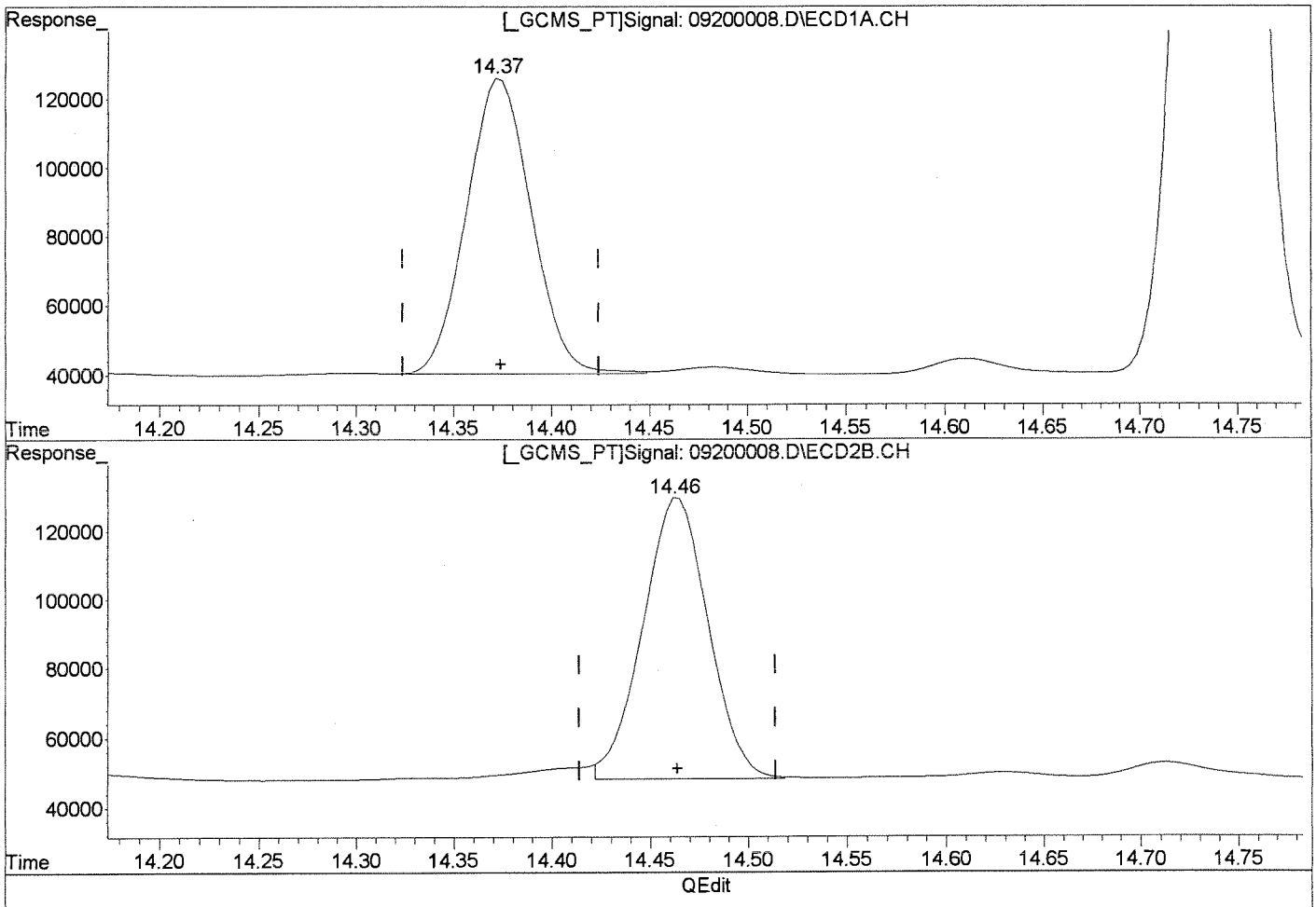
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:42:20 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(7) Dichloroprop (m)

14.37min 19.987ppb

response 196587

(7) Dichloroprop #2 (m)

14.46min 18.938ppb m

response 187178

Manual Integration:

After

Baseline/Shoulder

09/26/13

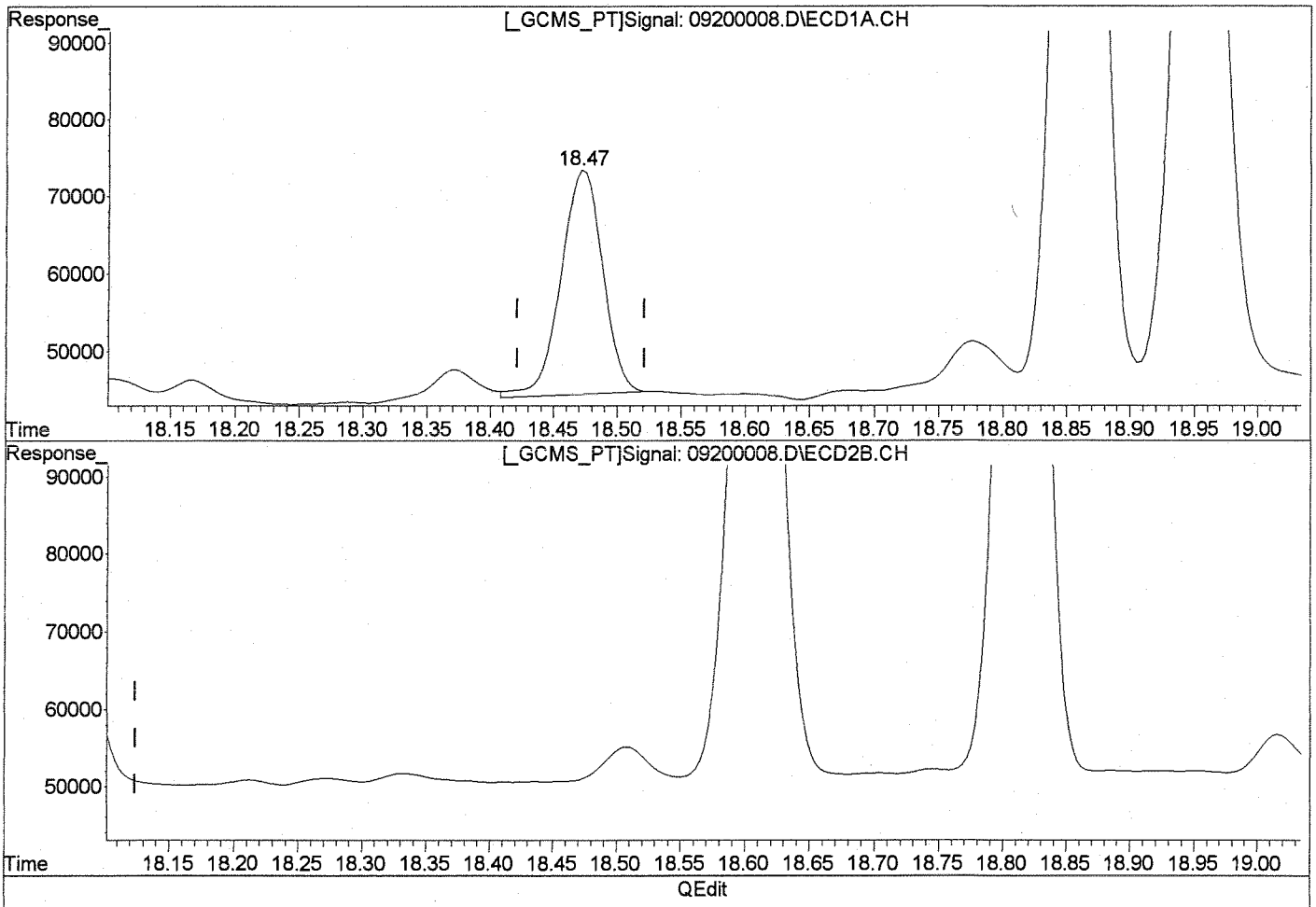
(+) = Expected Retention Time

09200008.D 092013_515.M Thu Sep 26 17:42:25 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:46 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(16) Bentazon (m)

18.47min 21.227ppb

response 66067

(16) Bentazon #2 (m)

18.07min 15.901ppb

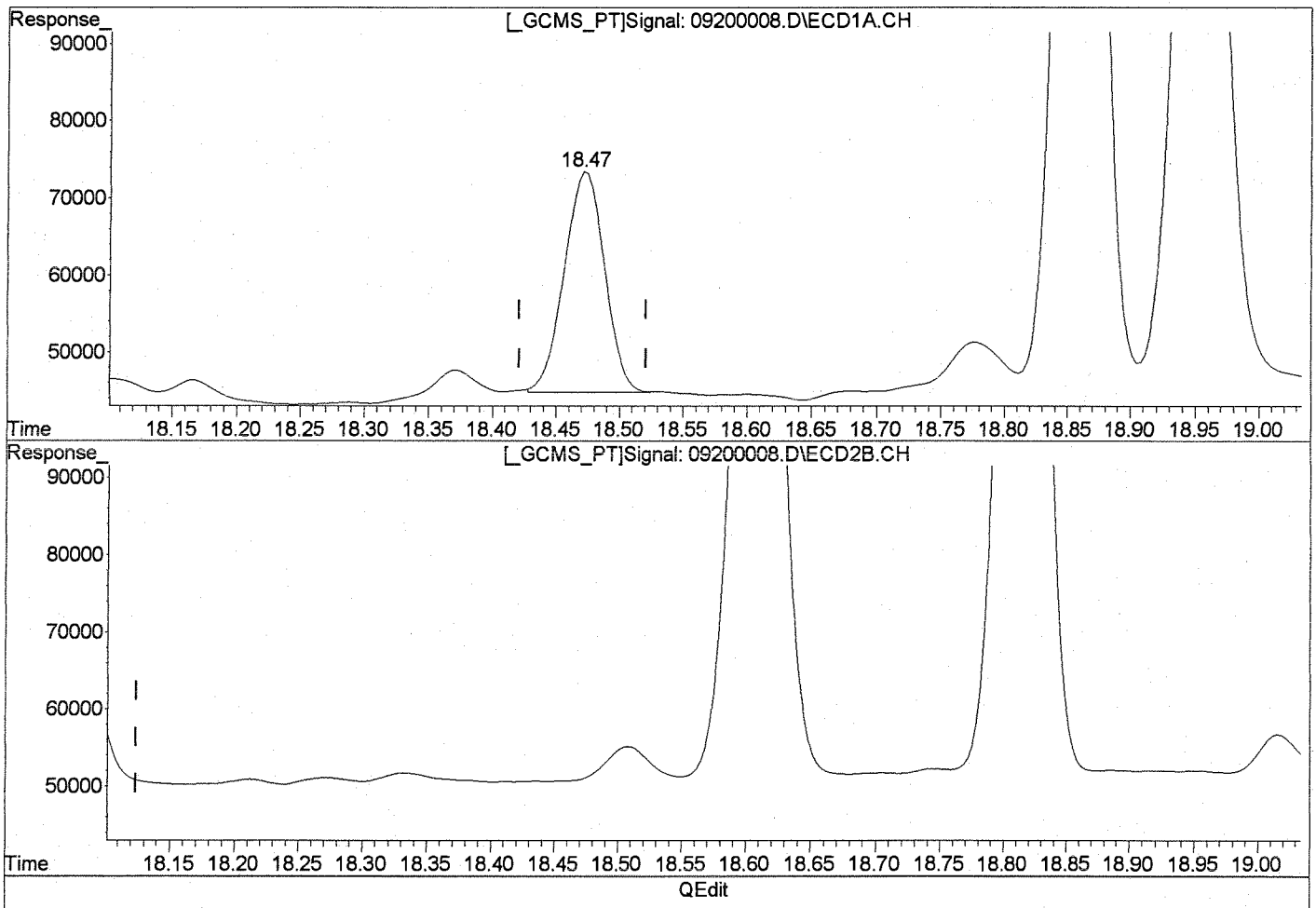
response 77903

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200008.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200008.D\ECD2B.CH
Acq On : 09-20-2013 07:33:45 PM Operator: JSCHWAB
Sample : 091713-LEV6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:46 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 17:17:03 2013
Response via : Multiple Level Calibration



QEdit

(16) Bentazon (m)

18.47min 20.369ppb m

response 63399

(16) Bentazon #2 (m)

18.07min 15.901ppb

response 77903

Manual Integration:

After

Baseline/Shoulder

09/30/13

(+) = Expected Retention Time

09200008.D 092013_515.M Mon Sep 30 17:40:11 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:13 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1201941	1146526	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	782236	759425	88.615m	85.799
		Target Compounds						
2)	m	Dalapon	4.16	4.02	720263	676493	45.352m	29.700m#
3)	m	3,5-Dichlorobenz	11.08	11.53	643060	623041	42.873	43.142
4)	m	4-Nitrophenol	12.13	11.94	167971	171989	43.489	51.496m
6)	m	Dicamba	13.27	13.22	1528947	1525876	45.026	46.144
7)	m	Dichloroprop	14.37	14.46	446565	431314	45.657	44.073
8)	m	2,4-D	14.86	14.88	487392	462179	43.060	41.576
9)	m	Trichlopyr	15.55	15.64	6320069	1127008	46.143	44.222
10)	m	Pentachloropheno	15.55	16.18	6320069	5530192	43.565	48.254
11)	m	2,4,5-TP (Silvex	16.06	16.27	1900654	1820848	43.586	41.699
12)	m	2,4,5-T	16.61	16.77	1445079	1374747	46.238	46.143
13)	m	Chloramben	16.72	16.61	971874	956424	48.868	46.020
14)	m	Dinoseb	17.76	17.72	1168759	1014787	40.312	49.676
15)	m	2,4-DB	17.31	17.54	226962	213906	47.676	41.328
16)	m	Bentazon	18.47	18.07	154516	154832	49.924	31.918 #
17)	m	DCPA (Dacthal)	18.86	18.81	1220471	1201108	41.095	42.917
18)	m	Picloram	18.95	18.61	886217	813596	46.943	46.169
19)	m	Acifluorfen	20.93	20.82	1067613	961755	45.785	47.521

SS 10/1/13

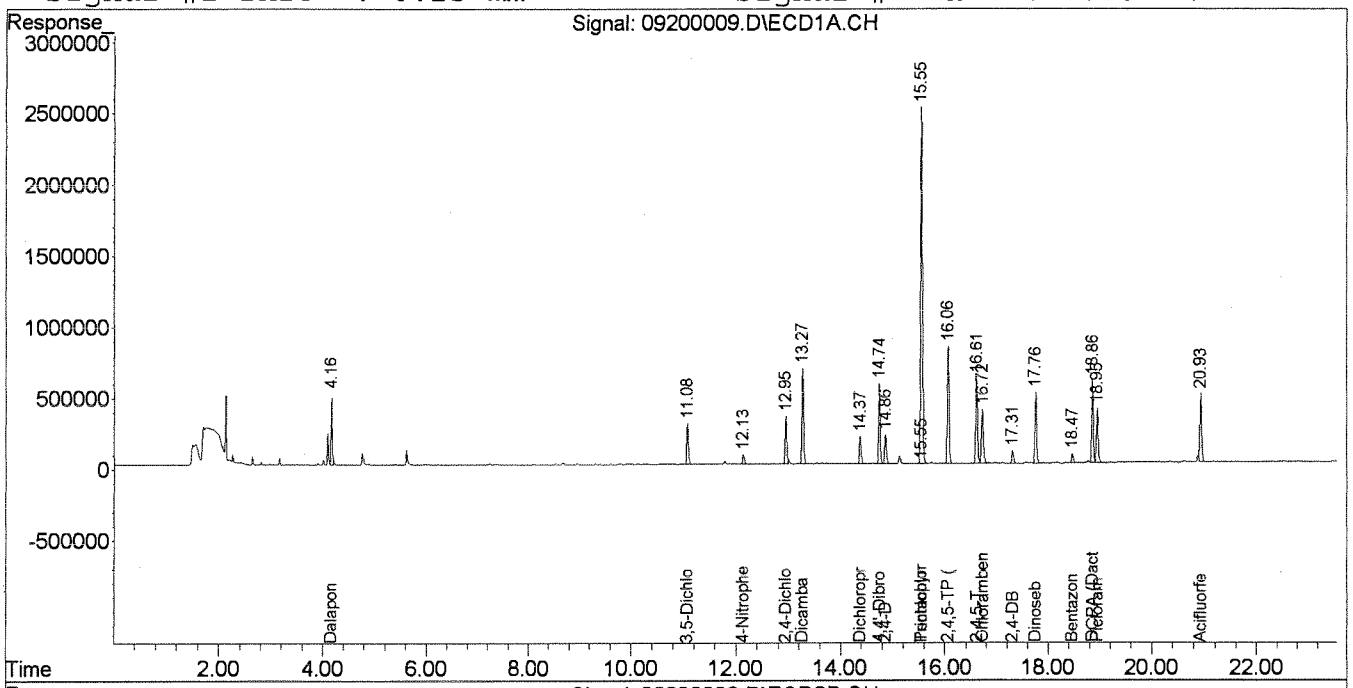
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

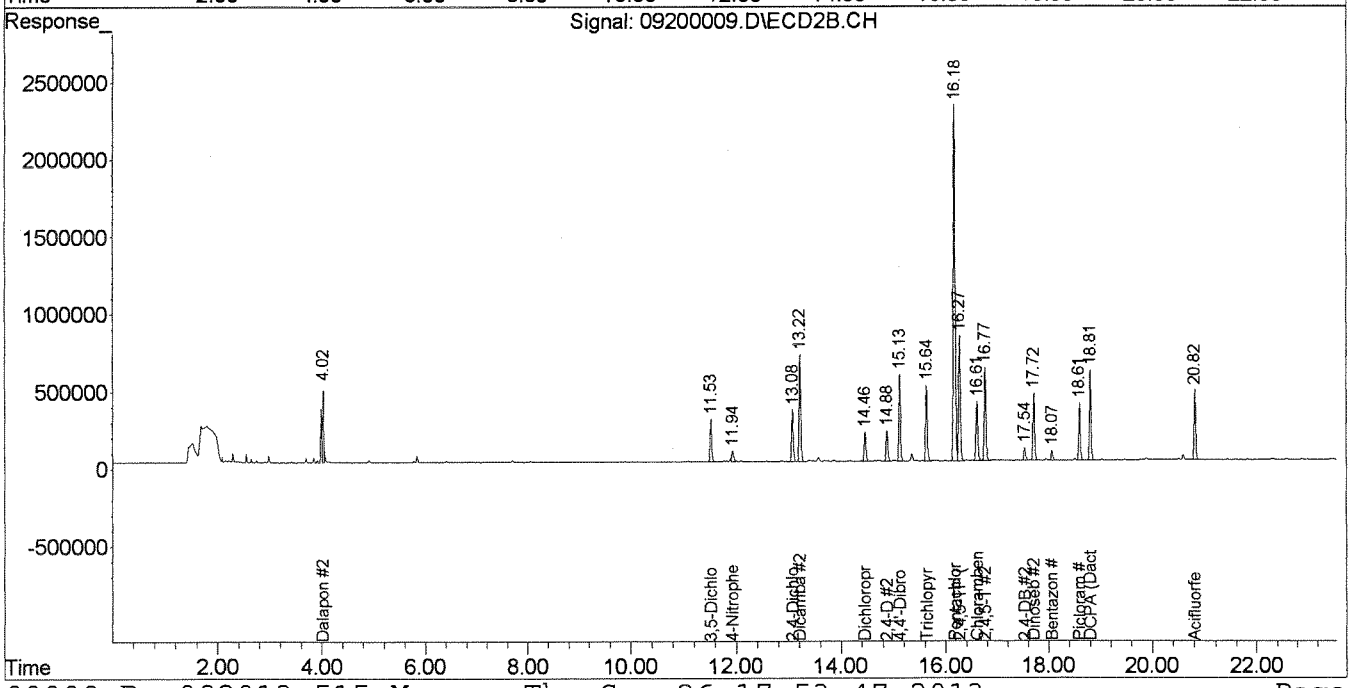
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:50 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

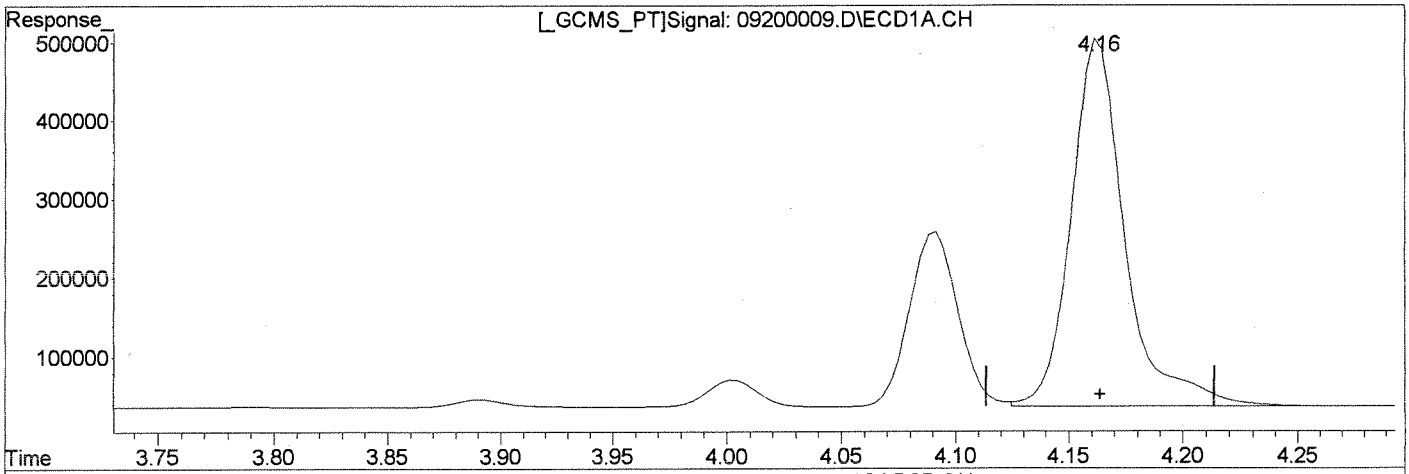


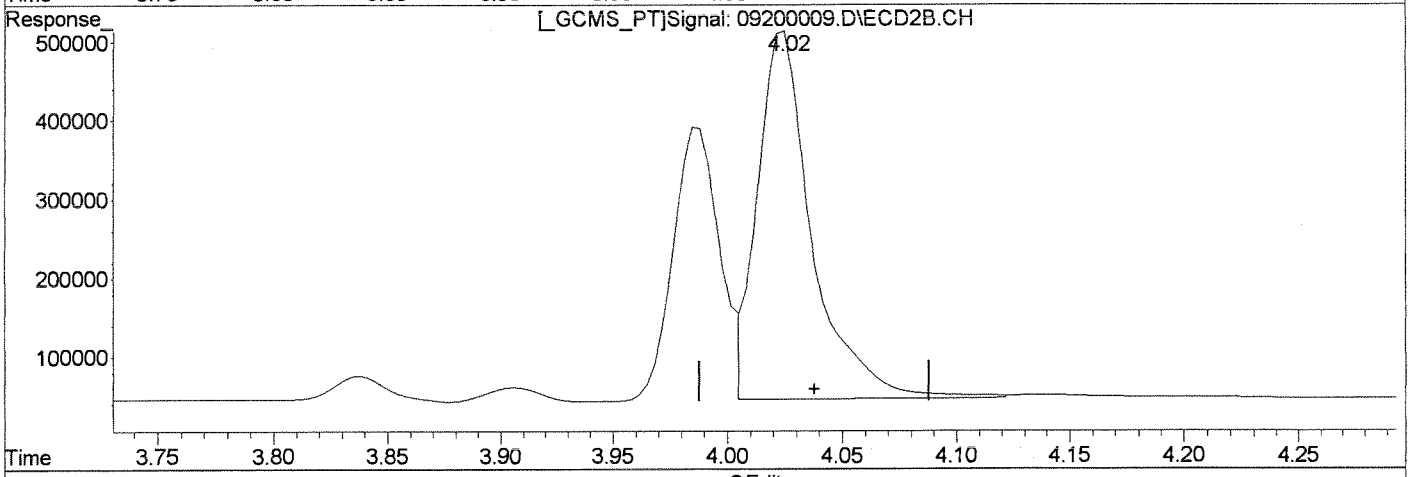


Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 48.100ppb

response 763907

(2) Dalapon #2 (m)

4.02min 33.589ppb

response 765081

Manual Integration:

Before

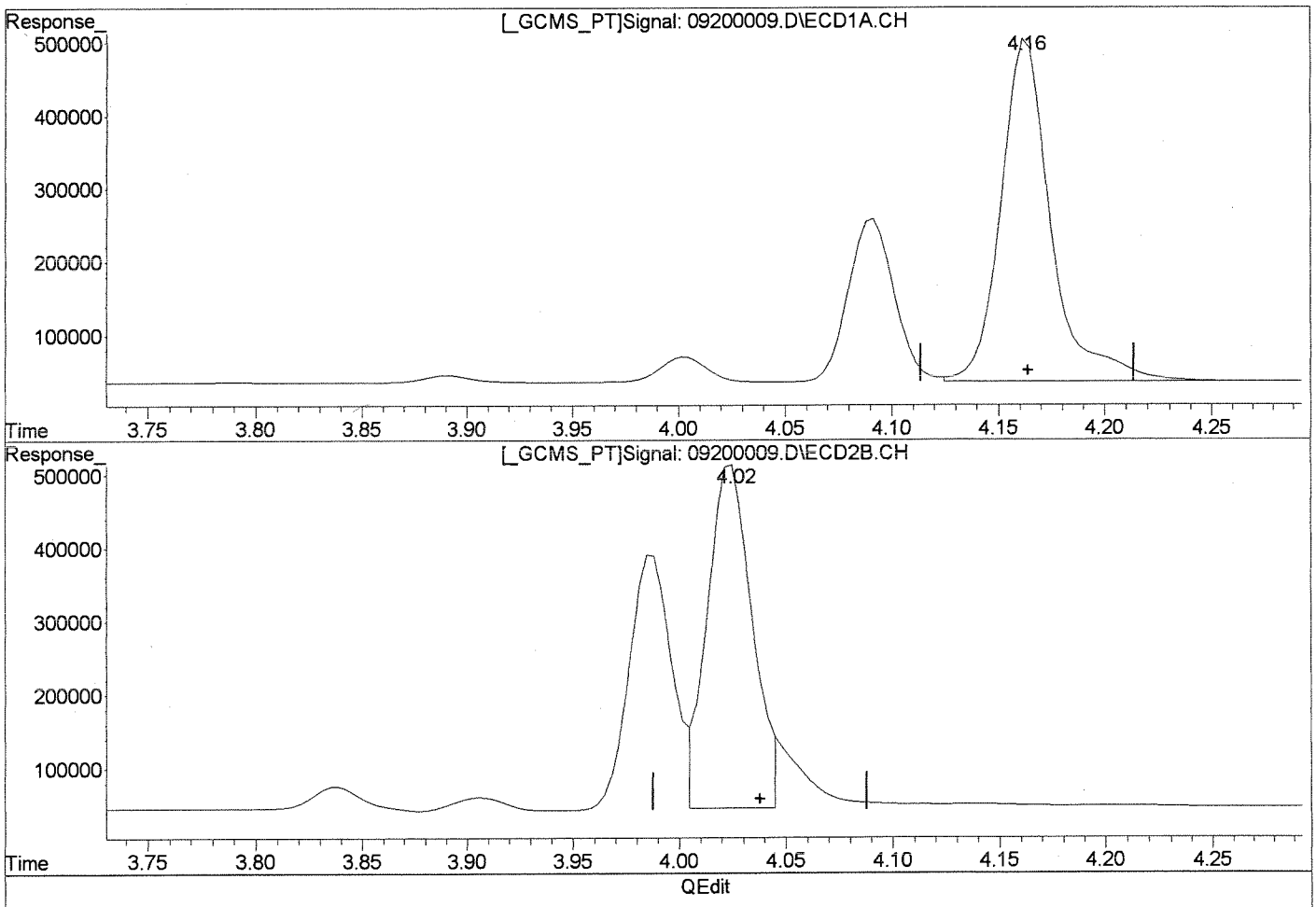
(+) = Expected Retention Time

09200009.D 092013_515.M Thu Sep 26 17:42:50 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

4.16min 48.100ppb

response 763907

(2) Dalapon #2 (m)

4.02min 29.700ppb m

response 676493

Manual Integration:

After

Baseline/Shoulder

09/26/13

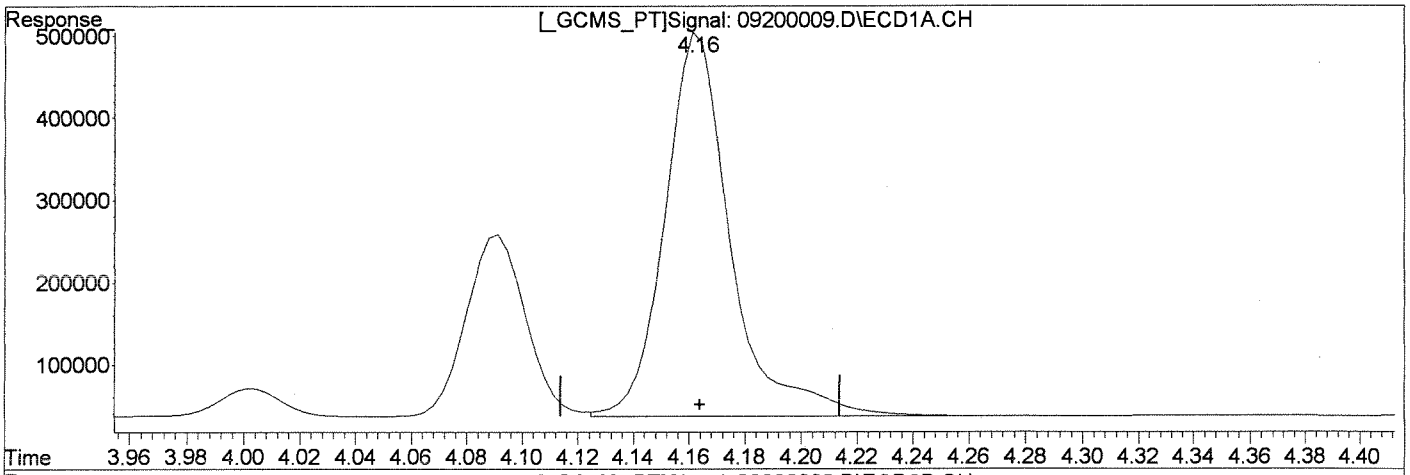
(+) = Expected Retention Time

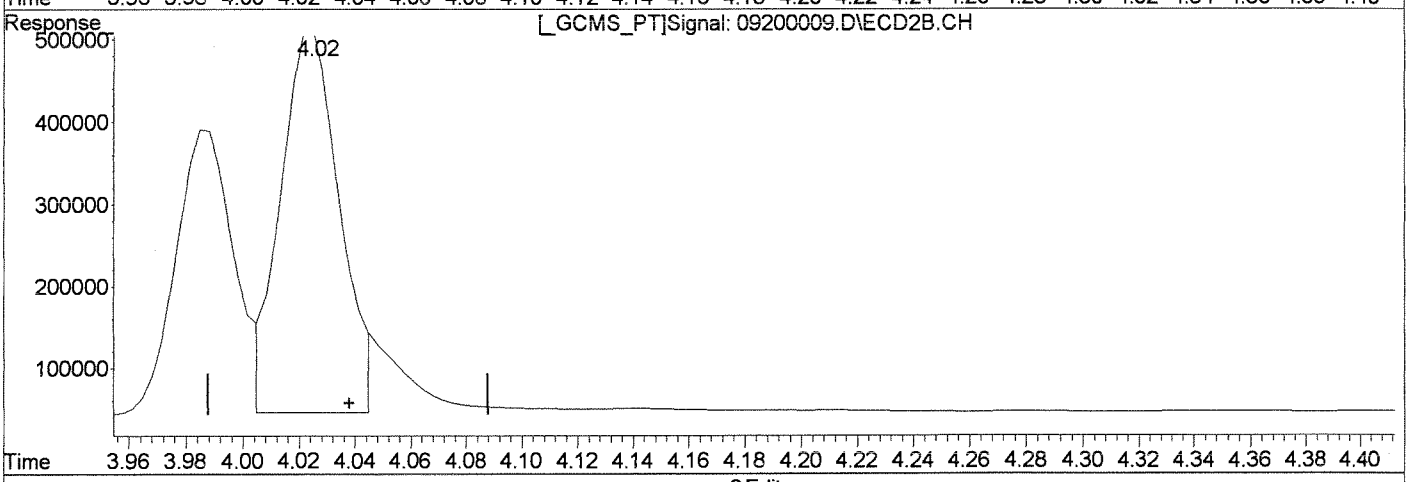
09200009.D 092013_515.M Thu Sep 26 17:42:56 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:47 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(2) Dalapon (m)

4.16min 48.100ppb

response 763907

(2) Dalapon #2 (m)

4.02min 29.700ppb m

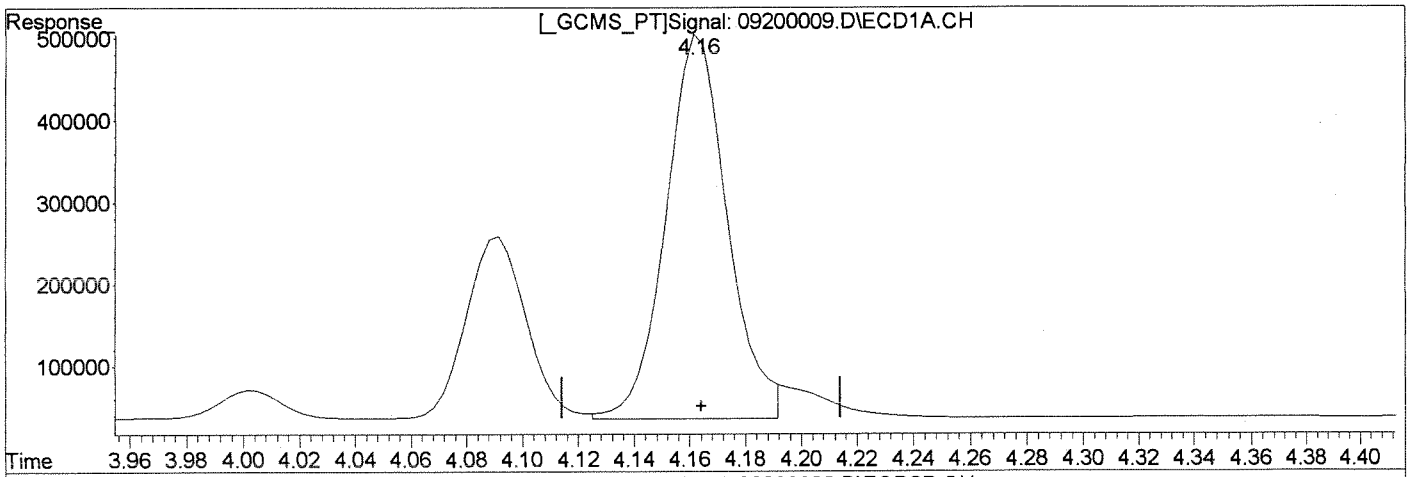
response 676493

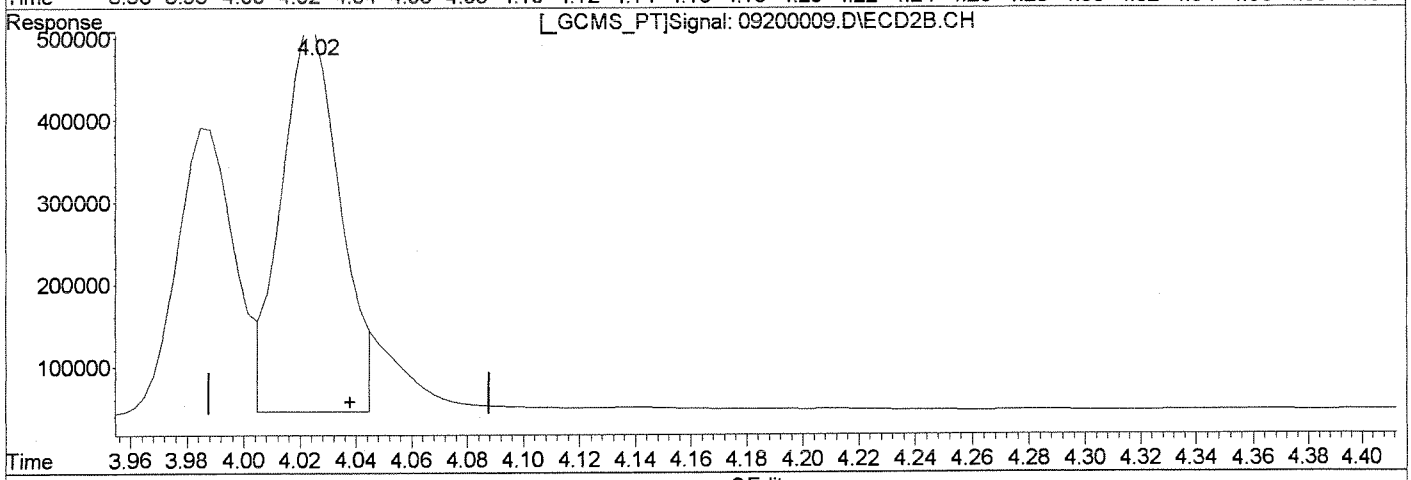
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:47 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 45.352ppb m

response 720263

(2) Dalapon #2 (m)

4.02min 29.700ppb m

response 676493

Manual Integration:

After

Baseline/Shoulder

09/26/13

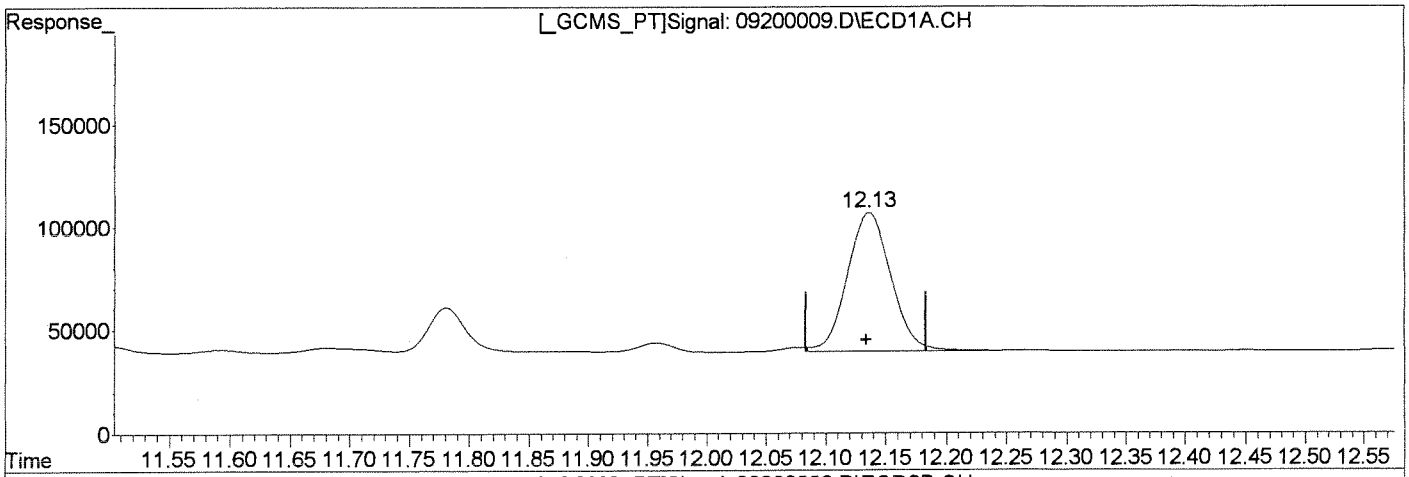
(+) = Expected Retention Time

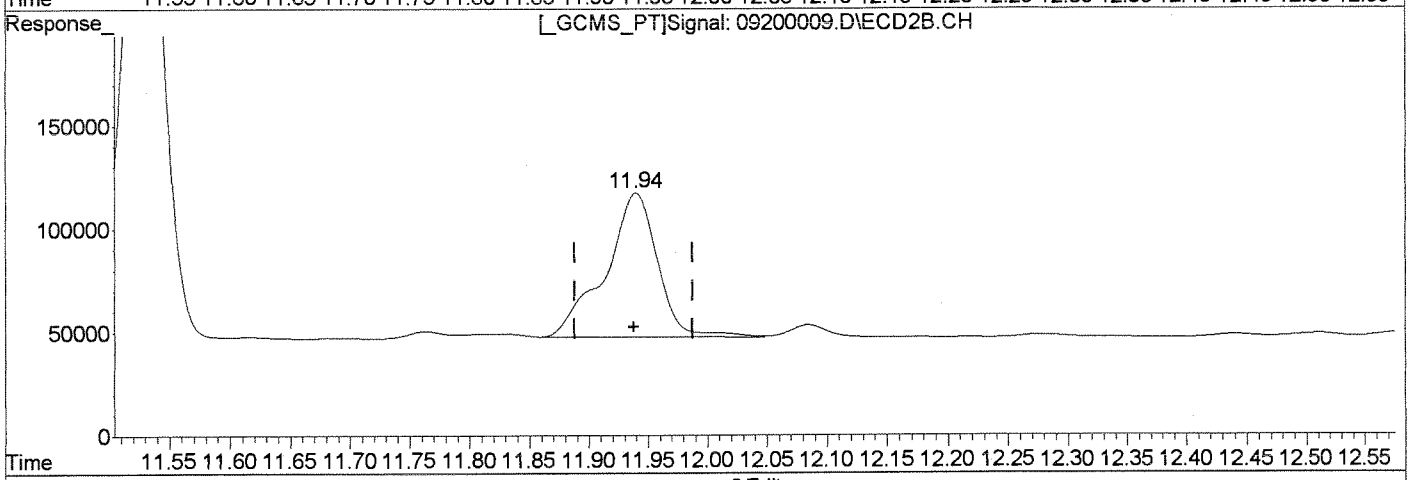
09200009.D 092013_515.M Thu Sep 26 17:47:21 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.13min 43.489ppb

response 167971

(4) 4-Nitrophenol #2 (m)

11.94min 63.994ppb

response 213731

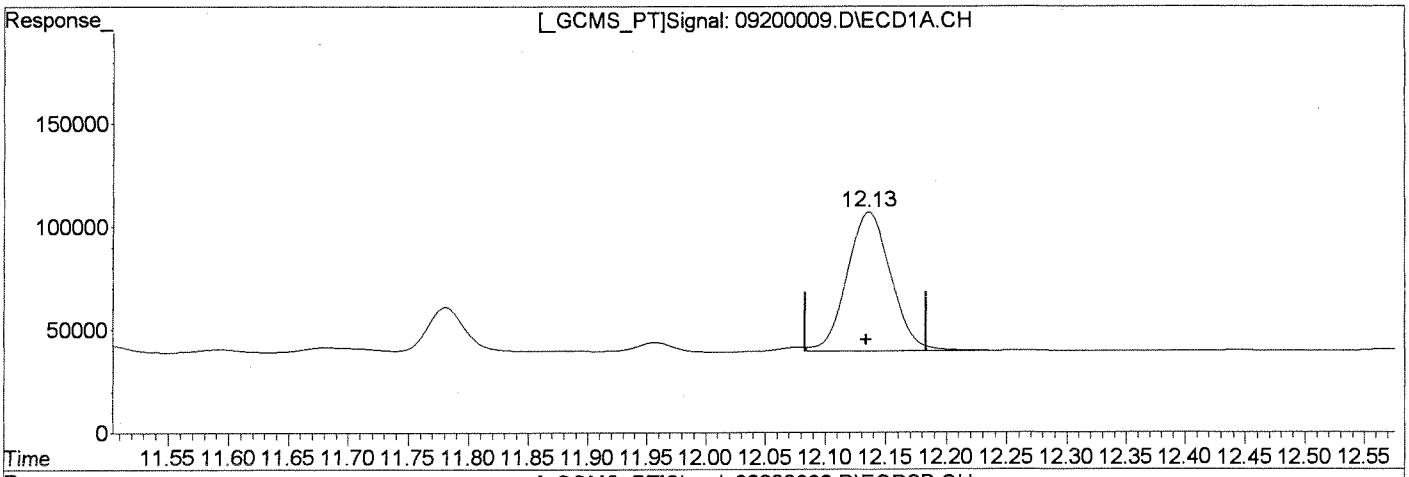
(+) = Expected Retention Time

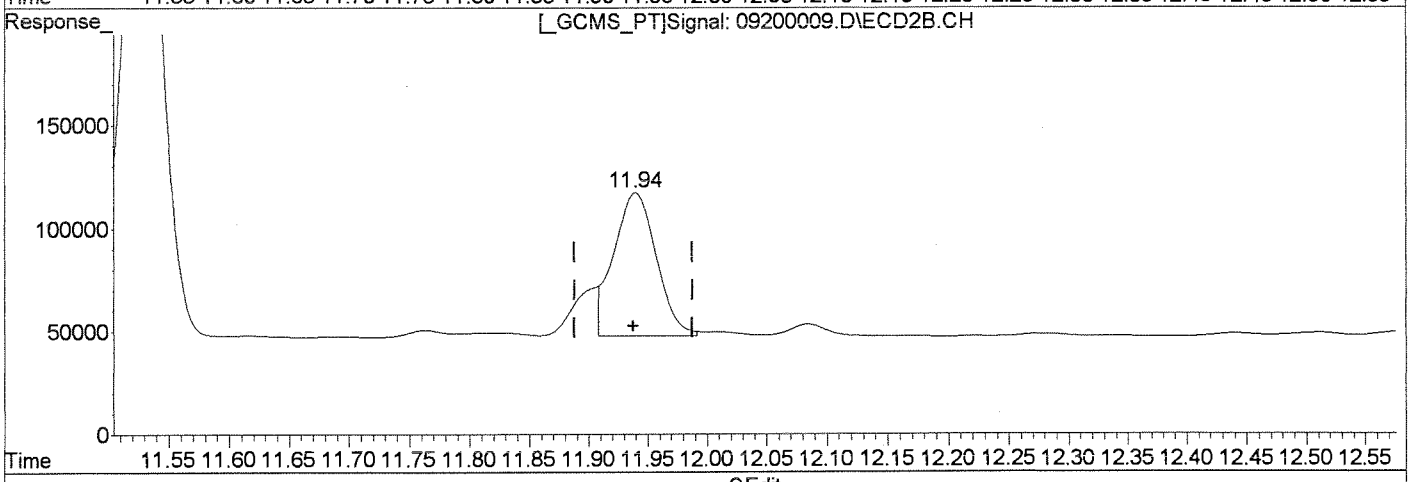
09200009.D 092013_515.M Thu Sep 26 17:43:07 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.13min 43.489ppb

response 167971

(4) 4-Nitrophenol #2 (m)

11.94min 51.496ppb m

response 171989

Manual Integration:

After

Baseline/Shoulder

09/26/13

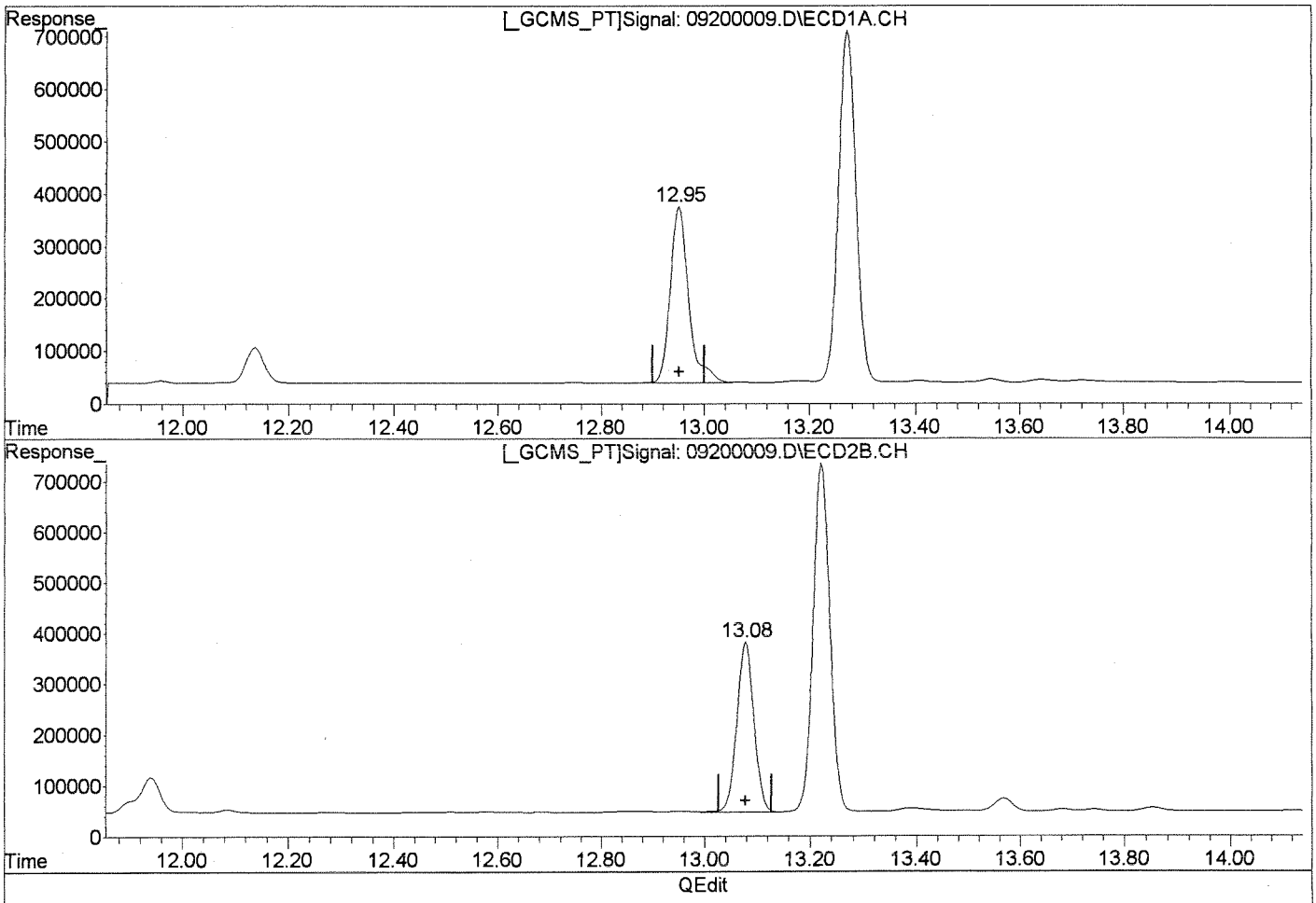
(+) = Expected Retention Time

09200009.D 092013_515.M Thu Sep 26 17:43:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 94.606ppb

response 835121

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 85.799ppb

response 759425

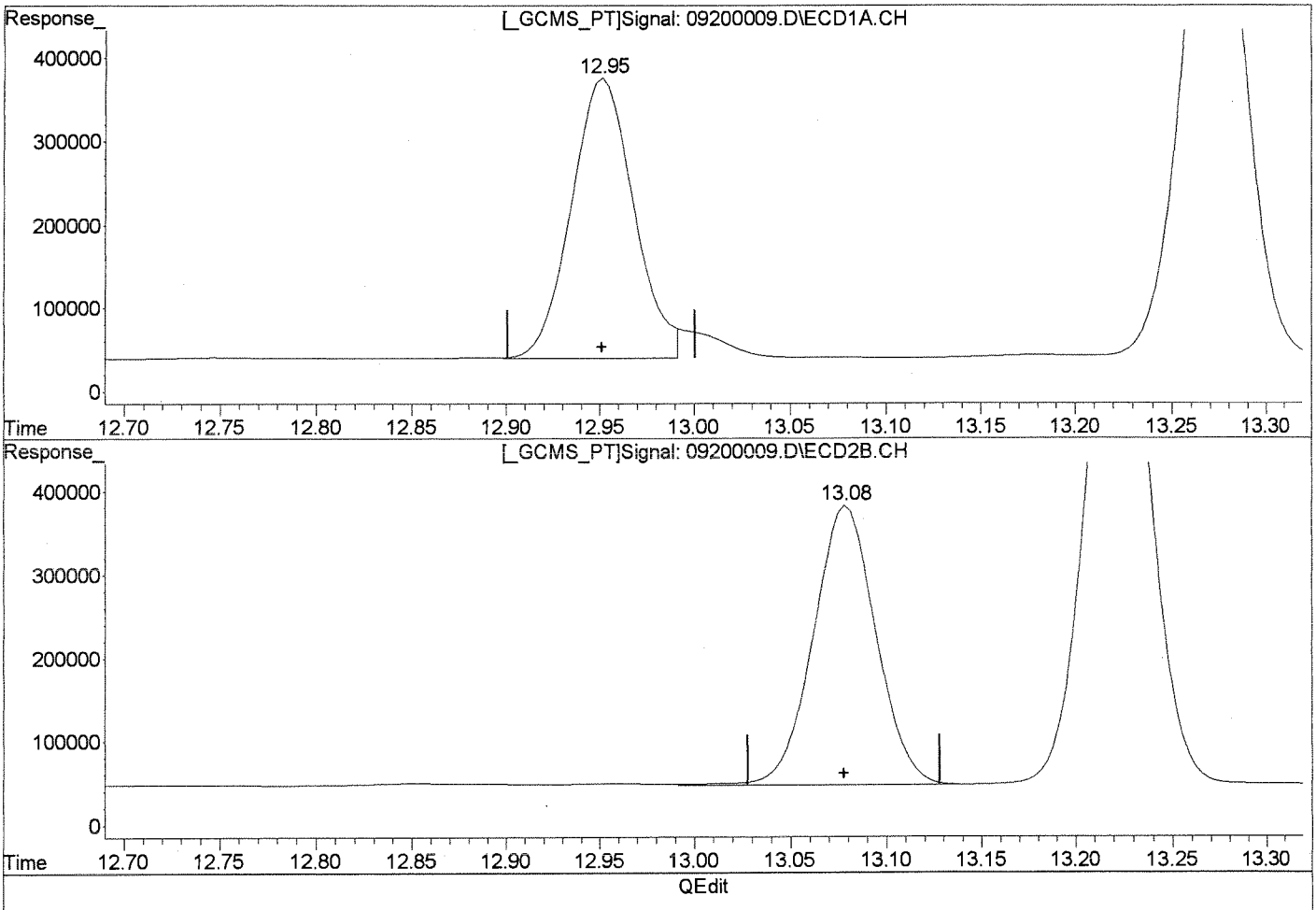
(+) = Expected Retention Time

09200009.D 092013_515.M Thu Sep 26 17:43:32 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200009.D\ECD1A.CH Vial: 7
Signal #2 : J:\GC24\DATA\092013.515\09200009.D\ECD2B.CH
Acq On : 09-20-2013 08:04:14 PM Operator: JSCHWAB
Sample : 091713-LEV7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 88.615ppb m

response 782236

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 85.799ppb

response 759425

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200009.D 092013_515.M Thu Sep 26 17:43:41 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:14 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1188865	1148852	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	915861	896261	104.893m	101.054
		Target Compounds						
2)	m	Dalapon	4.16	4.02	822064	802284	52.331m	35.151m#
3)	m	3,5-Dichlorobenz	11.08	11.53	745942	732083	50.279	50.590
4)	m	4-Nitrophenol	12.13	11.94	212404	218953	55.598	65.424m
6)	m	Dicamba	13.27	13.22	1788280	1808035	53.242	54.566
7)	m	Dichloroprop	14.37	14.46	510806	500183	52.799	51.007
8)	m	2,4-D	14.86	14.88	547413	530325	48.894	47.610
9)	m	Trichlopyr	15.55	15.64	7332581	1303438	54.124	51.041
10)	m	Pentachloropheno	15.55	16.18	7332581	6564787	51.101	57.166
11)	m	2,4,5-TP (Silvex	16.06	16.27	2136828	2106046	49.541	48.133
12)	m	2,4,5-T	16.61	16.77	1609330	1568239	52.060	52.530
13)	m	Chloramben	16.72	16.61	1090651	1087829	55.444	52.237
14)	m	Dinoseb	17.76	17.72	1280942	1137094	44.668	55.551
15)	m	2,4-DB	17.31	17.54	251170	241632	53.342	46.591
16)	m	Bentazon	18.47	18.07	179424	172086	58.609	35.403 #
17)	m	DCPA (Dacthal)	18.86	18.82	1389739	1394192	47.309	49.715
18)	m	Picloram	18.95	18.61	991829	936423	53.115	53.031
19)	m	Acifluorfen	20.94	20.83	1220358	1123611	52.911	55.406

55 10/1/13

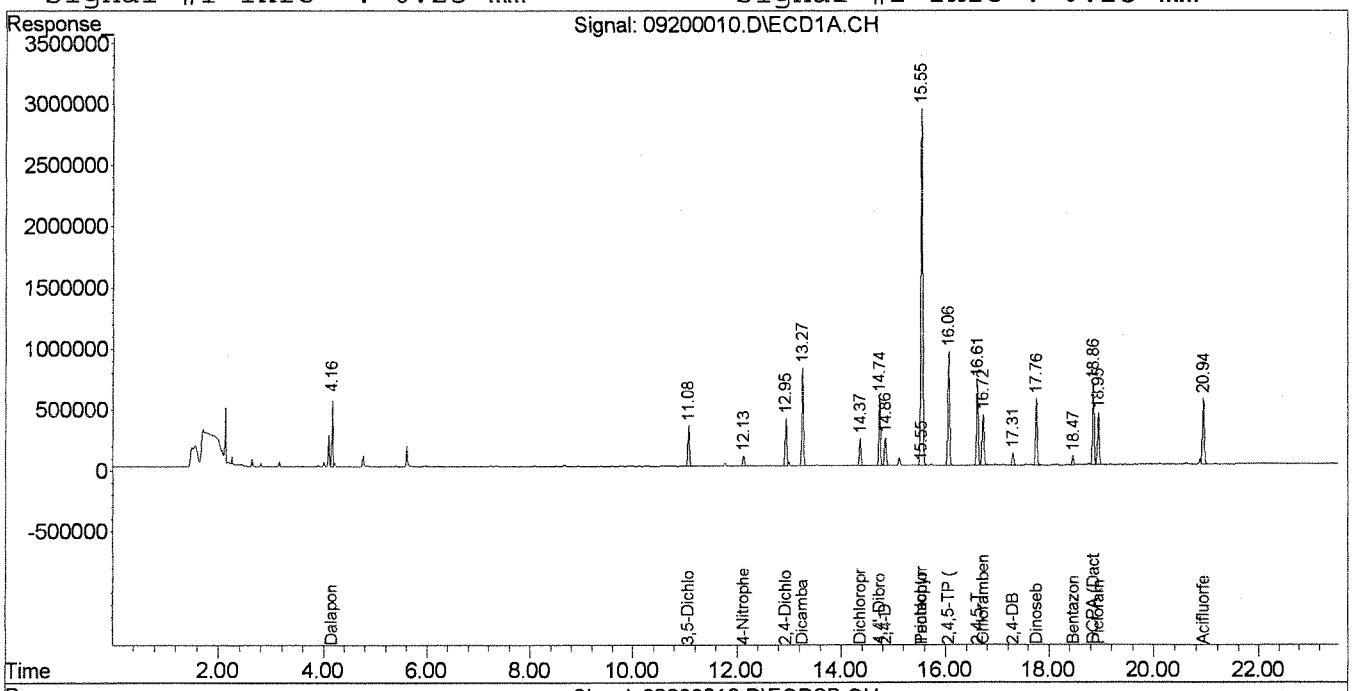
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

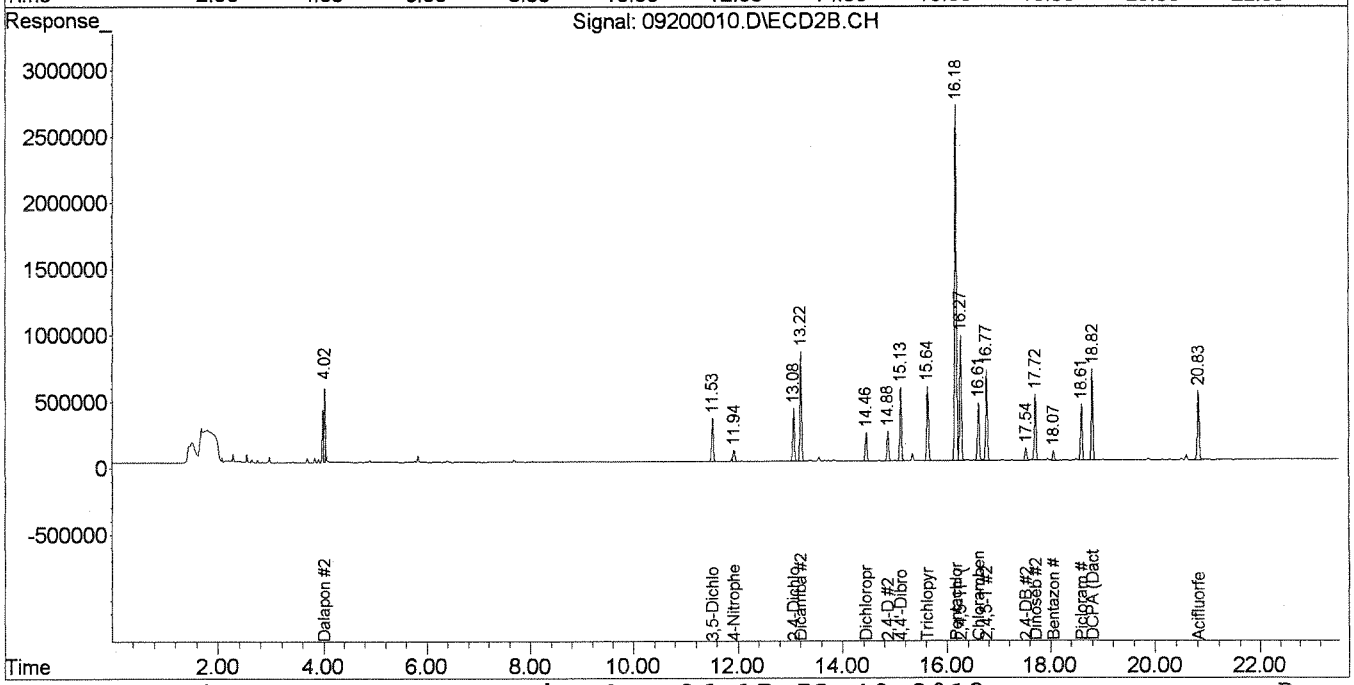
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:51 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

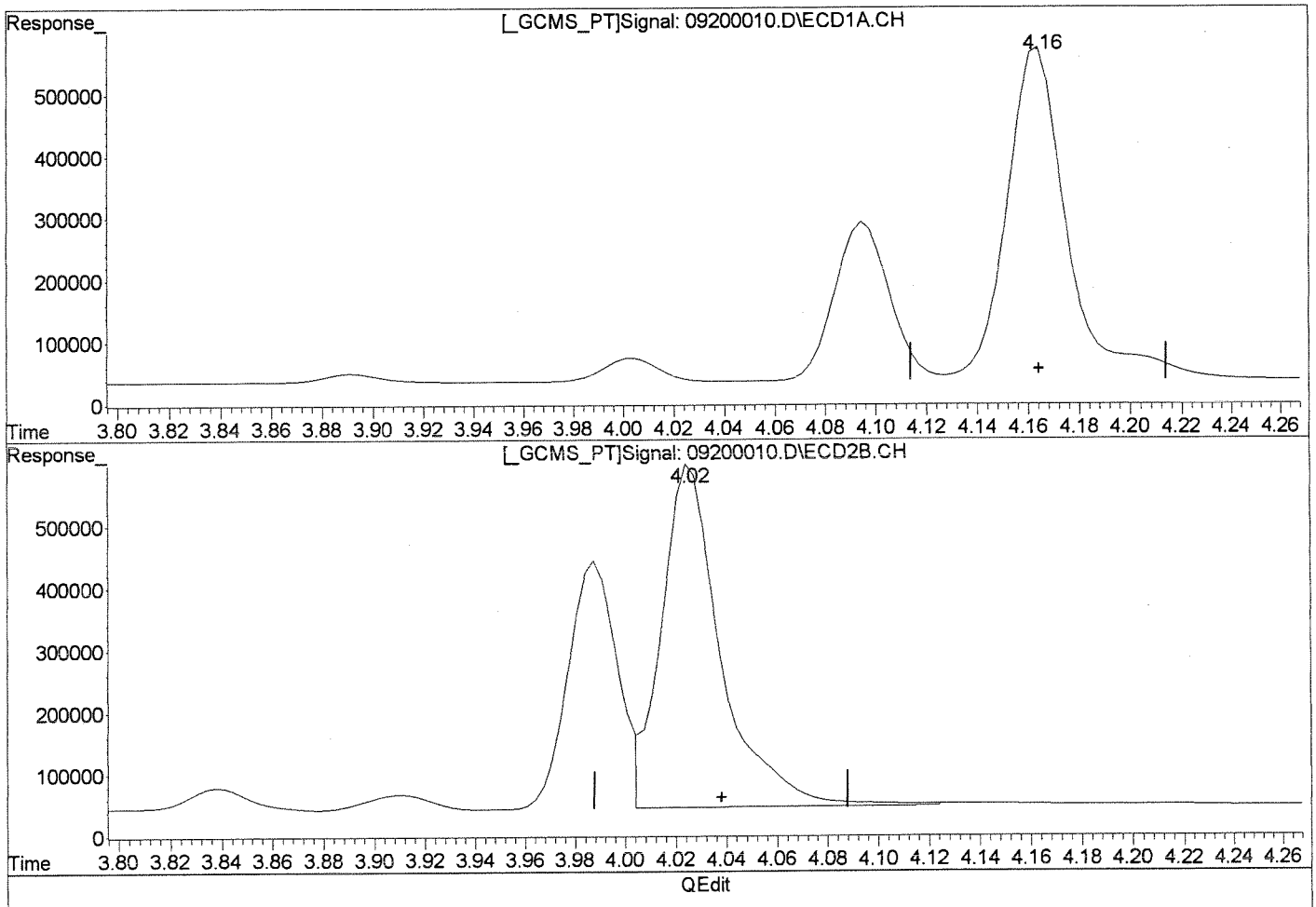




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(2) Dalapon (m)

4.16min 56.366ppb

response 885445

(2) Dalapon #2 (m)

4.02min 39.255ppb

response 895951

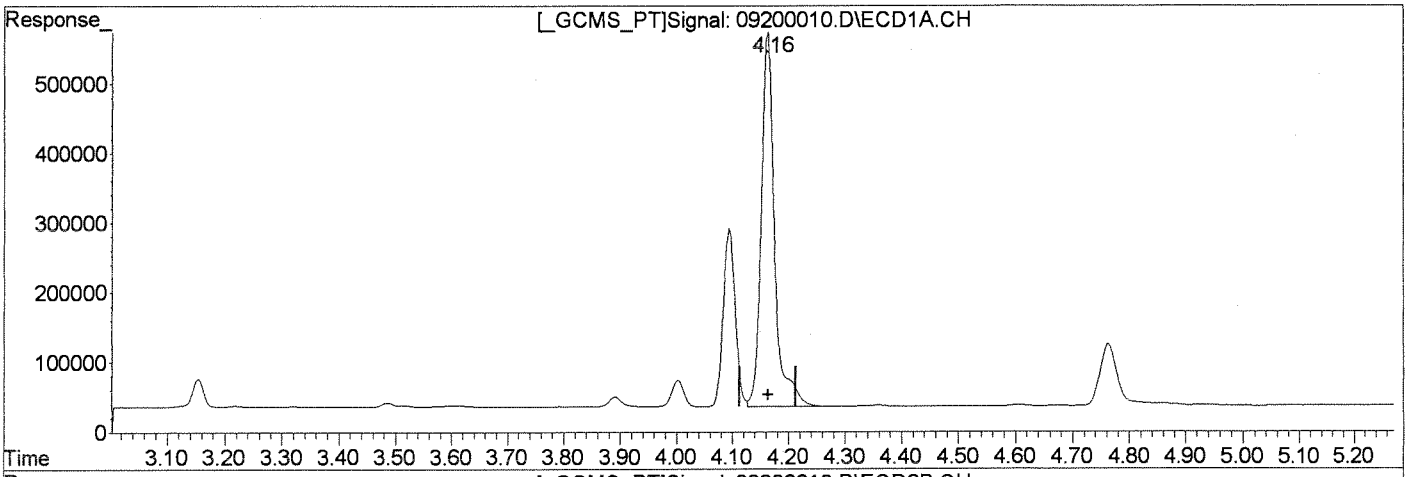
(+) = Expected Retention Time

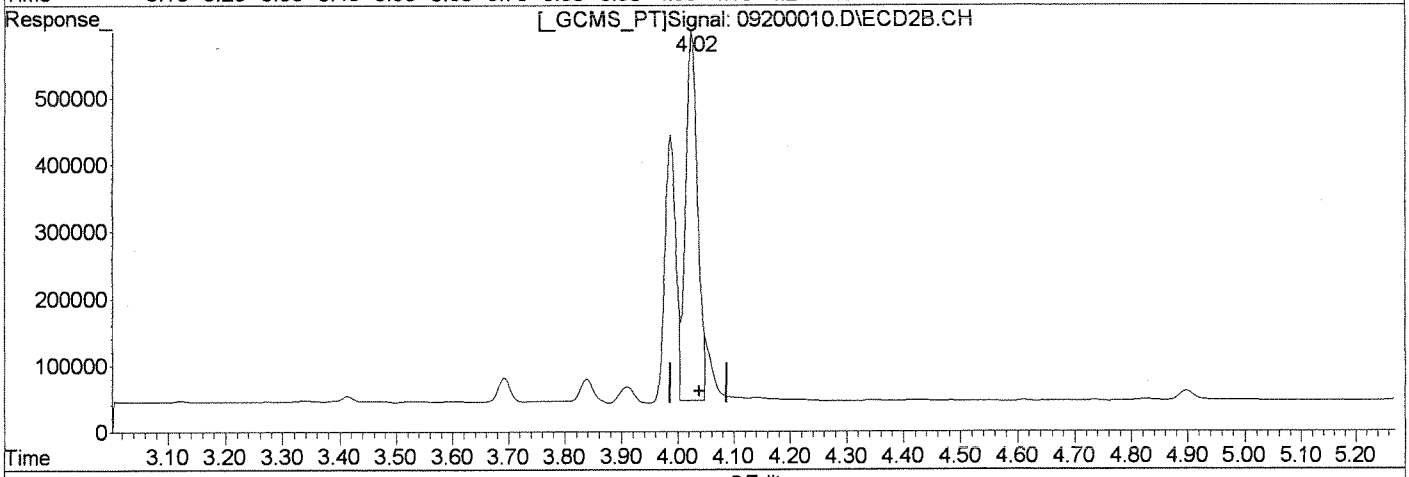
09200010.D 092013_515.M Thu Sep 26 17:44:03 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 56.366ppb

response 885445

(2) Dalapon #2 (m)

4.02min 35.151ppb m

response 802284

Manual Integration:

After

Baseline/Shoulder

09/26/13

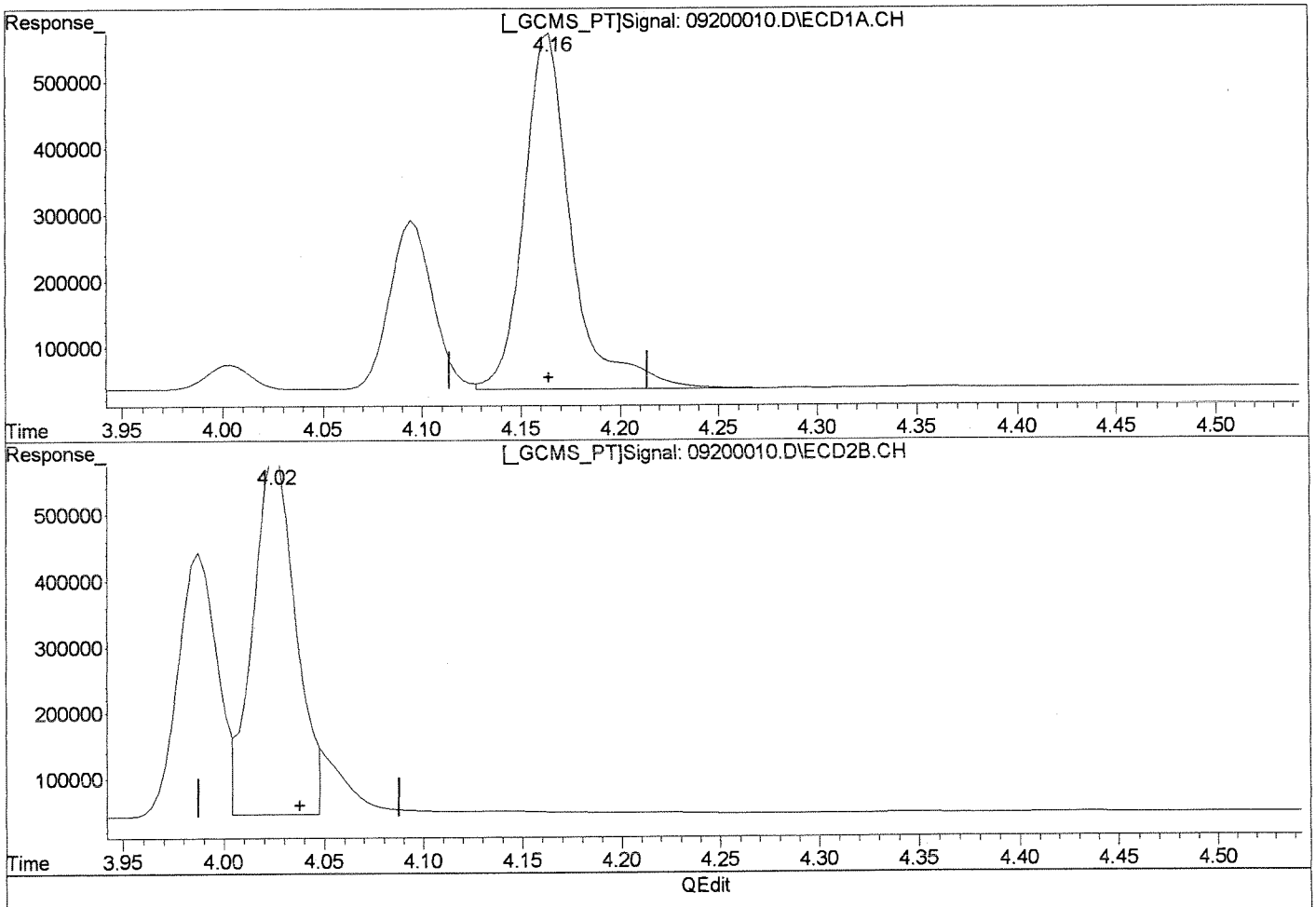
(+) = Expected Retention Time

09200010.D 092013_515.M Thu Sep 26 17:44:20 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:48 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 56.366ppb

response 885445

Manual Integration:

Before

(2) Dalapon #2 (m)

4.02min 35.151ppb m

response 802284

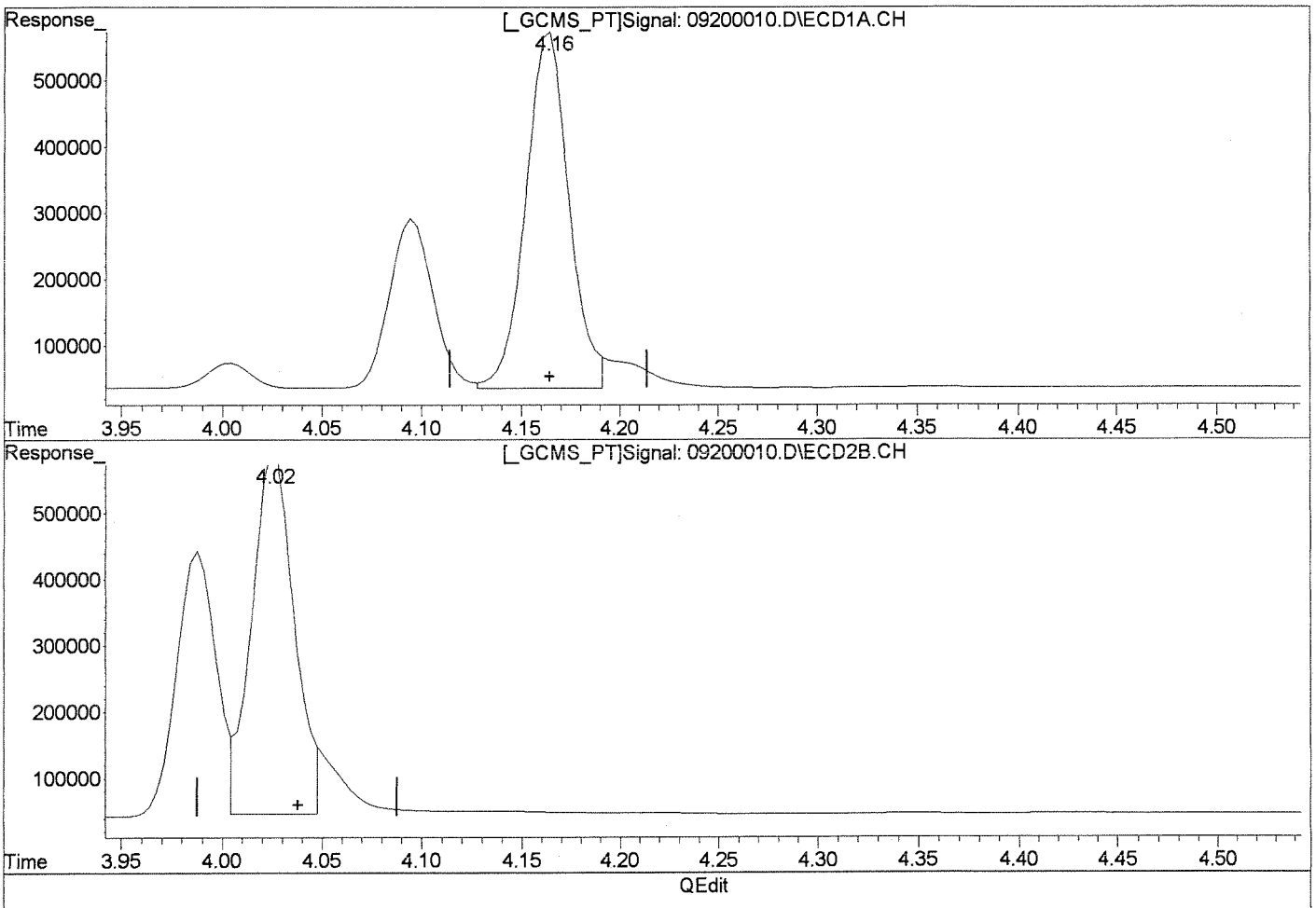
(+) = Expected Retention Time

09200010.D 092013_515.M Thu Sep 26 17:47:29 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:48 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(2) Dalapon (m)

4.16min 52.331ppb m

response 822064

(2) Dalapon #2 (m)

4.02min 35.151ppb m

response 802284

Manual Integration:

After

Baseline/Shoulder

09/26/13

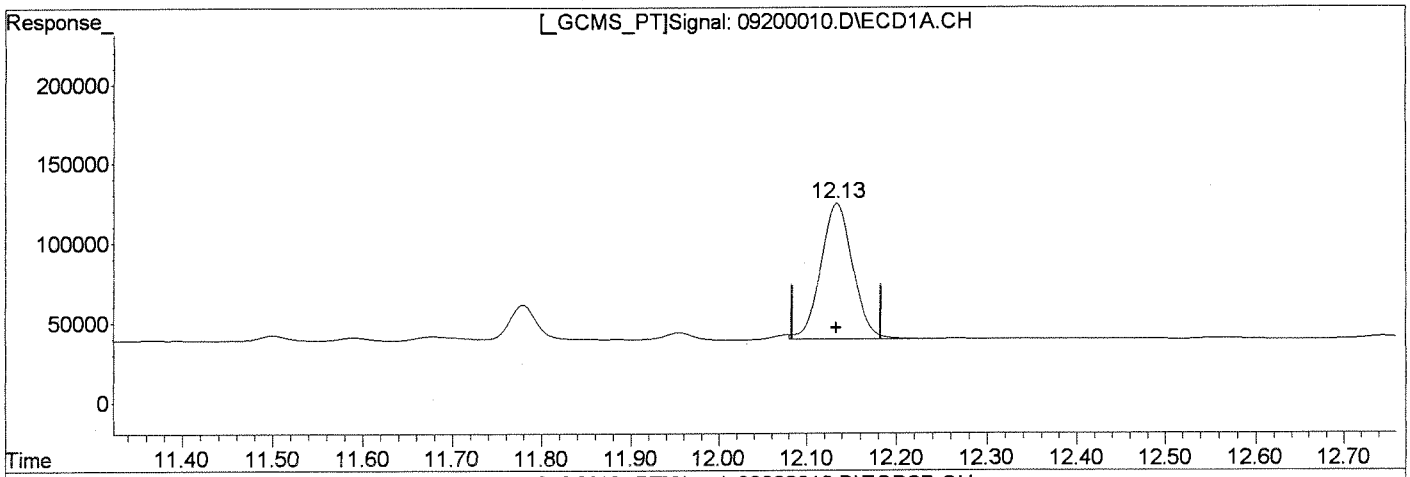
(+) = Expected Retention Time

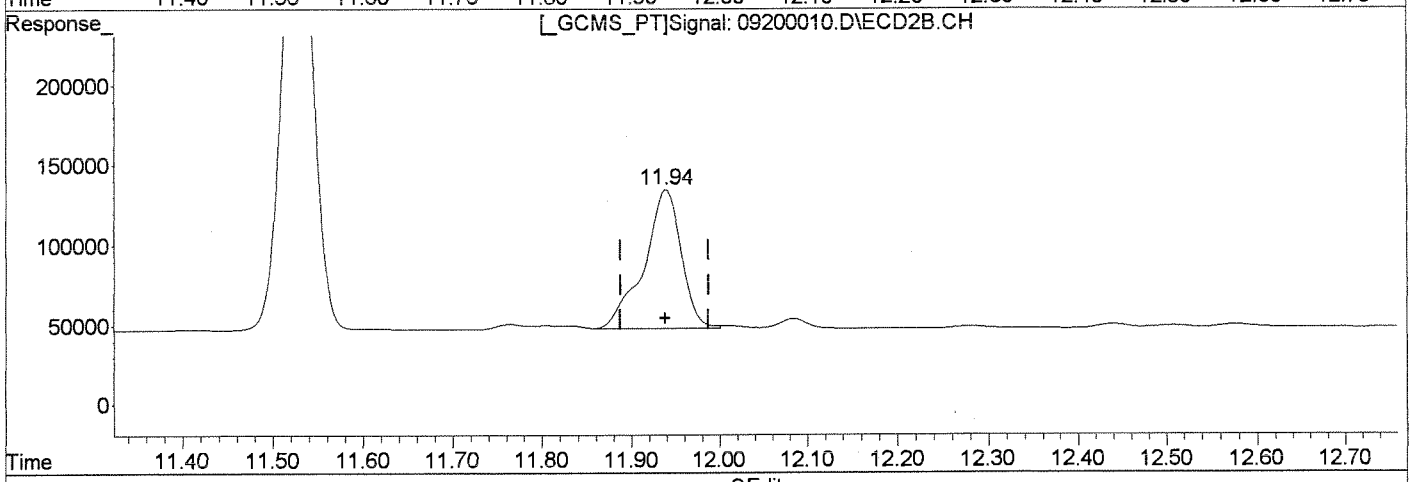
09200010.D 092013_515.M Thu Sep 26 17:47:37 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(4) 4-Nitrophenol (m)

12.13min 55.598ppb

response 212404

Manual Integration:

Before

(4) 4-Nitrophenol #2 (m)

11.94min 75.763ppb

response 253552

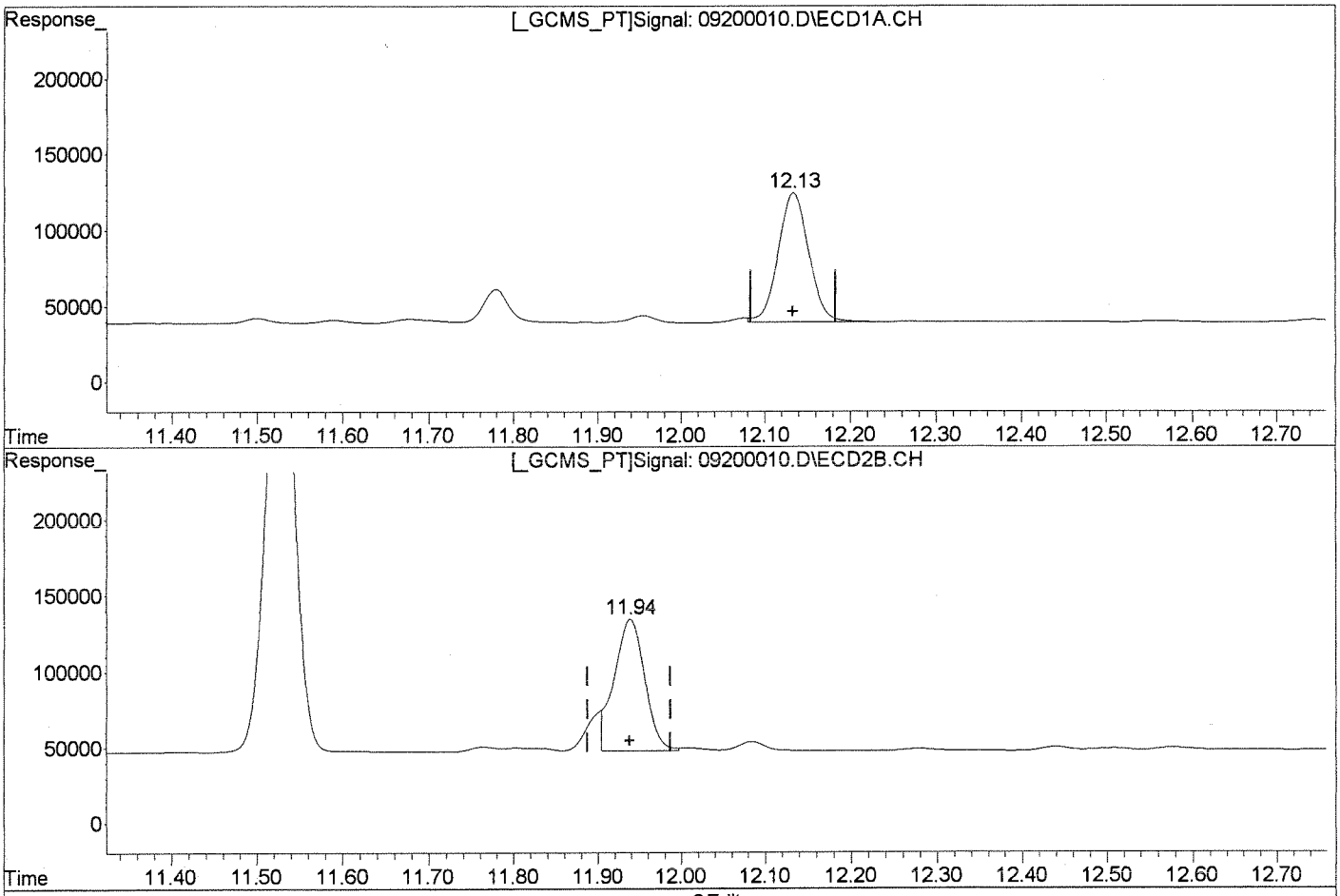
(+) = Expected Retention Time

09200010.D 092013_515.M Thu Sep 26 17:44:26 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(4) 4-Nitrophenol (m)

12.13min 55.598ppb

response 212404

(4) 4-Nitrophenol #2 (m)

11.94min 65.424ppb m

response 218953

Manual Integration:

After

Baseline/Shoulder

09/26/13

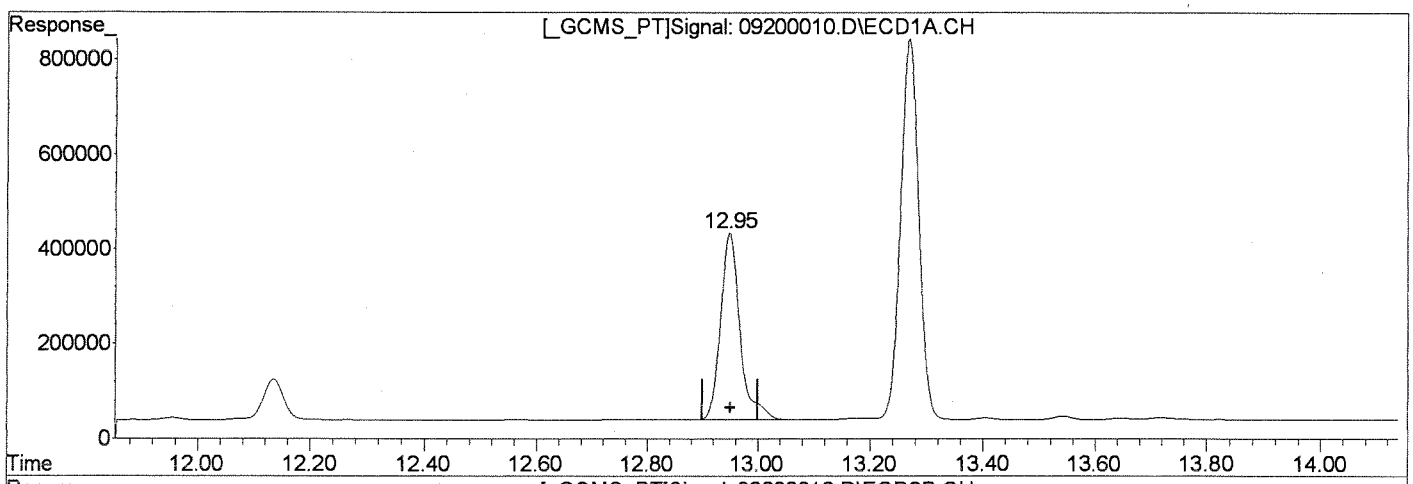
(+) = Expected Retention Time

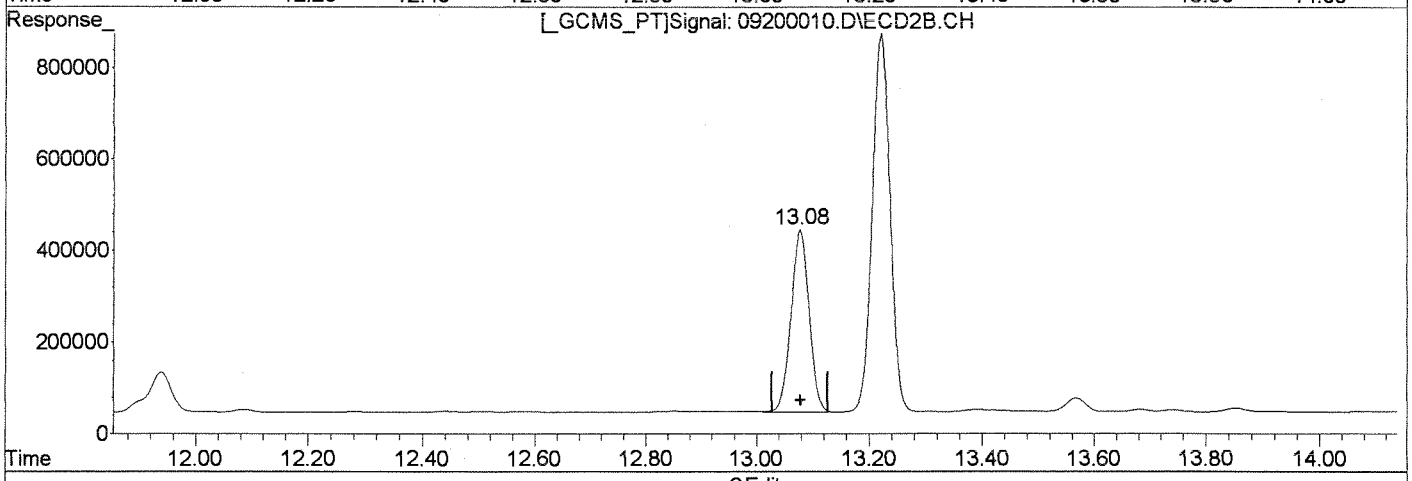
09200010.D 092013_515.M Thu Sep 26 17:44:32 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 111.521ppb

response 973725

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 101.054ppb

response 896261

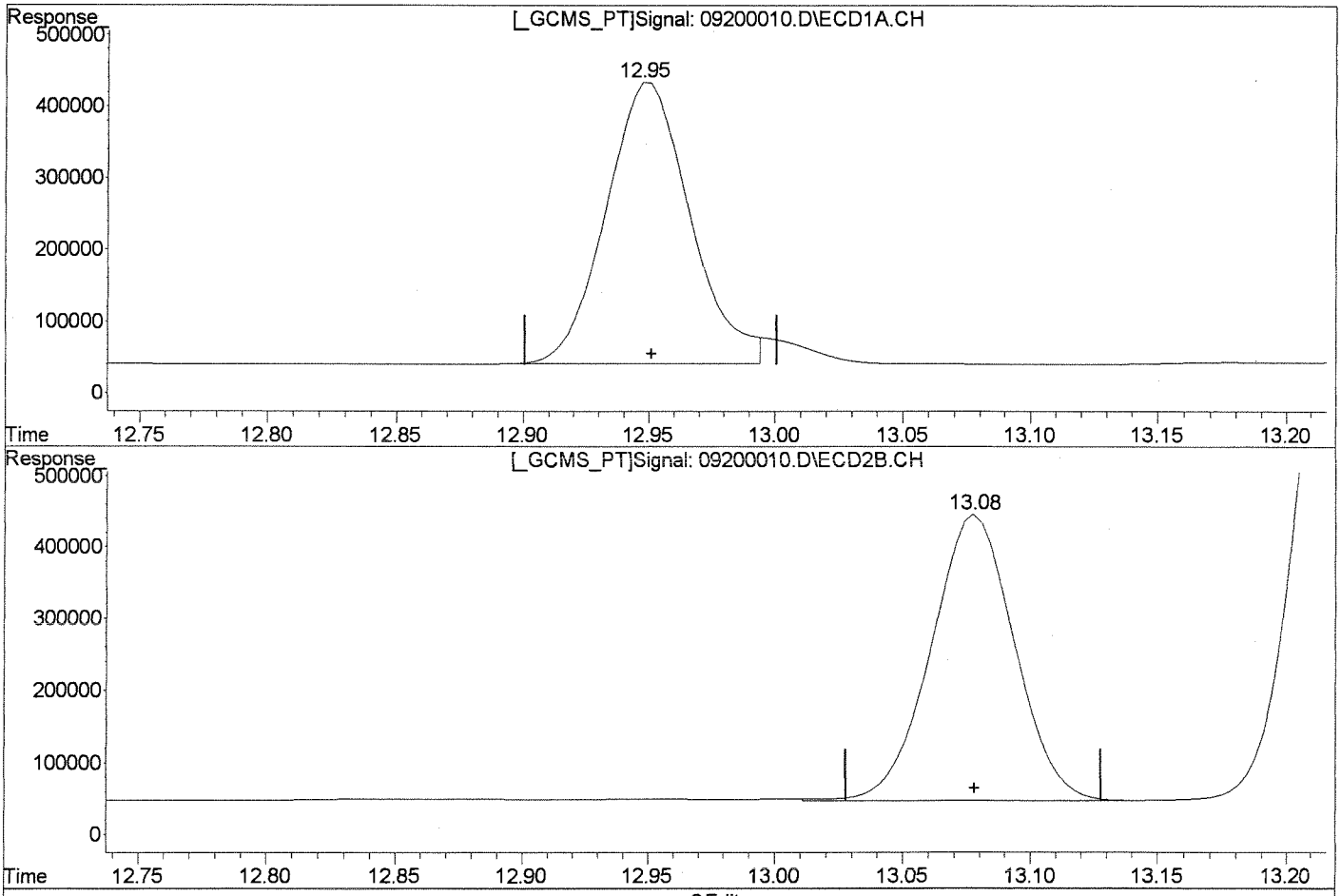
(+) = Expected Retention Time

09200010.D 092013_515.M Thu Sep 26 17:44:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200010.D\ECD1A.CH Vial: 8
Signal #2 : J:\GC24\DATA\092013.515\09200010.D\ECD2B.CH
Acq On : 09-20-2013 08:34:02 PM Operator: JSCHWAB
Sample : 091713-LEV8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 104.893ppb m

response 915861

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 101.054ppb

response 896261

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200010.D 092013_515.M Thu Sep 26 17:44:43 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:15 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1196966	1147008	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	1497450	1468598	170.342m	165.851
		Target Compounds						
2)	m	Dalapon	4.16	4.03	1414779	1369332	89.453	60.092m#
3)	m	3,5-Dichlorobenz	11.08	11.53	1220295	1204823	81.695	83.393
4)	m	4-Nitrophenol	12.14	11.94	347323	333420	90.298	99.788m
6)	m	Dicamba	13.27	13.22	3006657	3094476	88.911	93.541
7)	m	Dichloroprop	14.38	14.47	837739	817924	86.007	83.543
8)	m	2,4-D	14.86	14.88	909051	886087	80.646	79.676
9)	m	Trichlopyr	15.55	15.64	12183873	2201544	89.324	86.349
10)	m	Pentachloropheno	15.55	16.18	12183873	11195499	84.335	97.647
11)	m	2,4,5-TP (Silvex	16.07	16.28	3581442	3556276	82.472	81.408
12)	m	2,4,5-T	16.62	16.77	2729704	2701605	87.706	90.640
13)	m	Chloramben	16.73	16.61	1837772	1865671	92.791	89.733
14)	m	Dinoseb	17.76	17.72	2124985	1966063	73.599	96.203 #
15)	m	2,4-DB	17.31	17.54	405028	381696	85.435	73.715
16)	m	Bentazon	18.47	18.07	283534	273660	91.990	56.391 #
17)	m	DCPA (Dacthal)	18.86	18.81	2312851	2364856	78.201	84.464
18)	m	Picloram	18.95	18.61	1685443	1640854	89.649	93.073
19)	m	Acifluorfen	20.94	20.83	2043455	1935953	87.999	95.617

SS 10/1/13

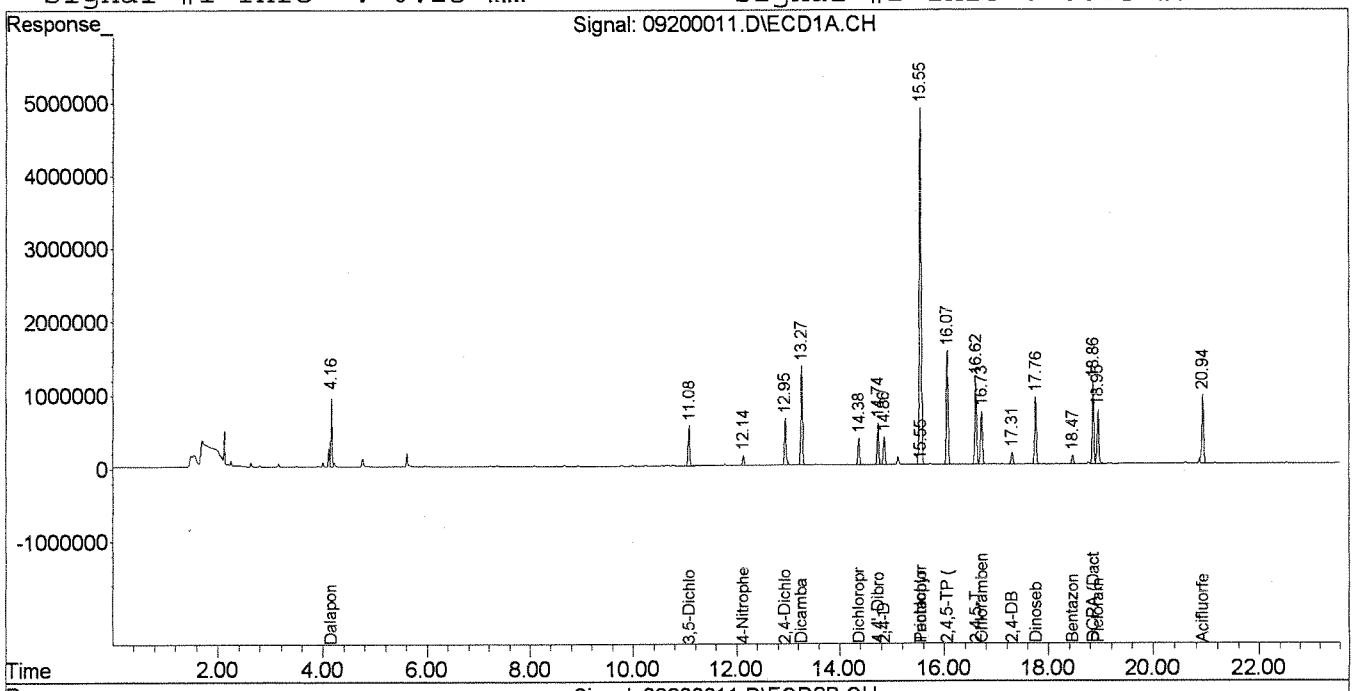
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

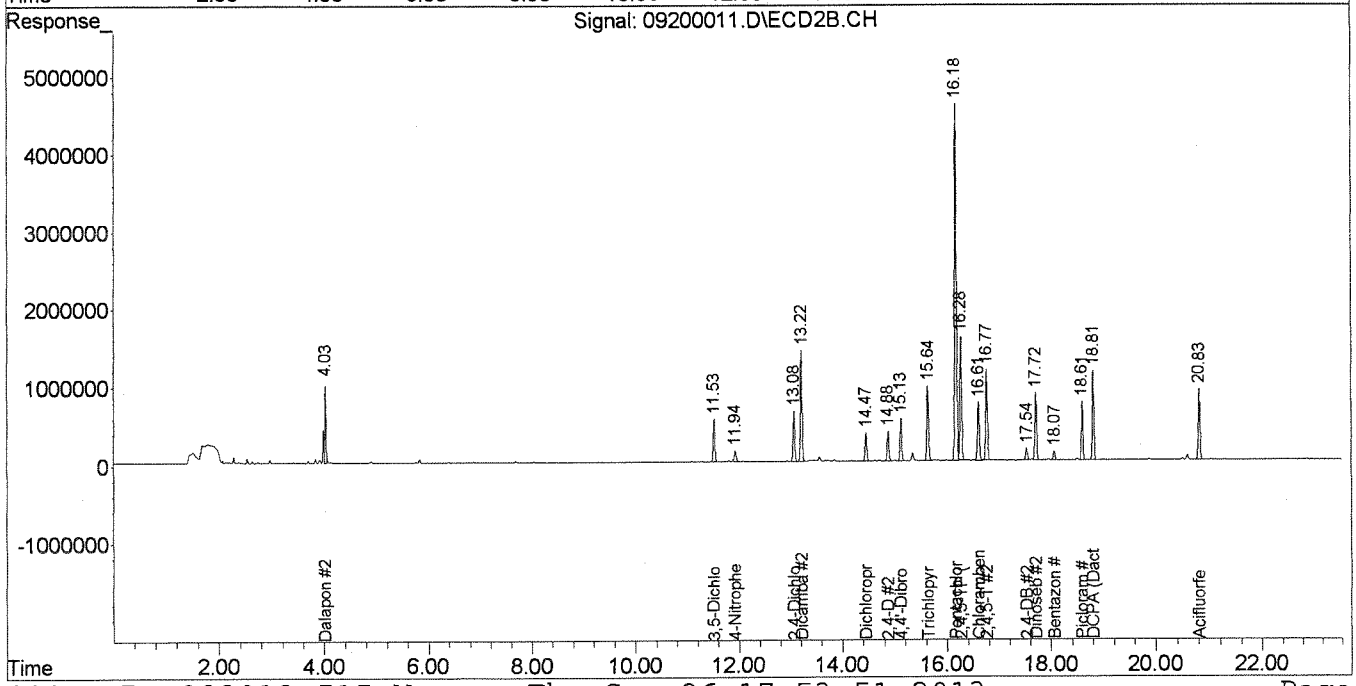
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:49 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

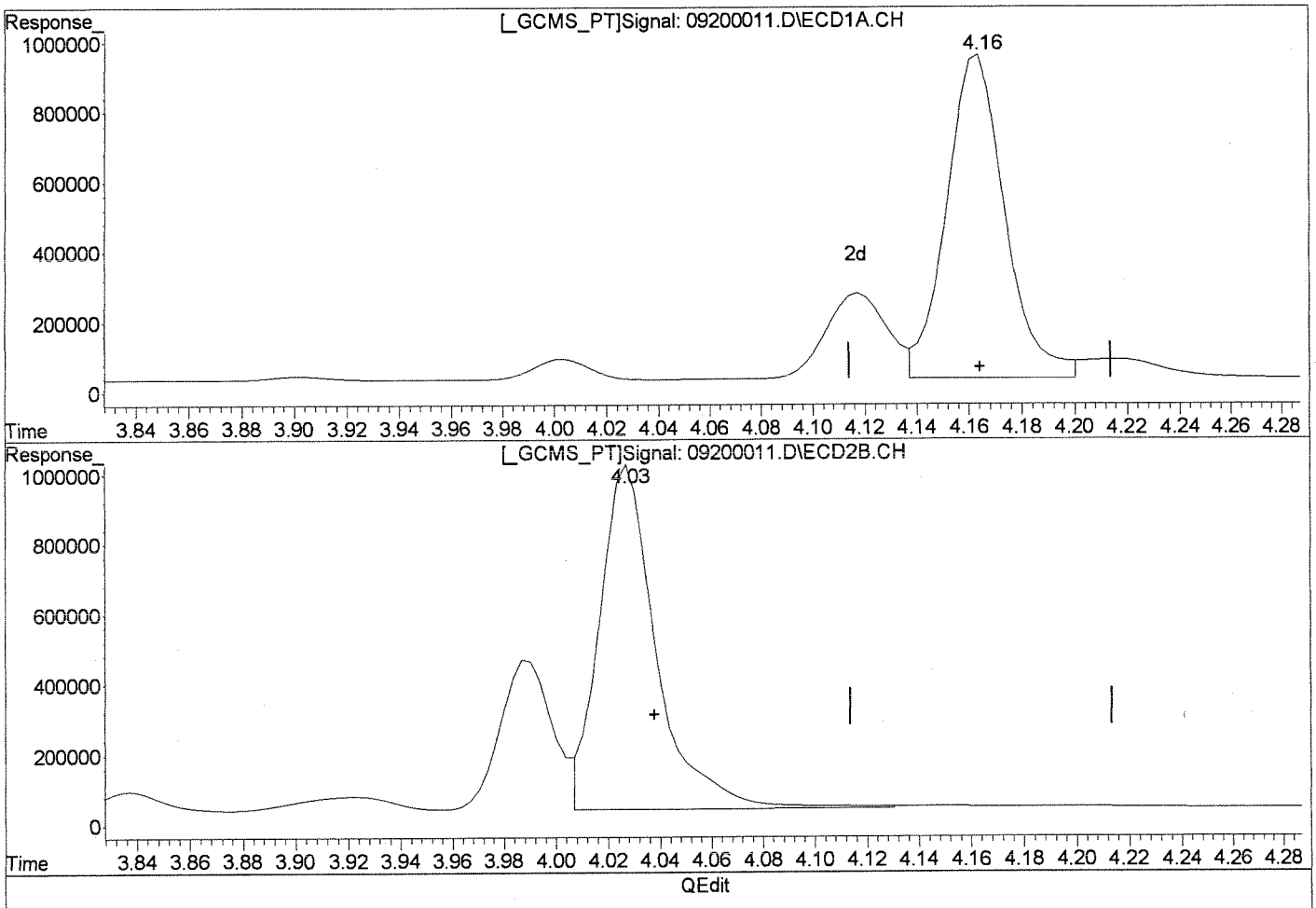




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(2) Dalapon (m)

4.16min 89.453ppb

response 1414779

(2) Dalapon #2 (m)

4.03min 65.213ppb

response 1486037

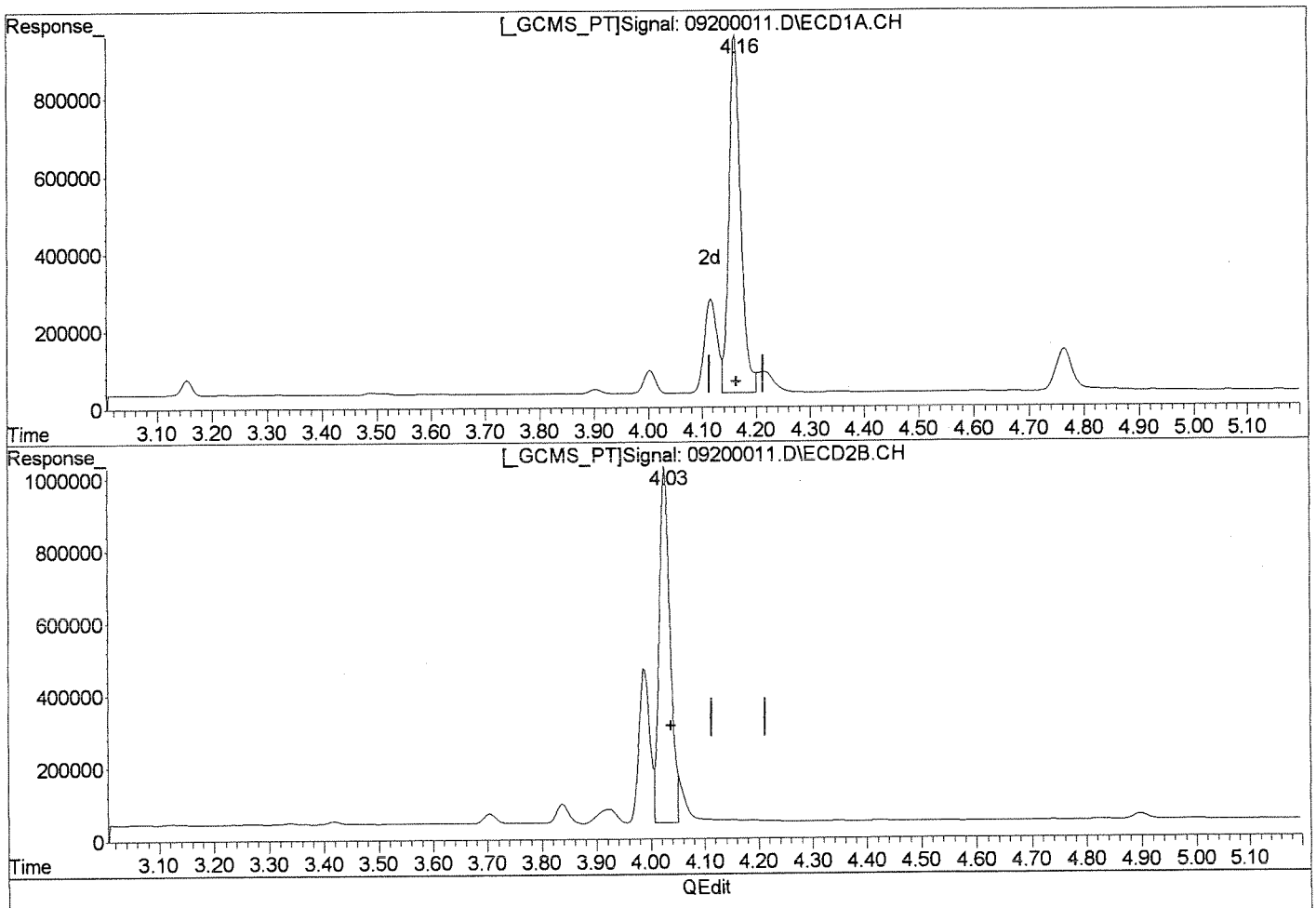
(+) = Expected Retention Time

09200011.D 092013_515.M Thu Sep 26 17:45:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 89.453ppb

response 1414779

(2) Dalapon #2 (m)

4.03min 60.092ppb m

response 1369332

Manual Integration:

After

Baseline/Shoulder

09/26/13

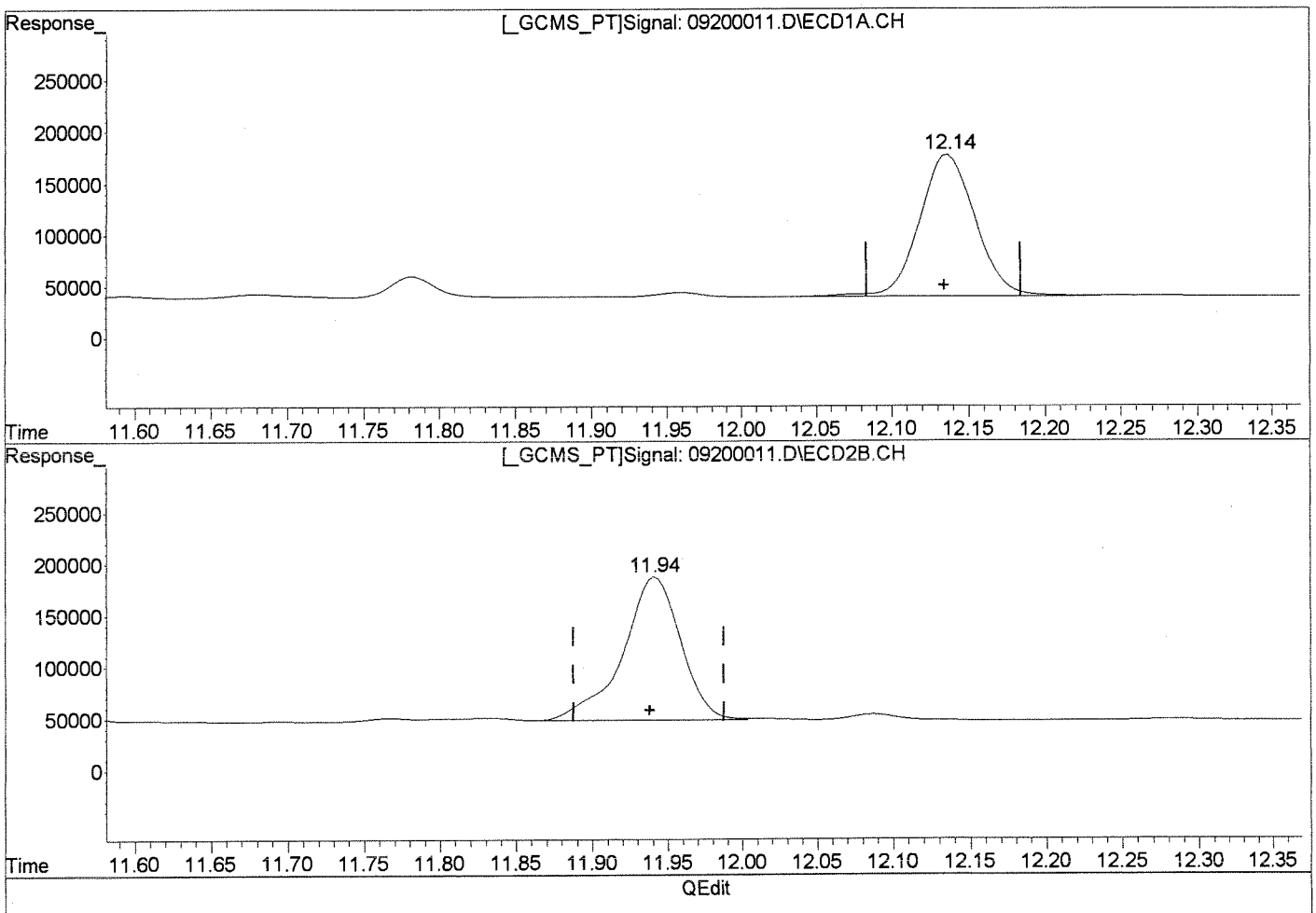
(+) = Expected Retention Time

09200011.D 092013_515.M Thu Sep 26 17:45:23 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(4) 4-Nitrophenol (m)

12.14min 90.298ppb

response 347323

(4) 4-Nitrophenol #2 (m)

11.94min 111.483ppb

response 372495

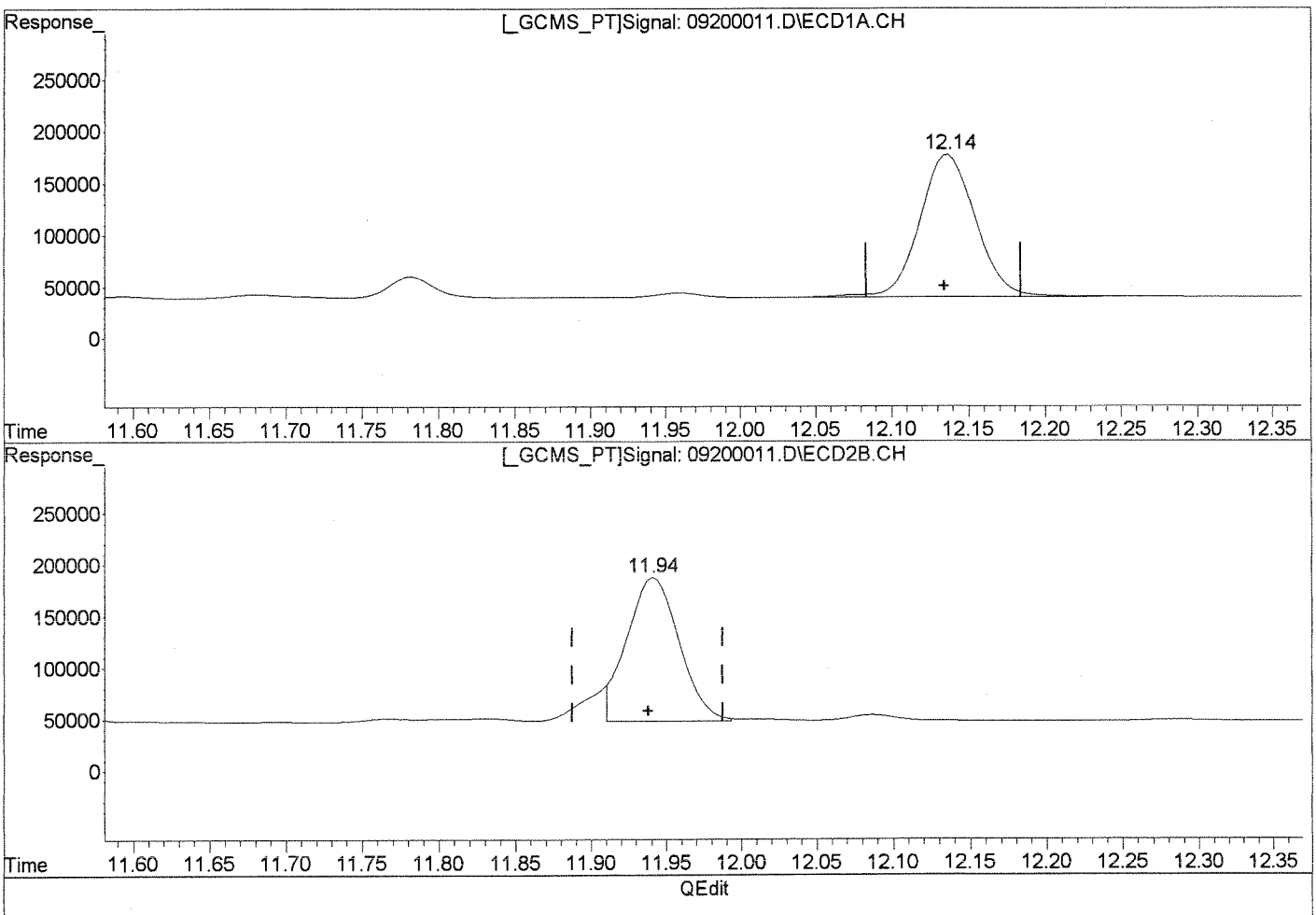
(+) = Expected Retention Time

09200011.D 092013_515.M Thu Sep 26 17:45:28 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



QEdit

(4) 4-Nitrophenol (m)

12.14min 90.298ppb

response 347323

(4) 4-Nitrophenol #2 (m)

11.94min 99.788ppb m

response 333420

Manual Integration:

After

Baseline/Shoulder

09/26/13

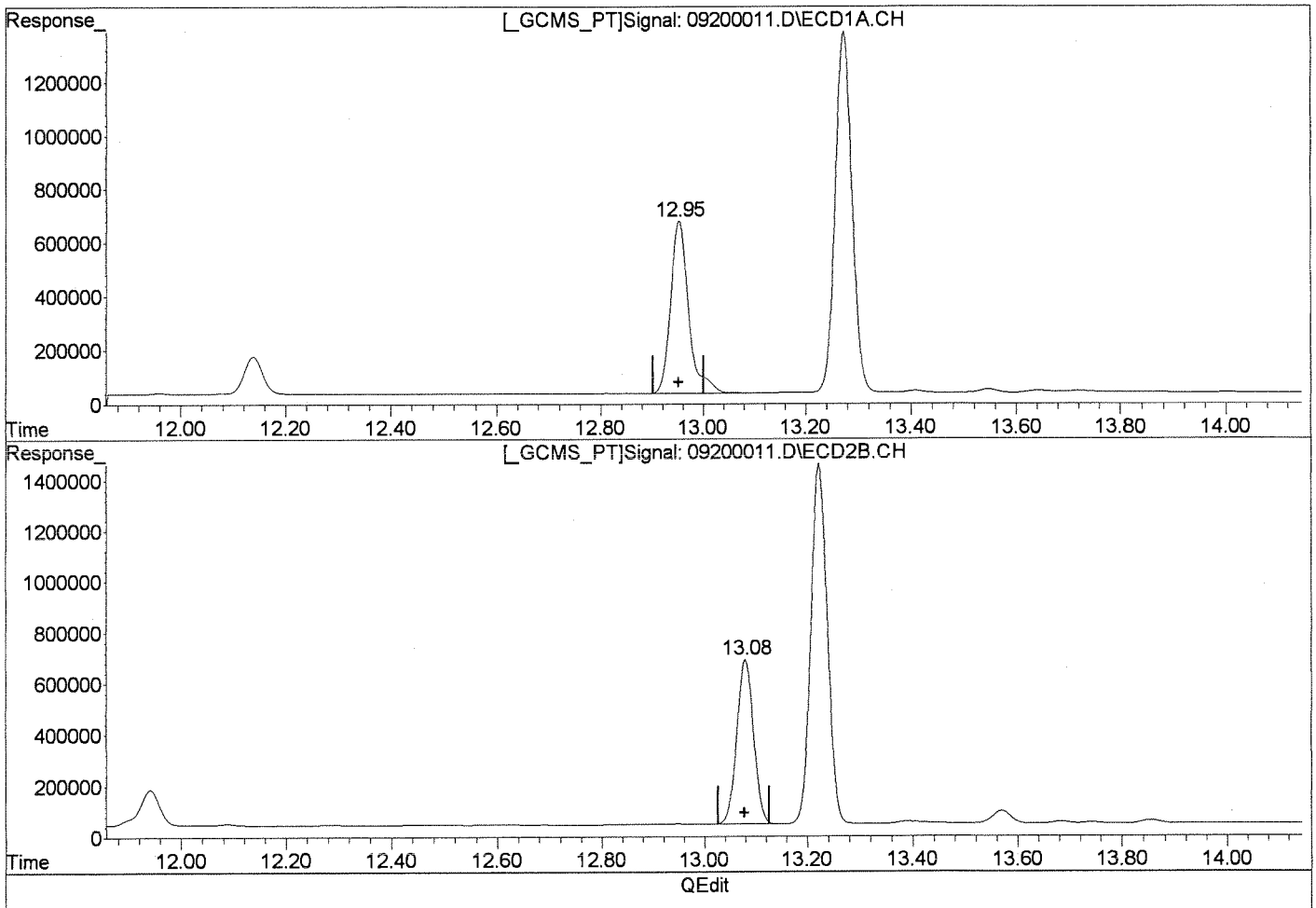
(+) = Expected Retention Time

09200011.D 092013_515.M Thu Sep 26 17:45:35 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



Manual Integration:
Before

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 180.477ppb

response 1586548

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 165.851ppb

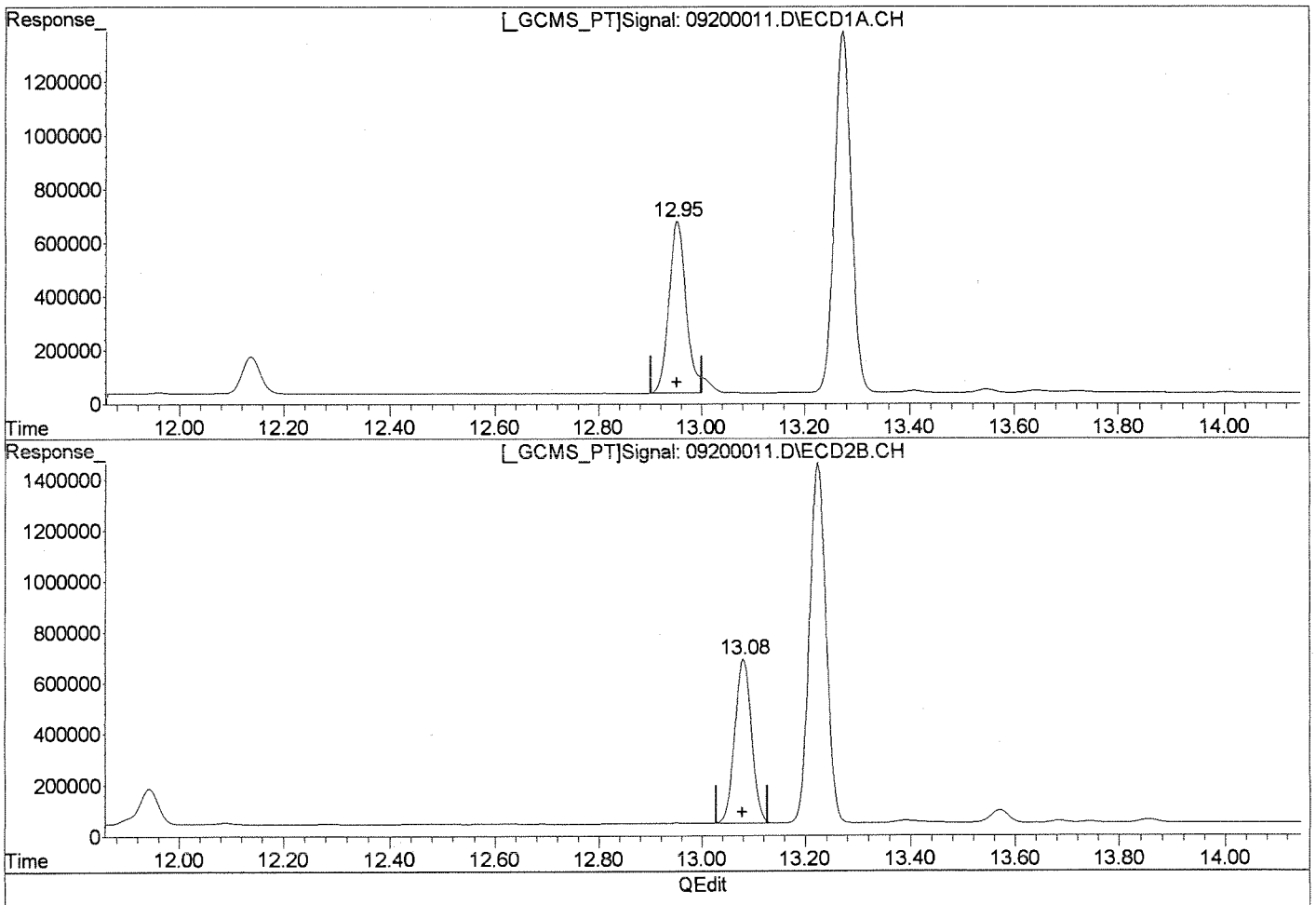
response 1468598

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200011.D\ECD1A.CH Vial: 9
Signal #2 : J:\GC24\DATA\092013.515\09200011.D\ECD2B.CH
Acq On : 09-20-2013 09:03:55 PM Operator: JSCHWAB
Sample : 091713-LEV9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 170.342ppb m

response 1497450

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 165.851ppb

response 1468598

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200011.D 092013_515.M Thu Sep 26 17:45:48 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200012.D\ECD1A.CH Vial: 10
Signal #2 : J:\GC24\DATA\092013.515\09200012.D\ECD2B.CH
Acq On : 09-20-2013 09:34:11 PM Operator: JSCHWAB
Sample : 091713-LEV10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:31:16 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb	
		Internal Standards							
1)	I	4,4'-Dibromoocta	14.74	15.12	1164831	1103282	20.000	20.000	
		System Monitoring Compounds							
5)	s	2,4-Dichlorophen	12.95	13.08	2792354	2769519	326.406m	325.162	
		Target Compounds							
3)	m	3,5-Dichlorobenz	11.08	11.53	2225474	2228162	153.099	160.336	
4)	m	4-Nitrophenol	12.13	11.94	771433	778962	206.093	242.372	
6)	m	Dicamba	13.27	13.22	5660351	5952097	172.003	187.054	
7)	m	Dichloroprop	14.37	14.46	1511080	1491083	159.415	158.337	
8)	m	2,4-D	14.86	14.88	1619625	1599953	147.648	149.567	
9)	m	Trichlopyr	15.55	15.64	22759959	4042416	171.465	164.835	
10)	m	Pentachloropheno	15.55	16.18	22759959	21519364	161.887	195.130	
11)	m	2,4,5-TP (Silvex	16.06	16.27	6427114	6576879	152.083	156.521	
12)	m	2,4,5-T	16.61	16.77	4878996	4963236	161.087	173.118	
13)	m	Chloramben	16.72	16.61	3351479	3443872	173.889	172.203	
14)	m	Dinoseb	17.76	17.72	3810351	3655559	135.612	185.963	#
15)	m	2,4-DB	17.31	17.54	724092	691857	156.951	138.911	
16)	m	Bentazon	18.47	18.07	502084	492826	167.390	105.577	#
17)	m	DCPA (Dacthal)	18.86	18.81	4513385	4729734	156.814	175.624	
18)	m	Picloram	18.95	18.61	3251768	3268064	177.735	192.719	
19)	m	Acifluorfen	20.94	20.83	3806805	3725471	168.458	191.293	

NM

SS 10/1/13

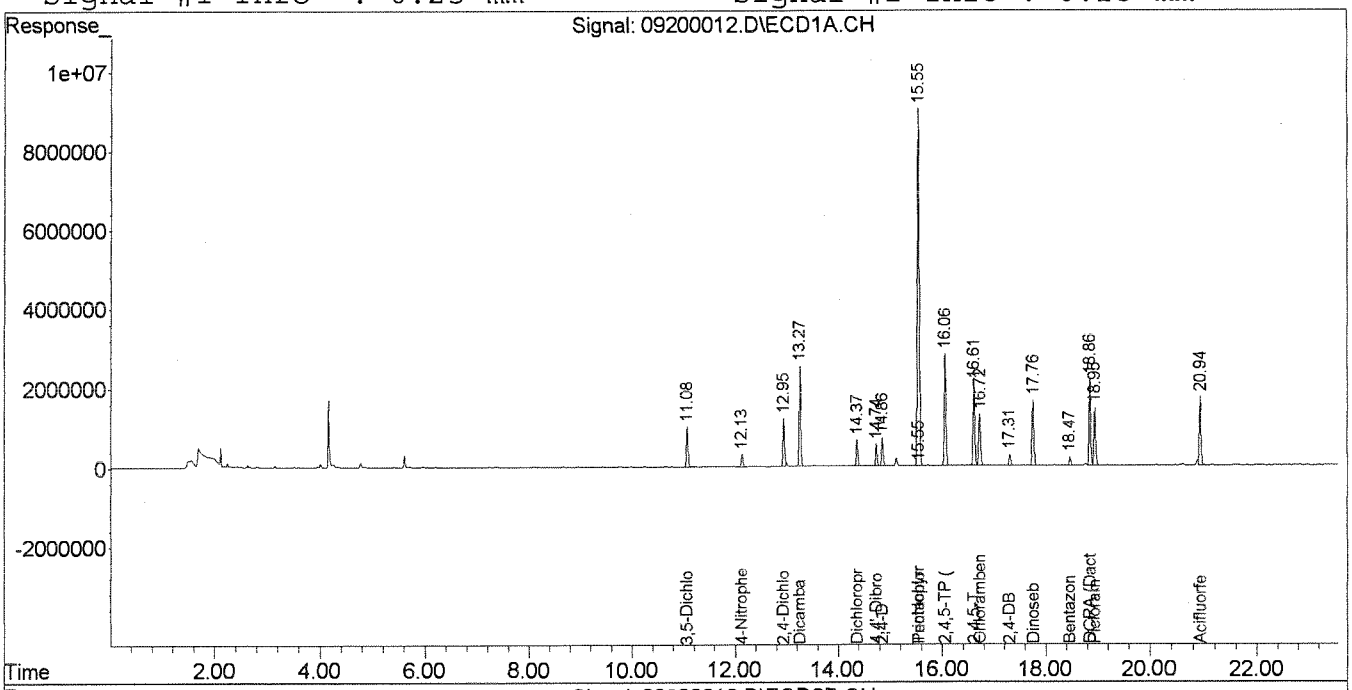
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

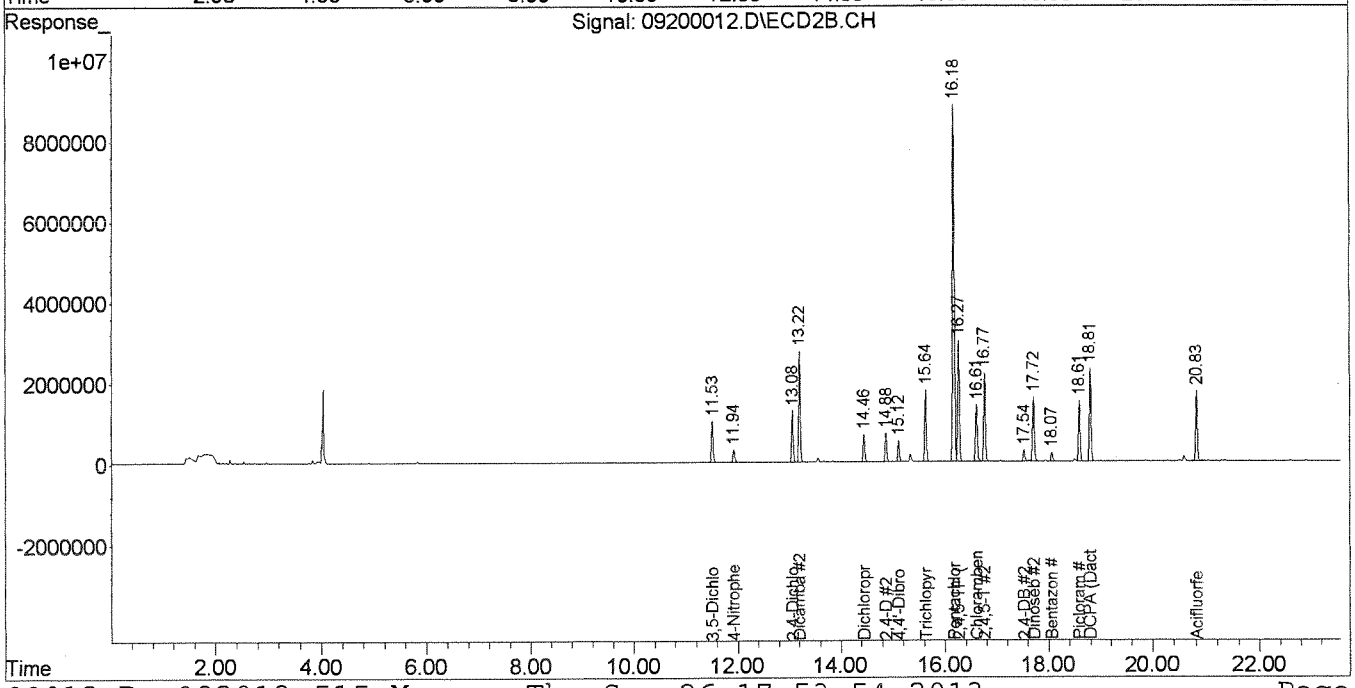
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200012.D\ECD1A.CH Vial: 10
Signal #2 : J:\GC24\DATA\092013.515\09200012.D\ECD2B.CH
Acq On : 09-20-2013 09:34:11 PM Operator: JSCHWAB
Sample : 091713-LEV10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:49 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

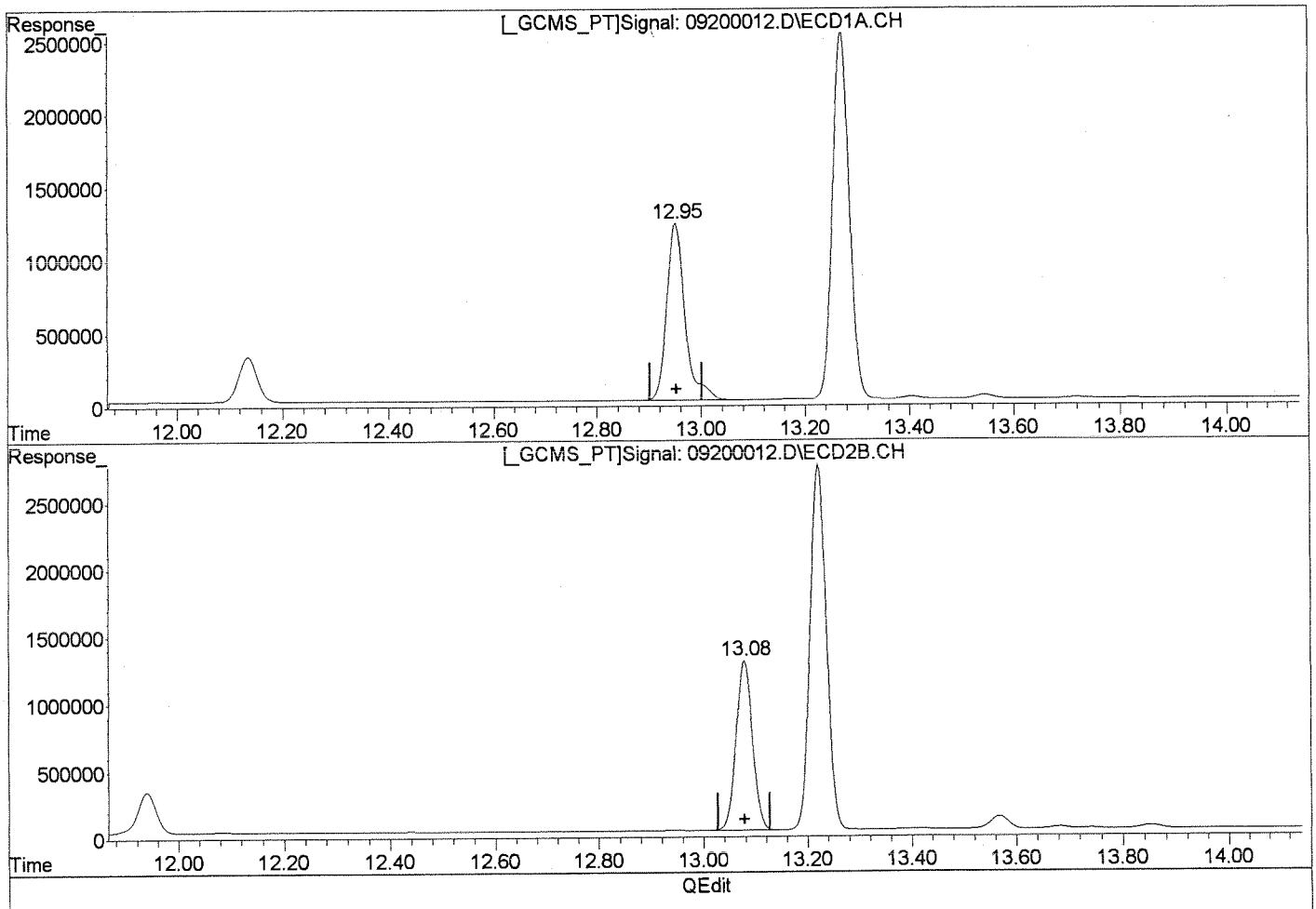




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200012.D\ECD1A.CH Vial: 10
Signal #2 : J:\GC24\DATA\092013.515\09200012.D\ECD2B.CH
Acq On : 09-20-2013 09:34:11 PM Operator: JSCHWAB
Sample : 091713-LEV10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 345.618ppb

response 2956709

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 325.162ppb

response 2769519

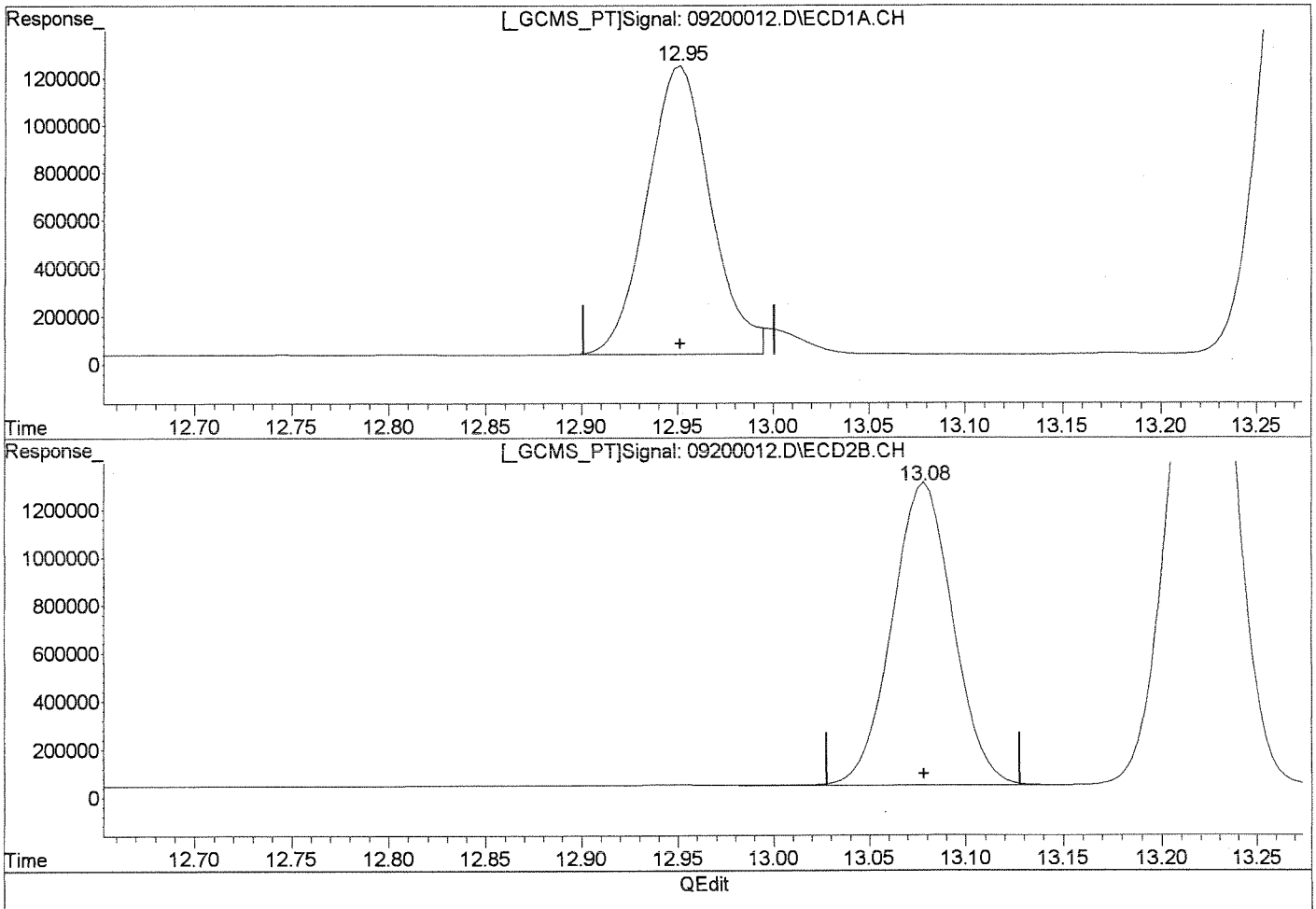
(+) = Expected Retention Time

09200012.D 092013_515.M Thu Sep 26 17:46:12 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200012.D\ECD1A.CH Vial: 10
Signal #2 : J:\GC24\DATA\092013.515\09200012.D\ECD2B.CH
Acq On : 09-20-2013 09:34:11 PM Operator: JSCHWAB
Sample : 091713-LEV10 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 26 17:34 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Thu Sep 26 17:30:41 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 326.406ppb m

response 2792354

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 325.162ppb

response 2769519

Manual Integration:

After

Baseline/Shoulder

09/26/13

(+) = Expected Retention Time

09200012.D 092013_515.M Thu Sep 26 17:46:18 2013

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:26:31 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1216105	1155110	20.000	20.000
		System Monitoring Compounds						
		Target Compounds						
2)	m	Dalapon	4.16	4.03	444887	446974	27.279	31.493m
3)	m	3,5-Dichlorobenz	11.08	11.53	218870	211038	14.858	15.916
4)	m	4-Nitrophenol	12.14	11.94	106123	109294	27.156	28.713
6)	m	Dicamba	13.27	13.22	493359	475135	14.350	14.392
7)	m	Dichloroprop	14.37	14.46	271006	257474	27.385	30.213m
8)	m	2,4-D	14.86	14.88	293870	278250	30.121	29.763
9)	m	Trichlopyr	15.55	15.64	1022442	658201	7.378	29.556 #
10)	m	Pentachloropheno	15.55	16.18	1022442	312867	7.902	2.710 #
11)	m	2,4,5-TP (Silvex	16.06	16.27	298317	273397	6.927	7.215
12)	m	2,4,5-T	16.62	16.77	216410	200326	6.844	6.668
13)	m	Chloramben	16.73	16.61	291007	279975	14.462	13.371
14)	m	Dinoseb	17.76	17.72	636698	573861	27.385	26.886
15)	m	2,4-DB	17.31	17.54	127823	128796	26.538	29.763
16)	m	Bentazon	18.47	18.07	94337	102034	30.505m	31.804
17)	m	DCPA (Dacthal)	18.86	18.81	836616	806023	34.593	32.960
18)	m	Picloram	18.95	18.61	532725	495692	30.538	27.920
19)	m	Acifluorfen	20.94	20.83	348324	293350	14.779	14.387

SS 10/1/13

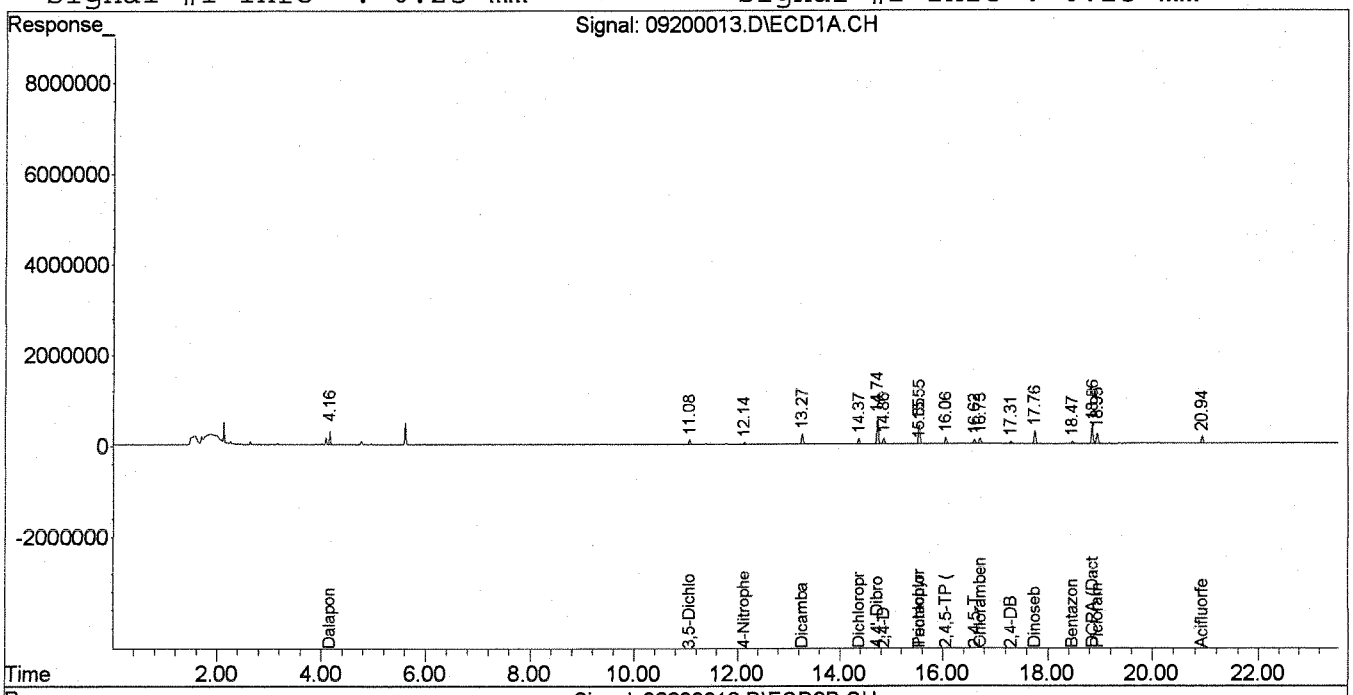
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

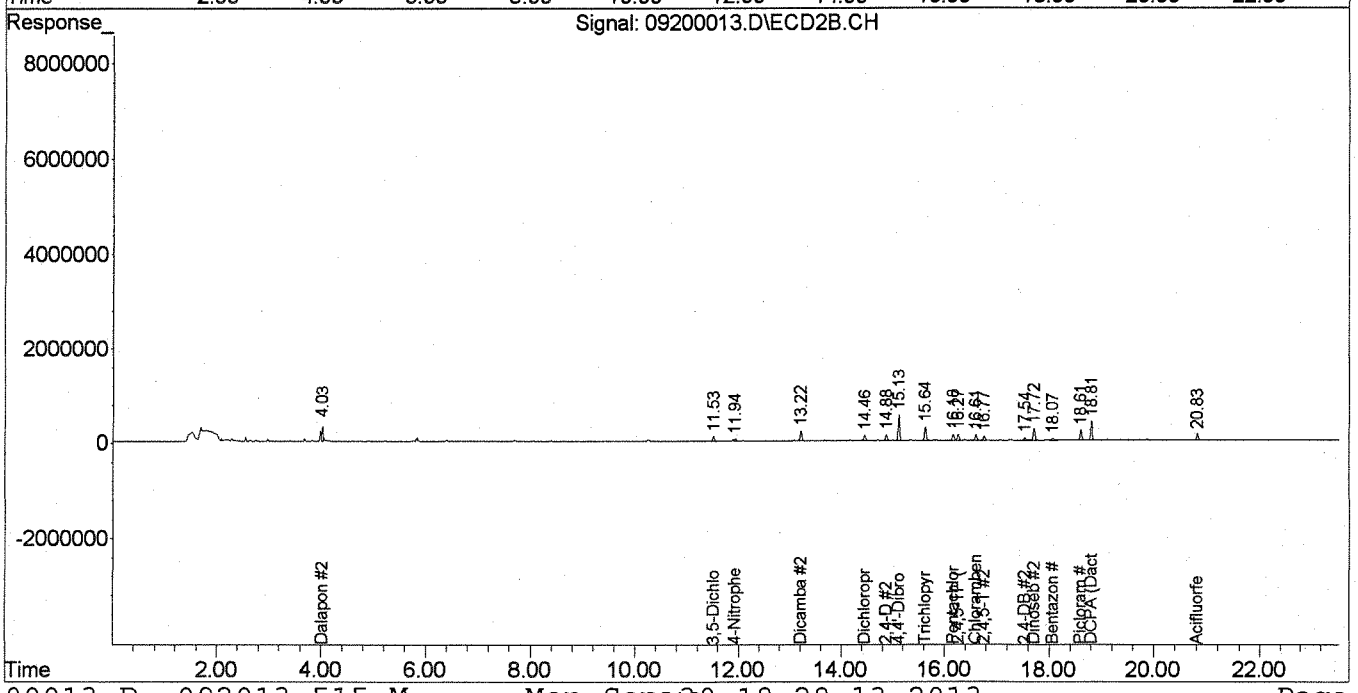
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:31 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

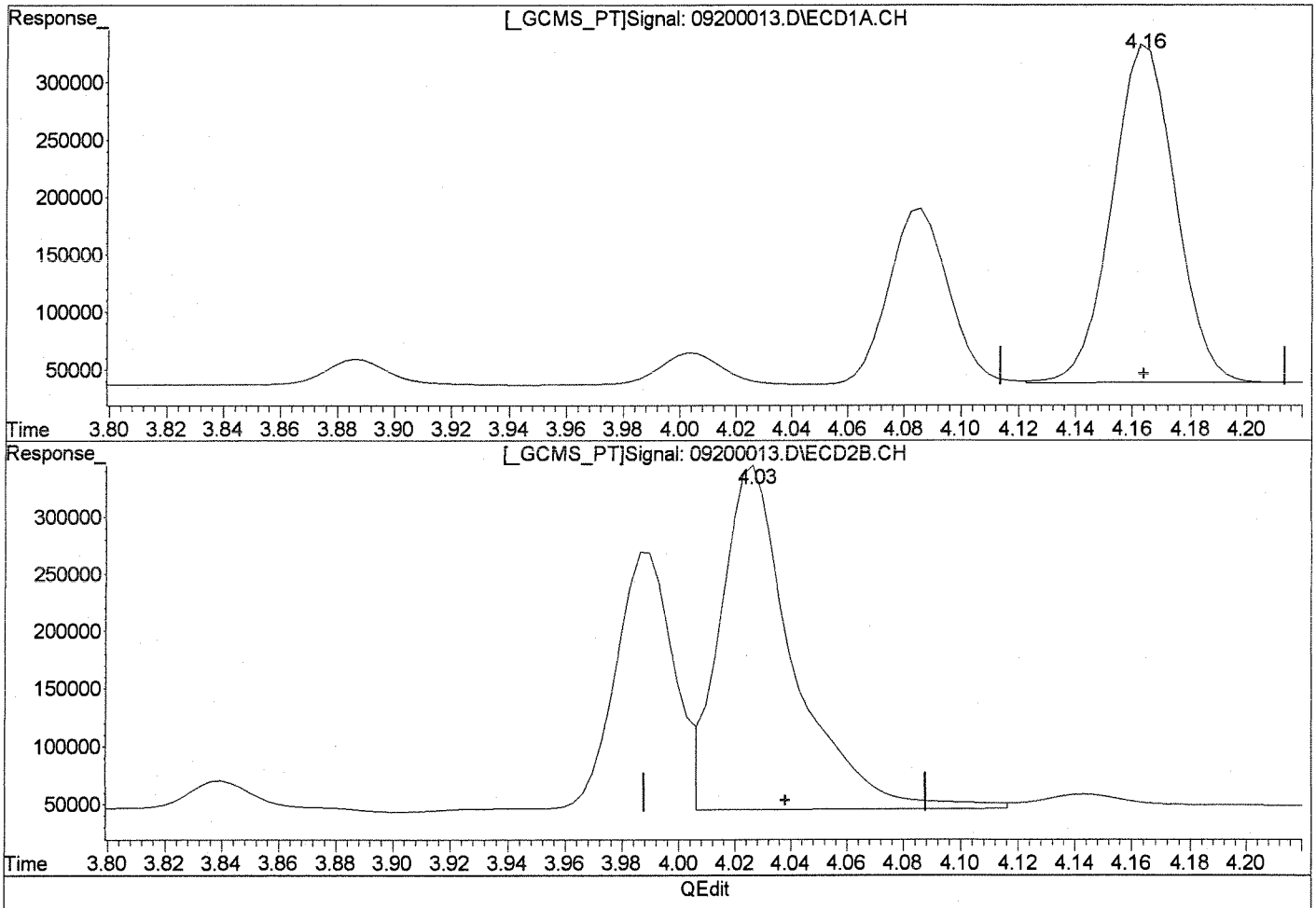




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 27.279ppb

response 444887

Manual Integration:

Before

(2) Dalapon #2 (m)

4.03min 38.102ppb

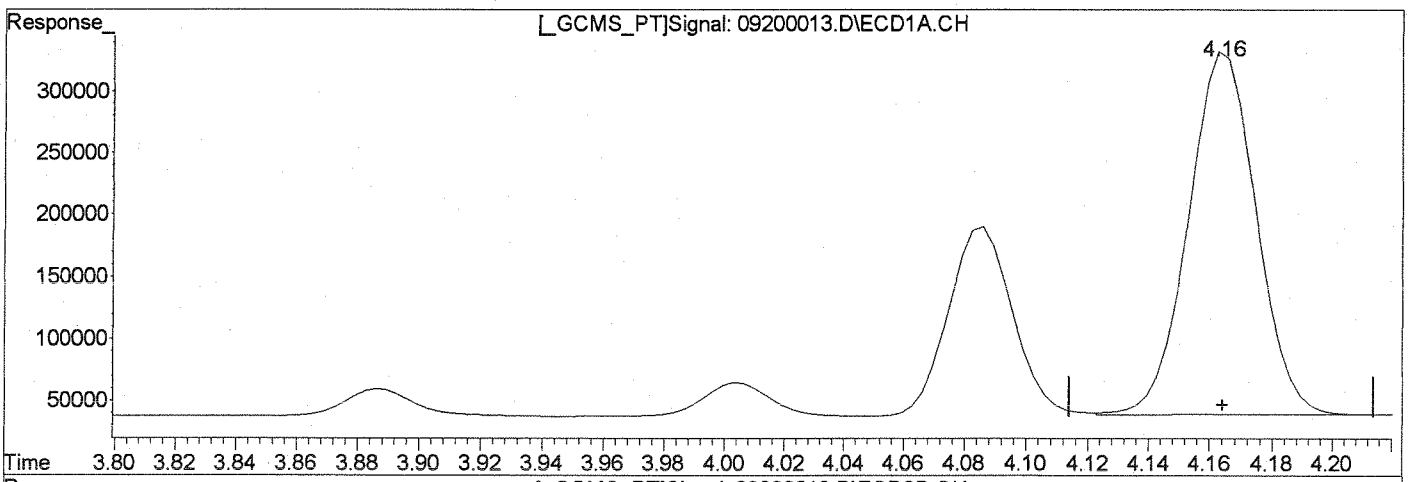
response 535602

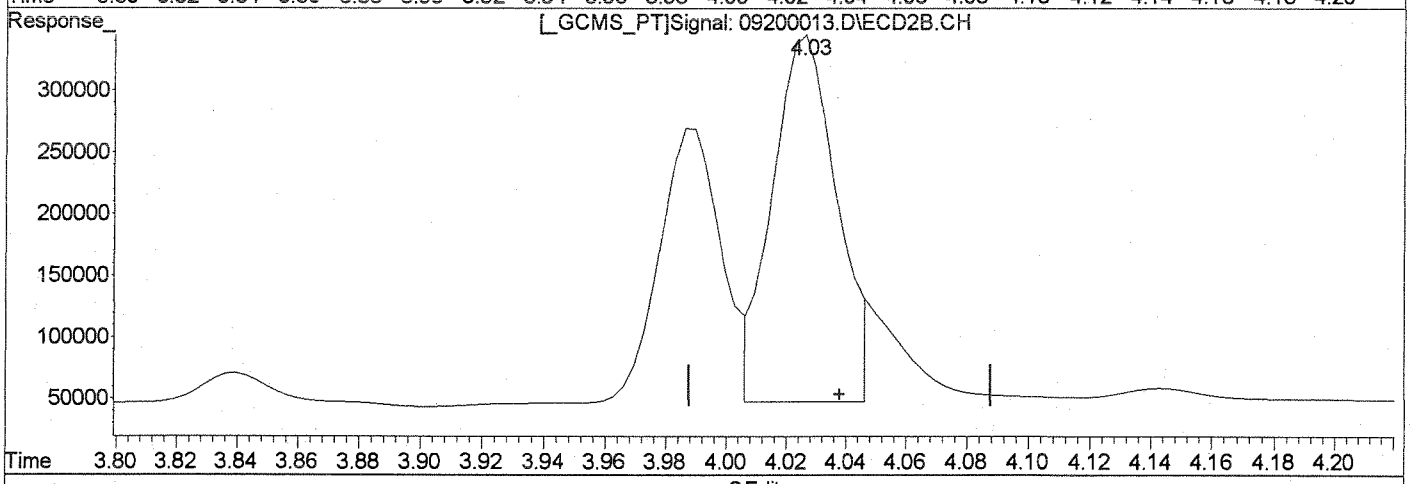
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 27.279ppb

response 444887

(2) Dalapon #2 (m)

4.03min 31.493ppb m

response 446974

Manual Integration:

After

Baseline/Shoulder

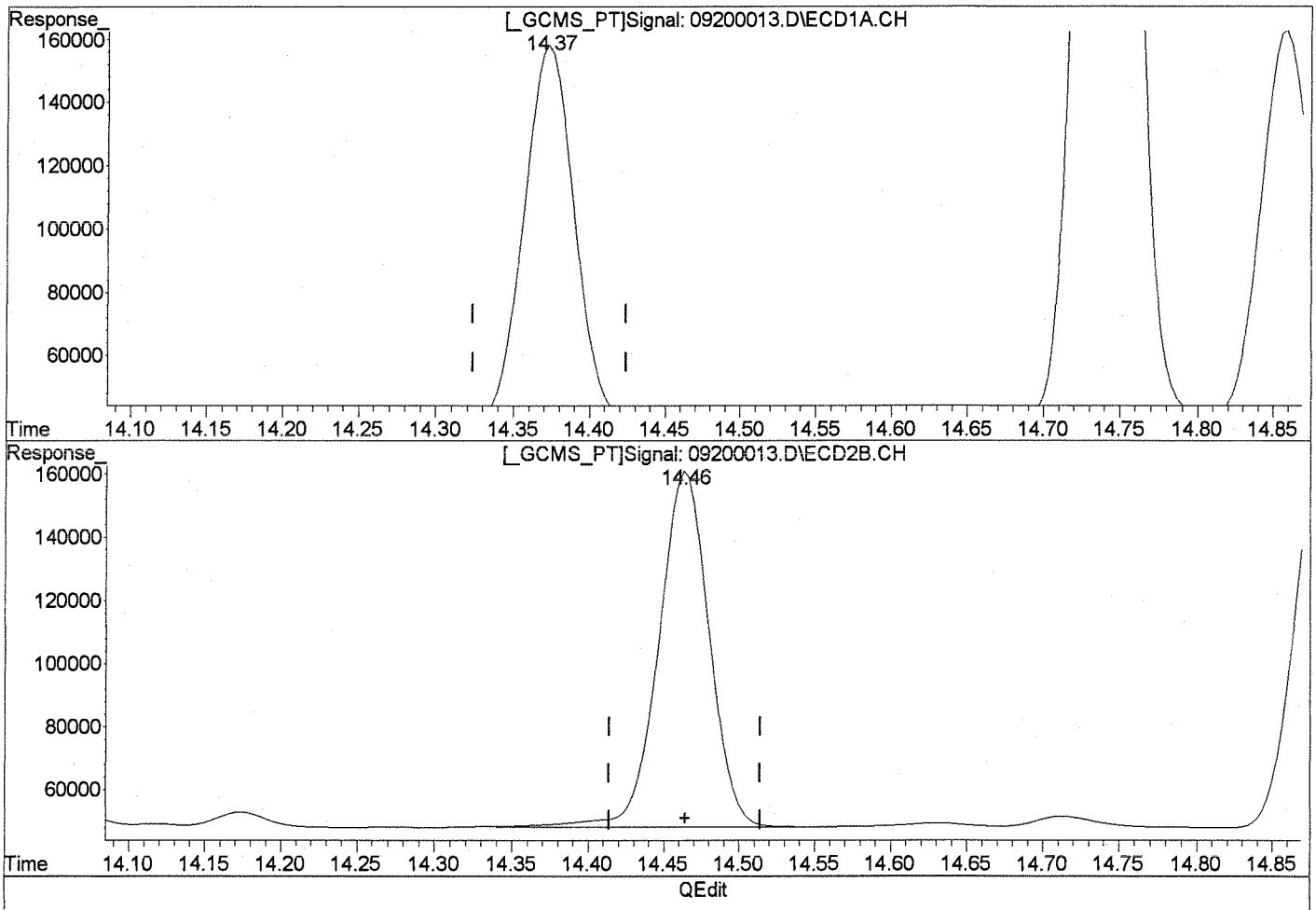
09/30/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(7) Dichloroprop (m)

14.37min 27.385ppb

response 271006

(7) Dichloroprop #2 (m)

14.46min 30.819ppb

response 262312

Manual Integration:

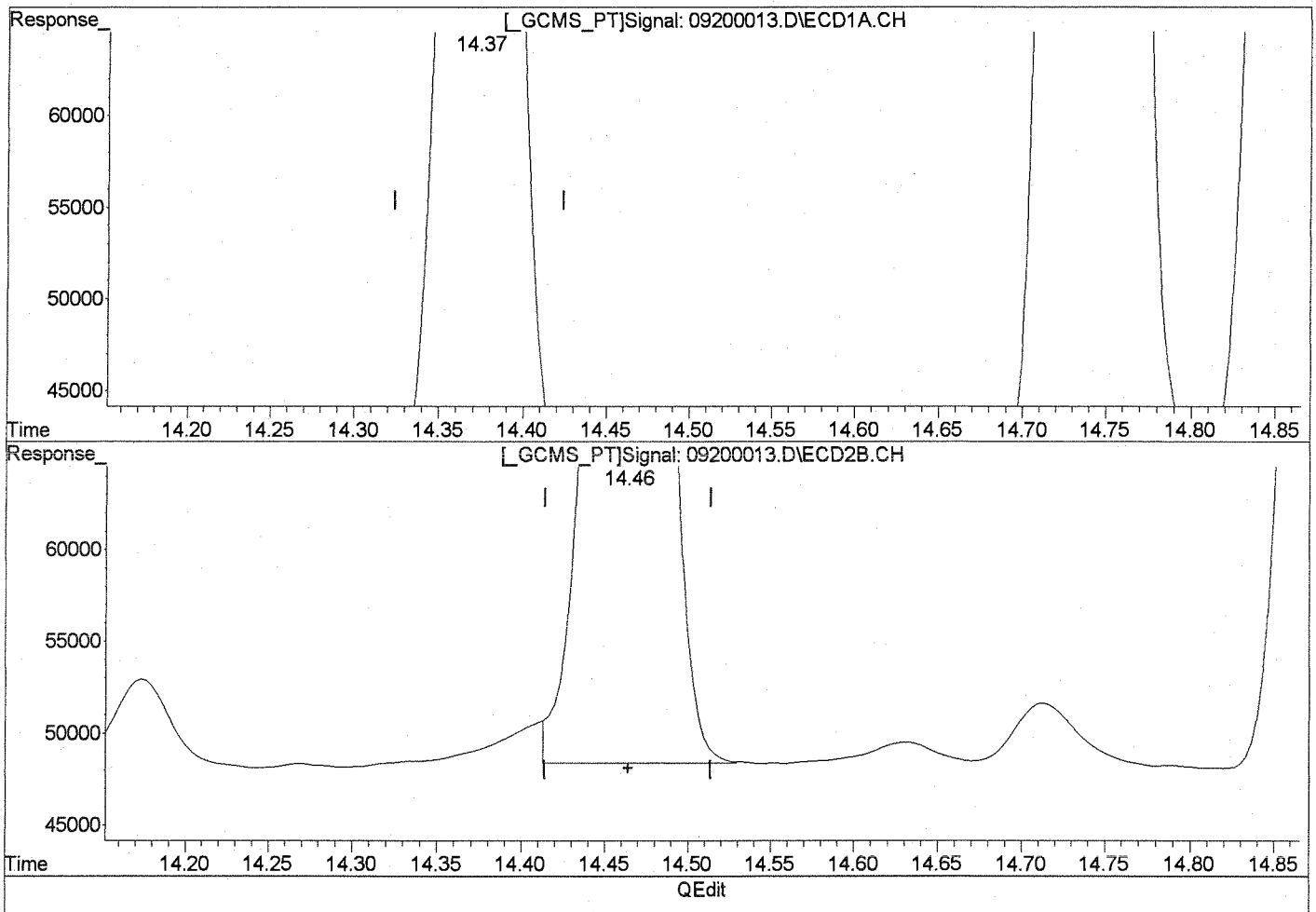
Before

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(7) Dichloroprop (m)

14.37min 27.385ppb

response 271006

(7) Dichloroprop #2 (m)

14.46min 30.213ppb m

response 257474

Manual Integration:

After

Baseline/Shoulder

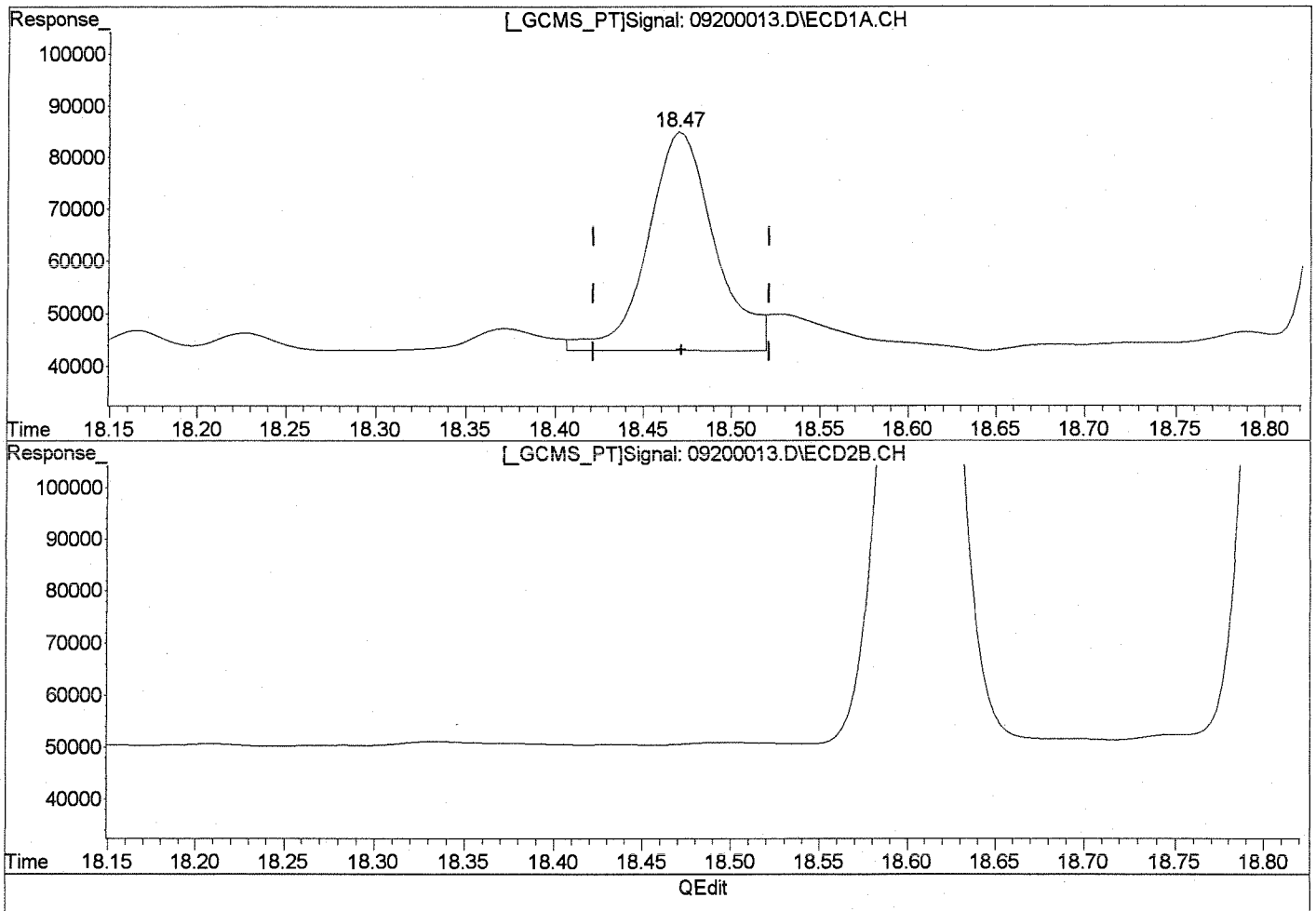
09/30/13

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration

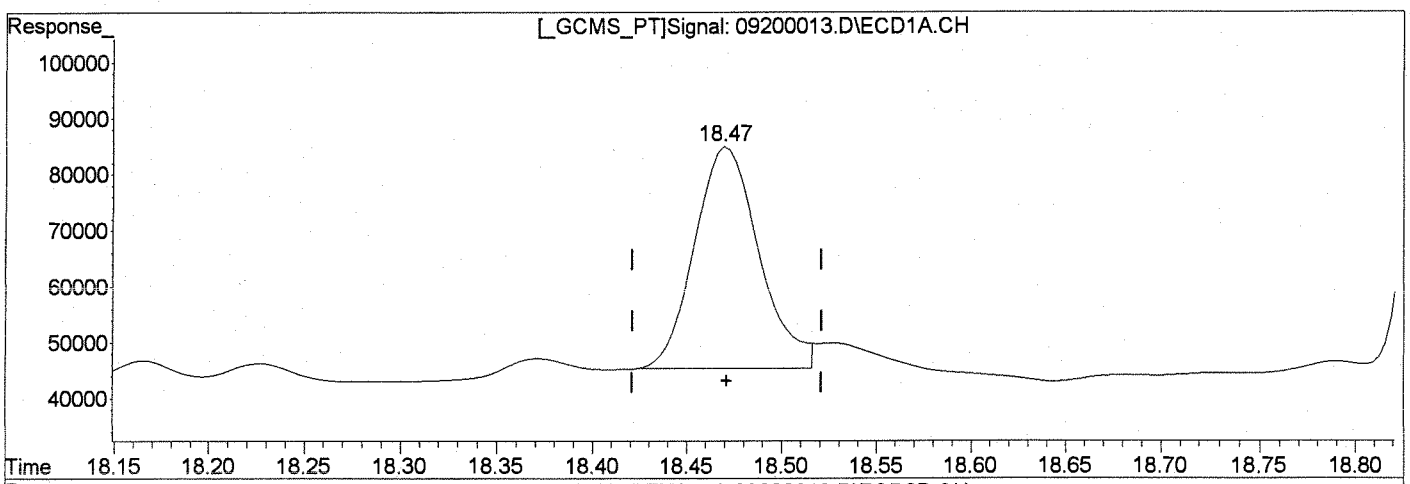


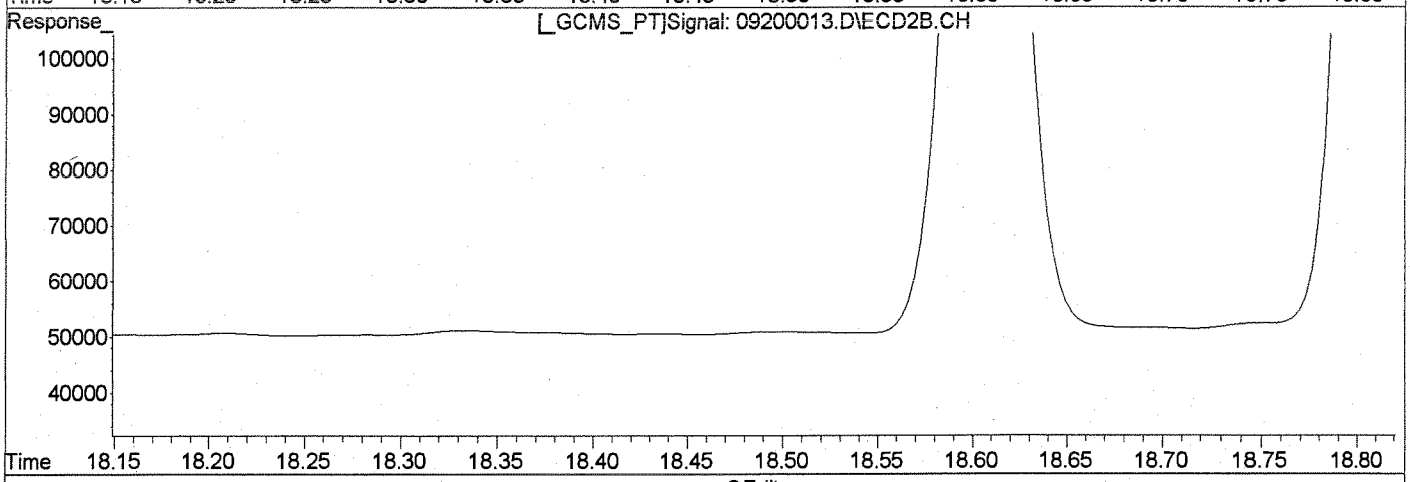
(+) = Expected Retention Time
09200013.D 092013_515.M Mon Sep 30 18:27:41 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200013.D\ECD1A.CH Vial: 11
Signal #2 : J:\GC24\DATA\092013.515\09200013.D\ECD2B.CH
Acq On : 20 Sep 2013 10:04 pm Operator: JSCHWAB
Sample : 091173-ICV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Sep 30 18:30 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(16) Bentazon (m)

18.47min 30.505ppb m

response 94337

(16) Bentazon #2 (m)

18.07min 31.804ppb

response 102034

Manual Integration:

After

Baseline/Shoulder

09/30/13

(+) = Expected Retention Time

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb
Column ID: RTX-CLP2

File ID: J:\GC24\DATA\092013.515\09200015.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	10	9.8		0.268	0.264	-2	NA	± 30 %	AverageRF
2,4-Dichlorophenylacetic Acid	20	22		0.146	0.160	9	NA	± 30 %	AverageRF
2,4-D	10	11		0.196	0.186	NA	9	± 30 %	Linear
Pentachlorophenol	10	11		2.41	2.27	NA	8	± 30 %	Linear
2,4,5-TP (Silvex)	10	9.0		0.708	0.641	-10	NA	± 30 %	AverageRF
Dinoseb	10	11		0.483	0.500	NA	10	± 30 %	Linear
Picloram	10	9.9		0.320	0.295	NA	-1	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb
Column ID: ZB-XLB-HT

File ID: J:\GC24\DATA\092013.515\09200015.D\09200015C.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	10	11		0.287	0.304	NA	13	± 30 %	Linear
2,4-Dichlorophenylacetic Acid	20	22		0.152	0.161	NA	10	± 30 %	Linear
2,4-D	10	11		0.205	0.185	NA	6	± 30 %	Linear
Pentachlorophenol	10	9.5		2.00	1.90	-5	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	10	9.7		0.762	0.625	NA	-3	± 30 %	Linear
Dinoseb	10	9.1		0.370	0.335	-9	NA	± 30 %	AverageRF
Picloram	10	8.7		0.307	0.268	-13	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC24\DATA\092013.515\09200015.D
Lab ID: KWG1310789-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 23:03
Date Quantitated: 10/01/2013 13:14
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	Dual ICV
	Pentachlorophenol	216.1	NA	30	
	Dacthal Diacid	38.4	NA	30	
Analyte Co-elution	Triclopyr	15.55	NA	NA	NR
	Pentachlorophenol	15.55	NA	NA	NO

10-01-13

Primary Review: [signature]

Secondary Review: [signature]

Exception Report

Data File: J:\GC24\DATA\092013.515\09200015.D\09200015C.D
Lab ID: KWG1310789-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 23:03
Date Quantitated: 10/01/2013 13:14
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NA

Primary Review: DBS 10-4-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200015.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200015.D\09200015c.d			**Vial:**	5
Acqu Date:	09/20/2013 23:03	**Quant Date:**	10/01/2013 13:14	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-1				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	10/01/2013

Analysis Lot:	KWG1310789	**Prep Lot:**		**Report Group:**	
Analysis Method:	515.4	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:			
MB Ref:		**Method ID:**	MJ503
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? $^{0.00}$	15.13? $^{+0.00}$	1183245	1154917	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2	Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	189077m	186146m	21.88	21.96	NA
				%Recovery =		NA	NA	Limits = 70-130

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon	4.16		4.03	155925	175521m	9.83	11.25			
1	3,5-Dichlorobenzoic Acid	11.08		11.53	155817	155270	10.87	11.19			
1	4-Nitrophenol	12.14		11.94	37789	39898	9.94	10.48			
1	Dicamba	13.27		13.22	347269	342763	10.38	10.38			
1	Dichlorprop	14.37		14.46	104596	110142	10.86	11.77			
1	2,4-D	14.86		14.88	109858	106902	10.88	10.60			
1	Triclopyr	15.55	c	15.64	1340292	241067	9.94	10.26			
1	Pentachlorophenol	15.55	c	16.18	1340292	1097419	10.80	9.51			
1	2,4,5-TP (Silvex)	16.06		16.27	378973	360947	9.05	9.71			
1	2,4,5-T	16.62		16.77	277957	265280	9.03	8.83			
1	Chloramben	16.73		16.61	180877	190682	9.24	9.11			
1	Dinoseb	17.76		17.72	295915	193623	11.02	9.07			
1	2,4-DB	17.31		17.54	46743	59018	9.97	10.71			
1	Bentazon	18.47		18.07	36987	46625	12.29	10.11			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200015.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200015.D\09200015c.d			**Vial:**	5
Acqu Date:	09/20/2013 23:03	**Quant Date:**	10/01/2013 13:14	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-1				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid	18.86	18.81	254086m	235226	9.74	9.01			
1	Picloram	18.95	18.61	174538	155041	9.90	8.73			
1	Acifluorfen	20.94	20.83	218419	196871	9.52	9.66			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:32 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1183245	1154917	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	189077	186146	21.877m	21.964m
		Target Compounds						
2)	m	Dalapon	4.16	4.03	155925	175521	9.826	11.251m
3)	m	3,5-Dichlorobenz	11.08	11.53	155817	155270	10.871	11.191
4)	m	4-Nitrophenol	12.14	11.94	37789	39898	9.938	10.484
6)	m	Dicamba	13.27	13.22	347269	342763	10.381	10.384
7)	m	Dichloroprop	14.37	14.46	104596	110142	10.863	11.765
8)	m	2,4-D	14.86	14.88	109858	106902	10.882	10.596
9)	m	Trichlopyr	15.55	15.64	1340292	241067	9.940	10.264
10)	m	Pentachloropheno	15.55	16.18	1340292	1097419	10.803	9.506
11)	m	2,4,5-TP (Silvex	16.06	16.27	378973	360947	9.045	9.711
12)	m	2,4,5-T	16.62	16.77	277957	265280	9.034	8.832
13)	m	Chloramben	16.73	16.61	180877	190682	9.239	9.108
14)	m	Dinoseb	17.76	17.72	295915	193623	11.016	9.073
15)	m	2,4-DB	17.31	17.54	46743	59018	9.974	10.708
16)	m	Bentazon	18.47	18.07	36987	46625	12.292	10.108
17)	m	DCPA (Dacthal)	18.86	18.81	254086	235226	9.742m	9.006
18)	m	Picloram	18.95	18.61	174538	155041	9.899	8.734
19)	m	Acifluorfen	20.94	20.83	218419	196871	9.524	9.657

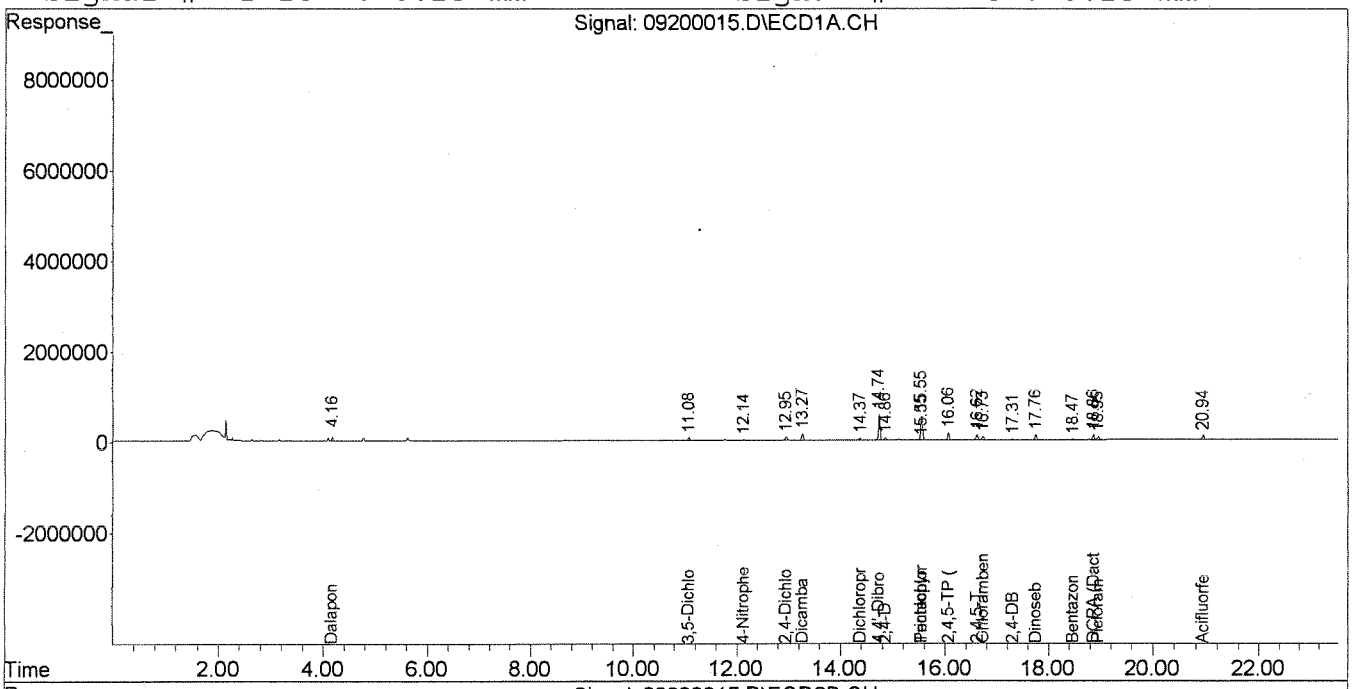
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

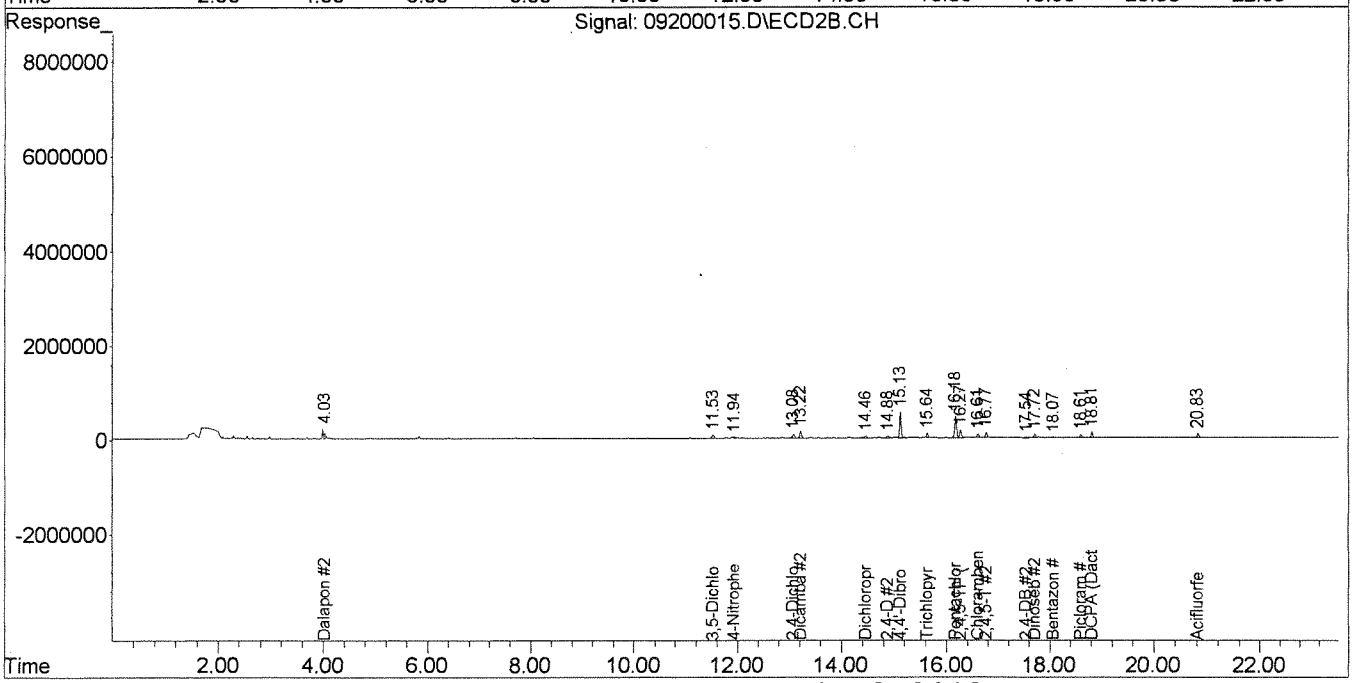
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:14 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

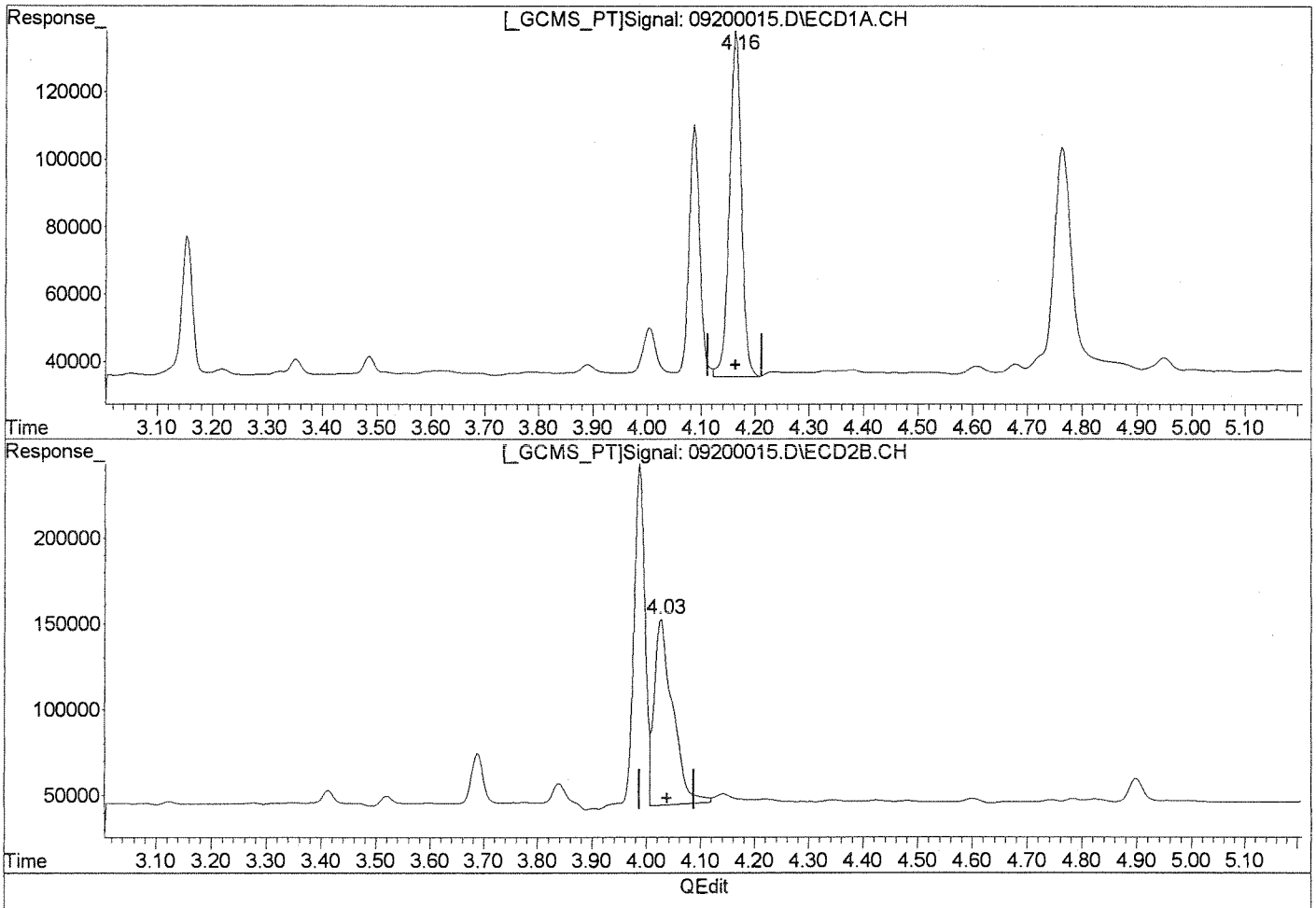




Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 9.826ppb

response 155925

Manual Integration:

Before

(2) Dalapon #2 (m)

4.03min 16.875ppb

response 250928

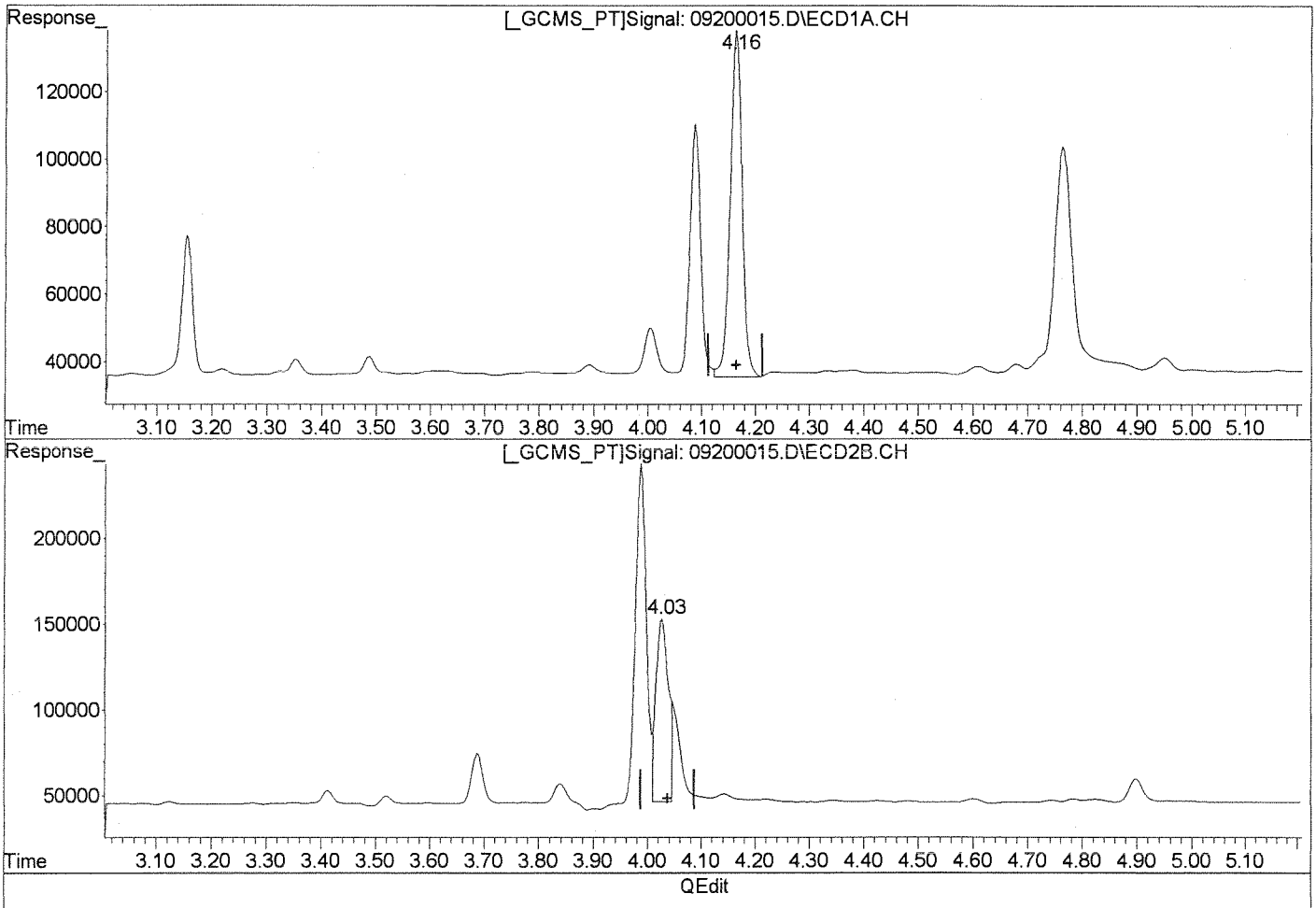
(+) = Expected Retention Time

09200015.D 092013_515.M Tue Oct 01 13:07:04 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(2) Dalapon (m)

4.16min 9.826ppb

response 155925

(2) Dalapon #2 (m)

4.03min 11.251ppb m

response 175521

Manual Integration:

After

Baseline/Shoulder

10/01/13

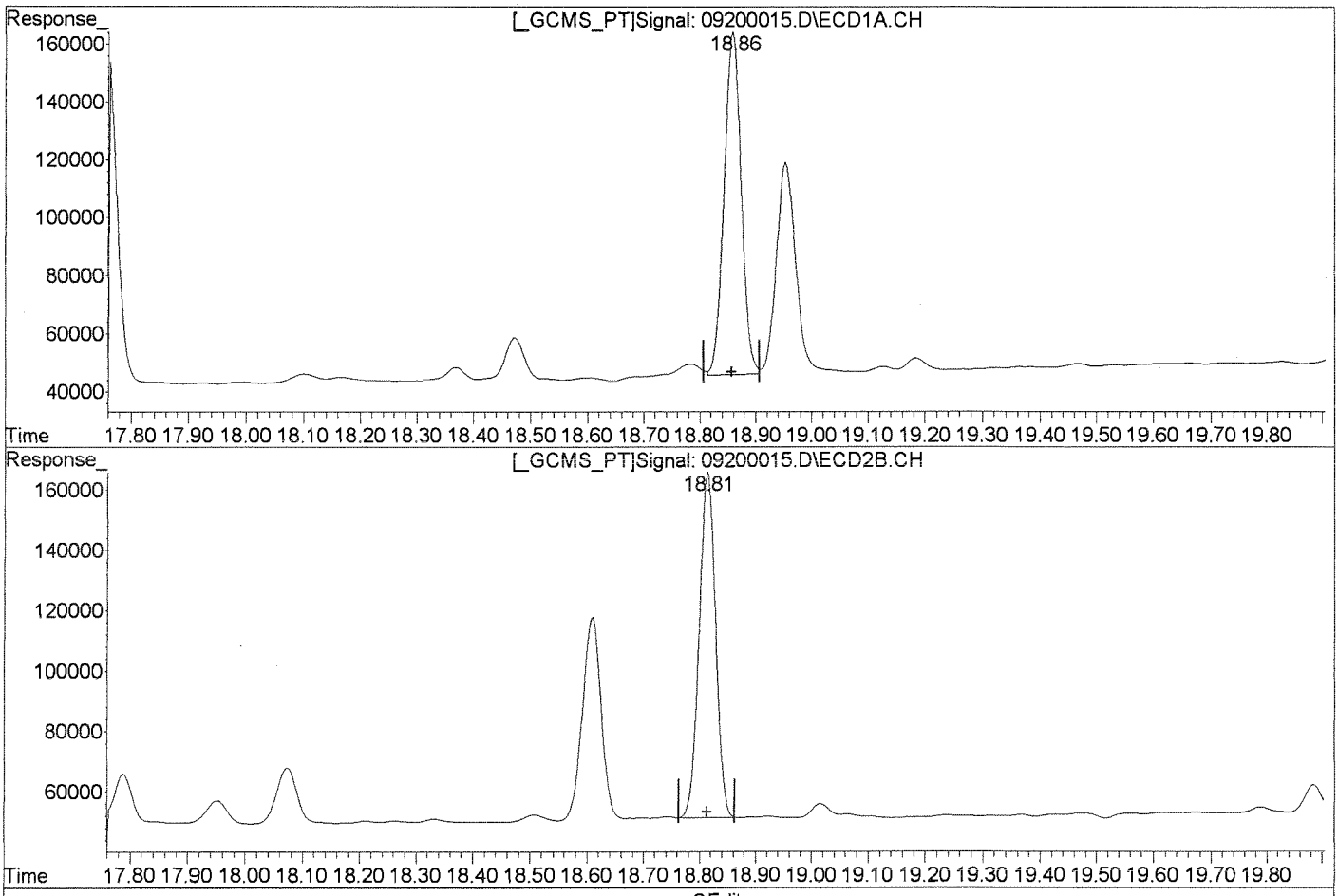
(+) = Expected Retention Time

09200015.D 092013_515.M Tue Oct 01 13:07:46 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

(17) DCPA (Dacthal) (m)

18.86min 9.709ppb

response 253333

(17) DCPA (Dacthal) #2 (m)

18.81min 9.006ppb

response 235226

Manual Integration:

Before

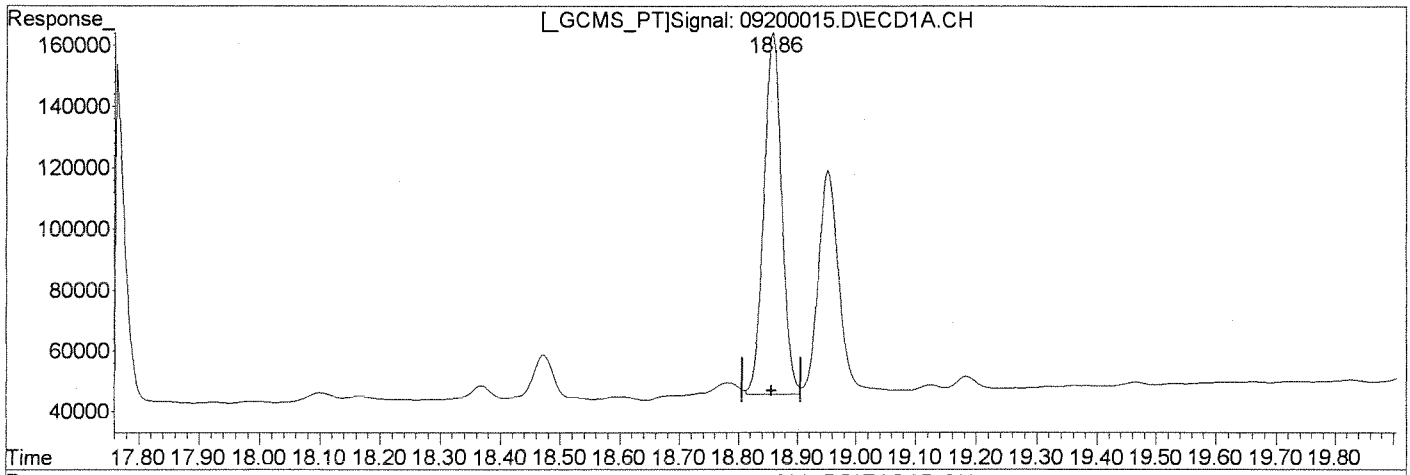
(+) = Expected Retention Time

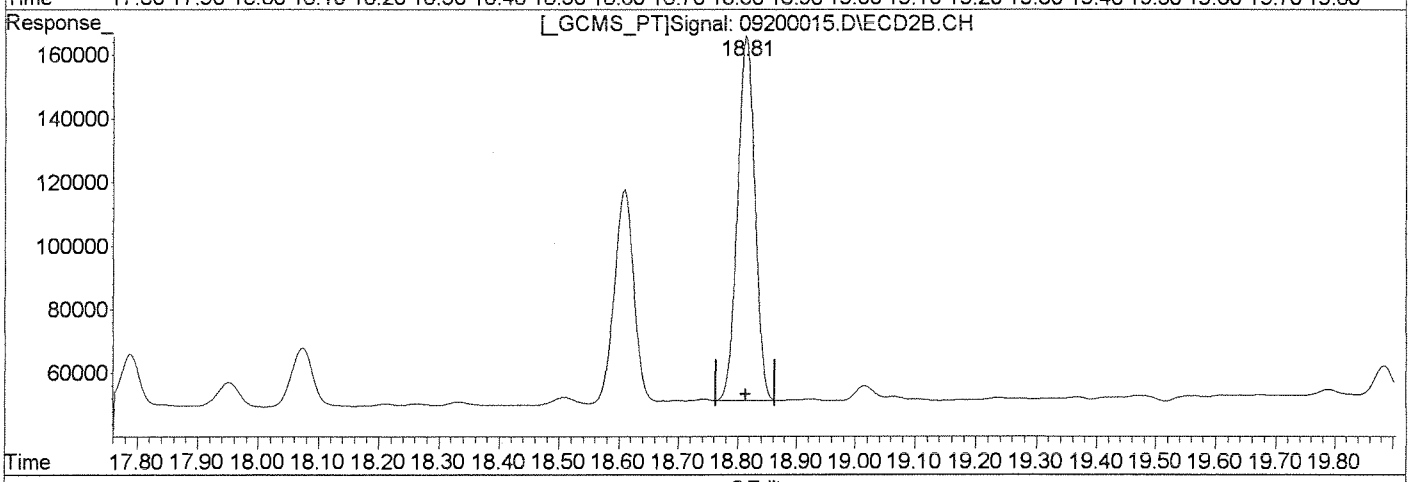
09200015.D 092013_515.M Tue Oct 01 13:08:59 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(17) DCPA (Dacthal) (m)

18.86min 9.742ppb m

response 254086

(17) DCPA (Dacthal) #2 (m)

18.81min 9.006ppb

response 235226

Manual Integration:

After

Baseline/Shoulder

10/01/13

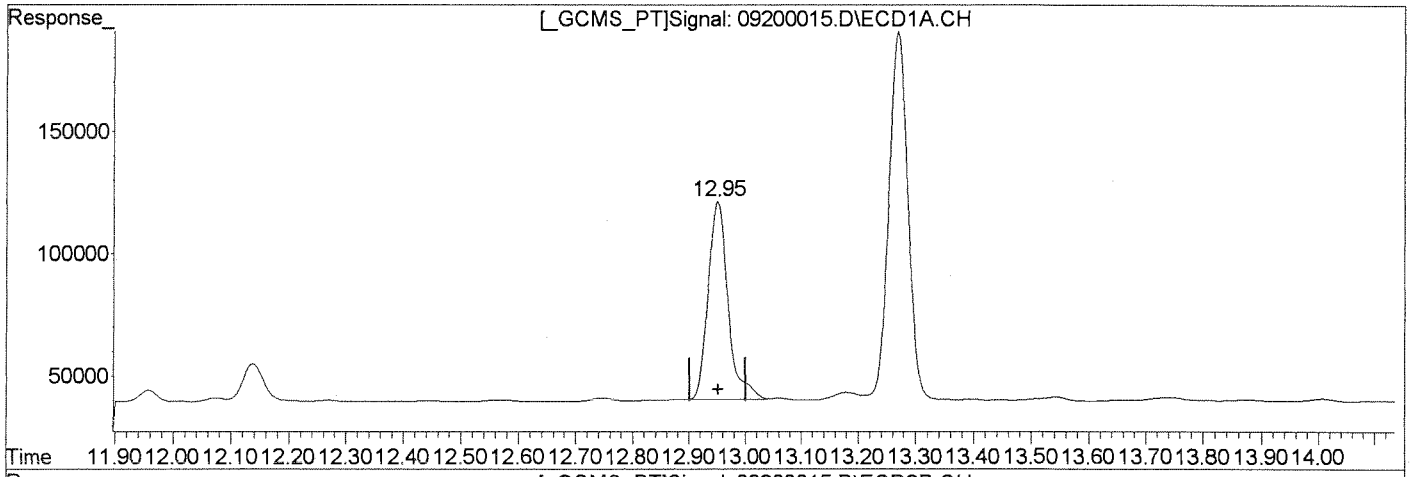
(+) = Expected Retention Time

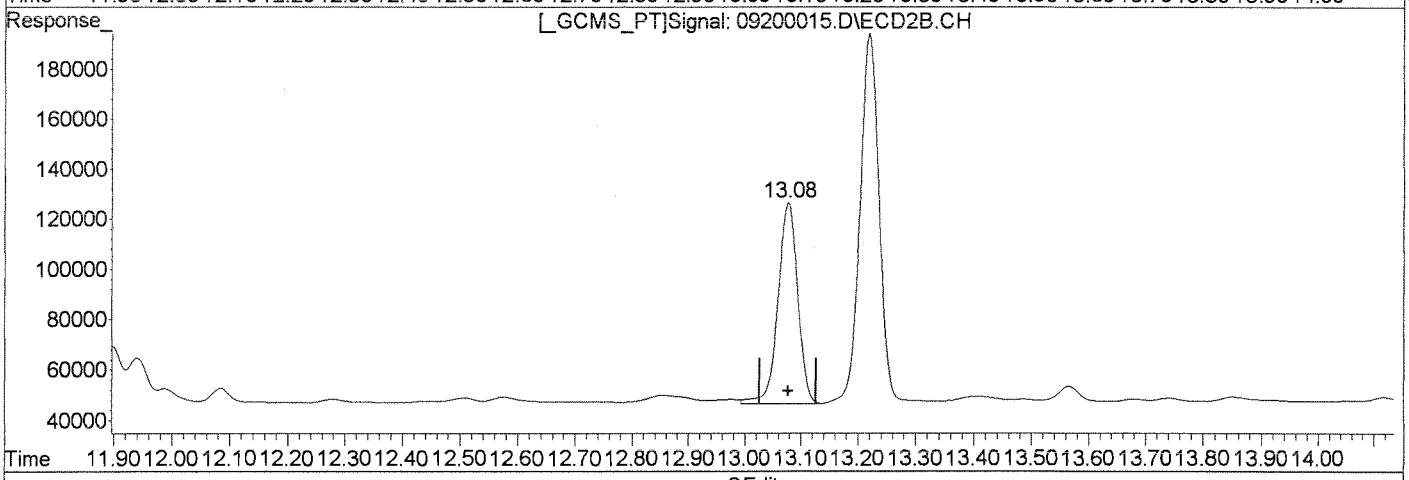
09200015.D 092013_515.M Tue Oct 01 13:09:10 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:12 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 22.973ppb

response 198547

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 22.914ppb

response 193041

Manual Integration:

Before

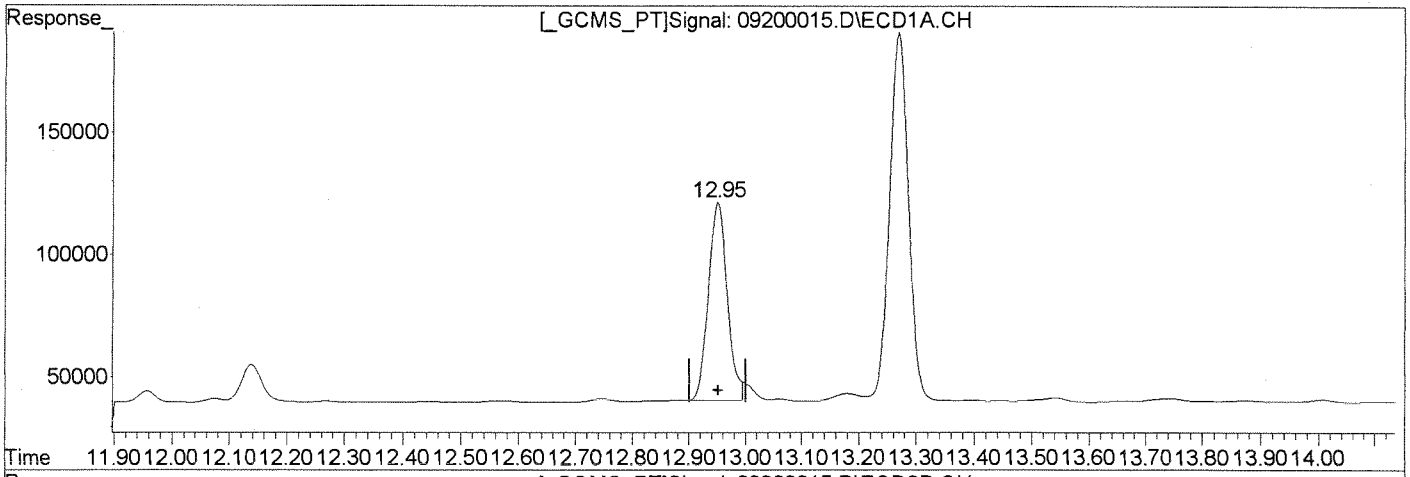
(+) = Expected Retention Time

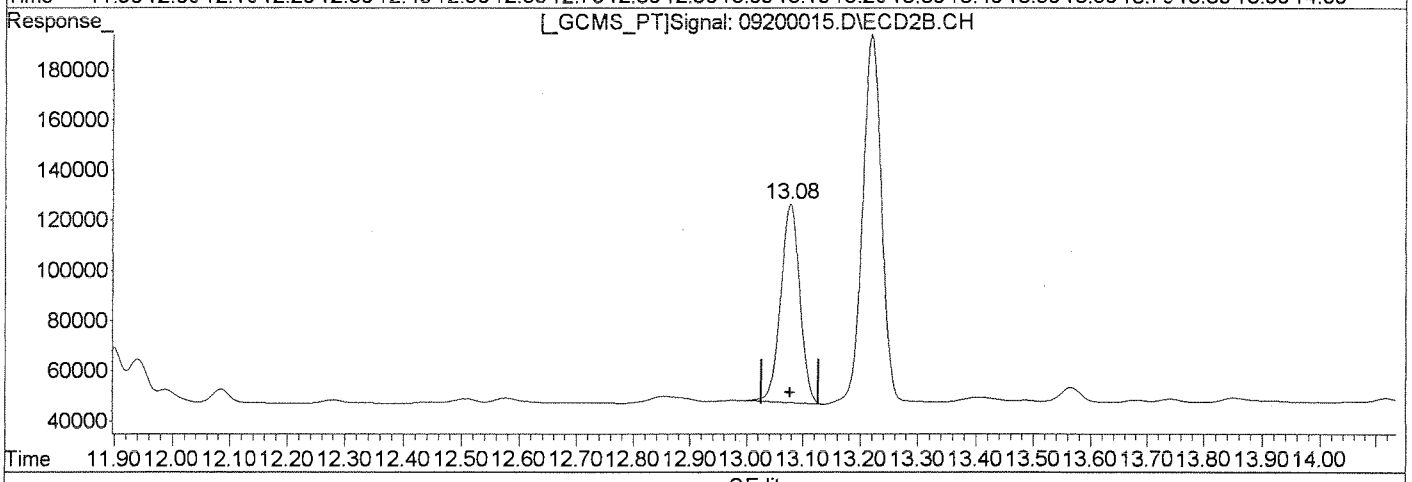
09200015.D 092013_515.M Tue Oct 01 13:10:23 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200015.D\ECD1A.CH Vial: 5
Signal #2 : J:\GC24\DATA\092013.515\09200015.D\ECD2B.CH
Acq On : 20 Sep 2013 11:03 pm Operator: JSCHWAB
Sample : 091713-LEV5 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:12 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 21.877ppb m

response 189077

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 21.964ppb m

response 186146

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200015.D 092013_515.M Tue Oct 01 13:10:45 2013

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200029.D

Column ID: RTX-CLP2

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	20	18		0.268	0.246	-8	NA	± 30 %	AverageRF
2,4-Dichlorophenylacetic Acid	40	42		0.146	0.153	5	NA	± 30 %	AverageRF
2,4-D	20	17		0.196	0.144	NA	-13	± 30 %	Linear
Pentachlorophenol	20	21		2.41	2.19	NA	6	± 30 %	Linear
2,4,5-TP (Silvex)	20	15		0.708	0.538	-24	NA	± 30 %	AverageRF
Dinoseb	20	16		0.483	0.330	NA	-21	± 30 %	Linear
Picloram	20	17		0.320	0.245	NA	-16	± 30 %	Linear

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/21/2013

Continuing Calibration Verification Summary
Chlorinated Acids by EPA Method 515.4

Calibration Type: Internal Standard
Analysis Method: 515.4

Calibration Date: 09/20/2013
Calibration ID: CAL12806
Analysis Lot: KWG1310789
Units: ppb

File ID: J:\GC24\DATA\092013.515\09200029.D\09200029C.D

Column ID: ZB-XLB-HT

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dalapon	20	24		0.287	0.295	NA	18	± 30 %	Linear
2,4-Dichlorophenylacetic Acid	40	44		0.152	0.151	NA	11	± 30 %	Linear
2,4-D	20	17		0.205	0.144	NA	-14	± 30 %	Linear
Pentachlorophenol	20	19		2.00	1.93	-4	NA	± 30 %	AverageRF
2,4,5-TP (Silvex)	20	17		0.762	0.526	NA	-16	± 30 %	Linear
Dinoseb	20	17		0.370	0.306	-17	NA	± 30 %	AverageRF
Picloram	20	15		0.307	0.234	-24	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\GC24\DATA\092013.515\09200029.D
Lab ID: KWG1310789-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/21/2013 06:02
Date Quantitated: 10/01/2013 14:02
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	
	Pentachlorophenol	216.1	NA	30	
	Dacthal Diacid	38.4	NA	30	
Analyte Co-elution	Triclopyr	15.55	NA	NA	
	Pentachlorophenol	15.55	NA	NA	

Primary Review: JPS 10/01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200029.D\09200029C.D
Lab ID: KWG1310789-3
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/21/2013 06:02
Date Quantitated: 10/01/2013 14:02
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NR

Primary Review: JPS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200029.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200029.D\09200029c.d			**Vial:**	6
Acqu Date:	09/21/2013 06:02	**Quant Date:**	10/01/2013 14:02	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-3				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	10/01/2013

Analysis Lot:	KWG1310789	**Prep Lot:**		**Report Group:**	
Analysis Method:	515.4	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:			
MB Ref:		**Method ID:**	MJ503
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny	14.74? $^{0.00}$	15.13? $^{+0.00}$	1167725	1113285	20.00	20.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2	Rpt
1	2,4-Dichlorophenylacetic Acid	12.95	13.08	358009m	335648m	41.97	44.30	NA
				%Recovery =		NA	NA	Limits = 70-130

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon	4.16		4.02	287768	328646m	18.38	23.59			
1	3,5-Dichlorobenzoic Acid	11.08		11.53	291529	283150	20.61	22.93			
1	4-Nitrophenol	12.14		11.94	75537	72786	20.13	19.84			
1	Dicamba	13.27		13.22	671682	650355	20.35	20.44			
1	Dichlorprop	14.38		14.47	178695	178228	18.81	21.13			
1	2,4-D	14.86		14.88	167587	159863	17.43	17.19			
1	Triclopyr	15.55	c	15.64	2554792	392685	19.20	17.96			
1	Pentachlorophenol	15.55	c	16.18	2554792	2145128	21.29	19.28			
1	2,4,5-TP (Silvex)	16.07		16.28	628092	586037	15.19	16.75			
1	2,4,5-T	16.62		16.77	460436	426809	15.16	14.74			
1	Chloramben	16.73		16.62	312847	290074	16.19	14.37			
1	Dinoseb	17.76		17.72	385587	340483	15.81	16.55			
1	2,4-DB	17.32		17.54	78015	81437	16.87	17.66			
1	Bentazon	18.47		18.08	56322	67022	18.97	19.08			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200029.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200029.D\09200029c.d			**Vial:**	6
Acqu Date:	09/21/2013 06:02	**Quant Date:**	10/01/2013 14:02	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-3				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid	18.86	18.82	367292	331195	14.98	13.55			
1	Picloram	18.96	18.61	285884	260515	16.81	15.23			
1	Acifluorfen	20.94	20.83	413167	368344	18.26	18.74			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200029.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200029.D\ECD2B.CH
Acq On : 09-21-2013 06:02:10 AM Operator: JSCHWAB
Sample : 091713-LEV6 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:44 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

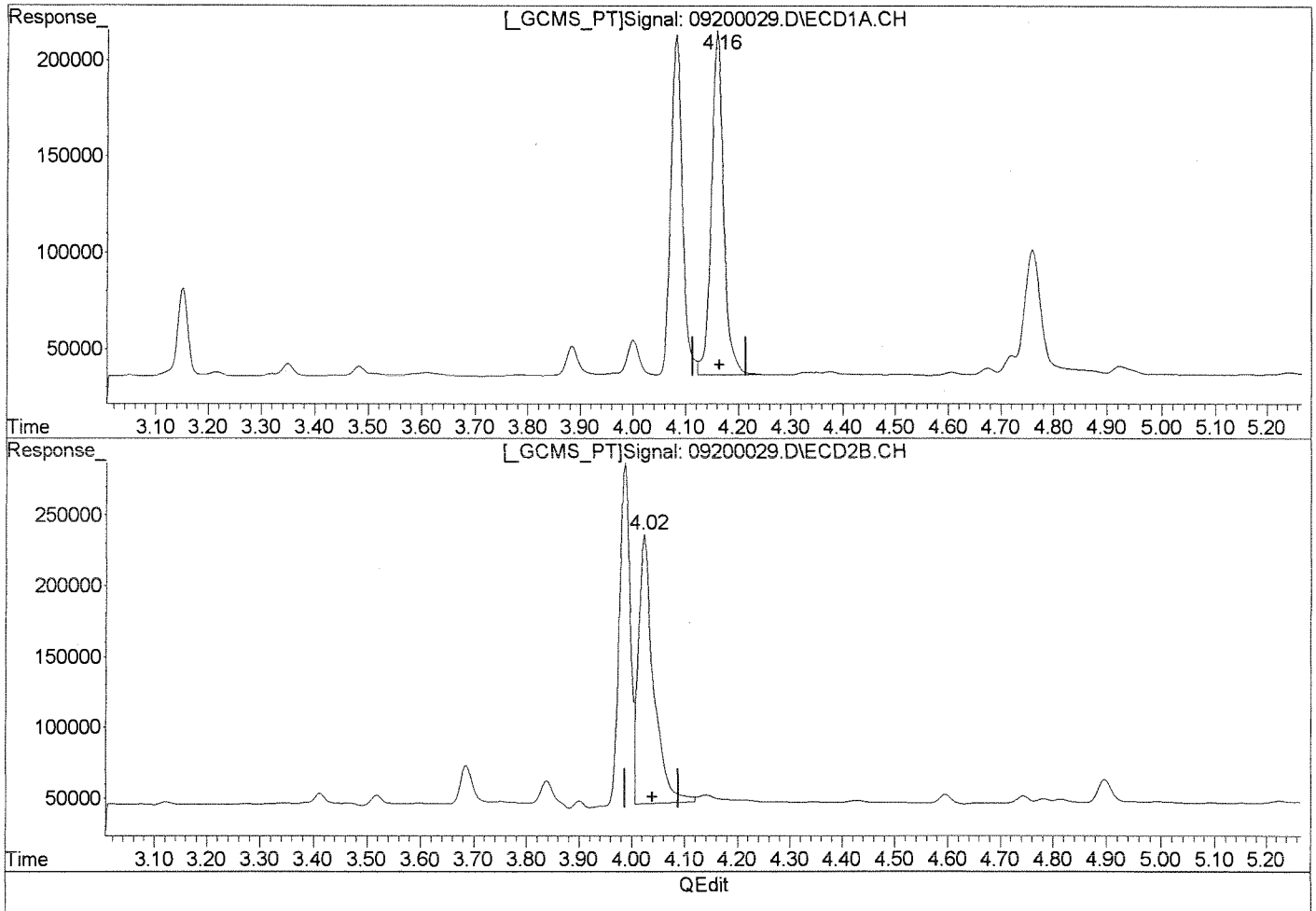
		Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb
		Internal Standards						
1)	I	4,4'-Dibromoocta	14.74	15.13	1167725	1113285	20.000	20.000
		System Monitoring Compounds						
5)	s	2,4-Dichlorophen	12.95	13.08	358009	335648	41.974m	44.301m
		Target Compounds						
2)	m	Dalapon	4.16	4.02	287768	328646	18.376	23.589m#
3)	m	3,5-Dichlorobenz	11.08	11.53	291529	283150	20.610	22.930
4)	m	4-Nitrophenol	12.14	11.94	75537	72786	20.130	19.841
6)	m	Dicamba	13.27	13.22	671682	650355	20.346	20.439
7)	m	Dichloroprop	14.38	14.47	178695	178228	18.805	21.127
8)	m	2,4-D	14.86	14.88	167587	159863	17.433	17.191
9)	m	Trichlopyr	15.55	15.64	2554792	392685	19.199	17.957
10)	m	Pentachloropheno	15.55	16.18	2554792	2145128	21.289	19.276
11)	m	2,4,5-TP (Silvex	16.07	16.28	628092	586037	15.189	16.751
12)	m	2,4,5-T	16.62	16.77	460436	426809	15.164	14.741
13)	m	Chloramben	16.73	16.62	312847	290074	16.192	14.374
14)	m	Dinoseb	17.76	17.72	385587	340483	15.812	16.551
15)	m	2,4-DB	17.32	17.54	78015	81437	16.868	17.664
16)	m	Bentazon	18.47	18.08	56322	67022	18.967	19.079
17)	m	DCPA (Dacthal)	18.86	18.82	367292	331195	14.983	13.554
18)	m	Picloram	18.96	18.61	285884	260515	16.811	15.225
19)	m	Acifluorfen	20.94	20.83	413167	368344	18.256	18.744

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200029.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200029.D\ECD2B.CH
Acq On : 09-21-2013 06:02:10 AM Operator: JSCHWAB
Sample : 091713-LEV6 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



QEdit

Manual Integration:

Before

(2) Dalapon (m)

4.16min 18.376ppb

response 287768

(2) Dalapon #2 (m)

4.02min 26.329ppb

response 364060

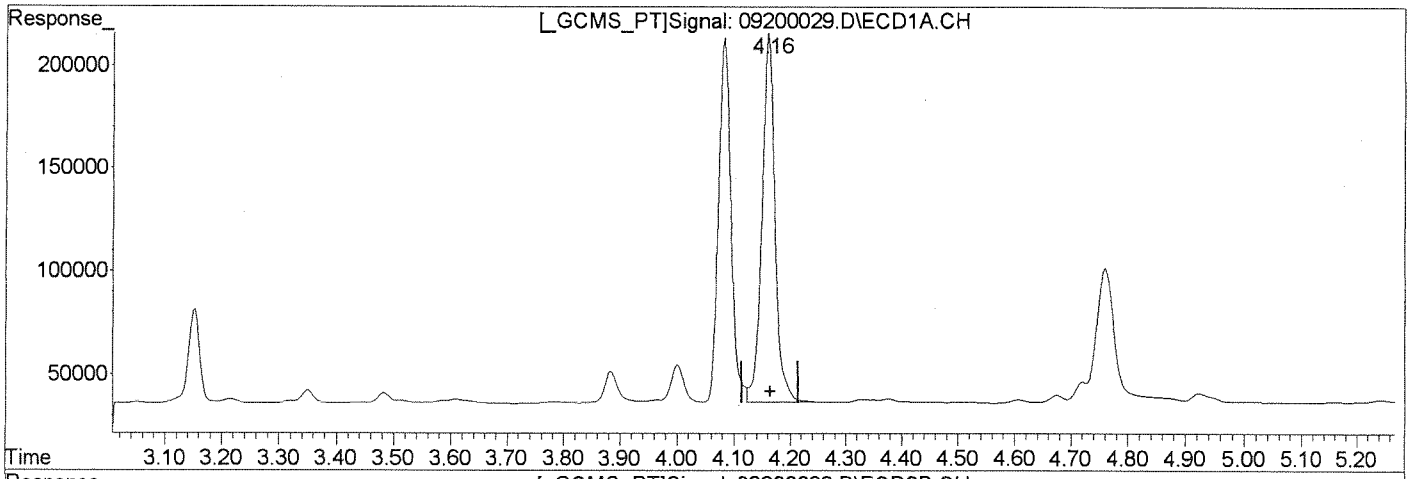
(+) = Expected Retention Time

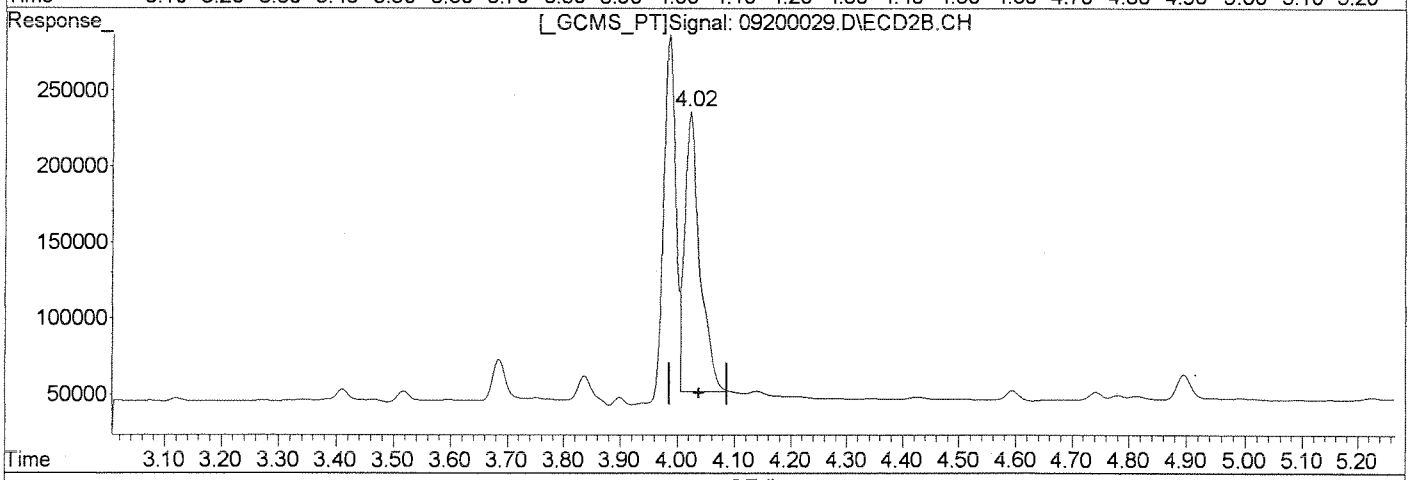
09200029.D 092013_515.M Tue Oct 01 13:58:30 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200029.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200029.D\ECD2B.CH
Acq On : 09-21-2013 06:02:10 AM Operator: JSCHWAB
Sample : 091713-LEV6 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration





QEdit

(2) Dalapon (m)

4.16min 18.376ppb

response 287768

(2) Dalapon #2 (m)

4.02min 23.589ppb m

response 328646

Manual Integration:

After

Baseline/Shoulder

10/01/13

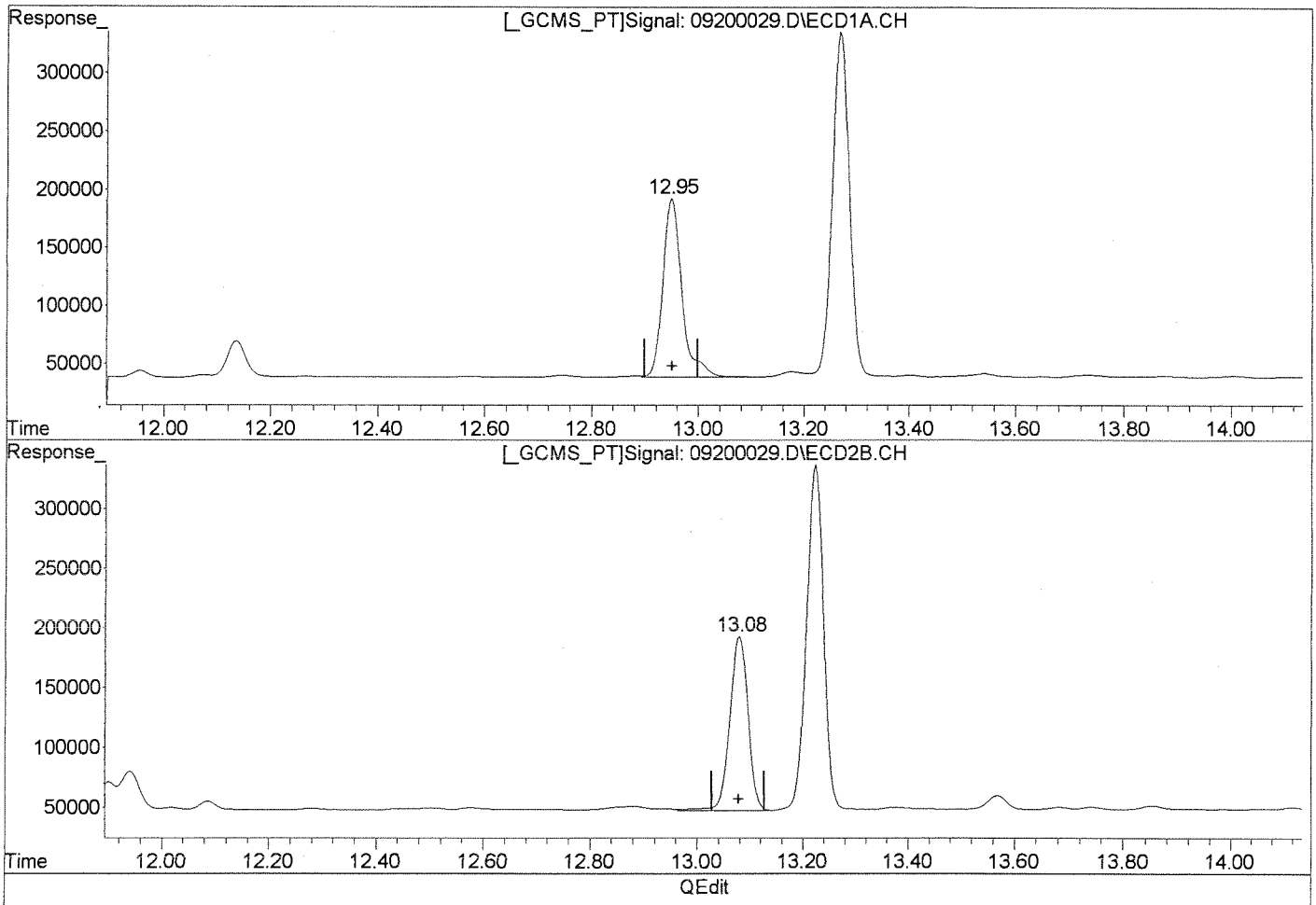
(+) = Expected Retention Time

09200029.D 092013_515.M Tue Oct 01 13:58:46 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200029.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200029.D\ECD2B.CH
Acq On : 09-21-2013 06:02:10 AM Operator: JSCHWAB
Sample : 091713-LEV6 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 44.727ppb

response 381489

Manual Integration:

Before

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 45.699ppb

response 345427

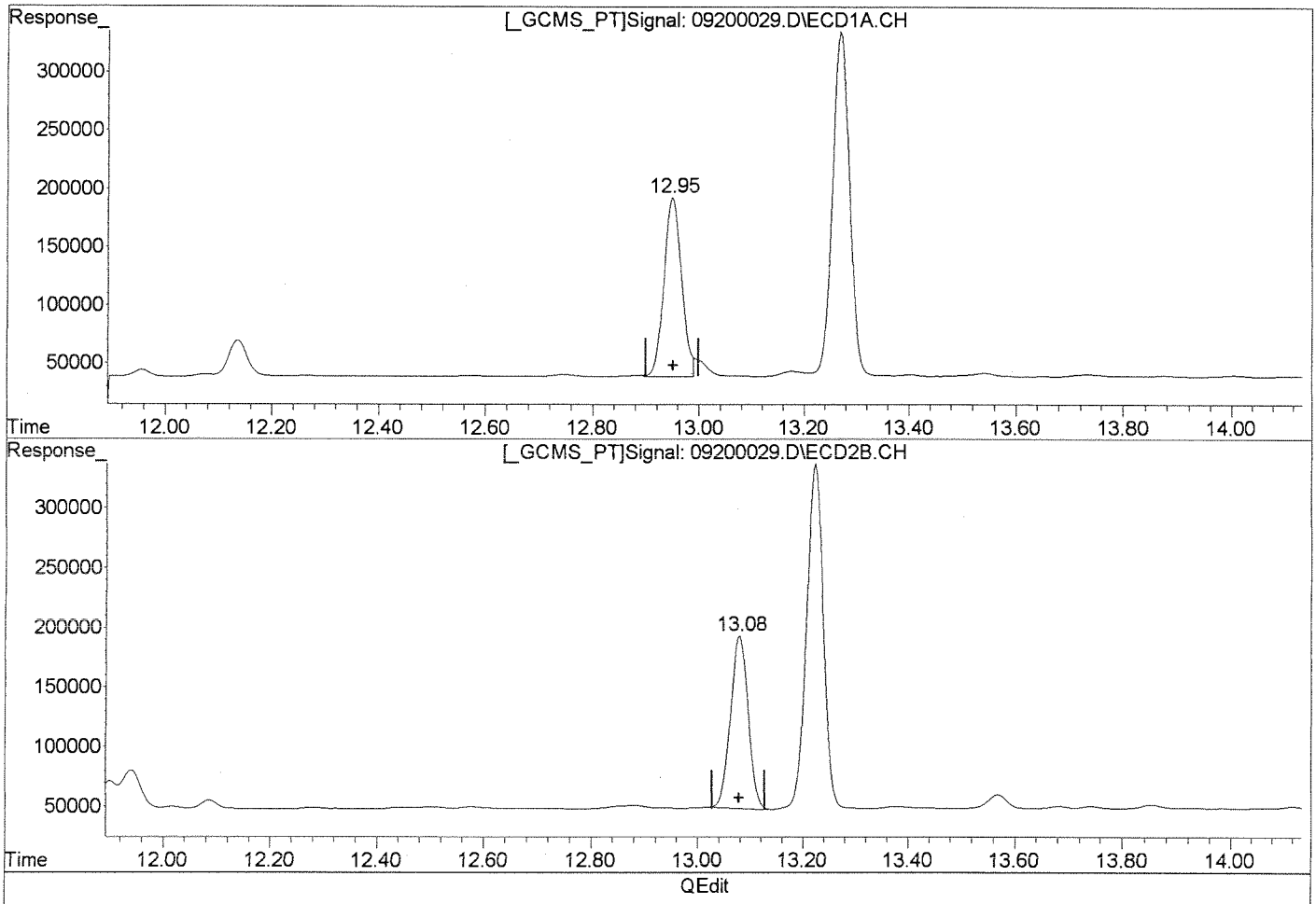
(+) = Expected Retention Time

09200029.D 092013_515.M Tue Oct 01 13:58:57 2013

Quantitation Report (Qedit)

Signal #1 : J:\GC24\DATA\092013.515\09200029.D\ECD1A.CH Vial: 6
Signal #2 : J:\GC24\DATA\092013.515\09200029.D\ECD2B.CH
Acq On : 09-21-2013 06:02:10 AM Operator: JSCHWAB
Sample : 091713-LEV6 CCV Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration



(5) 2,4-Dichlorophenylacetic Acid (s)

12.95min 41.974ppb m

response 358009

(5) 2,4-Dichlorophenylacetic Acid #2 (s)

13.08min 44.301ppb m

response 335648

Manual Integration:

After

Baseline/Shoulder

10/01/13

(+) = Expected Retention Time

09200029.D 092013_515.M Tue Oct 01 13:59:13 2013

Organic Analysis:
Chlorinated Acids by EPA Method 515.4

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1310098	**Prep Method:**	METHOD	**Prep Date:**	09/17/13 08:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1309458-001	Entry Point A	515.4 CL_ACID_HERB	DRINKING	40.18ml	4ml
K1309638-001	13254-BW-4	515.4 CL_ACID_HERB	WATER	40.26ml	4ml
K1309638-002	13254-BW-2	515.4 CL_ACID_HERB	WATER	40.13ml	4ml
K1309638-004	13253-BW-3	515.4 CL_ACID_HERB	WATER	40.05ml	4ml
K1309638-005	13253-Well D	515.4 CL_ACID_HERB	WATER	40.24ml	4ml
K1309638-008	13255-BW-1	515.4 CL_ACID_HERB	WATER	40.32ml	4ml
K1309638-010	13255-DUP	515.4 CL_ACID_HERB	WATER	40.22ml	4ml
K1309638-011	13255-Rinse	515.4 CL_ACID_HERB	WATER	40.20ml	4ml
KWG1310098-1	Matrix Spike	515.4 CL_ACID_HERB	WATER	40.28ml	4ml
KWG1310098-2	Duplicate Matrix Spike	515.4 CL_ACID_HERB	WATER	40.33ml	4ml
KWG1310098-3	Lab Control Sample	515.4 CL_ACID_HERB	WATER	40.00ml	4ml
KWG1310098-4	Method Blank	515.4 CL_ACID_HERB	WATER	40.00ml	4ml

Lab Code	Parent Lab Code	Comments
KWG1310098-1	K1309638-001	
KWG1310098-2	K1309638-001	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1309458-001	1282804	DWSTD06-06 H	4uL			
K1309638-001	1282805	DWSTD06-06 H	4uL			
K1309638-002	1282806	DWSTD06-06 H	4uL			
K1309638-004	1282807	DWSTD06-06 H	4uL			
K1309638-005	1282808	DWSTD06-06 H	4uL			
K1309638-008	1282809	DWSTD06-06 H	4uL			
K1309638-010	1282810	DWSTD06-06 H	4uL			
K1309638-011	1282811	DWSTD06-06 H	4uL			
KWG1310098-1	1282812			DWSTD06-65 E	250uL	
KWG1310098-2	1282813			DWSTD06-65 E	250uL	
KWG1310098-3	1282814			DWSTD06-65 E	250uL	

Comments:

Started By: RHayes Assisted By: Training Yes No

Completed By: RHayes Assisted By: Yes No

Reviewed By: Date: 10-01-13 Storage: 215A-F06

Chain of Custody

Relinquished By: Date: 9/12/13

Received By: Date: 10-01-13 Extracts Examined Yes No

Group ID:	KWG1310098	**Prep Method:**	METHOD	**Prep Date:**	09/17/13 08:00
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
KWG1310098-4	1282815	DWSTD06-06 H	4uL			

Comments:

Started By: RHayes Assisted By: Training Yes No

Completed By: RHayes Assisted By: Yes No

Reviewed By: John Schmidt Date: 10-01-13 Storage: 215A-F-06

Chain of Custody

Relinquished By: John Schmidt Date: 9/17/13

Received By: John Schmidt Date: 10-01-13 Extracts Examined Yes No

Sample Preparation Log | CAS - Kelso, WA | Drinking Water Lab

Herbicides in Water

Serv. Req. IDs: ICAL **Date:** 9-17-13 **Method** EPA 515.4

Lab Code	Client ID	Sample Amount (ml)	Sediment	pH (after base)	Surr (uL)	Spike (uL)	pH (after acid)	Emulsion ?	Final Volume (ml)
Ical-1		40.00	no	>12	-	2	~1	no	4
Ical-2		40.00	no	>12	-	5	~1	no	4
Ical-3		40.00	no	>12	-	10	~1	no	4
Ical-4		40.00	no	>12	-	25	~1	no	4
Ical-5		40.00	no	>12	-	50	~1	no	4
Ical-6		40.00	no	>12	-	100	~1	no	4
Ical-7		40.00	no	>12	-	250	~1	no	4
Ical-8		40.00	no	>12	-	300	~1	no	4
Ical-9		40.00	no	>12	-	500	~1	no	4
Ical-10		40.00	no	>12	-	1000	~1	no	4
ICV		40.00	no	>12	-	10	~1	no	4

BATCH ID:

Comments:

Surrogate ID/Conc: —

Spike ID/Conc: DWSTD016-165E VARIOUS CONC XP 12-9-13

ICV Spike ID/Conc: DWSTD016-57K VARIOUS CONC XP 2-1-13

Internal Standard/Extraction Solvent ID/Conc: DWSTD016-165D / SUD01-71N / 200ppb

Balance ID: K-BALANCE-08

10% MTBE in Hexane: SUD01-70N

Derivitization:

H_2SO_4 Lot# SUD01-71B

MTBE Lot #: 53011

KOH Lot# SUD01-70P — Start 1:25

Sulfate Lot #: 8/28/13-130199

Carbitol Lot# SUD01-69J — Stop 1:55

NaOH Lot #: SUD01-70R

Diazald Lot #: SUD01-69Q

Personnel and Bench Sheet Review

Started By: CJ

Completed By: CJ

Assisted By: —

Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Bench Sheet Reviewed By/Date Reviewed: John Schmidt 10-01-13

Extracts Examined: (Yes) / No

Sample Preparation Log | **CAS - Kelso, WA** | **Drinking Water Lab**

Herbicides in Water

Serv. Req. IDs: As listed **Date:** 9-17-13 **Method** EPA 515.4

Lab Code	Client ID	Sample Amount (ml)	Sediment	pH (after base)	Surr (uL)	Spike (uL)	pH (after acid)	Emulsion ?	Final Volume (ml)
K1309458-001		40.18		>12	4		1	NO	4
K1309638-001		40.26		>12	4		1		4
-002		40.13		>12	4		1		4
-004		40.05		>12	4		1		4
-005		40.24		>12	4		1		4
-008		40.32		>12	4		1		4
-010		40.22		>12	4		1		4
-011		40.20		>12	4		1		4
MB		40.00		>12	4		1		4
LCS		40.00		>12		250	1		4
K1309638-001	MS	40.28		>12		250	1		4
K1309638-001	DMS	40.33		>12		250	1		4

BATCH ID:

Comments:

Surrogate ID/Conc: DuSTD016-16H 100ppm XP 12-9-13 LD 9-17-13 EE

Spike ID/Conc: DuSTD016-16SE Various Conc XP 12-9-13

ICV Spike ID/Conc:

Internal Standard/Extraction Solvent ID/Conc: DuSTD016-16SD/SUD01-71N / 20ppb

Balance ID: K-Balance -08

10% MTBE in Hexane: SUD01-70N

H_2SO_4 Lot# SUD01-71B

MTBE Lot #: 53011

Sulfate Lot #: 8/28/13-130199

NaOH Lot #: SUD01-70B

KOH Lot# SUD01-70P

Carbitol Lot# SUD01-69J

Diazald Lot #: SUD01-69Q

Derivitization:

Start 1:25

Stop 1:55

Personnel and Bench Sheet Review

Started By:

Completed By:

Assisted By:

Assisted By:

Training: Yes / No; Yes / No

Bench Sheet Reviewed By/Date Reviewed: 10-01-13

Extracts Examined: Yes / No

Preparation Information Benchsheet

Prep Run#: 191865
Team: Semivoa GC
Number of Copies to make: 2

Prep WorkFlow: OrgExtDW(14/21)
Prep Method: Method

Status: Draft
Prep Date/Time: 9/17/13 07:39 AM

#	Lab Code	Client ID	B#	√	Test	Matrix	Amt Ext.	pH	Int Vol	Final Vol	Surr Added	Spike Added
1	K1309458-001	Entry Point A	.07		515.4/CL_ACID_HE RB	Drinking Water						
2	K1309638-001	13254-BW-4	.22		515.4/CL_ACID_HE RB	Water						
3	K1309638-002	13254-BW-2	.22		515.4/CL_ACID_HE RB	Water						
4	K1309638-004	13253-BW-3	.22		515.4/CL_ACID_HE RB	Water						
5	K1309638-005	13253-Well D	.22		515.4/CL_ACID_HE RB	Water						
6	K1309638-008	13255-BW-1	.22		515.4/CL_ACID_HE RB	Water						
7	K1309638-010	13255-DUP	.22		515.4/CL_ACID_HE RB	Water						
8	K1309638-011	13255-Rinse	.22		515.4/CL_ACID_HE RB	Water						

Comments: used for ID only

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Injection Log

Directory: J:\GC24\DATA\092013.515

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	95	09200001.D	1.	PRIMER BLANK		09/20/22013 04:0
2	95	09200002.D	1.	PRIMER BLANK		09/20/22013 04:3
3	1	09200003.D	1.	091713-LEV1		09/20/22013 05:0
4	2	09200004.D	1.	091713-LEV2		09/20/22013 05:3
5	3	09200005.D	1.	091713-LEV3		09/20/22013 06:0
6	4	09200006.D	1.	091713-LEV4		09/20/22013 06:3
7	5	09200007.D	1.	091713-LEV5		09/20/22013 07:0
8	6	09200008.D	1.	091713-LEV6		09/20/22013 07:3
9	7	09200009.D	1.	091713-LEV7		09/20/22013 08:0
10	8	09200010.D	1.	091713-LEV8		09/20/22013 08:3
11	9	09200011.D	1.	091713-LEV9		09/20/22013 09:0
12	10	09200012.D	1.	091713-LEV10		09/20/22013 09:3
13	11	09200013.D	1.	091173-ICV		09/20/22013 10:0
14	94	09200014.D	1.	PRIMER		09/20/22013 10:3
15	5	09200015.D	1.	091713-LEV5 CCV		09/20/22013 11:0
16	94	09200016.D	1.	IB		09/20/22013 11:3
17	12	09200017.D	1.	KWG-0098-3 LCS		09/21/22013 12:0
18	13	09200018.D	1.	KWG-0098-4 MB		09/21/22013 12:3
19	14	09200019.D	1.	K1309458-001		09/21/22013 01:0
20	15	09200020.D	1.	K1309638-001		09/21/22013 01:3
21	16	09200021.D	1.	K1309638-001 MS		09/21/22013 02:0
22	17	09200022.D	1.	K1309638-001 DMS		09/21/22013 02:3
23	18	09200023.D	1.	K1309638-002		09/21/22013 03:0
24	19	09200024.D	1.	K1309638-004		09/21/22013 03:3
25	20	09200025.D	1.	K1309638-005		09/21/22013 04:0
26	21	09200026.D	1.	K1309638-008		09/21/22013 04:3
27	22	09200027.D	1.	K1309638-010		09/21/22013 05:0
28	23	09200028.D	1.	K1309638-011		09/21/22013 05:3
29	6	09200029.D	1.	091713-LEV6 CCV		09/21/22013 06:0
30	93	09200030.D	1.	IB		09/21/22013 06:3
31	255	09200031.D	1.	REST		09/21/22013 07:0

KWG1310789

CAL: 12806

Run# 359952

Exception Report

Data File: J:\GC24\DATA\092013.515\09200016.D
Lab ID: KWG1310789-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 23:33
Date Quantitated: 10/01/2013 13:14
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	NR Outlier
	Pentachlorophenol	216.1	NA	30	
	Dacthal Diacid	38.4	NA	30	NR
Enviroquant/Stealth Calibration Check	Dinoseb	Calc	3-415109.81	I-0	NR NA
	Acifluorfen	Calc	3-907224.46	I-0	

Primary Review: JS 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200016.D\09200016C.D
Lab ID: KWG1310789-2
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 23:33
Date Quantitated: 10/01/2013 13:14
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NR

Primary Review: JDS 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200016.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200016.D\09200016c.d			**Vial:**	94
Acqu Date:	09/20/2013 23:33	**Quant Date:**	10/01/2013 13:14	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-2				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	10/01/2013

Analysis Lot:	KWG1310789	**Prep Lot:**		**Report Group:**	
Analysis Method:	515.4	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:			
MB Ref:		**Method ID:**	MJ503
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny			0d	0	20.00	0.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon			0	0	0.0000	0.0000			
1	3,5-Dichlorobenzoic Acid			0	0	0.0000	0.0000			
1	4-Nitrophenol			0	0	0.0000	0.0000			
1	Dicamba			0	0	0.0000	0.0000			
1	Dichlorprop			0d	0	0.0000	0.0000			
1	2,4-D			0	0	0.0000	0.0000			
1	Triclopyr			0	0	0.0000	0.0000			
1	Pentachlorophenol			0	0	0.0000	0.0000			
1	2,4,5-TP (Silvex)			0	0	0.0000	0.0000			
1	2,4,5-T			0	0	0.0000	0.0000			
1	Chloramben			0	0	0.0000	0.0000			
1	Dinoseb	17.75		6935	0	0.0000	0.0000			
1	2,4-DB			0	0	0.0000	0.0000			
1	Bentazon			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200016.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200016.D\09200016c.d			**Vial:**	94
Acqu Date:	09/20/2013 23:33	**Quant Date:**	10/01/2013 13:14	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-2				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid			0	0	0.0000	0.0000			
1	Picloram			0	0	0.0000	0.0000			
1	Acifluorfen	20.92		17583	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200016.D\ECD1A.CH Vial: 94
Signal #2 : J:\GC24\DATA\092013.515\09200016.D\ECD2B.CH
Acq On : 20 Sep 2013 11:33 pm Operator: JSCHWAB
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:33 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

Internal Standards

System Monitoring Compounds

Target Compounds

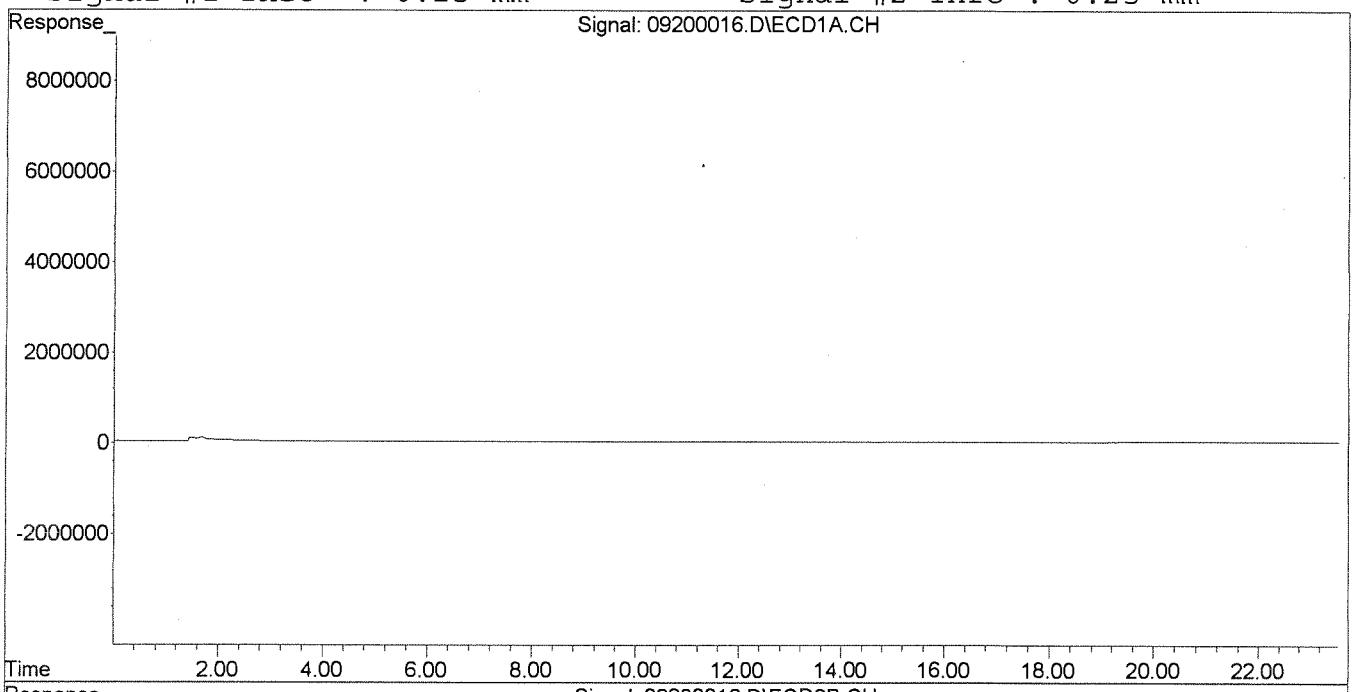
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

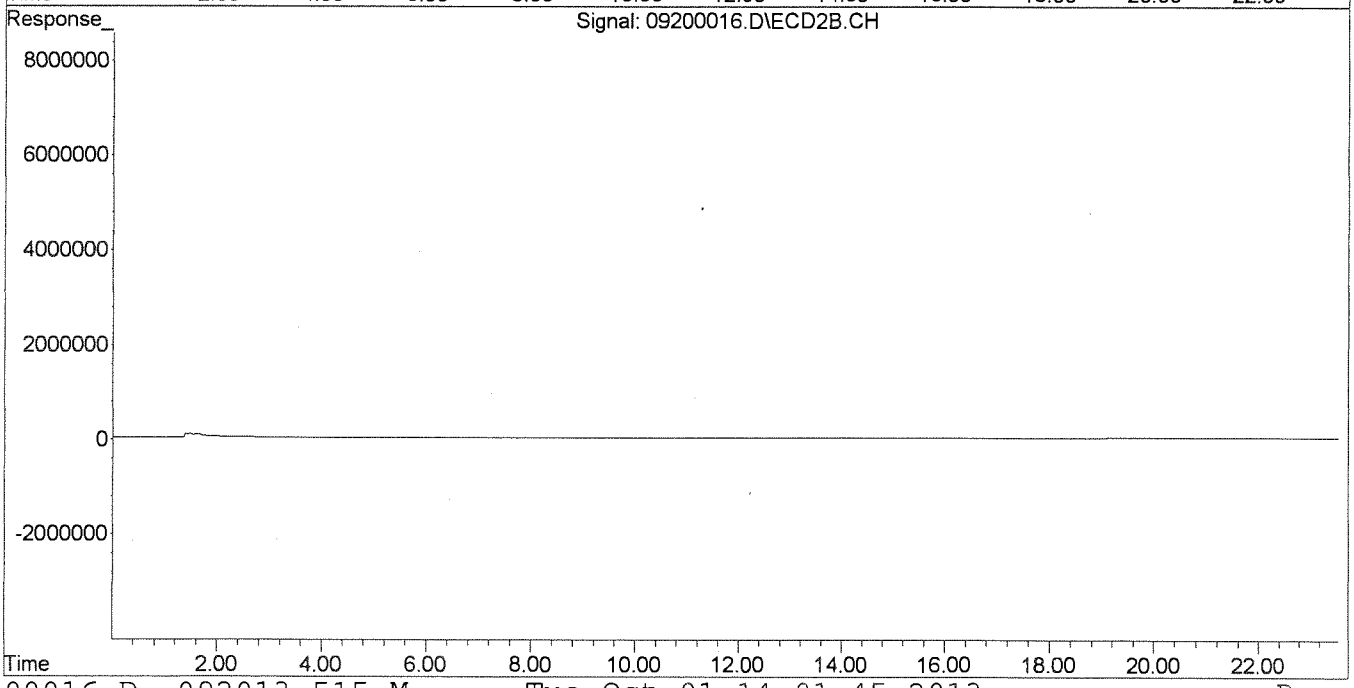
Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200016.D\ECD1A.CH Vial: 94
Signal #2 : J:\GC24\DATA\092013.515\09200016.D\ECD2B.CH
Acq On : 20 Sep 2013 11:33 pm Operator: JSCHWAB
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:14 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Exception Report

Data File: J:\GC24\DATA\092013.515\09200030.D
Lab ID: KWG1310789-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 09/21/2013 06:32
Date Quantitated: 10/01/2013 13:10
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Triclopyr	-70.5	NA	30	NR
	Pentachlorophenol	216.1	NA	30	Dual ICV
	Dacthal Diacid	38.4	NA	30	NR
Enviroquant/Stealth Calibration Check	Dinoseb	Calc	3-455693.40	I-0	NA
	Bentazon	Calc	3-2422746.97	I-0	NR
	Acifluorfen	Calc	3-453225.25	I-0	NR

Primary Review: JJ 10-01-13

Secondary Review: _____

Exception Report

Data File: J:\GC24\DATA\092013.515\09200030.D\09200030C.D
Lab ID: KWG1310789-4
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 09/21/2013 06:32
Date Quantitated: 10/01/2013 13:10
Batch ID: KWG1310789
Analysis Method: 515.4
MethodJoinID: MJ503

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Dacthal Diacid	31.8	NA	30	NA

Primary Review: 10-01-13

Secondary Review: _____

Quantitation Report

Data File #1:	J:\GC24\DATA\092013.515\09200030.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200030.D\09200030c.d			**Vial:**	93
Acqu Date:	09/21/2013 06:32	**Quant Date:**	10/01/2013 13:10	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-4				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	515.4 CL_ACID_H	**Collect Date:**		**Receive Date:**	10/01/2013

Analysis Lot:	KWG1310789	**Prep Lot:**		**Report Group:**	
Analysis Method:	515.4	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\GC24\METHODS\092013_515.M	**Calibration ID:**	CAL12806
Title:			
MB Ref:		**Method ID:**	MJ503
		Quant based on Method	

Internal Standard Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2
1	4,4'-Dibromooctafluorobipheny			0	0	0.00	0.00

Surrogate Compounds

IS #	Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ppb #1	ppb #2			Rpt
1	2,4-Dichlorophenylacetic Acid	0.00		0	0		0.0000			NA
				%Recovery =		NA	NA	Limits =	70-130	

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dalapon			0	0	0.0000	0.0000			
1	3,5-Dichlorobenzoic Acid			0	0	0.0000	0.0000			
1	4-Nitrophenol			0	0	0.0000	0.0000			
1	Dicamba			0	0	0.0000	0.0000			
1	Dichlorprop			0	0	0.0000	0.0000			
1	2,4-D			0	0	0.0000	0.0000			
1	Triclopyr			0	0	0.0000	0.0000			
1	Pentachlorophenol			0	0	0.0000	0.0000			
1	2,4,5-TP (Silvex)			0	0	0.0000	0.0000			
1	2,4,5-T			0	0	0.0000	0.0000			
1	Chloramben			0	0	0.0000	0.0000			
1	Dinoseb	17.74		7613	0	0.0000	0.0000			
1	2,4-DB			0	0	0.0000	0.0000			
1	Bentazon	18.52		6161	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC24\DATA\092013.515\09200030.D			**Instrument:**	GC24
Data File #2:	J:\GC24\DATA\092013.515\09200030.D\09200030c.d			**Vial:**	93
Acqu Date:	09/21/2013 06:32	**Quant Date:**	10/01/2013 13:10	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ppb
Lab ID:	KWG1310789-4				
Signal #1:	RTX-CLP2	**Signal #2:**	ZB-XLB-HT		

Target Compounds

Final Conc. Units: ug/L

IS #	Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ppb #1	ppb #2	ug/L #1	ug/L #2	Rpt
1	Dacthal Diacid			0	0	0.0000	0.0000			
1	Picloram			0	0	0.0000	0.0000			
1	Acifluorfen	20.90		8784	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Signal #1 : J:\GC24\DATA\092013.515\09200030.D\ECD1A.CH Vial: 93
Signal #2 : J:\GC24\DATA\092013.515\09200030.D\ECD2B.CH
Acq On : 09-21-2013 06:32:22 AM Operator: JSCHWAB
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 01 13:06:45 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Initial Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm

Compound	RT#1	RT#2	Resp#1	Resp#2	ppb	ppb

Internal Standards

System Monitoring Compounds

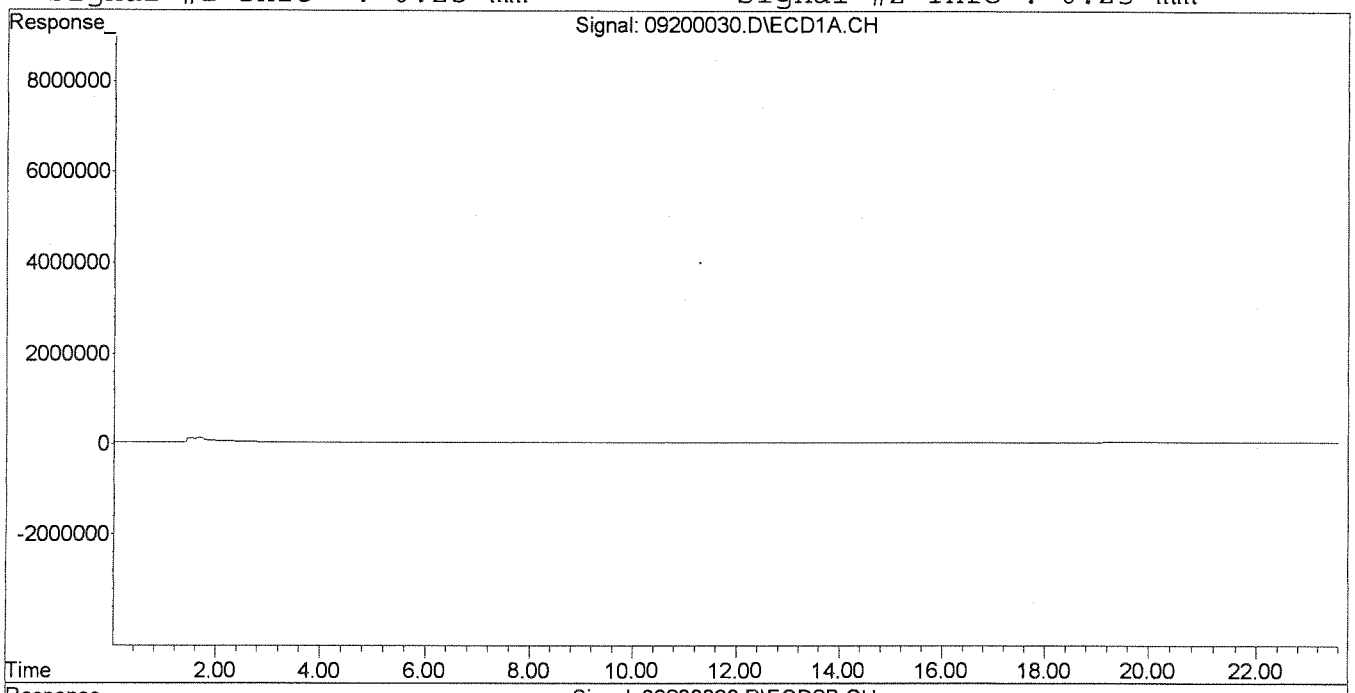
Target Compounds

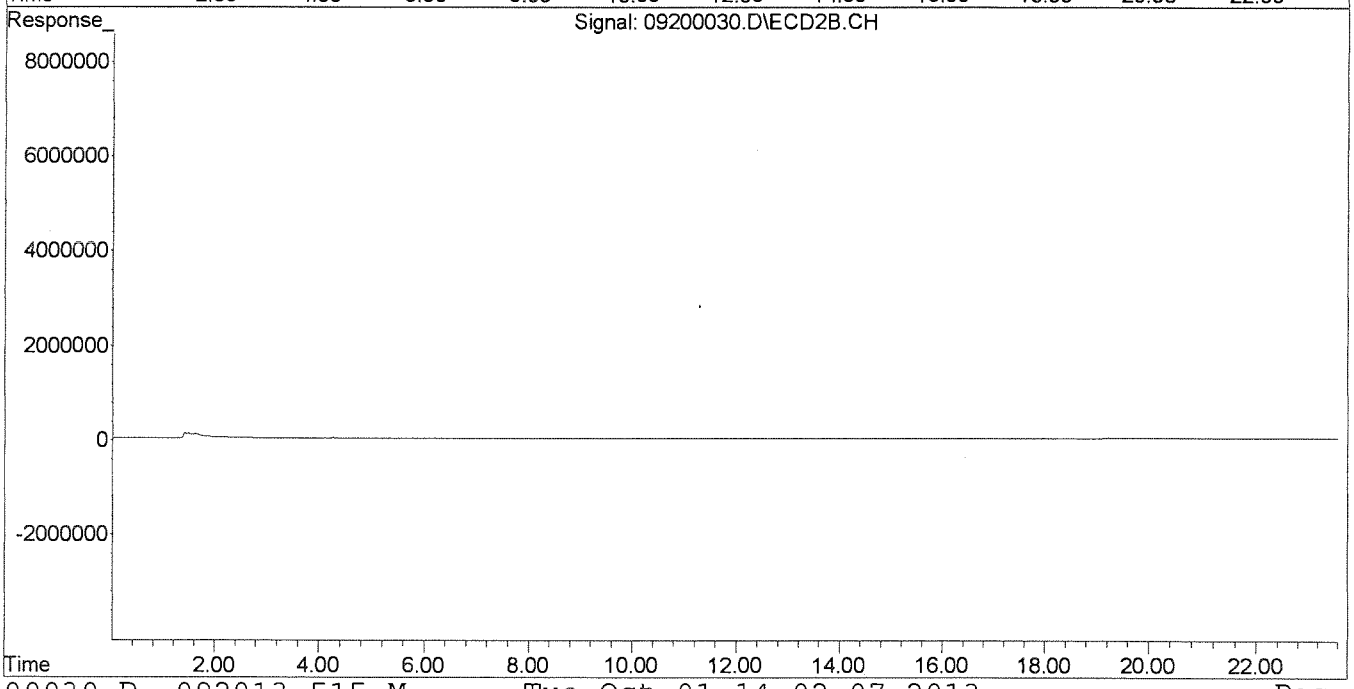
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Signal #1 : J:\GC24\DATA\092013.515\09200030.D\ECD1A.CH Vial: 93
Signal #2 : J:\GC24\DATA\092013.515\09200030.D\ECD2B.CH
Acq On : 09-21-2013 06:32:22 AM Operator: JSCHWAB
Sample : IB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile Signal #1: RTEINT.P IntFile Signal #2: RTEINT2.P
Quant Time: Oct 1 13:10 2013 Quant Results File: 092013_515.RES

Quant Method : J:\GC24\METHODS\092013_515.M (RTE Integrator)
Title : 092013_515.m MJ503 CAL12???
Last Update : Mon Sep 30 18:25:20 2013
Response via : Multiple Level Calibration
DataAcq Meth : 515NEW.M

Volume Inj. : 2 uL
Signal #1 Phase : RTX-CLP2 Signal #2 Phase: ZB-XLB-HT
Signal #1 Info : 0.25 mm Signal #2 Info : 0.25 mm





Semi-Volatile Organic Compounds

Organic Analysis:
Semivolatile Organics by EPA method 525.2

Validation Package

Organic Analysis:
Semivolatile Organics by EPA method 525.2

Validation Package

QC Reports

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1309638

Surrogate Recovery Summary
Semivolatile Organics by EPA method 525.2

Extraction Method: METHOD
Analysis Method: 525.2

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	
Batch QC	K1309458-001	84	87	99	
13254-BW-4	K1309638-001	82	93	68	*
13254-BW-2	K1309638-002	85	93	41	*
13253-BW-3	K1309638-004	82	93	68	*
13253-Well D	K1309638-005	89	96	54	*
13255-BW-1	K1309638-008	79	92	67	*
13255-DUP	K1309638-010	82	87	71	
13255-Rinse	K1309638-011	84	95	55	*
Method Blank	KWG1310290-3	83	93	74	
Batch QCMS	KWG1310290-2	88	97	72	
Lab Control Sample	KWG1310290-1	79	96	78	

Surrogate Recovery Control Limits (%)

Sur1 = 1,3-Dimethyl-2-nitrobenzene	70-130
Sur2 = Triphenyl Phosphate	70-130
Sur3 = Perylene-d12	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/20/2013
Sample Matrix:	Drinking water	**Date Analyzed:**	09/20/2013

Matrix Spike Summary
Semivolatile Organics by EPA method 525.2

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1309458-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	525.2	**Extraction Lot:**	KWG1310290

Batch QCMS
KWG1310290-2
Matrix Spike

Analyte Name	Sample Result	Result	Spike Amount	%Rec	%Rec Limits
Hexachlorocyclopentadiene	ND	0.857	0.980	87	70-130
Hexachlorobenzene	ND	0.863	0.980	88	70-130
Simazine	ND	0.951	0.980	97	70-130
Atrazine	ND	0.933	0.980	95	70-130
Alachlor	ND	1.04	0.980	106	70-130
trans-Nonachlor	ND	0.715	0.980	73	70-130
Bis(2-ethylhexyl) Adipate	ND	0.940	0.980	96	70-130
Bis(2-ethylhexyl) Phthalate	0.25	1.04	0.980	81	70-130
Benzo(a)pyrene	ND	0.285	0.980	29 *	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013

Lab Control Spike Summary
Semivolatile Organics by EPA method 525.2

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310290

Lab Control Sample
KWG1310290-1
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Hexachlorocyclopentadiene	0.776	1.00	78	70-130
Hexachlorobenzene	0.916	1.00	92	70-130
Simazine	0.935	1.00	93	70-130
Atrazine	0.962	1.00	96	70-130
Alachlor	1.03	1.00	103	70-130
trans-Nonachlor	0.746	1.00	75	70-130
Bis(2-ethylhexyl) Adipate	0.937	1.00	94	70-130
Bis(2-ethylhexyl) Phthalate	0.998	1.00	100	70-130
Benzo(a)pyrene	0.914	1.00	91	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/20/2013
Date Analyzed: 09/20/2013
Time Analyzed: 22:26

Method Blank Summary
Semivolatile Organics by EPA method 525.2

Sample Name: Method Blank
Lab Code: KWG1310290-3

Extraction Method: METHOD
Analysis Method: 525.2

Instrument ID: MS22
File ID: J:\MS22\DATA\092013-525\0920JLE006.D

Level: Low
Extraction Lot: KWG1310290

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310290-1	J:\MS22\DATA\092013-525\0920JLE004.D	09/20/13	21:03
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/13	23:13
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/13	23:59
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/13	00:46
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/13	01:32
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/13	02:18
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/13	03:05
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/13	03:51
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/13	04:38
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/13	18:49

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/20/2013
Sample Matrix:	Water	**Date Analyzed:**	09/20/2013
		Time Analyzed:	21:03

Lab Control Sample Summary
Semivolatile Organics by EPA method 525.2

Sample Name:	Lab Control Sample	**Instrument ID:**	MS22
Lab Code:	KWG1310290-1	**File ID:**	J:\MS22\DATA\092013-525\0920JLE004.D
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	525.2	**Extraction Lot:**	KWG1310290

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310290-3	J:\MS22\DATA\092013-525\0920JLE006.D	09/20/13	22:26
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/13	23:13
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/13	23:59
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/13	00:46
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/13	01:32
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/13	02:18
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/13	03:05
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/13	03:51
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/13	04:38
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/13	18:49

Organic Analysis:
Semivolatile Organics by EPA method 525.2

Validation Package

Raw Data

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13254-BW-4
Lab Code: K1309638-001

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	**0.033**	J	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	**0.025**	J	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.14**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	68	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE011.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 02:18
Date Quantitated: 09/23/2013 14:59
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	68	70	130	MRL

Primary Review: MH 09-25-13

Secondary Review: [illegible]

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE011.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 02:18	**Quant Date:**	10/10/2013 15:14	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-001			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
Prep Ref:	1284689	**Prep Date:**	09/20/2013		

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.43	-0.01	162	168310	2,500.00	OK
2	Phenanthrene-d10	14.88	-0.01	188	283179	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	274309	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	20753	816.48	82	70-130	OK	
2	Triphenyl Phosphate	22.65	-0.01	0.00	169	15015	925.57	93	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	64386	682.60	68	70-130	*	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine	14.51		0.00	215	177	34.11	0.033	J	
2	Alachlor	16.28	-0.01	0.00	160	480	25.48	0.025	J	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.65	-0.02	0.00	149	5241	143.03	0.14	J	
3	Benzo(a)pyrene				252	0d		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE011.D Vial: 0
Acq On : 21-09-2013 02:18 Operator:
Sample : K1309638-1 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:39 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

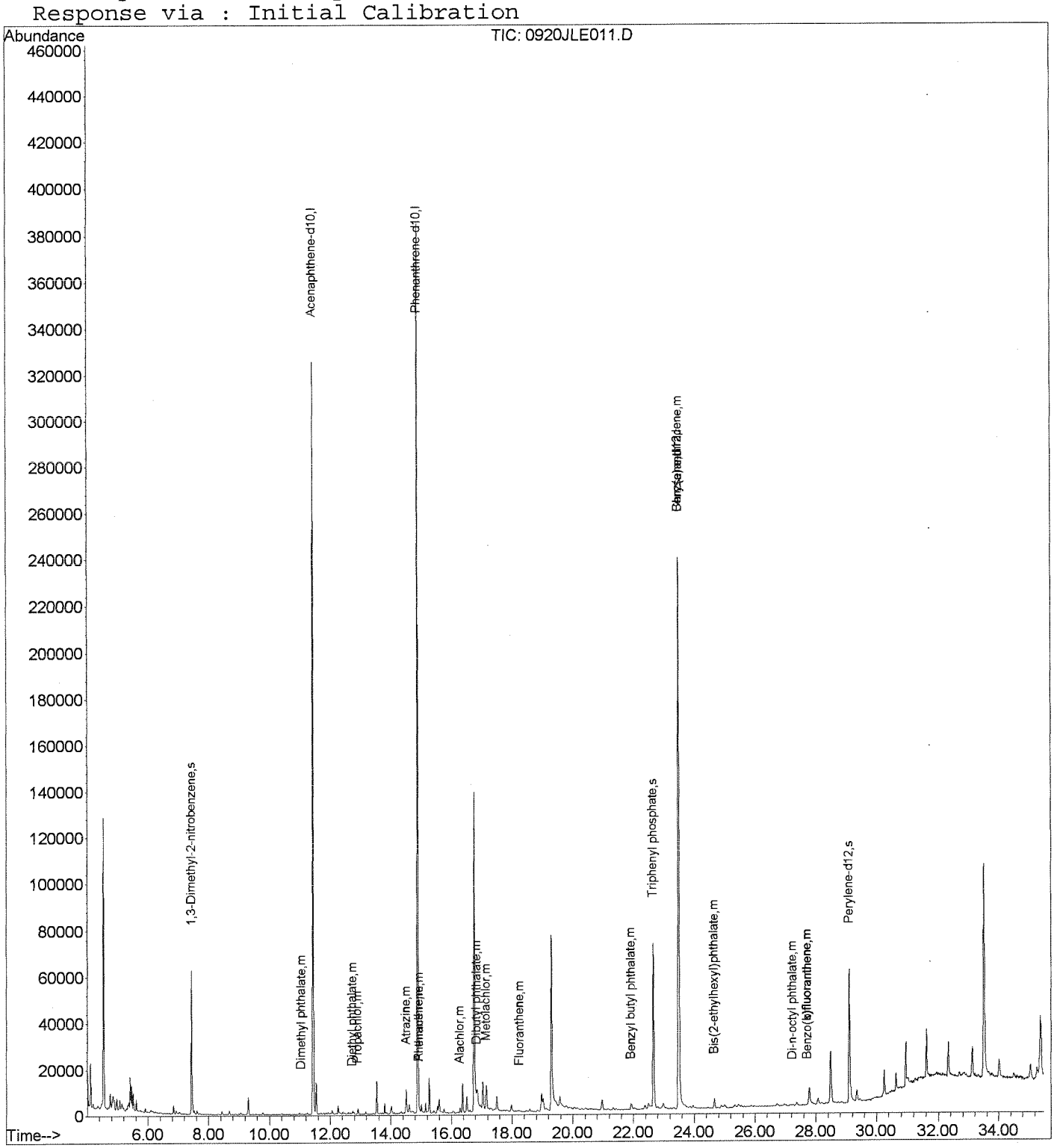
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.43	162	168310	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.88	188	283179	2500.00	ug/L	-0.01
35) Chrysene-d12	23.49	240	274309	2500.00	ug/L	-0.01
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	20753	816.48	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 81.65%			
34) Triphenyl phosphate	22.65	169	15015	925.57	ug/L	-0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 92.56%			
49) Perylene-d12	29.11	264	64386	682.60	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 68.26%#			
Target Compounds						Qvalue
7) Dimethyl phthalate	11.04	163	141	7.56	ug/L	69
10) Diethyl phthalate	12.74	149	674	19.40	ug/L	86
12) Propachlor	12.91	120	185	17.55	ug/L #	51
19) Atrazine	14.51	215	177	34.11	ug/L #	60
22) Phenanthrene	14.93	178	153	1.18	ug/L	92
23) Anthracene	14.93	178	153	1.23	ug/L	82
27) Alachlor	16.28	160	480	25.48	ug/L	94
29) Dibutyl phthalate	16.83	149	4925	63.61	ug/L	99
31) Metolachlor	17.16	162	8870	90.26	ug/L	91
36) Fluoranthene	18.24	202	126	6.75	ug/L	87
40) Benzyl butyl phthalate	21.93	149	363	50.37	ug/L	94
42) Benz(a)anthracene	23.50	228	686	31.86	ug/L #	46
43) Chrysene	23.50	228	686	6.17	ug/L #	43
44) Bis(2-ethylhexyl)phthalate	24.65	149	5241	143.03	ug/L	98
45) Di-n-octyl phthalate	27.24	149	114	94.61	ug/L	91
46) Benzo(b)fluoranthene	27.72	252	148	37.78	ug/L	96
47) Benzo(k)fluoranthene	27.72	252	148	33.62	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE011.D Vial: 0
Acq On : 21-09-2013 02:18 Operator:
Sample : K1309638-1 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 10 15:14 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Units: ug/L
Basis: NA

Extraction Method: METHOD
Analysis Method: 525.2

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	**0.028**	J	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	**0.14**		0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	**0.017**	J	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	*
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	*
Bis(2-ethylhexyl) Phthalate	**0.19**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	*
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	85	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	41	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE012.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:05
Date Quantitated: 09/23/2013 15:03
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA		x
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Internal Standards	Chrysene-d12	182189	198209.2	368102.8	NAR
Surrogates	Perylene-d12	41	70	130	NAR

Primary Review: JLL 09.25.13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE012.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 03:05	**Quant Date:**	09/23/2013 15:03	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-002			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
Prep Ref:	1284690	**Prep Date:**	09/20/2013		

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	166532	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	276541	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	182189	2,500.00	*

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21269	845.29	85	70-130	OK	
2	Triphenyl Phosphate	22.66	0.00	0.00	169	14739	930.17	93	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	25048	414.85	41	70-130	*	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine	14.40		0.00	201	206	29.31	0.028	J	
2	Atrazine	14.51		0.00	215	1163	147.82	0.14		
2	Alachlor	16.28	-0.01	0.00	160	195	17.79	0.017	J	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.66	-0.01	0.00	149	6870	191.97	0.19	J	
3	Benzo(a)pyrene				252	0		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE012.D Vial: 0
Acq On : 21-09-2013 03:05 Operator:
Sample : K1309638-2 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:40 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

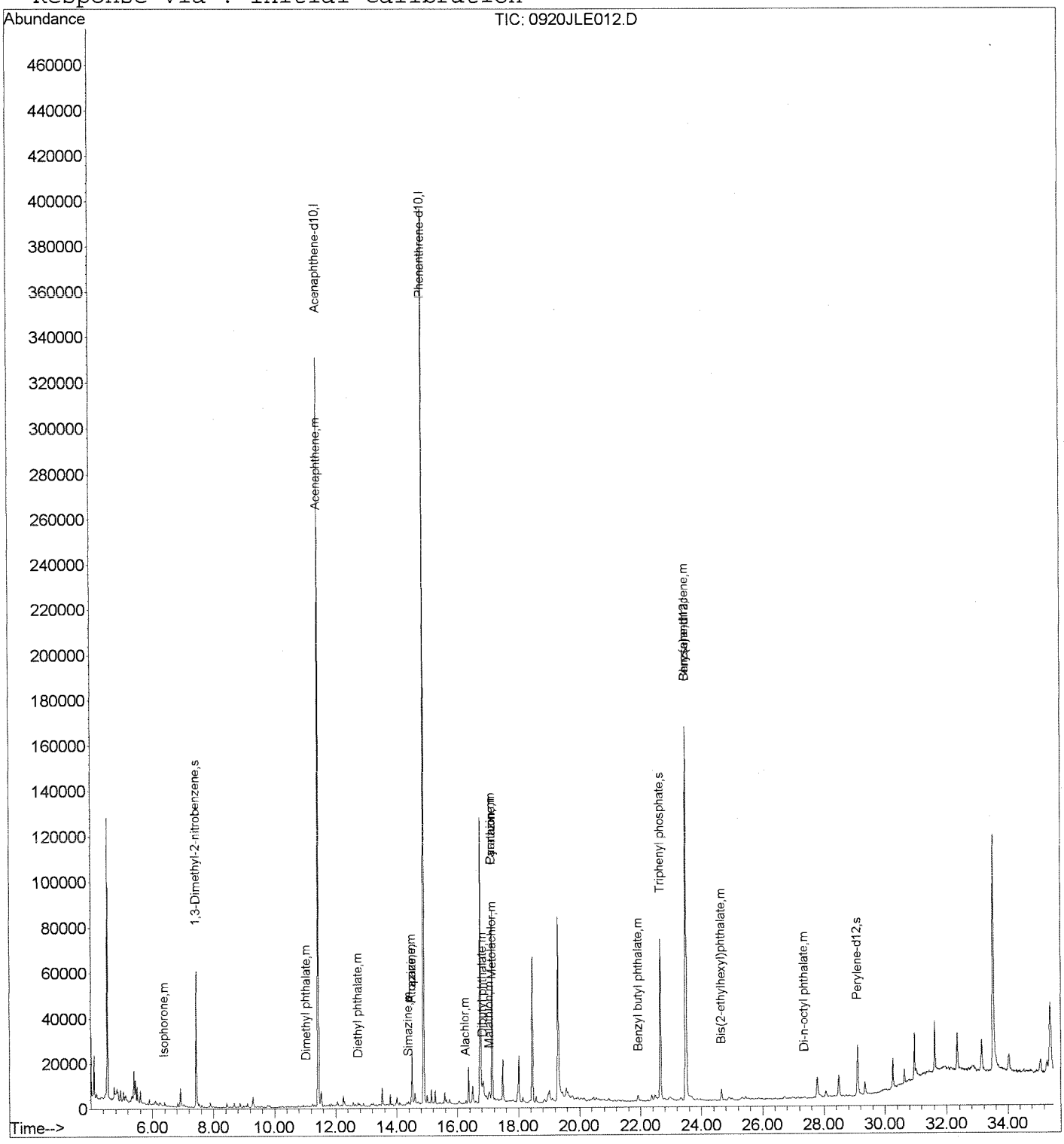
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	166532	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	276541	2500.00	ug/L	0.00
35) Chrysene-d12	23.49	240	182189	2500.00	ug/L	-0.01
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21269	845.29	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 84.53%			
34) Triphenyl phosphate	22.66	169	14739	930.17	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 93.02%			
49) Perylene-d12	29.11	264	25048	414.85	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 41.48%#			
Target Compounds						Qvalue
2) Isophorone	6.40	82	118	16.82	ug/L #	44
7) Dimethyl phthalate	11.04	163	152	7.68	ug/L	68
9) Acenaphthene	11.45	153	108	1.26	ug/L #	1
10) Diethyl phthalate	12.74	149	704	19.76	ug/L	92
18) Simazine	14.40	201	206	29.31	ug/L	96
19) Atrazine	14.51	215	1163	147.82	ug/L	92
20) Propazine	14.51	214	179	19.00	ug/L #	1
27) Alachlor	16.28	160	195	17.79	ug/L	89
29) Dibutyl phthalate	16.83	149	4584	62.20	ug/L	99
30) Malathion	17.06	173	138	86.08	ug/L	78
31) Metolachlor	17.16	162	2074	34.61	ug/L	94
32) Cyanazine	17.13	225	436	40.58	ug/L #	29
33) Parathion	17.14	291	566	223.62	ug/L #	81
40) Benzyl butyl phthalate	21.94	149	287	51.37	ug/L	97
42) Benz(a)anthracene	23.49	228	503	32.41	ug/L #	46
43) Chrysene	23.49	228	503	6.81	ug/L #	43
44) Bis(2-ethylhexyl)phthalate	24.66	149	6870	191.97	ug/L	90
45) Di-n-octyl phthalate	27.36	149	579	99.41	ug/L	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE012.D Vial: 0
Acq On : 21-09-2013 03:05 Operator:
Sample : K1309638-2 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 15:03 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.13**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/21/13	Acceptable
Triphenyl Phosphate	93	70-130	09/21/13	Acceptable
Perylene-d12	68	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE009.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 00:46
Date Quantitated: 09/23/2013 14:50
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	68	70	130	NAR

Primary Review: DL 09-25-13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE009.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 00:46	**Quant Date:**	09/23/2013 14:50	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-004			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
Prep Ref:	1284691	**Prep Date:**	09/20/2013		

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.43	-0.01	162	172177	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	279507	2,500.00	OK
3	Chrysene-d12	23.50	0.00	240	267991	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21262	817.70	82	70-130 OK	
2	Triphenyl Phosphate	22.65	-0.01	0.00	169	14934	932.38	93	70-130 OK	
3	Perylene-d12	29.11	0.00	0.00	264	62489	678.36	68	70-130 *	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0		0.0060	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.66	-0.01	0.00	149	3848	130.51	0.13	J	
3	Benzo(a)pyrene				252	0d		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE009.D Vial: 0
Acq On : 21-09-2013 00:46 Operator:
Sample : K1309638-4 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:37 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

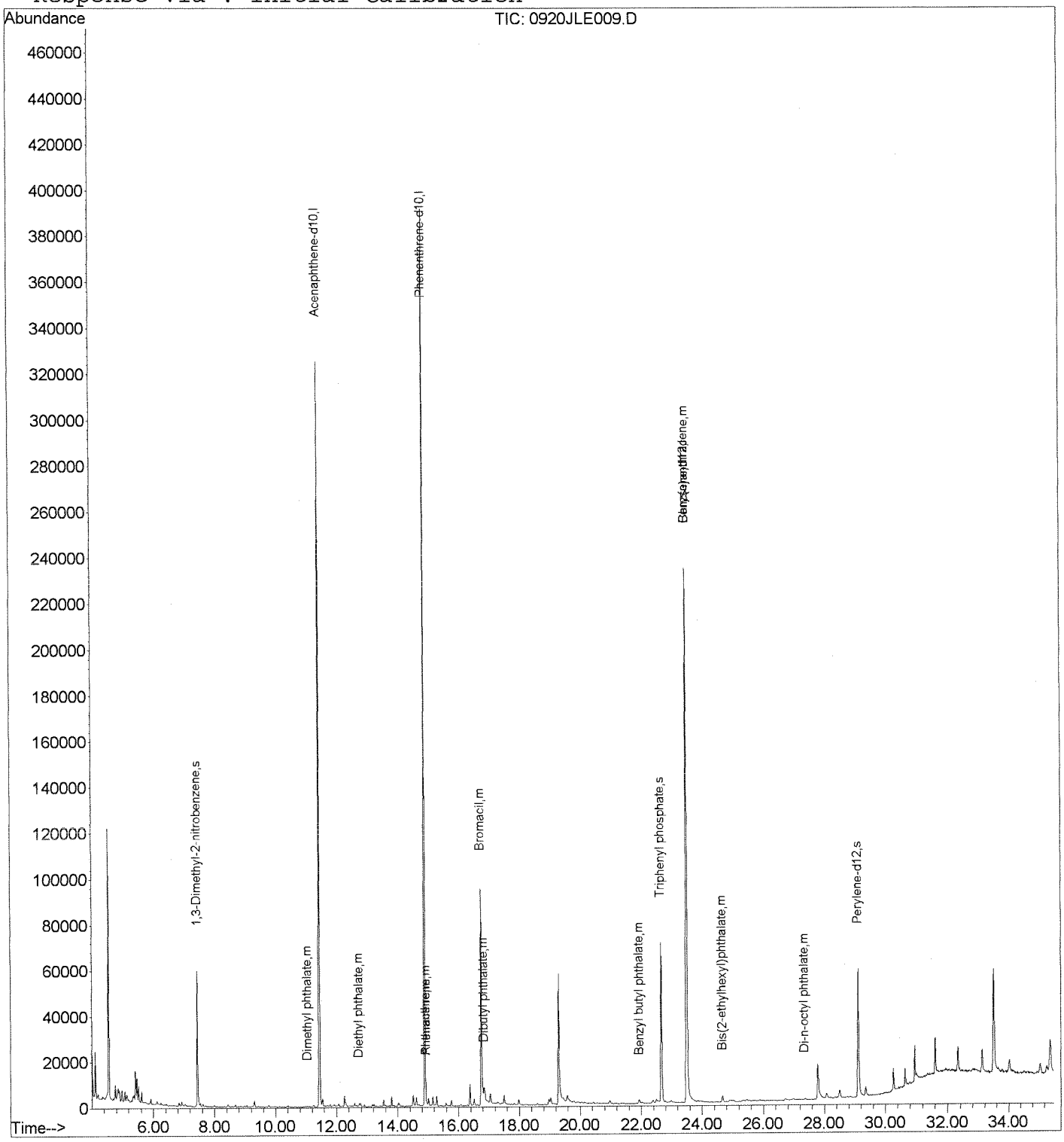
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.43	162	172177	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	279507	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	267991	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21262	817.70	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 81.77%			
34) Triphenyl phosphate	22.65	169	14934	932.38	ug/L	-0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 93.24%			
49) Perylene-d12	29.11	264	62489	678.36	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 67.84%#			
Target Compounds						Qvalue
7) Dimethyl phthalate	11.04	163	133	7.46	ug/L	53
10) Diethyl phthalate	12.74	149	832	20.72	ug/L	99
22) Phenanthrene	14.94	178	150	1.17	ug/L	91
23) Anthracene	14.94	178	150	1.22	ug/L	79
28) Bromacil	16.74	207	165	28.19	ug/L #	15
29) Dibutyl phthalate	16.83	149	5130	65.28	ug/L	98
40) Benzyl butyl phthalate	21.94	149	271	49.12	ug/L	88
42) Benz(a)anthracene	23.49	228	306	28.99	ug/L #	46
43) Chrysene	23.49	228	306	2.82	ug/L #	43
44) Bis(2-ethylhexyl)phthalate	24.66	149	3848	130.51	ug/L	100
45) Di-n-octyl phthalate	27.35	149	398	96.47	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE009.D Vial: 0
Acq On : 21-09-2013 00:46 Operator:
Sample : K1309638-4 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 14:50 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.25**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	89	70-130	09/21/13	Acceptable
Triphenyl Phosphate	96	70-130	09/21/13	Acceptable
Perylene-d12	54	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE013.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 03:51
Date Quantitated: 09/23/2013 15:05
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	54	70	130	MRL

Primary Review: DG 09-25-13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE013.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 03:51	**Quant Date:**	09/23/2013 15:05	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-005			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
Prep Ref:	1284692	**Prep Date:**	09/20/2013		

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	163606	2,500.00	OK
2	Phenanthrene-d10	14.88	-0.01	188	284208	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	277768	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	22075	892.33	89	70-130	OK	
2	Triphenyl Phosphate	22.65	-0.01	0.00	169	15632	958.69	96	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	51165	543.60	54	70-130	*	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0		0.0060	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.66	-0.01	0.00	149	17057	254.13	0.25	J	
3	Benzo(a)pyrene				252	0		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE013.D Vial: 0
Acq On : 21-09-2013 03:51 Operator:
Sample : K1309638-5 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:41 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

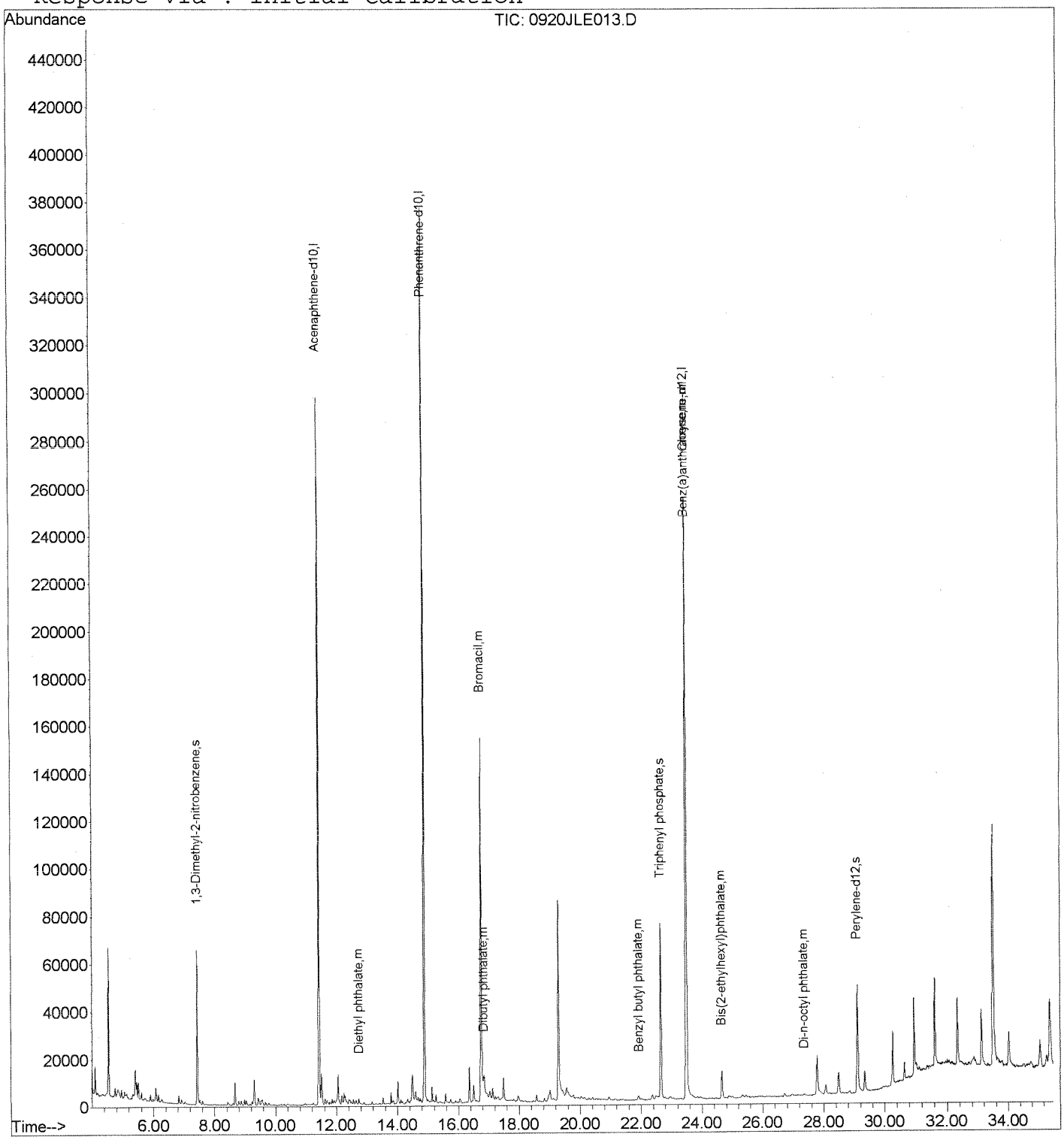
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	163606	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.88	188	284208	2500.00	ug/L	-0.01
35) Chrysene-d12	23.49	240	277768	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	22075	892.33	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 89.23%			
34) Triphenyl phosphate	22.65	169	15632	958.69	ug/L	-0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 95.87%			
49) Perylene-d12	29.11	264	51165	543.60	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 54.36%#			
Target Compounds						Qvalue
10) Diethyl phthalate	12.74	149	558	18.46	ug/L	82
28) Bromacil	16.76	207	105	25.16	ug/L #	1
29) Dibutyl phthalate	16.84	149	3649	55.73	ug/L	97
40) Benzyl butyl phthalate	21.94	149	255	48.75	ug/L	77
42) Benz(a)anthracene	23.48	228	249	28.47	ug/L #	54
43) Chrysene	23.50	228	228	2.02	ug/L #	43
44) Bis(2-ethylhexyl)phthalate	24.66	149	17057	254.13	ug/L	96
45) Di-n-octyl phthalate	27.36	149	541	97.28	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE013.D Vial: 0
Acq On : 21-09-2013 03:51 Operator:
Sample : K1309638-5 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 15:05 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.19**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	79	70-130	09/21/13	Acceptable
Triphenyl Phosphate	92	70-130	09/21/13	Acceptable
Perylene-d12	67	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE014.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 04:38
Date Quantitated: 09/23/2013 15:08
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	67	70	130	WDRR

Primary Review: DE 09-25-13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE014.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 04:38	**Quant Date:**	10/10/2013 15:16	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-008			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284693				

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	179524	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	285061	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	282417	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21459	791.89	79	70-130	OK	
2	Triphenyl Phosphate	22.66	0.00	0.00	169	14957	916.30	92	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	64879	668.88	67	70-130	*	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0d		0.0060	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.66	-0.01	0.00	149	11537	200.22	0.19	J	
3	Benzo(a)pyrene				252	0		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE014.D Vial: 0
Acq On : 21-09-2013 04:38 Operator:
Sample : K1309638-8 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:42 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

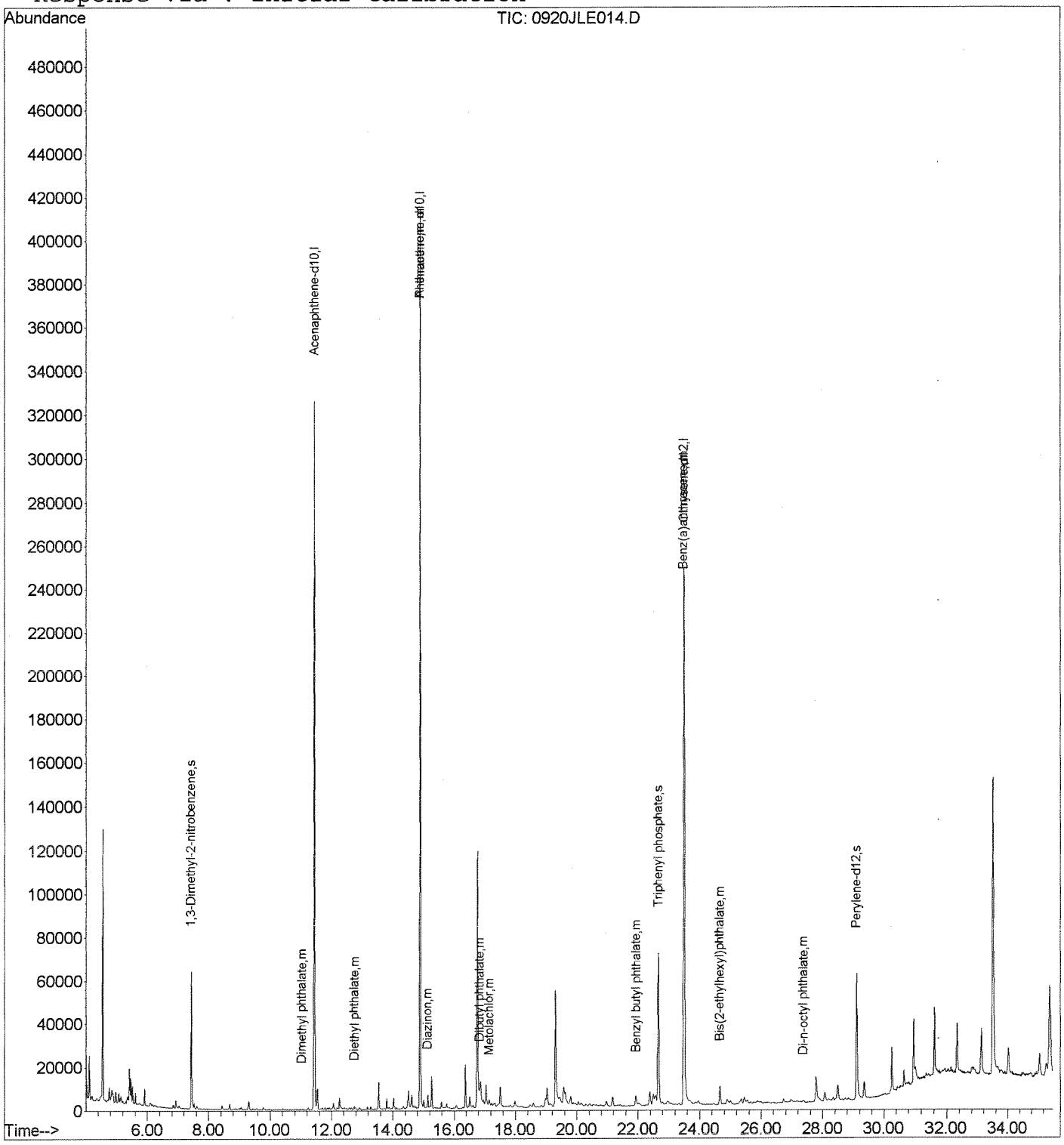
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Acenaphthene-d10	11.44	162	179524	2500.00	ug/L		0.00
14) Phenanthrene-d10	14.89	188	285061	2500.00	ug/L		0.00
35) Chrysene-d12	23.49	240	282417	2500.00	ug/L		-0.01
System Monitoring Compounds							
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21459	791.89	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 79.19%				
34) Triphenyl phosphate	22.66	169	14957	916.30	ug/L		-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 91.63%				
49) Perylene-d12	29.11	264	64879	668.88	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 66.89%#				
Target Compounds							Qvalue
7) Dimethyl phthalate	11.03	163	124	7.33	ug/L		52
10) Diethyl phthalate	12.74	149	596	18.31	ug/L		92
21) Diazinon	15.13	137	116	23.85	ug/L	#	52
22) Phenanthrene	14.89	178	148	1.13	ug/L	#	1
23) Anthracene	14.89	178	148	1.18	ug/L		96
29) Dibutyl phthalate	16.83	149	4158	58.76	ug/L		99
31) Metolachlor	17.15	162	438	20.66	ug/L		82
40) Benzyl butyl phthalate	21.94	149	209	48.04	ug/L		96
42) Benz(a)anthracene	23.48	228	204	28.10	ug/L		72
43) Chrysene	23.50	228	386	3.37	ug/L	#	49
44) Bis(2-ethylhexyl)phthalate	24.66	149	11537	200.22	ug/L		94
45) Di-n-octyl phthalate	27.37	149	538	97.20	ug/L		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE014.D Vial: 0
Acq On : 21-09-2013 04:38 Operator:
Sample : K1309638-8 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 10 15:16 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/23/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/23/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/23/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/23/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/23/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/23/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/23/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.16**	J	0.59	0.060	1	09/20/13	09/23/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/23/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	82	70-130	09/23/13	Acceptable
Triphenyl Phosphate	87	70-130	09/23/13	Acceptable
Perylene-d12	71	70-130	09/23/13	Acceptable

Comments:

Exception Report

Data File: J:\MS22\DATA\092313-525\0923JLE004.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/23/2013 18:49
Date Quantitated: 09/23/2013 23:07
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JTY 09/25/13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092313-525\0923JLE004.D			**Instrument:**	MS22
Acqu Date:	09/23/2013 18:49	**Quant Date:**	10/08/2013 11:06	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-010			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284694				

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092313-525\0923JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	169272	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	295854	2,500.00	OK
3	Chrysene-d12	23.50	0.00	240	276002	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21069	824.09	82	70-130	OK	
2	Triphenyl Phosphate	22.66	0.00	0.00	169	14699	869.58	87	70-130	OK	
3	Perylene-d12	29.12	0.01	0.00	264	67582	710.48	71	70-130	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0		0.0060	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.66		0.00	149	7172	161.14	0.16	J	
3	Benzo(a)pyrene				252	0d		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092313-525\0923JLE004.D Vial: 0
Acq On : 23-09-2013 18:49 Operator:
Sample : K1309638-10 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 23:04:11 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

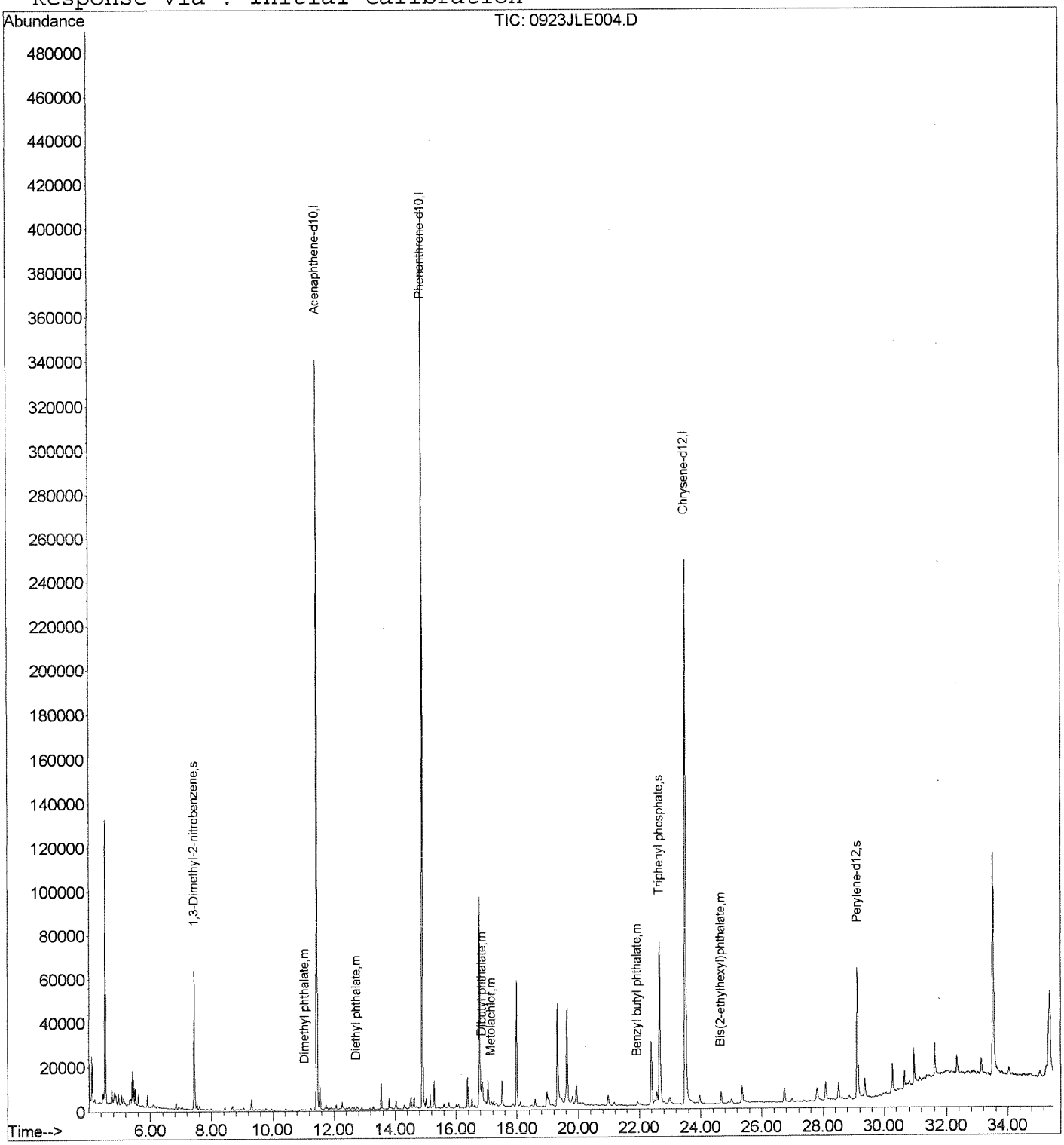
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	169272	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	295854	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	276002	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21069	824.09	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 82.41%			
34) Triphenyl phosphate	22.66	169	14699	869.58	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 86.96%			
49) Perylene-d12	29.12	264	67582	710.48	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 71.05%			
Target Compounds						Qvalue
7) Dimethyl phthalate	11.04	163	109	7.26	ug/L	54
10) Diethyl phthalate	12.74	149	632	18.97	ug/L	86
29) Dibutyl phthalate	16.84	149	5600	66.27	ug/L	99
31) Metolachlor	17.16	162	639	22.12	ug/L	88
40) Benzyl butyl phthalate	21.94	149	275	49.06	ug/L	81
44) Bis(2-ethylhexyl)phthalate	24.66	149	7172	161.14	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092313-525\0923JLE004.D Vial: 0
Acq On : 23-09-2013 18:49 Operator:
Sample : K1309638-10 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 8 11:06 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Semivolatile Organics by EPA method 525.2

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.098	0.020	1	09/20/13	09/21/13	KWG1310290	
Hexachlorobenzene	ND	U	0.098	0.0050	1	09/20/13	09/21/13	KWG1310290	
Simazine	ND	U	0.049	0.0090	1	09/20/13	09/21/13	KWG1310290	
Atrazine	ND	U	0.098	0.0060	1	09/20/13	09/21/13	KWG1310290	
Alachlor	ND	U	0.070	0.0060	1	09/20/13	09/21/13	KWG1310290	
trans-Nonachlor	ND	U	0.098	0.0080	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	**0.071**	J	0.59	0.030	1	09/20/13	09/21/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.17**	J	0.59	0.060	1	09/20/13	09/21/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/21/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	84	70-130	09/21/13	Acceptable
Triphenyl Phosphate	95	70-130	09/21/13	Acceptable
Perylene-d12	55	70-130	09/21/13	Outside Control Limits

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE010.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/21/2013 01:32
Date Quantitated: 09/23/2013 14:56
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ11736

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	55	70	130	MRL

Primary Review: JLJ 09-25-13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE010.D			**Instrument:**	MS22
Acqu Date:	09/21/2013 01:32	**Quant Date:**	09/23/2013 14:56	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-011			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309638
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284695				

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ11736
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.43	-0.01	162	158889	2,500.00	OK
2	Phenanthrene-d10	14.88	-0.01	188	281048	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	281432	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	20173	840.37	84	70-130	OK	
2	Triphenyl Phosphate	22.65	-0.01	0.00	169	15359	952.78	95	70-130	OK	
3	Perylene-d12	29.10	-0.01	0.00	264	52070	545.85	55	70-130	*	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0d		0.0060	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Bis(2-ethylhexyl) Adipate	22.55	-0.01	0.00	129	851	72.96	0.071	J	
3	Bis(2-ethylhexyl) Phthalate	24.65	-0.02	0.00	149	9255	179.29	0.17	J	
3	Benzo(a)pyrene				252	0d		0.0080	U	

Prep Amount:	1030 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE010.D Vial: 0
Acq On : 21-09-2013 01:32 Operator:
Sample : K1309638-11 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:38 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

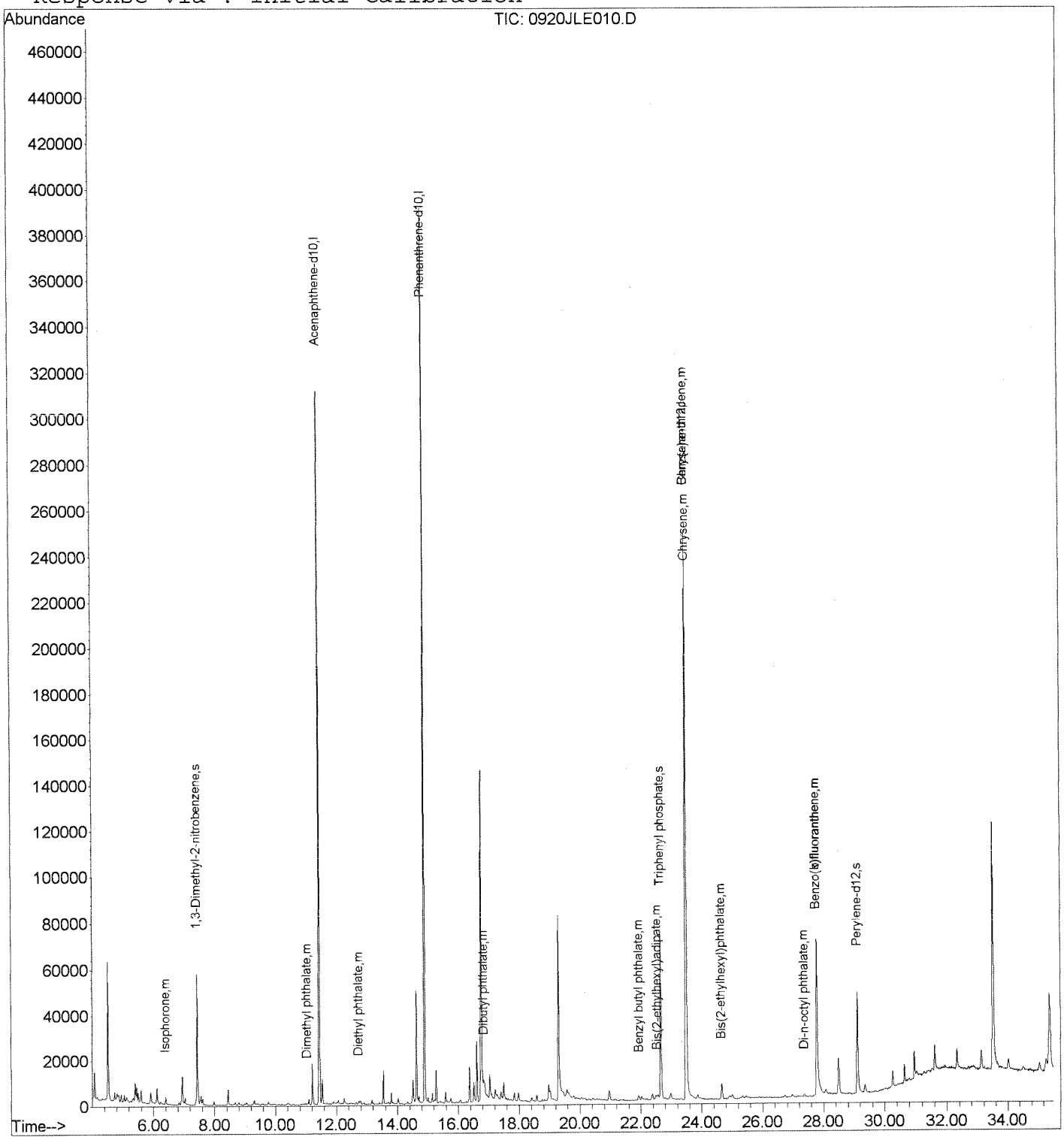
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.43	162	158889	2500.00	ug/L	-0.01
14) Phenanthrene-d10	14.88	188	281048	2500.00	ug/L	-0.01
35) Chrysene-d12	23.49	240	281432	2500.00	ug/L	-0.01
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	20173	840.37	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 84.04%			
34) Triphenyl phosphate	22.65	169	15359	952.78	ug/L	-0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 95.28%			
49) Perylene-d12	29.10	264	52070	545.85	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 54.59%#			
Target Compounds						Qvalue
2) Isophorone	6.39	82	190	19.68	ug/L #	38
7) Dimethyl phthalate	11.04	163	226	8.49	ug/L	95
10) Diethyl phthalate	12.73	149	730	20.34	ug/L	100
29) Dibutyl phthalate	16.83	149	4845	63.35	ug/L	99
40) Benzyl butyl phthalate	21.94	149	299	49.32	ug/L	90
41) Bis(2-ethylhexyl)adipate	22.55	129	851	72.96	ug/L	95
42) Benz(a)anthracene	23.48	228	256	28.50	ug/L #	46
43) Chrysene	23.50	228	214	1.87	ug/L #	50
44) Bis(2-ethylhexyl)phthalate	24.65	149	9255	179.29	ug/L	91
45) Di-n-octyl phthalate	27.36	149	878	99.31	ug/L	97
46) Benzo(b)fluoranthene	27.76	252	104	37.39	ug/L #	39
47) Benzo(k)fluoranthene	27.76	252	104	33.28	ug/L #	35

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE010.D Vial: 0
Acq On : 21-09-2013 01:32 Operator:
Sample : K1309638-11 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 14:56 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Semivolatile Organics by EPA method 525.2

Sample Name: Method Blank
Lab Code: KWG1310290-3

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.10	0.020	1	09/20/13	09/20/13	KWG1310290	
Hexachlorobenzene	ND	U	0.10	0.0050	1	09/20/13	09/20/13	KWG1310290	
Simazine	ND	U	0.050	0.0090	1	09/20/13	09/20/13	KWG1310290	
Atrazine	ND	U	0.10	0.0060	1	09/20/13	09/20/13	KWG1310290	
Alachlor	ND	U	0.072	0.0060	1	09/20/13	09/20/13	KWG1310290	
trans-Nonachlor	ND	U	0.10	0.0080	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.60	0.030	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.14**	J	0.60	0.060	1	09/20/13	09/20/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/20/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	83	70-130	09/20/13	Acceptable
Triphenyl Phosphate	93	70-130	09/20/13	Acceptable
Perylene-d12	74	70-130	09/20/13	Acceptable

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE006.D
Lab ID: KWG1310290-3
RunType: MB
Matrix: WATER

Date Acquired: 09/20/2013 22:26
Date Quantitated: 09/25/2013 16:09
Batch ID: KWG130474
Analysis Method: 525.2
MethodJoinID: MJ901

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JG 09.25.13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE006.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 22:26	**Quant Date:**	09/25/2013 16:09	**Vial:**	0
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310290-3			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/25/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284698				

Quant Method:	J:\MS22\METHODS\081513_525.M			**Calibration ID:**	CAL12715
Title:					
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D			**Method ID:**	MJ901
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.43	-0.01	162	170408	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	281113	2,500.00	OK
3	Chrysene-d12	23.50	0.00	240	281483	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21436	832.73	83	70-130	OK	
2	Triphenyl Phosphate	22.66	0.00	0.00	169	14911	925.90	93	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	72173	742.19	74	70-130	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Isophorone				82	0		0.0040	U	
1	Hexachlorocyclopentadiene				237	0		0.020	U	
1	Dichlobenil				171	0		0.0070	U	
1	EPTC				128	0		0.0070	U	
1	Dimethyl Phthalate	11.04		0.00	163	178	7.89	0.00789	J	
1	Acenaphthylene				152	0		0.0050	U	
1	Acenaphthene				153	0		0.016	U	
1	Diethyl Phthalate	12.74		0.00	149	882	21.27	0.0213	J	
1	Fluorene				165	0		0.0030	U	
1	Propachlor				120	0		0.0070	U	
1	Trifluralin				264	0		0.0060	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Atraton				196	0		0.0040	U	
2	Prometon				210	0		0.0045	U	
2	Simazine				201	0		0.0090	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE006.D		**Instrument:** MS22
Acqu Date:	09/20/2013 22:26	**Quant Date:** 09/25/2013 16:09	**Vial:** 0
Run Type:	MB		**Dilution:** 1.0
Lab ID:	KWG1310290-3		**Soln Conc. Units:** ug/L

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Atrazine				215	0		0.0060	U	
2	Propazine				214	0		0.0030	U	
2	Diazinon				137	0		0.0070	U	
2	Phenanthrene				178	0d		0.0050	U	
2	Anthracene				178	0d		0.0074	U	
2	Terbacil				117	0		0.011	U	
2	Acetochlor				146	0		0.0060	U	
2	Metribuzin				198	0		0.020	U	
2	Alachlor				160	0		0.0060	U	
2	Bromacil				207	0		0.0060	U	
2	Di-n-butyl Phthalate	16.83	-0.01	0.00	149	7715	81.01	0.0810	J	
2	Malathion				173	0		0.020	U	
2	Metolachlor				162	0		0.0060	U	
2	Cyanazine				225	0		0.050	U	
2	Parathion				291	0		0.060	U	
3	Fluoranthene				202	0		0.0050	U	
3	Butachlor				160	0		0.020	U	
3	trans-Nonachlor				409	0		0.0080	U	
3	Pyrene				202	0		0.0060	U	
3	Benzyl butyl phthalate	21.94		0.00	149	1185	61.90	0.080	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Benz(a)anthracene	23.48	0.04	0.00	228	213	28.18	0.0282	J	
3	Chrysene	23.50	-0.09	0.00	228	233	2.04	0.0060	U	
3	Bis(2-ethylhexyl) Phthalate	24.67		0.00	149	5540	144.54	0.145	J	
3	Di-n-octyl Phthalate	27.36	0.15	0.01	149	476	96.83	0.0968	J	
3	Benzo(b)fluoranthene				252	0		0.020	U	
3	Benzo(k)fluoranthene				252	0		0.0070	U	
3	Benzo(a)pyrene				252	0d		0.0080	U	
3	Indeno(1,2,3-cd)pyrene				276	0		0.0060	U	
3	Dibenz(a,h)anthracene				278	0		0.0060	U	
3	Benzo(g,h,i)perylene				276	0		0.0050	U	
	PCB 29				0	0		0.10	U	NR
	PCB 5				0	0		0.10	U	NR
	PCB 1				0	0		0.10	U	NR
	PCB 47				0	0		0.10	U	NR
	PCB 201				0	0		0.20	U	NR
	PCB 171				0	0		0.20	U	NR
	PCB 154				0	0		0.10	U	NR
	PCB 98				0	0		0.10	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE006.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 22:26	**Quant Date:**	09/25/2013 16:09	**Vial:**	0
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310290-3			**Soln Conc. Units:**	ug/L

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE006.D Vial: 0
Acq On : 20-09-2013 22:26 Operator:
Sample : 92013MB Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:35 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

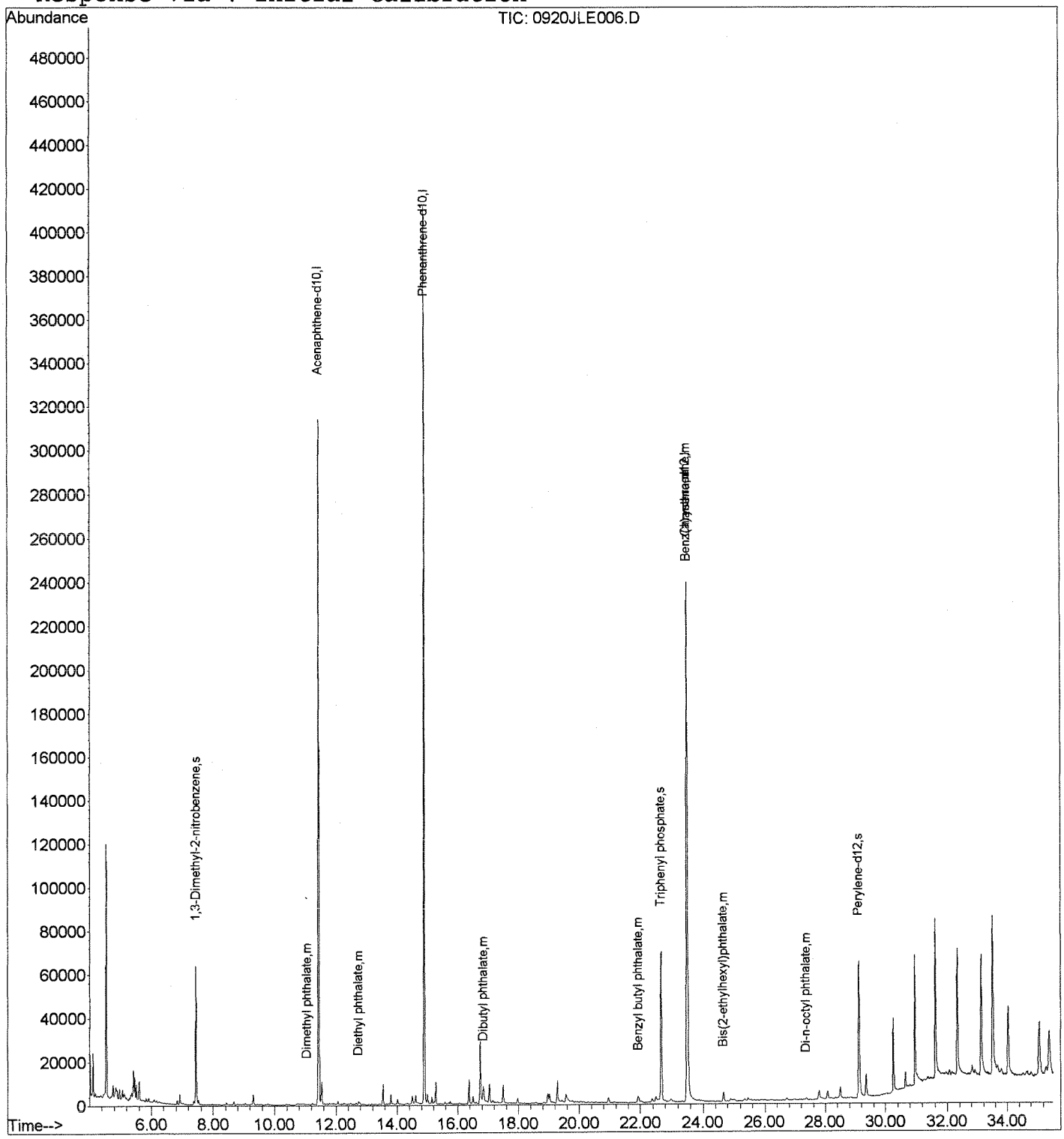
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.43	162	170408	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	281113	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	281483	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21436	832.73	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 83.27%			
34) Triphenyl phosphate	22.66	169	14911	925.90	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 92.59%			
49) Perylene-d12	29.11	264	72173	742.19	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 74.22%			
Target Compounds						Qvalue
7) Dimethyl phthalate	11.04	163	178	7.89	ug/L	60
10) Diethyl phthalate	12.74	149	882	21.27	ug/L	99
29) Dibutyl phthalate	16.83	149	7715	81.01	ug/L	98
40) Benzyl butyl phthalate	21.94	149	1185	61.90	ug/L	96
42) Benz(a)anthracene	23.48	228	213	28.18	ug/L #	46
43) Chrysene	23.50	228	233	2.04	ug/L #	60
44) Bis(2-ethylhexyl)phthalate	24.67	149	5540	144.54	ug/L	99
45) Di-n-octyl phthalate	27.36	149	476	96.83	ug/L	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE006.D Vial: 0
Acq On : 20-09-2013 22:26 Operator:
Sample : 92013MB Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 25 16:09 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Semivolatile Organics by EPA method 525.2

Sample Name: Batch QC
Lab Code: K1309458-001

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	ND	U	0.099	0.020	1	09/20/13	09/20/13	KWG1310290	
Hexachlorobenzene	ND	U	0.099	0.0050	1	09/20/13	09/20/13	KWG1310290	
Simazine	ND	U	0.050	0.0090	1	09/20/13	09/20/13	KWG1310290	
Atrazine	ND	U	0.099	0.0060	1	09/20/13	09/20/13	KWG1310290	
Alachlor	ND	U	0.071	0.0060	1	09/20/13	09/20/13	KWG1310290	
trans-Nonachlor	ND	U	0.099	0.0080	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	ND	U	0.59	0.030	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.25**	J	0.59	0.060	1	09/20/13	09/20/13	KWG1310290	
Benzo(a)pyrene	ND	U	0.020	0.0080	1	09/20/13	09/20/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	84	70-130	09/20/13	Acceptable
Triphenyl Phosphate	87	70-130	09/20/13	Acceptable
Perylene-d12	99	70-130	09/20/13	Acceptable

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE007.D
Lab ID: K1309458-001
RunType: SMPL
Matrix: DRINKING WATER

Date Acquired: 09/20/2013 23:13
Date Quantitated: 09/23/2013 14:44
Batch ID: KWG130474
Analysis Method: 525.2
ListJoinID: LJ8542

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Perylene-d12	50	70	130	MRL

Primary Review: JL 09-25-13

Secondary Review: MH

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE007.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 23:13	**Quant Date:**	09/23/2013 14:44	**Vial:**	0
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309458-001			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**	I	**Matrix:**	DRINKING WATE
Prod Code:	525.2 SVO	**Collect Date:**	09/11/2013	**Receive Date:**	09/11/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	K1309458
Analysis Method:	525.2	**Prep Method:**	METHOD		
Prep Ref:	1284688	**Prep Date:**	09/20/2013		

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:	Semivolatile Organics by EPA method 525.2	**Report List ID:**	LJ8542
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.43	-0.01	162	164057	2,500.00	OK
2	Phenanthrene-d10	14.88	-0.01	188	291490	2,500.00	OK
3	Chrysene-d12	23.49	-0.01	240	272486	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	20813	839.72	84	70-130	OK	
2	Triphenyl Phosphate	22.65	-0.01	0.00	169	14498	870.49	87	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	45525	496.42	99	70-130	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachlorocyclopentadiene				237	0		0.020	U	
2	Hexachlorobenzene				284	0		0.0050	U	
2	Simazine				201	0		0.0090	U	
2	Atrazine				215	0		0.0060	U	
2	Alachlor				160	0		0.0060	U	
3	Bis(2-ethylhexyl) Adipate				129	0d		0.030	U	
3	Bis(2-ethylhexyl) Phthalate	24.65	-0.02	0.00	149	16432	251.24	0.25	J	
3	Benzo(a)pyrene				252	0		0.0080	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE007.D Vial: 0
Acq On : 20-09-2013 23:13 Operator:
Sample : K1309458-1 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:36 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

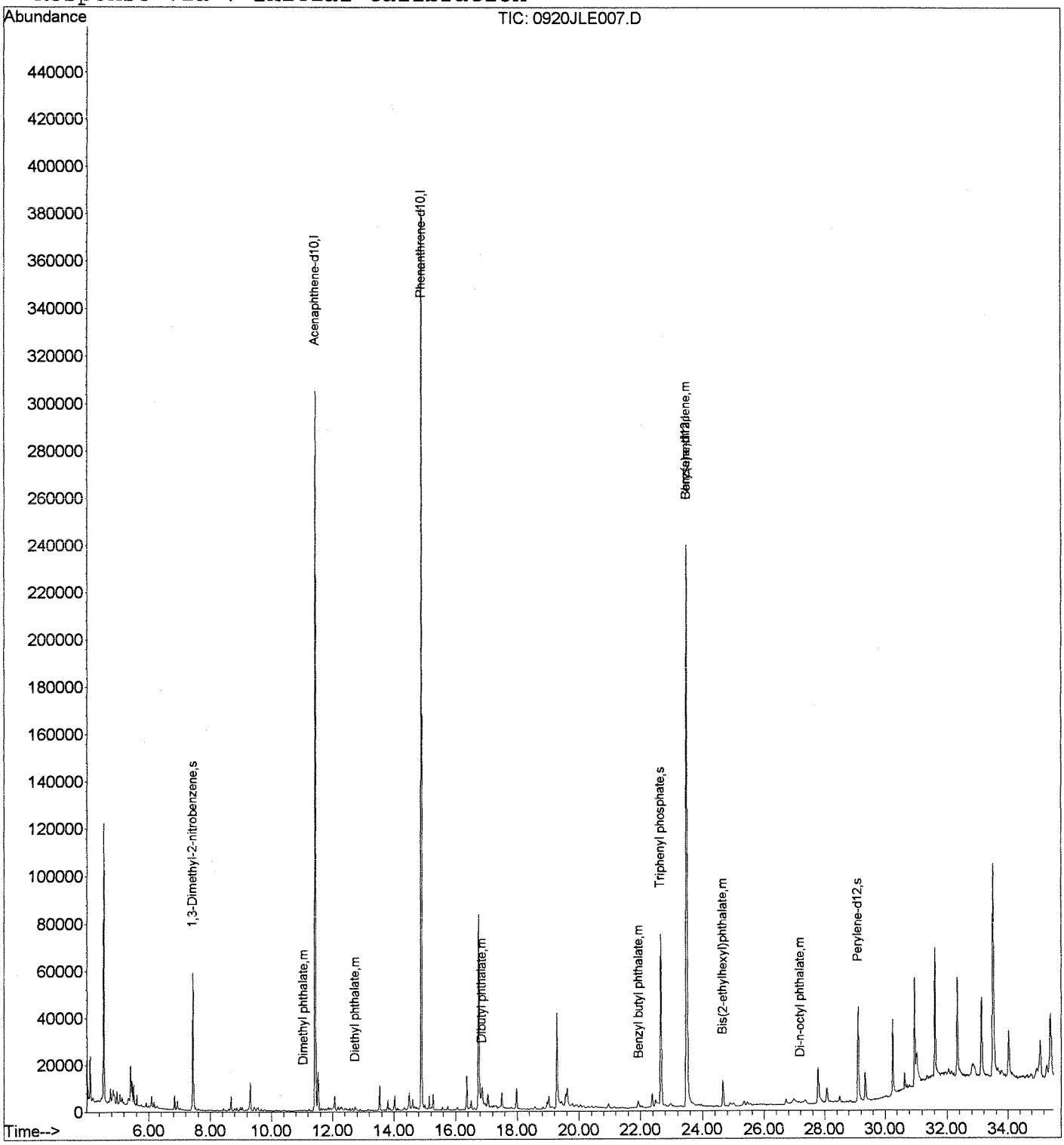
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.43	162	164057	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.88	188	291490	2500.00	ug/L	-0.01
35) Chrysene-d12	23.49	240	272486	2500.00	ug/L	-0.01
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	20813	839.72	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 83.97%			
34) Triphenyl phosphate	22.65	169	14498	870.49	ug/L	-0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 87.05%			
49) Perylene-d12	29.11	264	45525	496.42	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 49.64%#			
Target Compounds						Qvalue
7) Dimethyl phthalate	11.03	163	109	7.29	ug/L	52
10) Diethyl phthalate	12.74	149	579	18.65	ug/L	100
29) Dibutyl phthalate	16.83	149	3213	52.59	ug/L	99
40) Benzyl butyl phthalate	21.94	149	245	48.67	ug/L	91
42) Benz(a)anthracene	23.48	228	606	31.28	ug/L #	46
43) Chrysene	23.48	228	526	4.76	ug/L #	43
44) Bis(2-ethylhexyl)phthalate	24.65	149	16432	251.24	ug/L	98
45) Di-n-octyl phthalate	27.19	149	202	95.18	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE007.D Vial: 0
Acq On : 20-09-2013 23:13 Operator:
Sample : K1309458-1 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 14:44 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Drinking water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Semivolatile Organics by EPA method 525.2

Sample Name: Batch QCMS
Lab Code: KWG1310290-2

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	**0.857**		0.099	0.020	1	09/20/13	09/20/13	KWG1310290	
Hexachlorobenzene	**0.863**		0.099	0.0050	1	09/20/13	09/20/13	KWG1310290	
Simazine	**0.951**		0.050	0.0090	1	09/20/13	09/20/13	KWG1310290	
Atrazine	**0.933**		0.099	0.0060	1	09/20/13	09/20/13	KWG1310290	
Alachlor	**1.04**		0.071	0.0060	1	09/20/13	09/20/13	KWG1310290	
trans-Nonachlor	**0.715**		0.099	0.0080	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	**0.940**		0.59	0.030	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**1.04**		0.59	0.060	1	09/20/13	09/20/13	KWG1310290	
Benzo(a)pyrene	**0.285**		0.020	0.0080	1	09/20/13	09/20/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	88	70-130	09/20/13	Acceptable
Triphenyl Phosphate	97	70-130	09/20/13	Acceptable
Perylene-d12	72	70-130	09/20/13	Acceptable

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE008.D
Lab ID: KWG1310290-2 -- K1309458-001MS
RunType: MS
Matrix: DRINKING WATER

Date Acquired: 09/20/2013 23:59
Date Quantitated: 09/23/2013 13:54
Batch ID: KWG130474
Analysis Method: 525.2
MethodJoinID: MJ901

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: TG 09-25-13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE008.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 23:59	**Quant Date:**	09/23/2013 13:54	**Vial:**	0
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1310290-2 -- K1309458-001MS			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	DRINKING WATE
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/25/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284697				

Quant Method:	J:\MS22\METHODS\081513_525.M			**Calibration ID:**	CAL12715
Title:					
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D			**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	160952	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	274911	2,500.00	OK
3	Chrysene-d12	23.50	0.00	240	276663	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	21449	881.47	88	70-130	OK	
2	Triphenyl Phosphate	22.66	0.00	0.00	169	15349	972.58	97	70-130	OK	
3	Perylene-d12	29.11	0.00	0.00	264	68928	722.24	72	70-130	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Isophorone	6.42	0.01	0.00	82	23460	867.32	0.850		
1	Hexachlorocyclopentadiene	9.54		0.00	237	9809	873.69	0.857		
1	Dichlobenil	9.65		0.00	171	56222	1,181	1.16		
1	EPTC	9.78		0.00	128	15905	965.51	0.947		
1	Dimethyl Phthalate	11.04		0.00	163	93015	922.65	0.905		
1	Acenaphthylene	11.06		0.00	152	70661	744.03	0.729		
1	Acenaphthene	11.51		0.00	153	70434	852.94	0.836		
1	Diethyl Phthalate	12.74		0.00	149	88839	902.39	0.885		
1	Fluorene	12.71	0.01	0.00	165	84050	916.03	0.898		
1	Propachlor	12.99		0.00	120	38849	1,001	0.982		
1	Trifluralin	13.73	0.01	0.00	264	24441	1,049	1.03		
2	Hexachlorobenzene	14.20		0.00	284	23994	880.69	0.863		
2	Atraton	14.28		0.00	196	5999	375.37	0.368		
2	Prometon	14.42		0.00	210	10969	452.75	0.444		
2	Simazine	14.40		0.00	201	10991	970.12	0.951		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE008.D		**Instrument:** MS22
Acqu Date:	09/20/2013 23:59	**Quant Date:** 09/23/2013 13:54	**Vial:** 0
Run Type:	MS		**Dilution:** 1.0
Lab ID:	KWG1310290-2 -- K1309458-001MS		**Soln Conc. Units:** ug/L

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Atrazine	14.51		0.00	215	8148	951.49	0.933		
2	Propazine	14.60	-0.01	0.00	214	25708	969.35	0.950		
2	Diazinon	15.08		0.00	137	11172	630.98	0.619		
2	Phenanthrene	14.94		0.00	178	117998	934.13	0.916		
2	Anthracene	15.04	-0.01	0.00	178	3332	27.49	0.0270	J	
2	Terbacil	15.23	0.01	0.00	117	5599	1,084	1.06		
2	Acetochlor	16.06		0.00	146	20180	998.40	0.979	J	
2	Metribuzin	15.94		0.00	198	17352	976.14	0.957		
2	Alachlor	16.29		0.00	160	38738	1,058	1.04		
2	Bromacil	16.82	0.03	0.00	207	21614	1,061	1.04		
2	Di-n-butyl Phthalate	16.83	-0.01	0.00	149	145568	958.92	0.940		
2	Malathion	17.00		0.00	173	14846	872.84	0.856		
2	Metolachlor	17.16		0.00	162	124636	1,056	1.03		
2	Cyanazine	17.25	0.01	0.00	225	12260	1,148	1.13		
2	Parathion	17.29	0.01	0.00	291	4122	937.75	0.919		
3	Fluoranthene	18.24		0.00	202	106445	868.71	0.852		
3	Butachlor	19.15		0.00	160	37651	1,014	0.994		
3	trans-Nonachlor	19.29	-0.01	0.00	409	6499	728.82	0.715		
3	Pyrene	18.93		0.00	202	87860	697.45	0.684		
3	Benzyl butyl phthalate	21.95	0.01	0.00	149	67439	1,005	0.986		
3	Bis(2-ethylhexyl) Adipate	22.56		0.00	129	44118	958.63	0.940		
3	Benz(a)anthracene	23.45	0.01	0.00	228	48072	394.42	0.387		
3	Chrysene	23.59		0.00	228	101916	908.23	0.890		
3	Bis(2-ethylhexyl) Phthalate	24.66	-0.01	0.00	149	104433	1,064	1.04		
3	Di-n-octyl Phthalate	27.22	0.01	0.00	149	154510	1,035	1.01		
3	Benzo(b)fluoranthene	27.73		0.00	252	100108	863.01	0.846		
3	Benzo(k)fluoranthene	27.82	0.01	0.00	252	104849	790.47	0.775		
3	Benzo(a)pyrene	28.88	-0.01	0.00	252	28372	290.96	0.285		
3	Indeno(1,2,3-cd)pyrene	31.59		0.00	276	71974	917.48	0.899		
3	Dibenz(a,h)anthracene	31.67		0.00	278	88682	902.18	0.884		
3	Benzo(g,h,i)perylene	32.09		0.00	276	77463	835.48	0.819		
	PCB 29				0	0		0.099	U	NR
	PCB 5				0	0		0.099	U	NR
	PCB 1				0	0		0.099	U	NR
	PCB 47				0	0		0.099	U	NR
	PCB 201				0	0		0.20	U	NR
	PCB 171				0	0		0.20	U	NR
	PCB 154				0	0		0.099	U	NR
	PCB 98				0	0		0.099	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE008.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 23:59	**Quant Date:**	09/23/2013 13:54	**Vial:**	0
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1310290-2 -- K1309458-001MS			**Soln Conc. Units:**	ug/L

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE008.D Vial: 0
Acq On : 20-09-2013 23:59 Operator:
Sample : K1309458-1 MS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:37 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	160952	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	274911	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	276663	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	21449	881.47	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 88.15%			
34) Triphenyl phosphate	22.66	169	15349	972.58	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 97.26%			
49) Perylene-d12	29.11	264	68928	722.24	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 72.22%			
Target Compounds						Qvalue
2) Isophorone	6.42	82	23460	867.32	ug/L	95
4) Hexachlorocyclopentadiene	9.54	237	9809	873.69	ug/L	96
5) Dichlobenil	9.65	171	56222	1180.69	ug/L	99
6) EPTC	9.78	128	15905	965.51	ug/L	93
7) Dimethyl phthalate	11.04	163	93015	922.65	ug/L	95
8) Acenaphthylene	11.06	152	70661	744.03	ug/L	100
9) Acenaphthene	11.51	153	70434	852.94	ug/L	98
10) Diethyl phthalate	12.74	149	88839	902.39	ug/L	95
11) Fluorene	12.71	165	84050	916.03	ug/L	99
12) Propachlor	12.99	120	38849	1001.35	ug/L	99
13) Trifluralin	13.73	264	24441	1048.66	ug/L	92
15) Hexachlorobenzene	14.20	284	23994	880.69	ug/L	95
16) Atraton	14.28	196	5999	375.37	ug/L	84
17) Prometon	14.42	210	10969	452.75	ug/L	96
18) Simazine	14.40	201	10991	970.12	ug/L	99
19) Atrazine	14.51	215	8148	951.49	ug/L	90
20) Propazine	14.60	214	25708	969.35	ug/L	93
21) Diazinon	15.08	137	11172	630.98	ug/L	97
22) Phenanthrene	14.94	178	117998	934.13	ug/L	96
23) Anthracene	15.04	178	3332	27.49	ug/L	91
24) Terbacil	15.23	117	5599	1084.27	ug/L	95
25) Acetochlor	16.06	146	20180	998.40	ug/L	92
26) Metribuzin	15.94	198	17352	976.14	ug/L	97
27) Alachlor	16.29	160	38738	1057.56	ug/L	99
28) Bromacil	16.82	207	21614	1061.08	ug/L #	77
29) Dibutyl phthalate	16.83	149	145568	958.92	ug/L	99
30) Malathion	17.00	173	14846	872.84	ug/L	89
31) Metolachlor	17.16	162	124636	1055.51	ug/L	95
32) Cyanazine	17.25	225	12260	1147.90	ug/L	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE008.D Vial: 0
Acq On : 20-09-2013 23:59 Operator:
Sample : K1309458-1 MS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:37 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

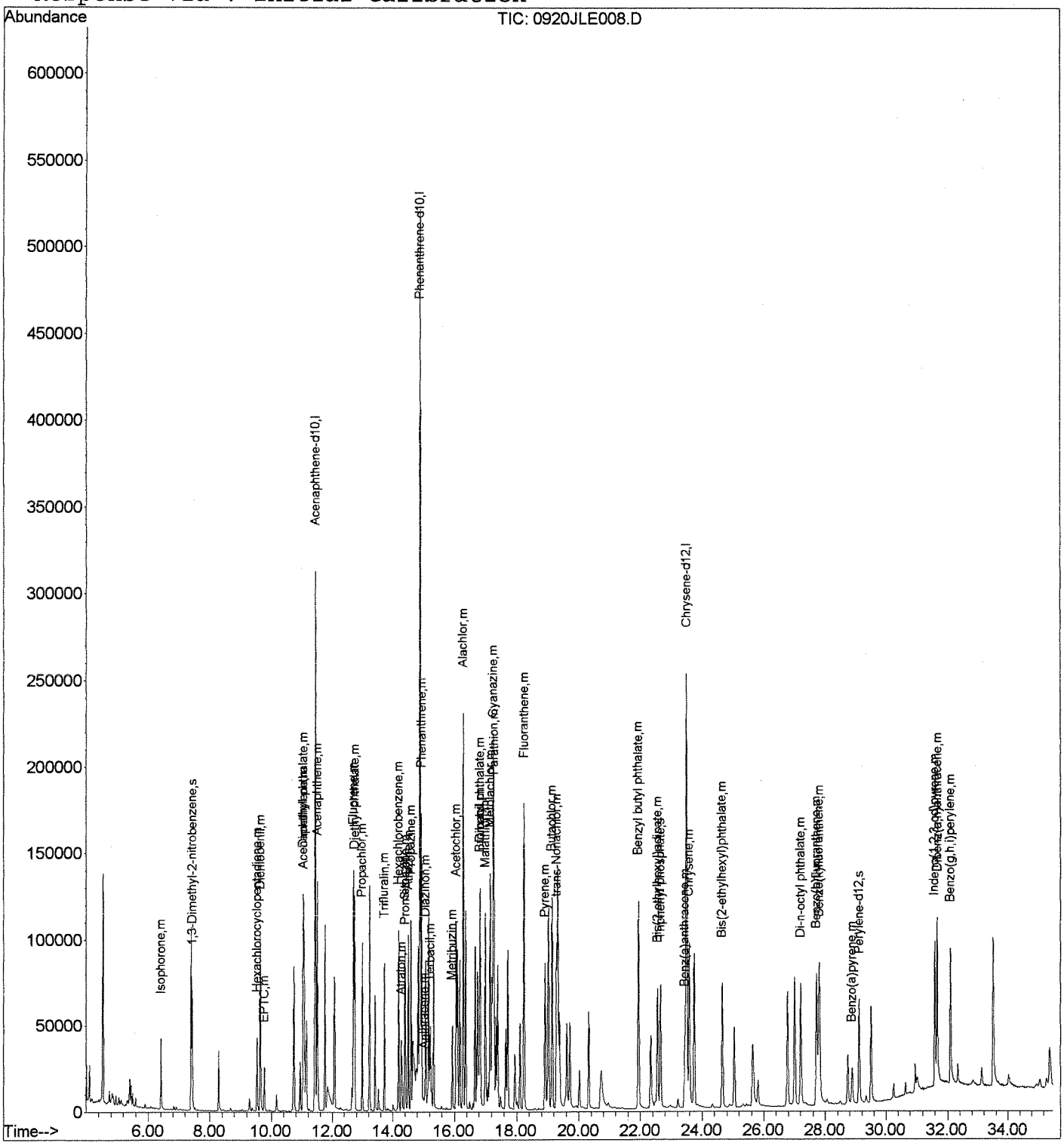
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.29	291	4122	937.75	ug/L	#	74
36)	Fluoranthene	18.24	202	106445	868.71	ug/L		98
37)	Butachlor	19.15	160	37651	1014.38	ug/L		94
38)	trans-Nonachlor	19.29	409	6499	728.82	ug/L		95
39)	Pyrene	18.93	202	87860	697.45	ug/L		97
40)	Benzyl butyl phthalate	21.95	149	67439	1005.38	ug/L		100
41)	Bis(2-ethylhexyl)adipate	22.56	129	44118	958.63	ug/L		100
42)	Benz(a)anthracene	23.45	228	48072	394.42	ug/L		100
43)	Chrysene	23.59	228	101916	908.23	ug/L		97
44)	Bis(2-ethylhexyl)phthalate	24.66	149	104433	1063.79	ug/L		93
45)	Di-n-octyl phthalate	27.22	149	154510	1034.91	ug/L		99
46)	Benzo(b)fluoranthene	27.73	252	100108	863.01	ug/L		99
47)	Benzo(k)fluoranthene	27.82	252	104849	790.47	ug/L		95
48)	Benzo(a)pyrene	28.88	252	28372	290.96	ug/L		98
50)	Indeno(1,2,3-cd)pyrene	31.59	276	71974	917.48	ug/L		97
51)	Dibenz(a,h)anthracene	31.67	278	88682	902.18	ug/L		91
52)	Benzo(g,h,i)perylene	32.09	276	77463	835.48	ug/L		86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE008.D Vial: 0
Acq On : 20-09-2013 23:59 Operator:
Sample : K1309458-1 MS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:54 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Semivolatile Organics by EPA method 525.2

Sample Name: Lab Control Sample
Lab Code: KWG1310290-1

Extraction Method: METHOD
Analysis Method: 525.2

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Hexachlorocyclopentadiene	**0.776**		0.10	0.020	1	09/20/13	09/20/13	KWG1310290	
Hexachlorobenzene	**0.916**		0.10	0.0050	1	09/20/13	09/20/13	KWG1310290	
Simazine	**0.935**		0.050	0.0090	1	09/20/13	09/20/13	KWG1310290	
Atrazine	**0.962**		0.10	0.0060	1	09/20/13	09/20/13	KWG1310290	
Alachlor	**1.03**		0.072	0.0060	1	09/20/13	09/20/13	KWG1310290	
trans-Nonachlor	**0.746**		0.10	0.0080	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Adipate	**0.937**		0.60	0.030	1	09/20/13	09/20/13	KWG1310290	
Bis(2-ethylhexyl) Phthalate	**0.998**		0.60	0.060	1	09/20/13	09/20/13	KWG1310290	
Benzo(a)pyrene	**0.914**		0.020	0.0080	1	09/20/13	09/20/13	KWG1310290	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,3-Dimethyl-2-nitrobenzene	79	70-130	09/20/13	Acceptable
Triphenyl Phosphate	96	70-130	09/20/13	Acceptable
Perylene-d12	78	70-130	09/20/13	Acceptable

Comments:

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE004.D\0920JLE001.D
Lab ID: KWG1310290-1
RunType: LCS
Matrix: WATER

Date Acquired: 09/20/2013 21:03
Date Quantitated: 09/23/2013 13:54
Batch ID: KWG130474
Analysis Method: 525.2
MethodJoinID: MJ901

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JTG 09.25.13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE004.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 21:03	**Quant Date:**	09/23/2013 13:54	**Vial:**	0
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310290-1			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/25/2013

Analysis Lot:	KWG130474	**Prep Lot:**	KWG1310290	**Report Group:**	
Analysis Method:	525.2	**Prep Method:**	METHOD		
		Prep Date:	09/20/2013		
Prep Ref:	1284696				

Quant Method:	J:\MS22\METHODS\081513_525.M	**Calibration ID:**	CAL12715
Title:			
Tune Ref:	J:\MS22\DATA\092013-525\0920JLE002.D	**Method ID:**	MJ901
MB Ref:	J:\MS22\DATA\092013-525\0920JLE006.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	165228	2,500.00	OK
2	Phenanthrene-d10	14.90	0.01	188	270591	2,500.00	OK
3	Chrysene-d12	23.51	0.01	240	268702	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43	0.00	0.00	134	19690	789.52	79	70-130	OK	
2	Triphenyl Phosphate	22.67	0.01	0.00	169	14943	962.39	96	70-130	OK	
3	Perylene-d12	29.12	0.01	0.00	264	72985	783.99	78	70-130	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Isophorone	6.41		0.00	82	23274	838.60	0.839		
1	Hexachlorocyclopentadiene	9.54		0.00	237	8895	776.37	0.776		
1	Dichlobenil	9.65		0.00	171	55666	1,139	1.14		
1	EPTC	9.78		0.00	128	15694	929.51	0.930		
1	Dimethyl Phthalate	11.04		0.00	163	90067	870.44	0.870		
1	Acenaphthylene	11.06		0.00	152	86894	891.67	0.892		
1	Acenaphthene	11.51		0.00	153	72621	856.67	0.857		
1	Diethyl Phthalate	12.74		0.00	149	85980	850.98	0.851		
1	Fluorene	12.71	0.01	0.00	165	78425	832.60	0.833		
1	Propachlor	12.99		0.00	120	35958	905.67	0.906		
1	Trifluralin	13.73	0.01	0.00	264	22895	964.63	0.965		
2	Hexachlorobenzene	14.20		0.00	284	24520	915.90	0.916		
2	Atraton	14.28		0.00	196	5924	376.52	0.377		
2	Prometon	14.43	0.01	0.00	210	14167	588.03	0.588		
2	Simazine	14.40		0.00	201	10410	934.79	0.935		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE004.D		
Acqu Date:	09/20/2013 21:03	**Quant Date:**	09/23/2013 13:54
Run Type:	LCS		
Lab ID:	KWG1310290-1		

Instrument:	MS22
Vial:	0
Dilution:	1.0
Soln Conc. Units:	ug/L

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Atrazine	14.52	0.01	0.00	215	8109	961.84	0.962		
2	Propazine	14.61		0.00	214	25890	991.41	0.991		
2	Diazinon	15.08		0.00	137	12766	727.48	0.727		
2	Phenanthrene	14.94		0.00	178	113808	915.35	0.915		
2	Anthracene	15.05		0.00	178	115870	971.33	0.971		
2	Terbacil	15.24	0.02	0.00	117	5369	1,058	1.06		
2	Acetochlor	16.06		0.00	146	19088	959.45	0.959	J	
2	Metribuzin	15.94		0.00	198	16661	954.01	0.954		
2	Alachlor	16.29		0.00	160	37219	1,034	1.03		
2	Bromacil	16.81	0.02	0.00	207	20883	1,043	1.04		
2	Di-n-butyl Phthalate	16.84		0.00	149	146595	980.56	0.981		
2	Malathion	17.00		0.00	173	13702	823.80	0.824		
2	Metolachlor	17.16		0.00	162	117318	1,011	1.01		
2	Cyanazine	17.26	0.02	0.00	225	12129	1,154	1.15		
2	Parathion	17.30	0.02	0.00	291	3840	893.89	0.894		
3	Fluoranthene	18.24		0.00	202	104004	873.85	0.874		
3	Butachlor	19.16	0.01	0.00	160	35450	985.16	0.985		
3	trans-Nonachlor	19.29	-0.01	0.00	409	6457	745.58	0.746		
3	Pyrene	18.93		0.00	202	101650	828.95	0.829		
3	Benzyl butyl phthalate	21.96	0.02	0.00	149	64017	983.96	0.984		
3	Bis(2-ethylhexyl) Adipate	22.56		0.00	129	41805	937.16	0.937		
3	Benz(a)anthracene	23.45	0.01	0.00	228	104486	852.57	0.853		
3	Chrysene	23.60	0.01	0.00	228	96798	888.18	0.888		
3	Bis(2-ethylhexyl) Phthalate	24.67		0.00	149	94404	998.14	0.998		
3	Di-n-octyl Phthalate	27.22	0.01	0.00	149	135712	947.33	0.947		
3	Benzo(b)fluoranthene	27.73		0.00	252	96988	860.98	0.861		
3	Benzo(k)fluoranthene	27.82	0.01	0.00	252	107858	835.67	0.836		
3	Benzo(a)pyrene	28.89		0.00	252	93800	914.42	0.914		
3	Indeno(1,2,3-cd)pyrene	31.60	0.01	0.00	276	68232	896.97	0.897		
3	Dibenz(a,h)anthracene	31.67		0.00	278	85531	896.24	0.896		
3	Benzo(g,h,i)perylene	32.10	0.01	0.00	276	79514	880.58	0.881		
	PCB 29				0	0		0.10	U	NR
	PCB 5				0	0		0.10	U	NR
	PCB 1				0	0		0.10	U	NR
	PCB 47				0	0		0.10	U	NR
	PCB 201				0	0		0.20	U	NR
	PCB 171				0	0		0.20	U	NR
	PCB 154				0	0		0.10	U	NR
	PCB 98				0	0		0.10	U	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092013-525\0920JLE004.D			**Instrument:**	MS22
Acqu Date:	09/20/2013 21:03	**Quant Date:**	09/23/2013 13:54	**Vial:**	0
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310290-1			**Soln Conc. Units:**	ug/L

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	1 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE004.D Vial: 0
Acq On : 20-09-2013 21:03 Operator:
Sample : 092013 LCS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:33 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Acenaphthene-d10	11.44	162	165228	2500.00	ug/L		0.00
14) Phenanthrene-d10	14.90	188	270591	2500.00	ug/L		0.00
35) Chrysene-d12	23.51	240	268702	2500.00	ug/L		0.00
System Monitoring Compounds							
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	19690	789.52	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 78.95%				
34) Triphenyl phosphate	22.67	169	14943	962.39	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 96.24%				
49) Perylene-d12	29.12	264	72985	783.99	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 78.40%				
Target Compounds							Qvalue
2) Isophorone	6.41	82	23274	838.60	ug/L		87
4) Hexachlorocyclopentadiene	9.54	237	8895	776.37	ug/L		87
5) Dichlobenil	9.65	171	55666	1138.61	ug/L		97
6) EPTC	9.78	128	15694	929.51	ug/L		90
7) Dimethyl phthalate	11.04	163	90067	870.44	ug/L		93
8) Acenaphthylene	11.06	152	86894	891.67	ug/L		96
9) Acenaphthene	11.51	153	72621	856.67	ug/L		98
10) Diethyl phthalate	12.74	149	85980	850.98	ug/L		99
11) Fluorene	12.71	165	78425	832.60	ug/L		99
12) Propachlor	12.99	120	35958	905.67	ug/L		99
13) Trifluralin	13.73	264	22895	964.63	ug/L		89
15) Hexachlorobenzene	14.20	284	24520	915.90	ug/L		98
16) Atraton	14.28	196	5924	376.52	ug/L	#	75
17) Prometon	14.43	210	14167	588.03	ug/L		95
18) Simazine	14.40	201	10410	934.79	ug/L		93
19) Atrazine	14.52	215	8109	961.84	ug/L		95
20) Propazine	14.61	214	25890	991.41	ug/L		91
21) Diazinon	15.08	137	12766	727.48	ug/L		97
22) Phenanthrene	14.94	178	113808	915.35	ug/L		95
23) Anthracene	15.05	178	115870	971.33	ug/L		98
24) Terbacil	15.24	117	5369	1058.12	ug/L		92
25) Acetochlor	16.06	146	19088	959.45	ug/L		94
26) Metribuzin	15.94	198	16661	954.01	ug/L		98
27) Alachlor	16.29	160	37219	1033.65	ug/L		93
28) Bromacil	16.81	207	20883	1042.53	ug/L		96
29) Dibutyl phthalate	16.84	149	146595	980.56	ug/L		100
30) Malathion	17.00	173	13702	823.80	ug/L		94
31) Metolachlor	17.16	162	117318	1011.05	ug/L		94
32) Cyanazine	17.26	225	12129	1153.77	ug/L		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE004.D Vial: 0
Acq On : 20-09-2013 21:03 Operator:
Sample : 092013 LCS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:50:33 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

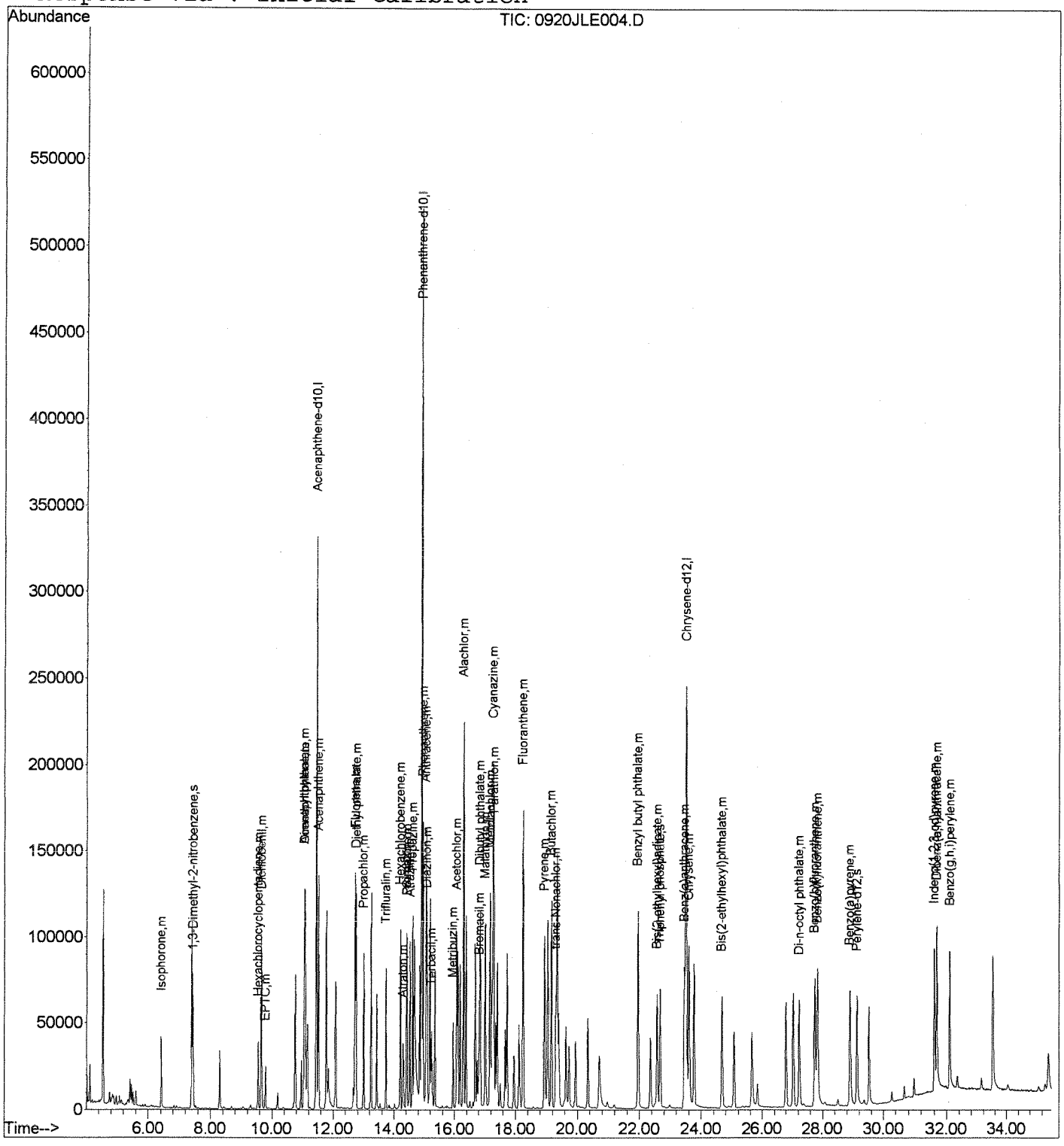
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	Parathion	17.30	291	3840	893.89	ug/L	88
36)	Fluoranthene	18.24	202	104004	873.85	ug/L	94
37)	Butachlor	19.16	160	35450	985.16	ug/L	94
38)	trans-Nonachlor	19.29	409	6457	745.58	ug/L	91
39)	Pyrene	18.93	202	101650	828.95	ug/L	100
40)	Benzyl butyl phthalate	21.96	149	64017	983.96	ug/L	96
41)	Bis(2-ethylhexyl)adipate	22.56	129	41805	937.16	ug/L	92
42)	Benz(a)anthracene	23.45	228	104486	852.57	ug/L	99
43)	Chrysene	23.60	228	96798	888.18	ug/L	98
44)	Bis(2-ethylhexyl)phthalate	24.67	149	94404	998.14	ug/L	98
45)	Di-n-octyl phthalate	27.22	149	135712	947.33	ug/L	98
46)	Benzo(b)fluoranthene	27.73	252	96988	860.98	ug/L	99
47)	Benzo(k)fluoranthene	27.82	252	107858	835.67	ug/L	97
48)	Benzo(a)pyrene	28.89	252	93800	914.42	ug/L	96
50)	Indeno(1,2,3-cd)pyrene	31.60	276	68232	896.97	ug/L	98
51)	Dibenz(a,h)anthracene	31.67	278	85531	896.24	ug/L	90
52)	Benzo(g,h,i)perylene	32.10	276	79514	880.58	ug/L	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE004.D Vial: 0
Acq On : 20-09-2013 21:03 Operator:
Sample : 092013 LCS Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 13:54 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Organic Analysis:
Semivolatile Organics by EPA method 525.2

Validation Package

Standards Data

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013
Time Analyzed: 18:22

Tune Summary
Semivolatile Organics by EPA method 525.2

File ID: J:\MS22\DATA\092013-525\0920JLE002.D
Instrument ID: MS22
Column:

Analysis Method: 525.2
Analysis Lot: KWG130474

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.0	7115	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	18.1	2801	PASS
70	69	0	2	1.9	54	PASS
127	198	10	80	30.8	4763	PASS
197	198	0	2	0.4	67	PASS
198	198	100	100	100.0	15466	PASS
199	198	5	9	8.7	1339	PASS
275	198	10	60	39.5	6104	PASS
365	198	1	100	2.3	361	PASS
441	443	0	100	92.1	1772	PASS
442	198	50	150	56.6	8751	PASS
443	442	15	24	22.0	1924	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310474-1	J:\MS22\DATA\092013-525\0920JLE003.D	09/20/2013	19:08	
Lab Control Sample	KWG1310290-1	J:\MS22\DATA\092013-525\0920JLE004.D	09/20/2013	21:03	
Method Blank	KWG1310290-3	J:\MS22\DATA\092013-525\0920JLE006.D	09/20/2013	22:26	
Batch QC	K1309458-001	J:\MS22\DATA\092013-525\0920JLE007.D	09/20/2013	23:13	
Batch QCMS	KWG1310290-2	J:\MS22\DATA\092013-525\0920JLE008.D	09/20/2013	23:59	
13253-BW-3	K1309638-004	J:\MS22\DATA\092013-525\0920JLE009.D	09/21/2013	00:46	
13255-Rinse	K1309638-011	J:\MS22\DATA\092013-525\0920JLE010.D	09/21/2013	01:32	
13254-BW-4	K1309638-001	J:\MS22\DATA\092013-525\0920JLE011.D	09/21/2013	02:18	
13254-BW-2	K1309638-002	J:\MS22\DATA\092013-525\0920JLE012.D	09/21/2013	03:05	
13253-Well D	K1309638-005	J:\MS22\DATA\092013-525\0920JLE013.D	09/21/2013	03:51	
13255-BW-1	K1309638-008	J:\MS22\DATA\092013-525\0920JLE014.D	09/21/2013	04:38	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE002.D
Lab ID: KWG1310474-4
RunType: DFTPP
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 18:22
Date Quantitated:
Batch ID: KWG130474
Analysis Method: DFTPP
ListJoinID: LJ4247

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: JG 09-25-13

Secondary Review:

Quantitation Report

Data File:	J:\MS22\DATA\092013-525\0920JLE002.D	**Instrument:**	MS22
Acqu Date:	09/20/2013 18:22	**Quant Date:**	**Vial:**	0
Run Type:	DFTPP		**Dilution:**	1.0
Lab ID:	KWG1310474-4		**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/24/2013

Analysis Lot:	KWG130474	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS22\METHODS\ENDRIN-DDT_5	**Calibration ID:**	CAL12715
Title:		**Report List ID:**	LJ4247
Tune Ref:		**Method ID:**	MJ542
MB Ref:		**Quant based on Report List**	

Tune Results

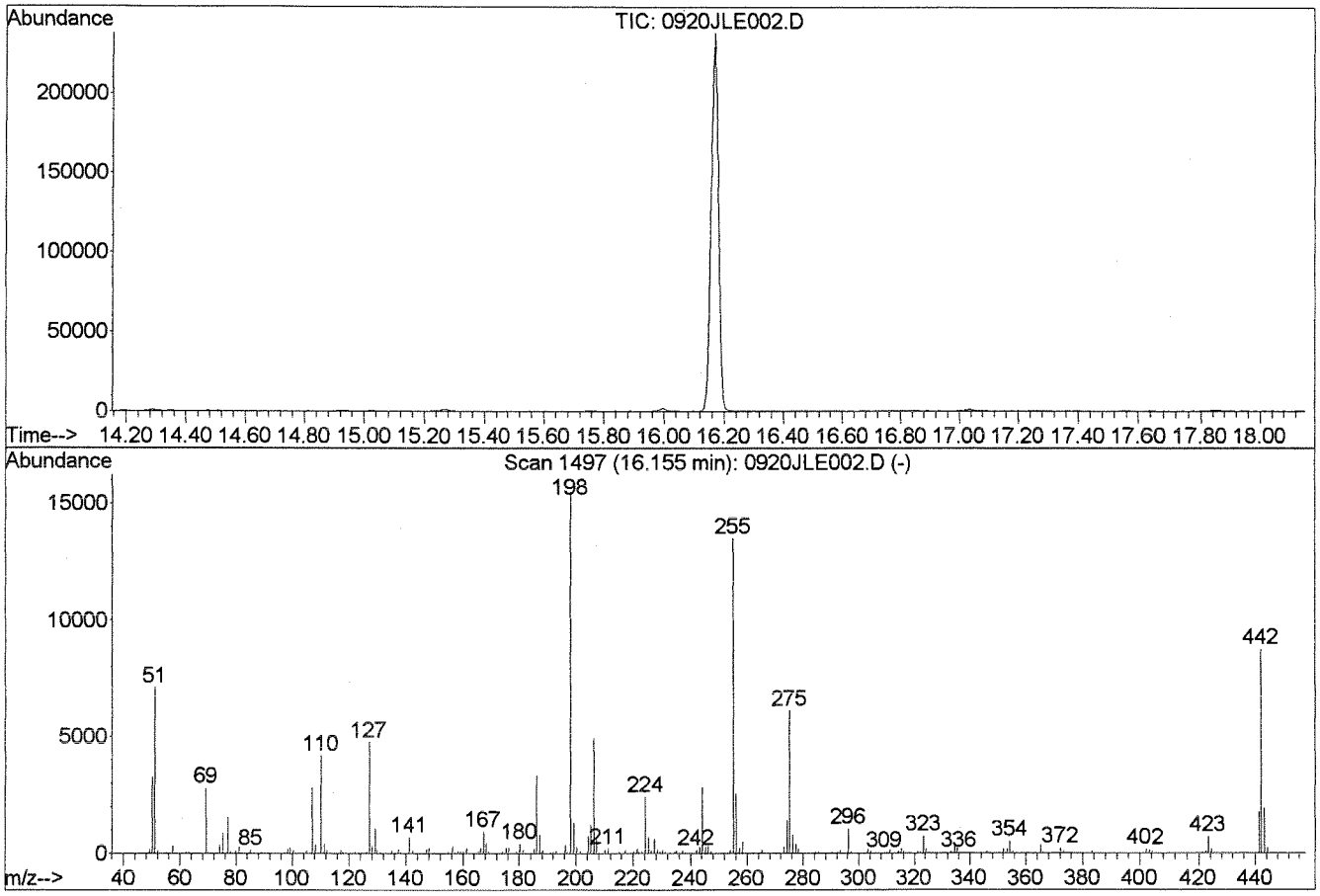
Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.0	7115	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	18.1	2801	Pass
70	69	0	2	1.9	54	Pass
127	198	10	80	30.8	4763	Pass
197	198	0	2	0.4	67	Pass
198	198	100	100	100.0	15466	Pass
199	198	5	9	8.7	1339	Pass
275	198	10	60	39.5	6104	Pass
365	198	1	100	2.3	361	Pass
441	443	0.01	100	92.1	1772	Pass
442	198	50	150	56.6	8751	Pass
443	442	15	24	22.0	1924	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS22\DATA\092013-525\0920JLE002.D Vial: 0
Acq On : 20-09-2013 18:22 Operator:
Sample : DWSTD06-56B IPC Sol Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS22\METHODS\ENDRIN-DDT_525.M (RTE Integrator)
Title : Endrin, DDT Degradation Checks



Spectrum Information: Scan 1497

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.0	7115	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	18.1	2801	PASS
70	69	0.00	2	1.9	54	PASS
127	198	10	80	30.8	4763	PASS
197	198	0.00	2	0.4	67	PASS
198	198	100	100	100.0	15466	PASS
199	198	5	9	8.7	1339	PASS
275	198	10	60	39.5	6104	PASS
365	198	1	100	2.3	361	PASS
441	443	0.01	100	92.1	1772	PASS
442	198	50	150	56.6	8751	PASS
443	442	15	24	22.0	1924	PASS

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
49.15	155	72.95	1	85.90	43	105.05	122
50.05	3283	74.15	371	87.35	7	107.05	2823
51.00	7115	75.10	868	89.10	51	108.05	392
52.15	144	76.10	14	91.15	34	109.25	17
55.05	64	77.05	1551	92.35	29	110.15	4194
57.15	343	78.10	120	95.90	17	111.15	422
62.20	61	79.05	48	98.15	214	112.10	145
63.10	54	79.95	115	99.10	246	113.30	12
65.10	26	81.05	280	100.30	128	116.15	12
69.10	2801	83.05	39	101.20	22	117.05	138
69.70	54	85.10	140	104.00	14	117.70	64

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
120.20	22	136.05	59	150.10	29	166.10	222
122.30	79	137.15	178	151.00	19	167.25	936
124.15	19	138.20	66	153.20	9	168.25	443
125.10	12	141.05	677	155.00	64	169.05	84
126.25	46	142.45	103	156.30	302	170.20	27
127.10	4763	143.10	14	157.25	71	171.35	34
128.05	284	145.10	9	158.35	94	173.20	7
129.10	1055	146.40	17	159.20	69	174.10	96
129.95	160	147.05	181	160.20	94	175.25	255
131.00	24	148.10	235	161.15	227	176.15	247
135.10	132	149.30	9	165.40	57	177.05	41

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
178.00	37	191.05	37	204.15	742	219.15	12
179.10	86	192.00	52	205.10	1226	220.20	84
180.25	416	193.15	113	206.15	4929	221.20	196
181.30	136	194.25	14	207.15	668	221.90	62
183.95	7	194.85	14	208.15	42	223.00	89
185.20	193	196.25	367	210.10	148	224.20	2411
186.15	3337	196.90	67	211.20	211	225.25	688
187.15	820	198.00	15466	215.25	47	226.25	126
187.80	62	199.05	1339	215.95	12	227.25	621
188.40	141	200.15	277	217.15	146	228.50	164
189.15	42	201.55	86	218.15	12	229.35	67

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
230.15	159	244.20	2836	256.10	2554	272.20	19
231.20	52	245.15	275	257.05	213	273.15	286
233.00	34	246.25	310	258.25	499	274.05	1428
234.40	96	247.20	89	259.35	14	275.05	6104
235.20	104	248.30	2	260.15	5	276.10	796
236.10	39	249.15	24	261.05	52	277.20	425
237.25	119	250.05	9	264.20	24	278.25	211
238.05	22	251.20	24	265.20	134	283.35	42
238.95	2	253.20	36	265.95	10	284.15	67
242.10	141	254.10	154	266.90	13	285.40	64
243.25	275	255.15	13500	271.15	47	286.45	42

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
288.25	5	303.15	179	321.25	79	336.15	47
290.30	69	304.20	77	322.15	49	340.25	2
291.30	29	305.20	14	323.25	742	341.30	24
292.35	57	308.05	17	324.20	196	342.20	29
293.30	146	309.25	34	325.05	12	346.10	84
294.50	2	310.25	24	326.30	7	347.30	69
295.55	7	311.15	129	327.55	39	351.95	187
296.20	1038	314.25	77	328.30	39	353.20	187
297.30	74	315.15	181	333.00	89	354.25	518
298.10	32	316.15	99	334.35	306	355.20	99
299.65	10	318.20	37	335.30	214	364.45	12

Scan 1497 (16.155 min): 0920JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
365.10	361	391.35	17	423.20	707		
366.10	74	392.05	10	424.20	209		
370.40	17	393.35	20	425.35	27		
371.25	20	401.15	40	440.45	2		
372.15	237	402.10	172	441.25	1772		
373.25	109	403.20	137	442.05	8751		
374.20	49	404.20	79	443.05	1924		
377.90	10	410.35	2	444.15	227		
383.30	92	419.45	2	445.15	35		
384.35	12	421.20	52				
390.10	30	422.20	99				

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/23/2013
Time Analyzed: 16:26

Tune Summary
Semivolatile Organics by EPA method 525.2

File ID: J:\MS22\DATA\092313-525\0923JLE002.D
Instrument ID: MS22
Column:

Analysis Method: 525.2
Analysis Lot: KWG130474

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.3	13038	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	20.7	6529	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	42.2	13307	PASS
197	198	0	2	0.2	54	PASS
198	198	100	100	100.0	31541	PASS
199	198	5	9	7.3	2288	PASS
275	198	10	60	36.2	11410	PASS
365	198	1	100	2.2	702	PASS
441	443	0	100	92.7	3443	PASS
442	198	50	150	60.2	18975	PASS
443	442	15	24	19.6	3714	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310516-2	J:\MS22\DATA\092313-525\0923JLE003.D	09/23/2013	17:12	
13255-DUP	K1309638-010	J:\MS22\DATA\092313-525\0923JLE004.D	09/23/2013	18:49	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS22\DATA\092313-525\0923JLE002.D
Lab ID: KWG1310516-1
RunType: DFTPP
Matrix: NOT APPLICABLE

Date Acquired: 09/23/2013 16:26
Date Quantitated:
Batch ID: KWG130474
Analysis Method: DFTPP
ListJoinID: LJ4247

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: JH 09.25.13

Secondary Review:

Quantitation Report

Data File:	J:\MS22\DATA\092313-525\0923JLE002.D	**Instrument:**	MS22
Acqu Date:	09/23/2013 16:26 **Quant Date:**	**Vial:**	0
Run Type:	DFTPP	**Dilution:**	1.0
Lab ID:	KWG1310516-1	**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/25/2013

Analysis Lot:	KWG130474	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS22\METHODS\ENDRIN-DDT_5	**Calibration ID:**	CAL12715
Title:		**Report List ID:**	LJ4247
Tune Ref:		**Method ID:**	MJ542
MB Ref:		**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	41.3	13038	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	20.7	6529	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	42.2	13307	Pass
197	198	0	2	0.2	54	Pass
198	198	100	100	100.0	31541	Pass
199	198	5	9	7.3	2288	Pass
275	198	10	60	36.2	11410	Pass
365	198	1	100	2.2	702	Pass
441	443	0.01	100	92.7	3443	Pass
442	198	50	150	60.2	18975	Pass
443	442	15	24	19.6	3714	Pass

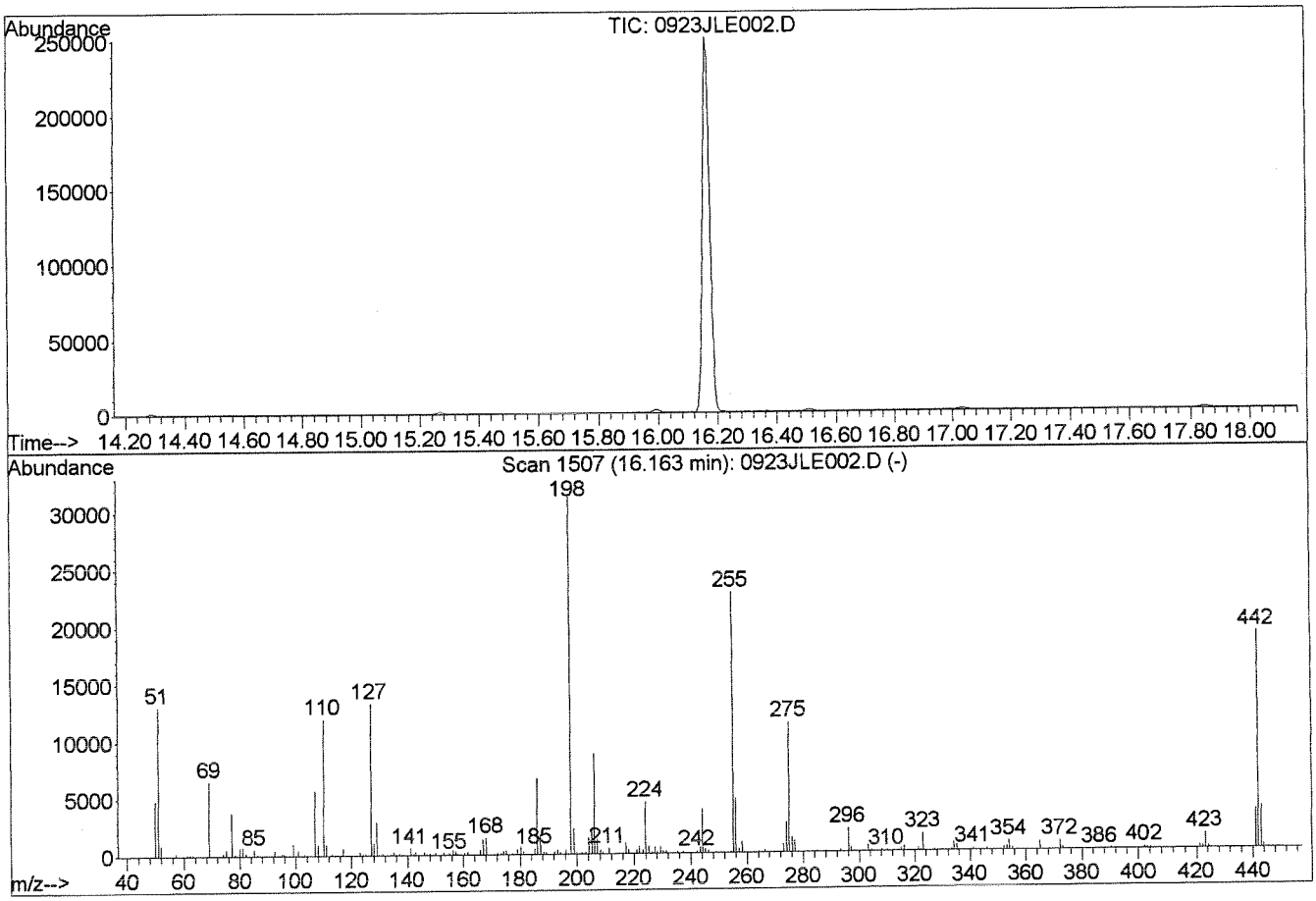
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS22\DATA\092313-525\0923JLE002.D Vial: 0
Acq On : 23-09-2013 16:26 Operator:
Sample : DWSTD06-56B IPC Sol Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS22\METHODS\ENDRIN-DDT_525.M (RTE Integrator)
Title : Endrin, DDT Degradation Checks



Spectrum Information: Scan 1507

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.3	13038	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	20.7	6529	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	42.2	13307	PASS
197	198	0.00	2	0.2	54	PASS
198	198	100	100	100.0	31541	PASS
199	198	5	9	7.3	2288	PASS
275	198	10	60	36.2	11410	PASS
365	198	1	100	2.2	702	PASS
441	443	0.01	100	92.7	3443	PASS
442	198	50	150	60.2	18975	PASS
443	442	15	24	19.6	3714	PASS

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
50.00	4879	78.10	169	92.50	480	110.05	11959
51.05	13038	79.10	91	93.40	50	111.05	924
52.05	966	80.05	696	95.05	183	112.05	41
57.05	241	81.10	711	95.85	199	112.95	187
61.10	108	82.25	249	99.10	1005	117.05	638
62.25	101	83.10	31	101.05	468	117.95	24
63.25	117	85.15	564	103.20	141	123.00	295
69.05	6529	86.25	113	104.00	63	124.20	143
74.00	273	89.75	9	105.70	29	125.15	109
75.00	541	90.60	43	107.00	5664	126.25	97
77.05	3796	91.35	53	108.05	963	127.05	13307

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.05	1059	142.20	163	157.35	343	172.25	189
129.05	2937	142.95	273	158.05	117	173.30	108
129.75	51	146.20	293	159.00	88	174.20	333
131.10	162	147.05	131	160.50	176	175.20	326
133.70	100	148.15	156	161.55	272	176.10	4
135.15	259	149.25	90	162.40	46	177.30	154
136.10	92	150.20	271	165.10	70	178.00	68
137.25	156	152.25	102	166.05	441	179.10	480
139.45	29	153.10	231	167.20	1381	180.25	680
140.25	14	155.05	149	168.25	1501	181.25	285
141.10	630	156.30	453	169.00	68	184.00	105

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
185.25	501	198.00	31541	211.05	510	227.30	562
186.20	6700	199.00	2288	216.25	56	228.15	180
187.20	1703	200.00	157	217.15	929	229.15	651
188.35	206	201.70	182	218.15	431	230.15	254
189.15	196	203.20	179	219.50	96	231.25	192
192.15	214	204.15	1445	221.05	328	235.20	212
193.20	380	205.25	2191	221.85	628	236.20	17
194.10	194	206.15	8769	223.25	352	237.30	155
194.80	4	207.15	1356	224.15	4543	240.05	79
196.25	418	208.20	332	225.15	699	242.30	180
197.20	54	209.05	209	226.40	143	243.35	508

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
244.15	3879	258.20	1009	276.20	1342	293.30	178
245.10	385	258.95	69	277.10	1020	294.30	34
246.15	266	260.10	37	278.40	76	295.20	29
247.15	89	261.15	29	282.15	5	296.20	2055
250.60	93	264.40	150	283.70	39	297.25	411
252.15	93	265.25	66	284.35	44	299.15	32
253.05	63	266.40	252	285.10	128	301.20	32
254.30	106	271.15	81	286.20	14	302.10	71
255.15	22829	273.15	740	288.35	111	303.30	595
256.15	4822	274.10	2669	290.00	84	304.35	134
257.20	393	275.10	11410	292.00	34	308.20	196

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
310.10	111	325.45	17	340.30	5	355.20	224
313.35	7	326.15	14	341.25	198	359.25	14
314.20	37	327.15	121	342.10	77	360.35	24
315.05	293	328.25	29	345.25	5	362.95	2
316.20	427	329.35	32	346.15	194	365.15	702
317.25	74	330.95	74	347.20	72	366.15	92
318.35	22	332.25	24	348.35	39	368.70	12
321.25	280	333.30	159	350.45	24	370.40	24
322.20	94	334.25	735	352.25	318	371.15	19
323.15	1555	335.30	524	353.25	363	372.30	789
324.40	39	336.15	77	354.20	813	373.20	244

Scan 1507 (16.163 min): 0923JLE002.D
DWSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
373.80	77	401.35	27	425.20	47		
375.65	5	402.25	199	437.75	5		
379.75	7	403.15	147	440.05	27		
383.10	39	404.20	104	441.20	3443		
384.30	10	404.95	17	442.05	18975		
386.55	19	408.20	20	443.05	3714		
389.25	5	414.30	69	444.05	324		
390.30	139	421.30	289	444.95	37		
391.30	84	422.25	239				
392.25	37	423.20	1328				
394.70	29	424.25	274				

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Semivolatile Organics by EPA method 525.2

Calibration ID: CAL12715
Instrument ID: MS22

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS22\DATA\081513-525\0815DV202.D\0815DV201.d	F	J:\MS22\DATA\081513-525\0815DV207.D
B	J:\MS22\DATA\081513-525\0815DV203.D	G	J:\MS22\DATA\081513-525\0815DV208.D
C	J:\MS22\DATA\081513-525\0815DV204.D	H	J:\MS22\DATA\081513-525\0815DV209.D
D	J:\MS22\DATA\081513-525\0815DV205.D	I	J:\MS22\DATA\081513-525\0815DV210.D
E	J:\MS22\DATA\081513-525\0815DV206.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,3-Dimethyl-2-nitrobenzene	A	20	0.233	B	50	0.282	C	100	0.373	D	200	0.316	E	500	0.318
	F	1000	0.354	G	2000	0.391	H	4000	0.385	I	6000	0.387			
Hexachlorocyclopentadiene				B	50	0.132	C	100	0.133	D	200	0.134	E	500	0.153
	F	1000	0.156	G	2000	0.206	H	4000	0.188						
Hexachlorobenzene				B	50	0.255	C	100	0.232	D	200	0.231	E	500	0.257
	F	1000	0.239	G	2000	0.262	H	4000	0.209	I	6000	0.206			
Simazine	A	20	0.0445	B	50	0.0810	C	100	0.0902	D	200	0.0897	E	500	0.0920
	F	1000	0.104	G	2000	0.112	H	4000	0.110	I	6000	0.119			
Atrazine	A	20	0.0325	B	50	0.0623	C	100	0.0597	D	200	0.0675	E	500	0.0717
	F	1000	0.0774	G	2000	0.0827	H	4000	0.0794	I	6000	0.0810			
Alachlor	A	20	0.140	B	50	0.253	C	100	0.277	D	200	0.281	E	500	0.306
	F	1000	0.348	G	2000	0.360	H	4000	0.365	I	6000	0.412			
trans-Nonachlor				B	50	0.0644	C	100	0.0620	D	200	0.0653	E	500	0.0691
	F	1000	0.0747	G	2000	0.0852	H	4000	0.0699	I	6000	0.0610			
Bis(2-ethylhexyl) Adipate				B	50	0.158	C	100	0.162	D	200	0.202	E	500	0.319
	F	1000	0.366	G	2000	0.492	H	4000	0.489	I	6000	0.489			
Triphenyl Phosphate	A	20	0.0402	B	50	0.0592	C	100	0.103	D	200	0.105	E	500	0.125
	F	1000	0.143	G	2000	0.161	H	4000	0.151	I	6000	0.161			
Bis(2-ethylhexyl) Phthalate							C	100	0.351	D	200	0.404	E	500	0.629
	F	1000	0.755	G	2000	1.03	H	4000	1.07	I	6000	1.06			
Benzo(a)pyrene	A	20	0.372	B	50	0.542	C	100	0.571	D	200	0.637	E	500	0.825
	F	1000	0.904	G	2000	1.14	H	4000	1.08						
Perylene-d12				B	50	0.420	C	100	0.654	D	200	0.647	E	500	0.701
	F	1000	0.845	G	2000	0.954	H	4000	0.931	I	6000	0.918			

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013

Initial Calibration Summary
Semivolatile Organics by EPA method 525.2

Calibration ID: CAL12715
Instrument ID: MS22

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
1,3-Dimethyl-2-nitrobenzene	SURR	Linear	R2	0.998		≥0.99	0.338		
Hexachlorocyclopentadiene	MS	Quadratic	COD	0.992		≥0.99	0.158		
Hexachlorobenzene	MS	Quadratic	COD	0.996		≥0.99	0.236		
Simazine	MS	Quadratic	COD	0.999		≥0.99	0.0936		
Atrazine	MS	Quadratic	COD	1.000		≥0.99	0.0682		
Alachlor	MS	Quadratic	COD	0.999		≥0.99	0.305		
trans-Nonachlor	MS	Quadratic	COD	0.997		≥0.99	0.0690		
Bis(2-ethylhexyl) Adipate	MS	Quadratic	COD	0.997		≥0.99	0.335		
Triphenyl Phosphate	SURR	Quadratic	COD	0.999		≥0.99	0.116		
Bis(2-ethylhexyl) Phthalate	MS	Quadratic	COD	0.997		≥0.99	0.757		
Benzo(a)pyrene	MS	Quadratic	COD	0.994		≥0.99	0.759		
Perylene-d12	SURR	Quadratic	COD	0.999		≥0.99	0.759		

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/15/2013
Date Analyzed: 08/26/2013

Second Source Calibration Verification
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration ID: CAL12715
Units: ug/L

File ID: J:\MS22\DATA\081513-525\0815DV213.D
J:\MS22\DATA\082613-525\0826DV003.D
J:\MS22\DATA\082613-525\0826DV006.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Hexachlorocyclopentadiene	1000	700	0.158	0.121	NA	-30	± 30 %	Quadratic
Hexachlorobenzene	1000	870	0.236	0.216	NA	-13	± 30 %	Quadratic
Simazine	1000	830	0.0936	0.0854	NA	-17	± 30 %	Quadratic
Atrazine	1000	860	0.0682	0.0668	NA	-14	± 30 %	Quadratic
Alachlor	1000	910	0.305	0.302	NA	-9	± 30 %	Quadratic
trans-Nonachlor	1000	800	0.0690	0.0643	NA	-20	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	1000	730	0.335	0.295	NA	-27	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	1000	760	0.757	0.639	NA	-24	± 30 %	Quadratic
Benzo(a)pyrene	1000	880	0.759	0.835	NA	-12	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Injection Log

Directory: J:\MS22\DATA\081513-525

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		0815DV001.d	1.	DCM		15-08-22013 20:04
2		0815DV002.d	1.	DWTSTD06-56B IPC Sol	Not used for CAL 1B	15-08-22013 20:43
3		0815DV003.d	1.	CCV | DWSTD06-62M @ 1000 ppb		15-08-22013 21:28
4		0815DV101.d	1.	DCM		15-08-22013 25:30
5		0815DV102.d	1.	DWTSTD06-56B IPC Sol		15-08-22013 26:08
6		0815DV103.d	1.	CCV | DWSTD06-62M @ 1000 ppb		15-08-22013 26:53
7		0815DV104.d	1.	K1307025-023 @50X		15-08-22013 27:39
8		0815DV105.d	1.	CCV | DWSTD06-62O @ 500ppb		15-08-22013 28:31
9		0815DV201.d	1.	DWTSTD06-56B IPC Sol		15-08-22013 29:58
10		0815DV202.d	1.	ICAL 20 ppB | DWSTD06-63I		15-08-22013 30:57
11		0815DV203.d	1.	ICAL 50ppb | DWSTD06-63H		15-08-22013 31:34
12		0815DV204.d	1.	ICAL 100ppb | DWSTD06-63G		15-08-22013 32:21
13		0815DV205.d	1.	ICAL 200ppb | DWSTD06-63F		15-08-22013 33:07
14		0815DV206.d	1.	ICAL 500ppb | DWSTD06-62O		15-08-22013 33:53
15		0815DV207.d	1.	ICAL 1000ppb | DWSTD06-62M		15-08-22013 34:39
16		0815DV208.d	1.	ICAL 2000ppb | DWSTD06-63E		15-08-22013 35:25
17		0815DV209.d	1.	ICAL 4000ppb | DWSTD06-63D		16-08-22013 12:12
18		0815DV210.d	1.	ICAL 6000ppb | DWSTD06-63C		16-08-22013 12:58
19		0815DV211.d	1.	ICV 1 | DWSTD06-49B 1000ppb	-NR, expired CAL 12715	16-08-22013 13:44
20		0815DV212.d	1.	ICV 2 | DWSTD06-50H 1000ppb	-NR. expired	16-08-22013 14:30
21		0815DV213.d	1.	ICV 3 | DWSTD06-48F 1000ppb		16-08-22013 15:16

8/19/13

Injection Log

Directory: J:\MS22\DATA\082613-525

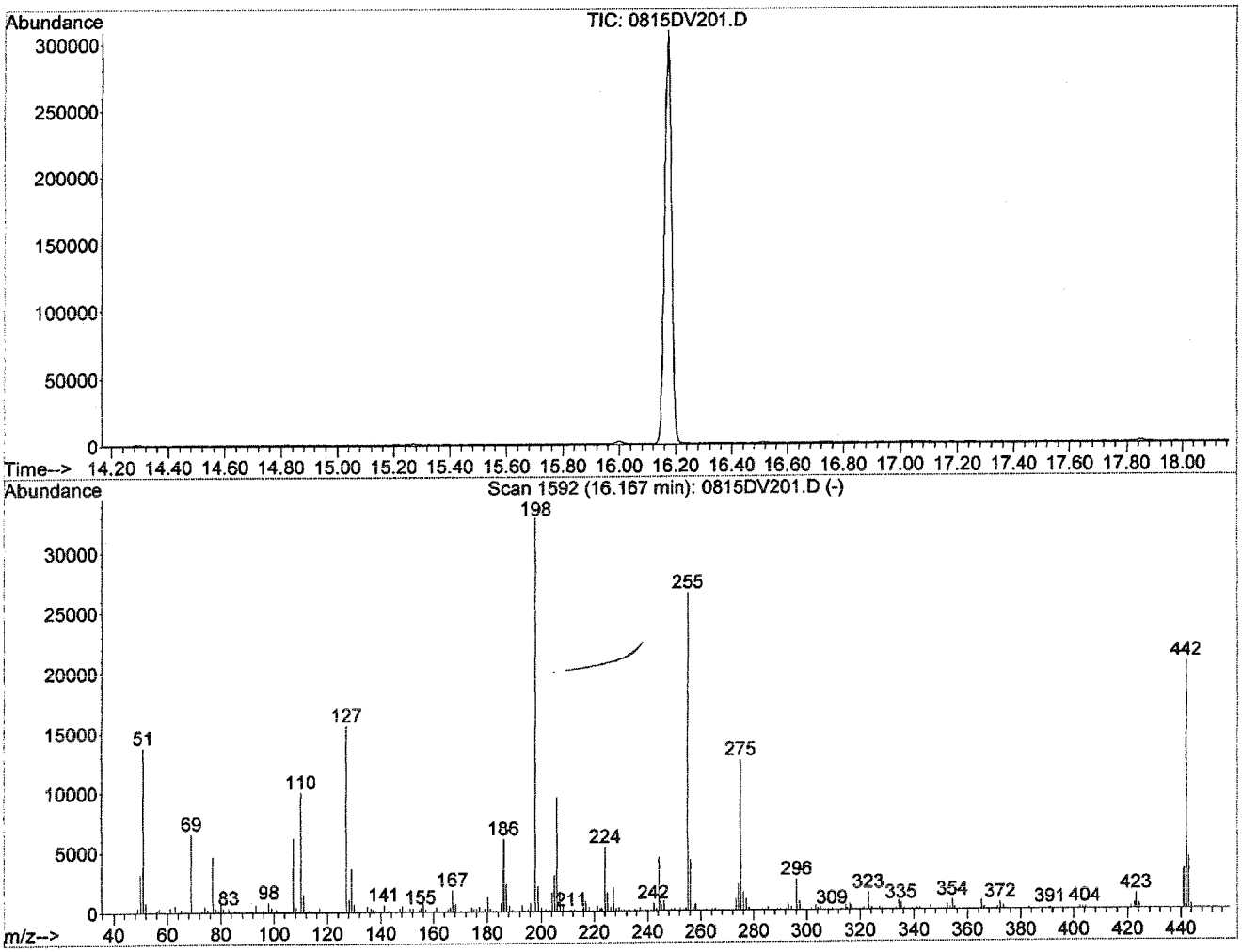
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		0826DV001.d	1.	DCM		26-08-22013 23:2
2		0826DV002.d	1.	DWTSTD06-56B IPC Sol		26-08-22013 23:5
3		0826DV003.d	1.	DWSTD06-64G ICV 1 @ 1000ppb		26-08-22013 12:4
4		0826DV004.d	1.	DWSTD06-64I ICV 2 @ 1000ppb-- did not inject		26-08-22013 26:5
5		0826DV006.d	1.	DWSTD06-64I ICV 2 @ 1000ppb		26-08-22013 30:1

CAL 7/5

DV 8/27/13

DFTPP

Data File : J:\MS22\DATA\081513-525\0815DV201.D Vial: 0
Acq On : 15-08-2013 17:58 Operator:
Sample : DWTSTD06-56B IPC Sol Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS22\METHODS\050613_525.M (RTE Integrator)
Title : 031113_525.m | MJ901 CAL12446



Spectrum Information: Scan 1592

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.9	13785	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	19.9	6534	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	47.4	15606	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	32907	PASS
199	198	5	9	6.4	2091	PASS
275	198	10	60	38.3	12606	PASS
365	198	1	100	2.2	736	PASS
441	443	0.01	100	76.8	3338	PASS
442	198	50	150	63.0	20725	PASS
443	442	15	24	21.0	4348	PASS

0815DV201.D 050613_525.M Thu Aug 15 19:09:36 2013

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
48.95	380	69.05	6534	85.25	177	109.00	116
50.00	3234	73.00	153	93.20	602	110.05	9998
51.05	13785	73.95	524	96.10	184	111.10	1502
52.05	827	75.10	256	98.10	821	113.15	128
56.10	183	75.95	72	99.05	365	116.30	119
56.95	316	77.00	4687	100.90	230	117.15	387
61.00	421	78.05	375	103.50	99	119.25	18
62.90	578	79.20	234	104.60	31	121.55	121
64.10	97	80.10	709	105.15	80	125.10	77
64.95	277	81.00	303	107.10	6147	126.35	12
66.70	85	82.95	339	108.15	393	127.10	15606

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.20	1052	144.65	70	156.95	247	174.25	333
129.15	3657	146.15	29	158.10	26	175.10	220
130.10	613	147.20	283	160.20	93	176.20	232
131.15	82	148.10	490	161.15	369	177.10	401
134.10	39	149.15	65	165.40	190	178.35	68
135.05	486	151.00	251	166.10	340	179.10	231
136.20	341	152.20	222	167.10	1775	180.25	1223
137.05	199	152.90	12	168.20	642	181.20	264
138.20	104	154.45	144	169.50	31	182.20	98
141.15	573	155.15	342	170.35	90	183.30	93
143.00	114	156.10	672	173.35	12	184.20	14

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
185.25	672	199.05	2091	212.60	123	228.25	229
186.20	6043	200.25	312	215.90	297	229.25	315
187.25	2282	201.75	145	217.05	832	230.10	83
188.25	476	203.25	91	218.20	347	231.20	115
189.35	130	204.25	1605	221.20	453	232.95	44
191.90	31	205.15	3046	222.20	211	235.30	138
193.05	531	206.15	9521	223.00	258	236.05	34
194.10	36	207.10	1668	224.20	5336	237.15	263
195.10	201	208.10	482	225.10	1538	239.05	118
196.15	702	210.90	59	226.15	305	240.35	29
198.05	32907	211.55	76	227.20	1968	241.15	34

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
242.25	653	253.20	85	266.80	17	285.40	255
243.20	259	254.30	217	269.20	68	286.25	74
244.25	4489	255.15	26573	273.15	952	289.00	84
245.20	861	256.15	4251	274.10	2204	290.15	86
246.25	792	257.15	289	275.10	12606	291.15	17
247.10	76	258.20	588	276.20	1556	292.20	109
248.05	51	259.40	74	277.20	940	293.05	515
248.85	132	261.05	93	278.20	222	294.15	282
250.05	153	262.05	128	280.75	27	296.20	2537
251.30	37	264.20	140	283.20	96	297.25	698
252.25	237	265.25	190	284.15	69	298.35	62

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
301.75	109	321.35	178	339.30	49	356.70	17
303.35	396	323.20	1407	341.20	144	360.55	14
304.20	124	324.40	178	342.30	166	364.65	39
305.20	238	325.00	2	346.15	295	365.25	736
309.55	106	327.20	175	347.20	44	366.15	229
310.45	22	328.20	94	350.20	24	370.05	52

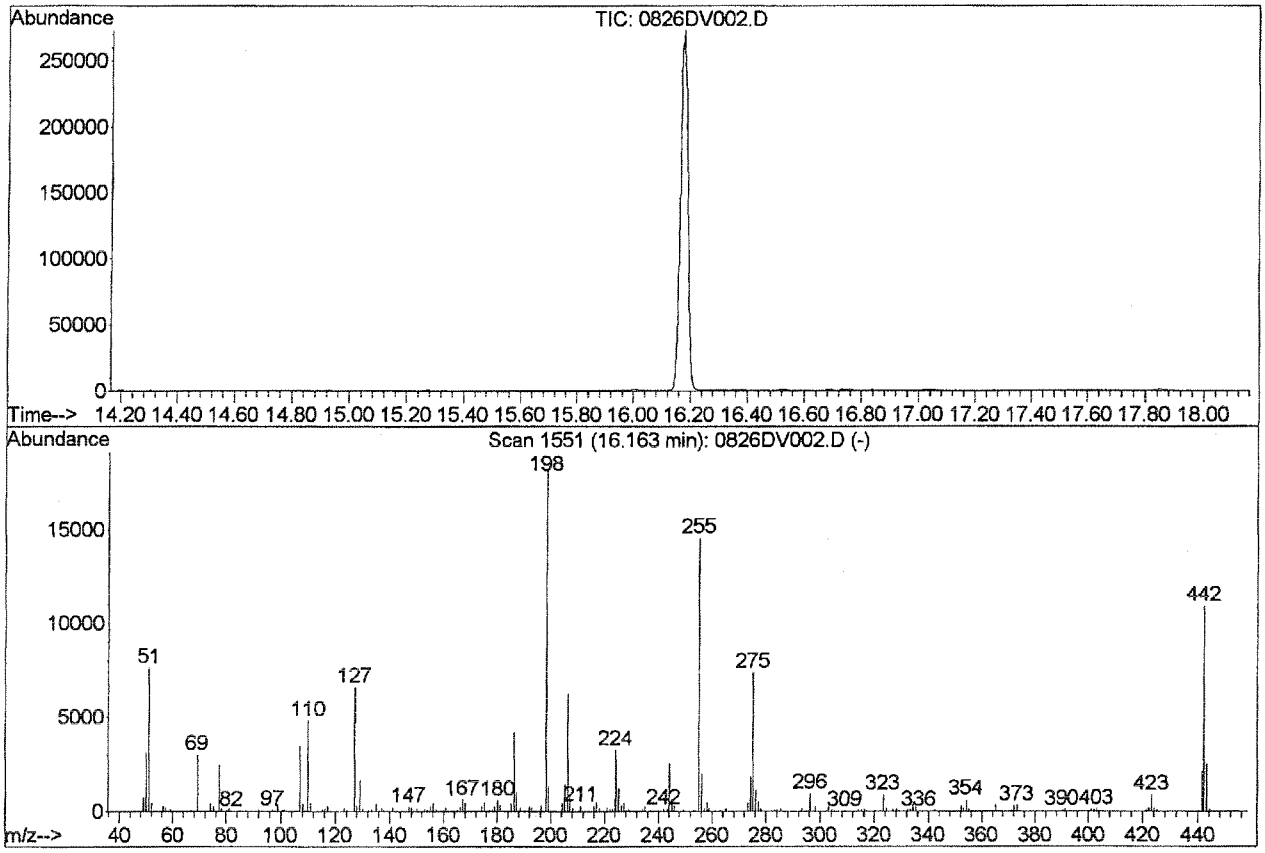
313.10	89	332.15	39	351.15	37	371.20	186
314.40	389	333.20	136	352.40	455	372.25	552
315.20	130	334.35	713	353.50	179	373.35	351
316.30	446	335.25	539	354.35	801	374.25	37
317.45	91	336.45	134	355.15	233	377.60	2

Scan 1592 (16.167 min): 0815DV201.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
378.95	37	410.55	34	445.35	90		
383.10	117	416.40	10				
388.10	17	421.20	259				
390.45	34	422.45	499				
391.15	132	423.15	1260				
392.20	10	424.20	407				
392.95	2	425.15	27				
401.55	44	441.15	3338				
402.35	192	442.05	20725				
403.25	169	443.05	4348				
404.25	199	444.10	392				

DFTPP

Data File : J:\MS22\DATA\082613-525\0826DV002.D Vial: 0
Acq On : 26-08-2013 11:59 Operator:
Sample : DWTSTD06-56B IPC Sol Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS22\METHODS\ENDRIN-DDT_525.M (RTE Integrator)
Title : Endrin, DDT Degradation Checks



Spectrum Information: Scan 1551

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.9	7639	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	16.5	3005	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	36.3	6623	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	18226	PASS
199	198	5	9	7.3	1322	PASS
275	198	10	60	40.7	7422	PASS
365	198	1	100	2.0	364	PASS
441	443	0.01	100	84.4	2139	PASS
442	198	50	150	60.1	10954	PASS
443	442	15	24	23.1	2534	PASS

0826DV002.D ENDRIN-DDT_525.M Mon Aug 26 14:23:22 2013

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
48.95	713	73.35	12	85.00	55	101.15	110
50.05	3119	74.10	409	86.00	27	102.75	12
51.05	7639	75.10	257	87.20	68	106.10	51
52.05	482	75.75	56	92.05	90	107.10	3506
56.40	305	77.10	2503	93.05	28	108.05	415
57.15	209	78.00	163	95.10	31	110.05	4833
59.05	90	79.10	19	96.40	78	111.15	472
63.05	19	80.10	63	97.10	93	112.10	17
64.85	22	81.10	184	98.10	61	112.95	27
66.90	102	81.75	56	99.05	387	115.35	93
69.05	3005	83.00	9	100.45	110	116.20	132

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
117.05	292	135.15	386	151.70	29	162.30	47
118.05	44	136.20	24	153.00	140	165.15	108
122.30	17	137.20	170	153.95	106	166.20	244
123.15	155	137.85	83	154.95	293	167.10	632
124.20	73	141.05	190	156.10	447	168.15	470
127.05	6623	142.55	51	157.20	113	168.95	71
127.95	330	146.10	4	158.00	34	170.80	17
129.05	1662	147.10	248	159.20	22	172.25	17
130.20	128	148.10	182	160.05	96	173.30	39
132.45	76	149.30	24	160.95	229	174.05	277
133.20	114	150.05	133	161.60	19	175.20	512

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.30	7	188.50	195	202.15	14	218.05	143
177.10	98	189.25	61	204.10	438	221.00	203
178.05	111	190.30	61	205.10	1447	222.20	158
179.10	252	192.00	292	206.10	6248	223.10	133
180.25	588	193.05	246	207.15	756	224.15	3261
181.05	343	194.40	32	208.10	165	225.20	1232
182.85	42	196.25	319	210.35	54	226.25	329
184.30	22	198.05	18226	211.20	290	227.25	491
185.10	420	199.00	1322	212.35	12	228.15	74
186.15	4218	199.95	32	216.05	280	228.95	106
187.15	1031	201.50	61	217.00	478	229.90	22

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
231.30	29	247.00	44	258.90	159	276.05	1126
232.25	14	249.35	121	261.15	39	277.20	559
234.15	129	249.95	29	263.20	67	278.15	131
235.10	263	251.15	22	265.15	119	283.25	114
237.10	59	252.30	24	266.20	49	284.05	92
240.20	81	253.20	67	267.10	31	285.30	139
242.15	139	254.05	44	270.80	12	291.20	12
243.30	146	255.10	14556	272.10	2	293.25	179
244.15	2557	256.15	1992	273.20	454	294.35	44
245.10	382	257.05	176	274.10	1832	295.40	32
246.20	310	258.15	489	275.05	7422	296.15	943

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.95	24	317.05	84	332.20	52	347.10	2
298.20	256	317.95	10	333.30	112	352.20	291
302.10	34	320.40	42	334.25	348	353.10	167
303.15	288	322.15	24	335.40	246	354.15	625
304.10	84	323.15	871	336.55	22	355.05	97
307.30	12	324.30	171	338.10	7	359.30	5
309.15	22	325.15	10	340.10	7	361.35	27
312.95	10	326.95	64	341.10	10	363.15	2
314.15	114	328.25	149	342.35	57	365.15	364
315.25	117	329.10	34	343.85	19	366.05	44
316.20	124	331.15	22	346.20	22	371.25	87

Scan 1551 (16.163 min): 0826DV002.D
DWTSTD06-56B IPC Sol
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
372.15	299	401.15	102	427.20	15		
373.20	316	402.25	114	439.15	15		
374.30	15	403.15	122	441.15	2139		
383.25	62	405.15	25	442.00	10954		
384.20	15	406.40	10	443.05	2534		
385.20	2	417.25	32	444.10	127		
390.25	67	421.25	97	445.30	27		
391.20	119	422.15	177				
392.15	17	423.10	864				
393.30	12	424.20	167				
396.15	10	425.15	62				

Quantitation Report (Not Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:29 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	196533	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.90	188	373373	2500.00	ug/L	0.00
35) Chrysene-d12	23.51	240	346780	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	367	33.49	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery =	3.35%#		
34) Triphenyl phosphate	22.67	169	120	56.71	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery =	5.67%#		
49) Perylene-d12	29.14	264	870	9.21	ug/L	0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.92%#		
Target Compounds						Qvalue
2) Isophorone	6.42	82	408	14.70	ug/L	94
4) Hexachlorocyclopentadiene	9.54	237	141	67.79	ug/L	90
5) Dichlobenil	9.66	171	905	29.13	ug/L	89
6) EPTC	9.79	128	239	38.29	ug/L	98
7) Dimethyl phthalate	11.05	163	1777	25.26	ug/L	99
8) Acenaphthylene	11.07	152	1555	17.51	ug/L	98
9) Acenaphthene	11.51	153	1676	18.82	ug/L	97
10) Diethyl phthalate	12.75	149	1590	17.35	ug/L	95
11) Fluorene	12.71	165	1524	18.58	ug/L	98
12) Propachlor	13.00	120	488	35.85	ug/L	97
13) Trifluralin	13.73	264	91m	72.48	ug/L	
15) Hexachlorobenzene	14.20	284	582	22.99	ug/L	88
16) Atraton	14.29	196	169	11.04	ug/L	86
17) Prometon	14.42	210	257	24.80	ug/L	89
18) Simazine	14.41	201	133	12.14	ug/L	88
19) Atrazine	14.51	215	97m	11.91	ug/L	
20) Propazine	14.61	214	325	12.24	ug/L	91
21) Diazinon	15.08	137	205	12.26	ug/L	97
22) Phenanthrene	14.95	178	3008	21.20	ug/L	99
23) Anthracene	15.06	178	2459	17.72	ug/L	98
24) Terbacil	15.21	117	44m	8.27	ug/L	
25) Acetochlor	16.07	146	288	14.13	ug/L	88
26) Metribuzin	15.95	198	133	57.41	ug/L	96
27) Alachlor	16.29	160	418	22.82	ug/L	95
28) Bromacil	16.78	207	191	47.44	ug/L #	61
29) Dibutyl phthalate	16.85	149	1708	11.81	ug/L	97
30) Malathion	17.01	173	319	16.93	ug/L	93
31) Metolachlor	17.16	162	1298	31.64	ug/L	96
32) Cyanazine	17.26	225	137	13.40	ug/L	81

(#) = qualifier out of range (m) = manual integration
0815DV202.D 081513_525.M Mon Aug 19 13:15:32 2013 Page 1

Quantitation Report (Not Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:29 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

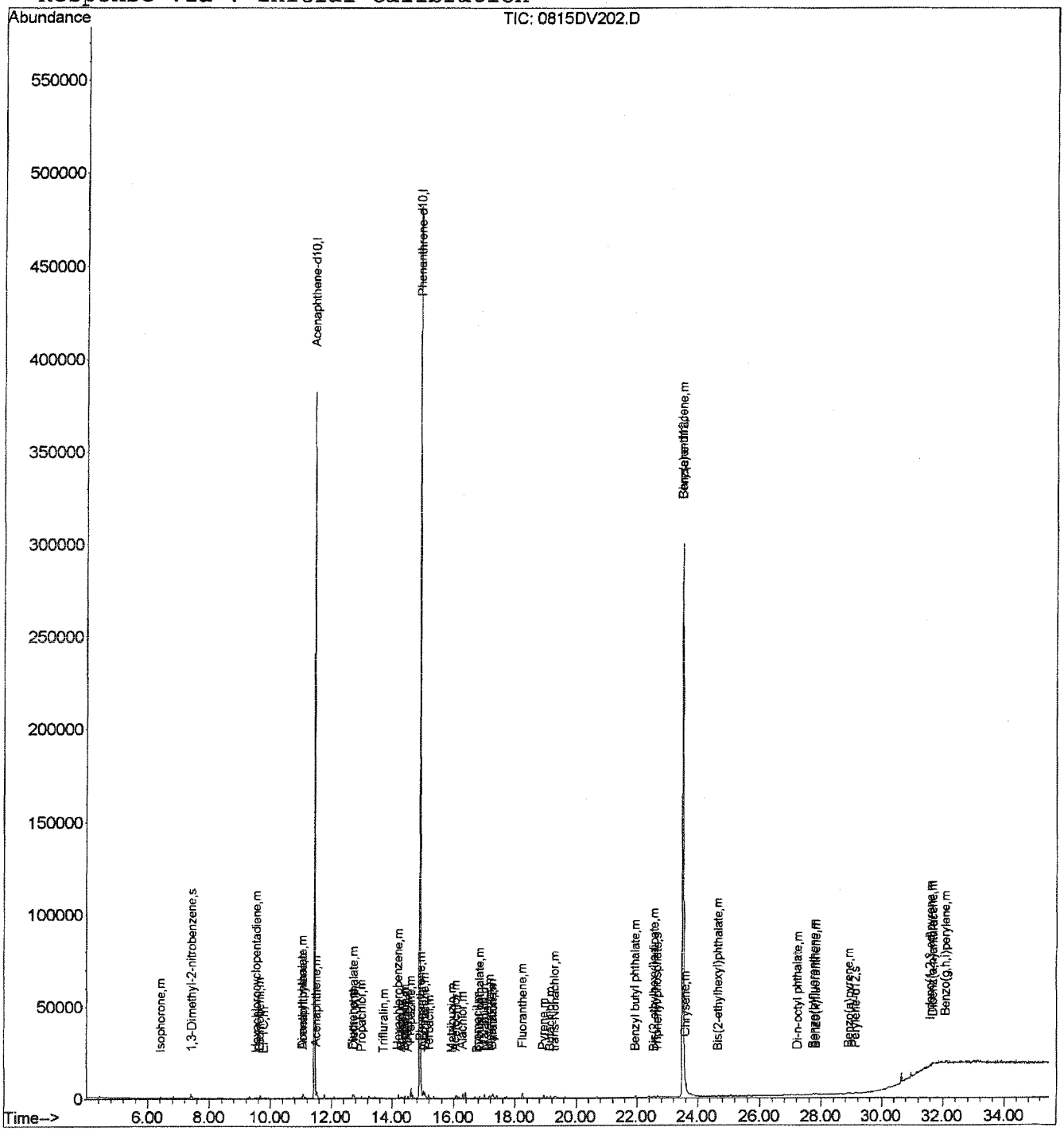
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	Parathion	17.29	291	52m	90.13	ug/L	
36)	Fluoranthene	18.25	202	1993	16.15	ug/L	97
37)	Butachlor	19.16	160	323	44.55	ug/L	94
38)	trans-Nonachlor	19.30	409	100	44.16	ug/L	86
39)	Pyrene	18.94	202	1797	31.08	ug/L	99
40)	Benzyl butyl phthalate	21.96	149	539	64.13	ug/L	99
41)	Bis(2-ethylhexyl)adipate	22.57	129	321	66.52	ug/L	92
42)	Benz(a)anthracene	23.52	228	2226m	18.55	ug/L	
43)	Chrysene	23.60	228	2100	16.08	ug/L	99
44)	Bis(2-ethylhexyl)phthalate	24.67	149	785	85.53	ug/L	91
45)	Di-n-octyl phthalate	27.22	149	1027	84.63	ug/L	96
46)	Benzo(b)fluoranthene	27.74	252	1134	9.65	ug/L	95
47)	Benzo(k)fluoranthene	27.84	252	1230	9.17	ug/L	92
48)	Benzo(a)pyrene	28.91	252	1031	27.27	ug/L	97
50)	Indeno(1,2,3-cd)pyrene	31.60	276	549	13.36	ug/L	80
51)	Dibenz(a,h)anthracene	31.68	278	704	7.67	ug/L	91
52)	Benzo(g,h,i)perylene	32.10	276	659	28.63	ug/L	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:53 2013 Quant Results File: 081513_525.R

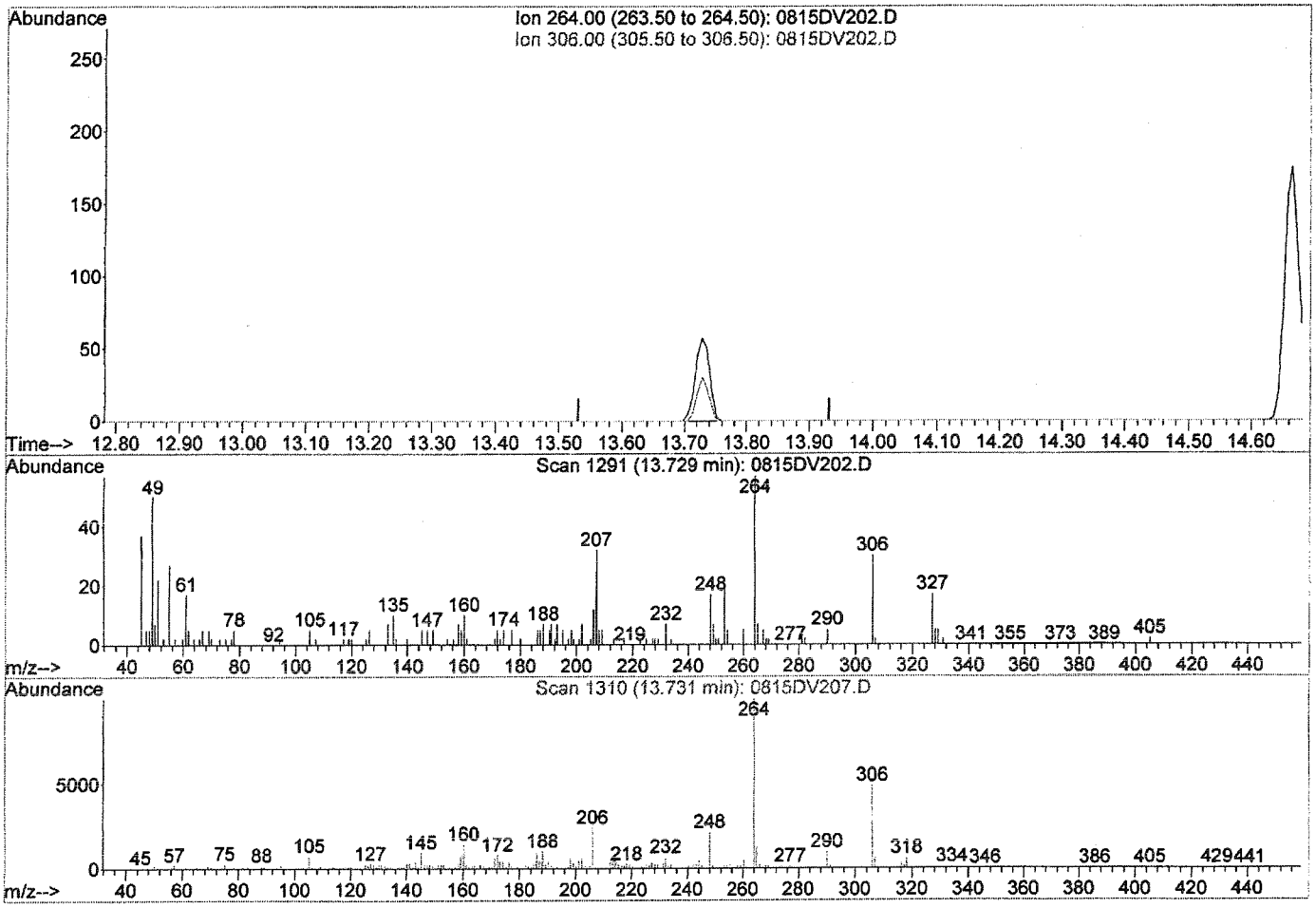
Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(13) Trifluralin (m)

13.73min 0.00ug/L

response 0

Ion	Exp%	Act%
264.00	100	0.00
306.00	46.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

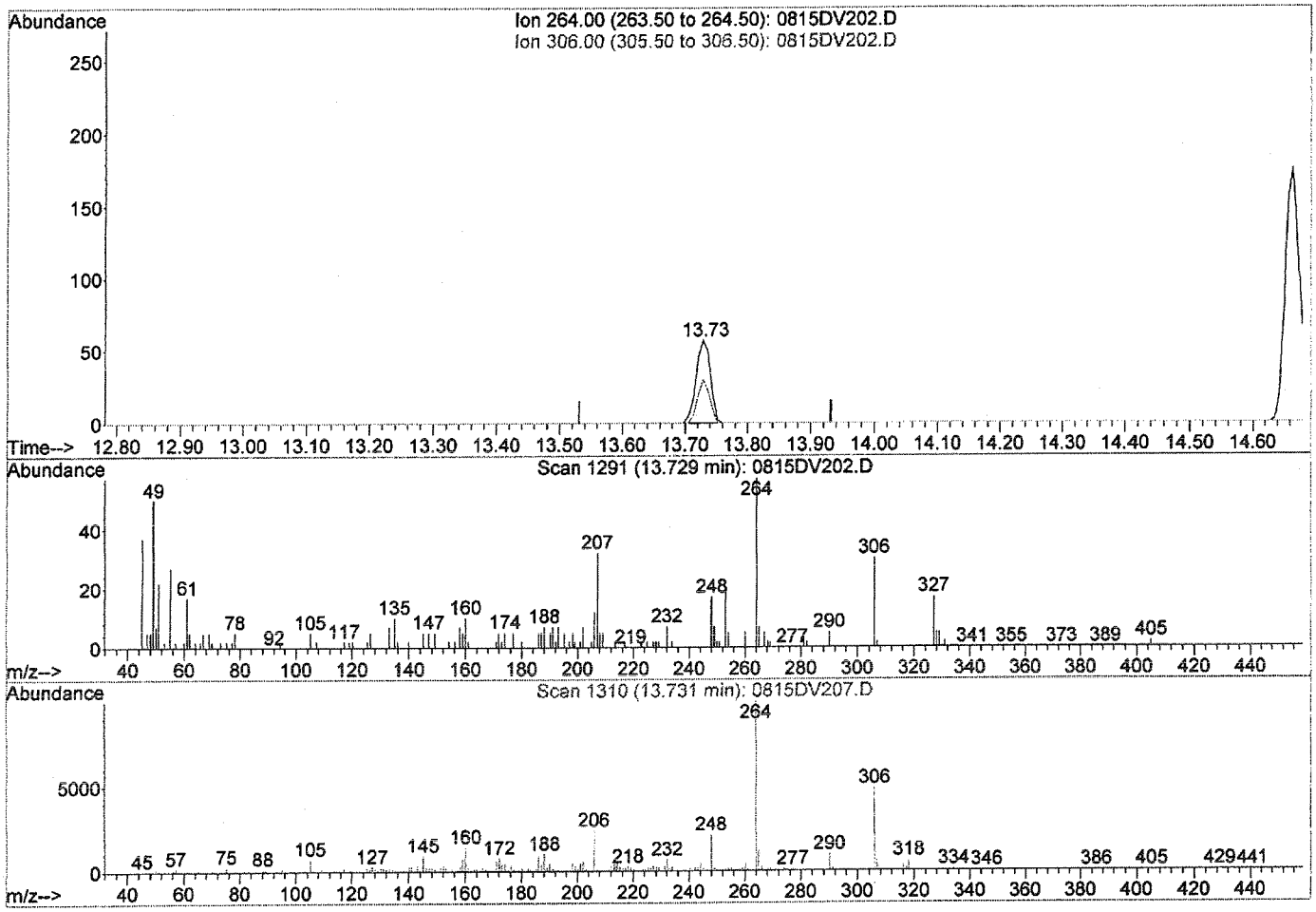
Before

0815DV202.D 081513_525.M Mon Aug 19 12:48:25 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:51 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(13) Trifluralin (m)

13.73min 72.48ug/L m

response 91

Ion	Exp%	Act%
264.00	100	100
306.00	46.30	52.63
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed Peak

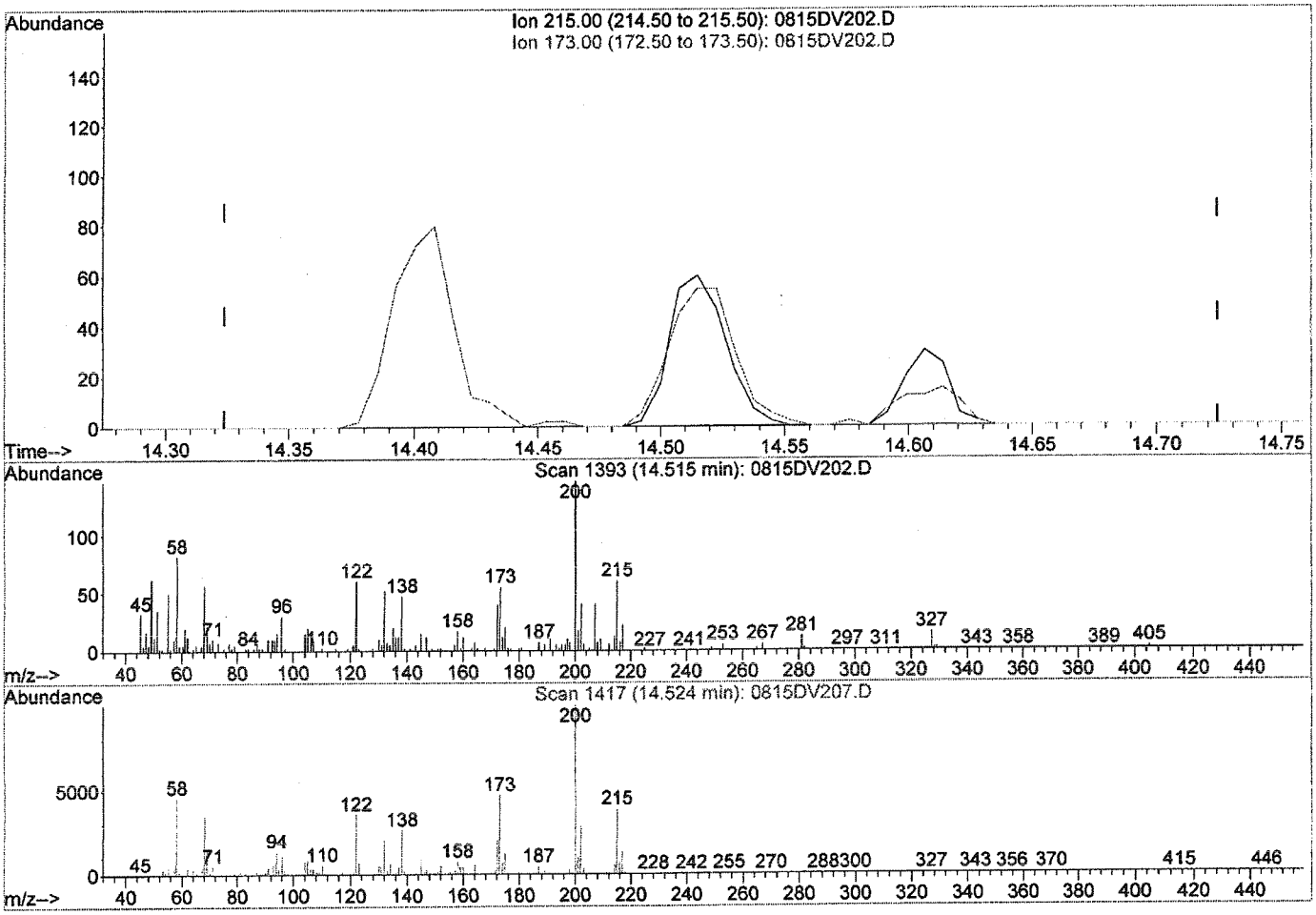
08/19/13

0815DV202.D 081513_525.M Mon Aug 19 12:48:32 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:51 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(19) Atrazine (m)

14.52min 0.00ug/L

response 0

Ion	Exp%	Act%
215.00	100	0.00
173.00	112.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

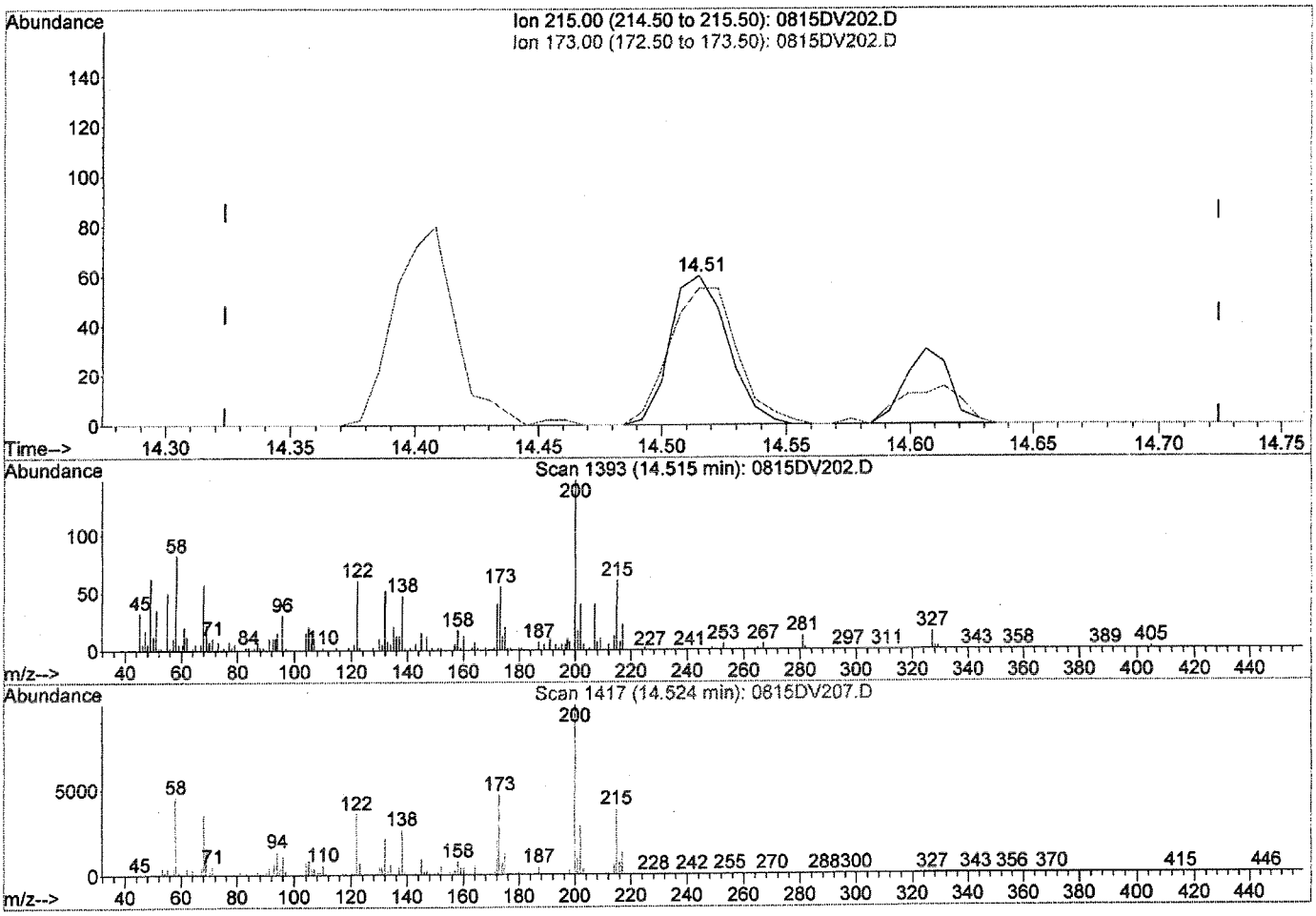
Before

0815DV202.D 081513_525.M Mon Aug 19 12:48:49 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(19) Atrazine (m)

14.51min 11.91ug/L m

response 97

Ion	Exp%	Act%
215.00	100	100
173.00	112.80	91.67#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed Peak

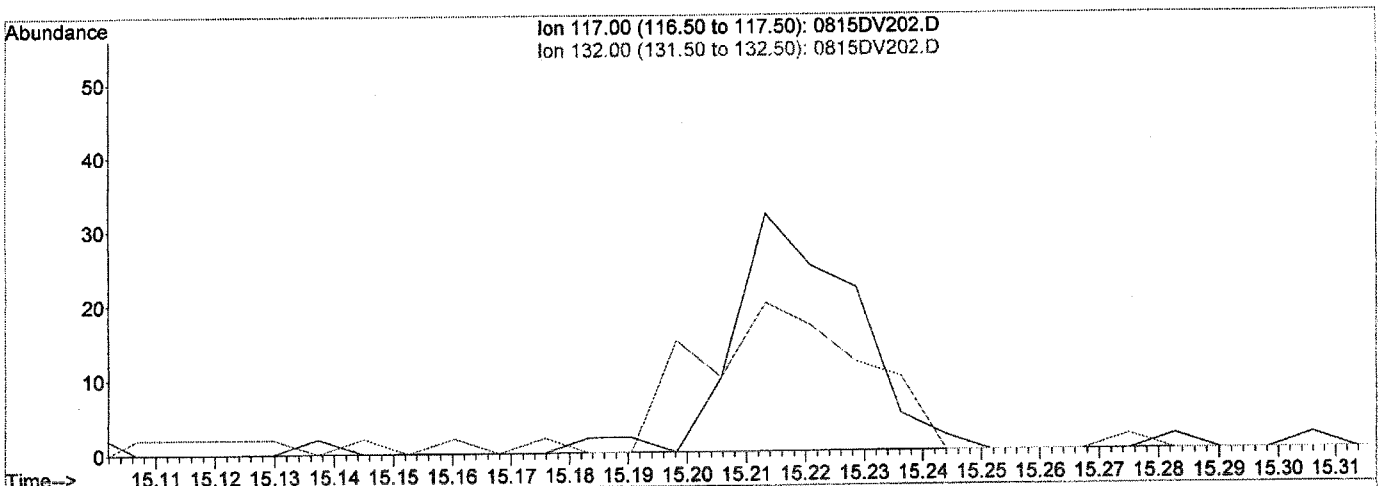
08/19/13

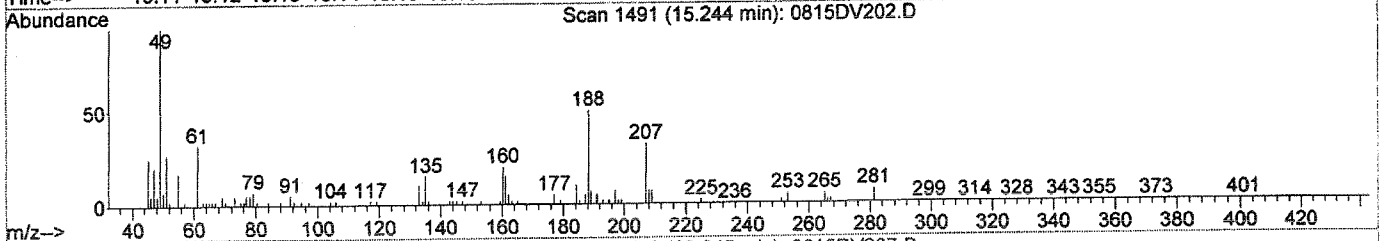
0815DV202.D 081513_525.M Mon Aug 19 12:48:54 2013

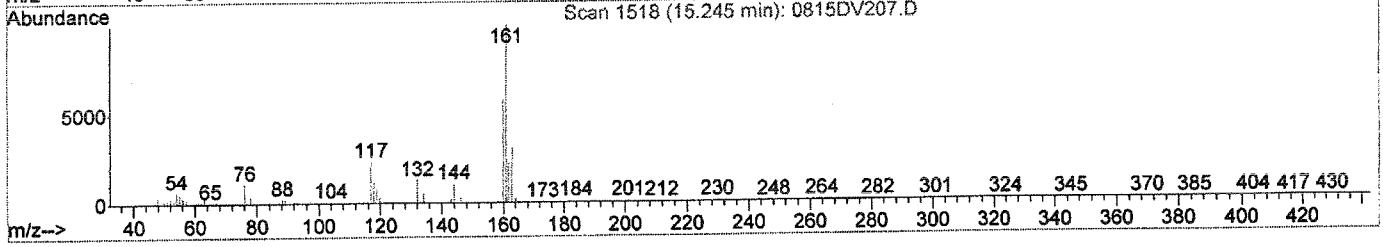
Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration







TIC: 0815DV202.D

(24) Terbacil (m)

15.25min 0.00ug/L

response 0

Ion	Exp%	Act%
117.00	100	0.00
132.00	59.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

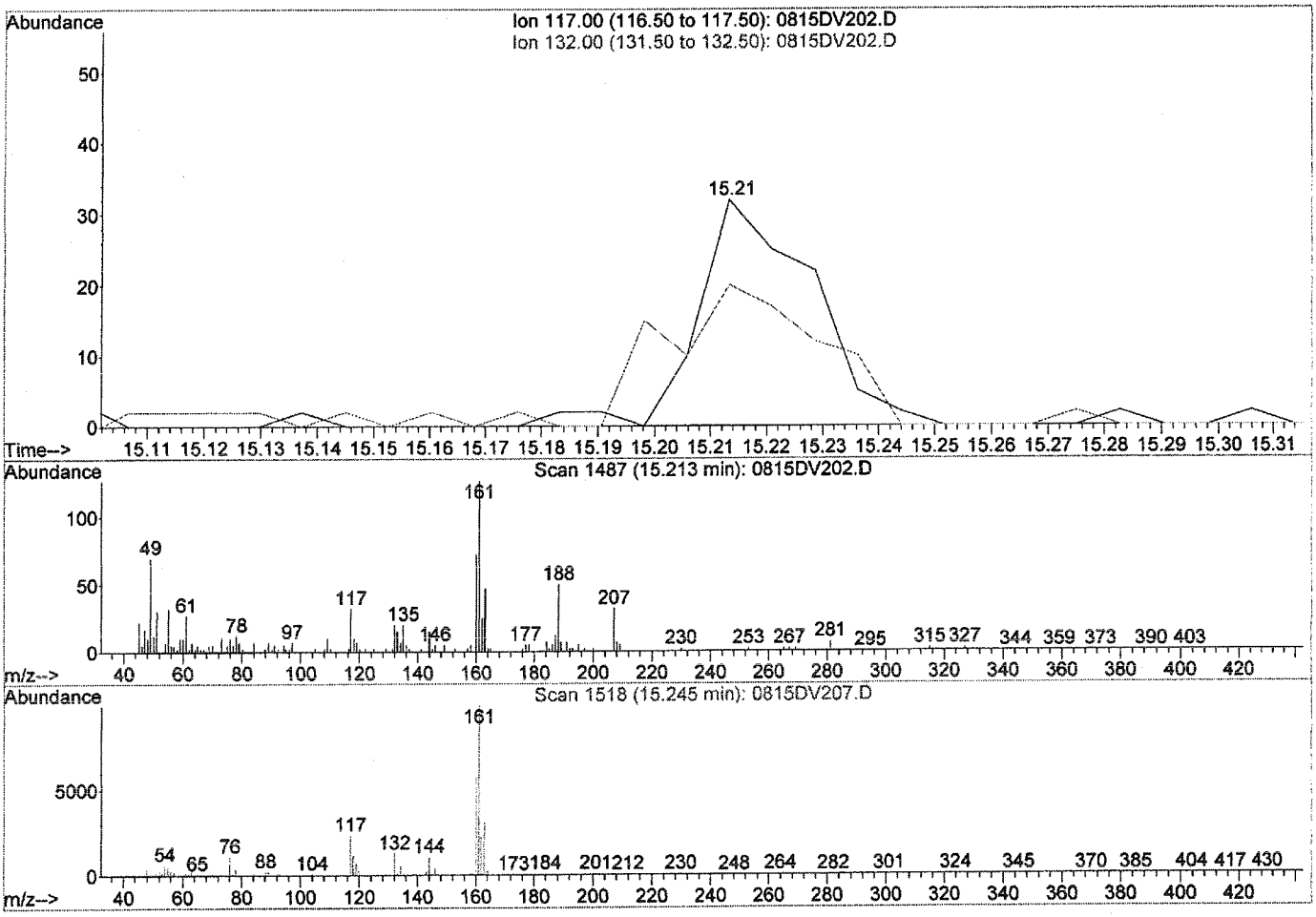
Before

0815DV202.D 081513_525.M Mon Aug 19 12:49:10 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(24) Terbacil (m)

15.21min 8.27ug/L m

response 44

Ion	Exp%	Act%
117.00	100	100
132.00	59.20	62.50
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed Peak

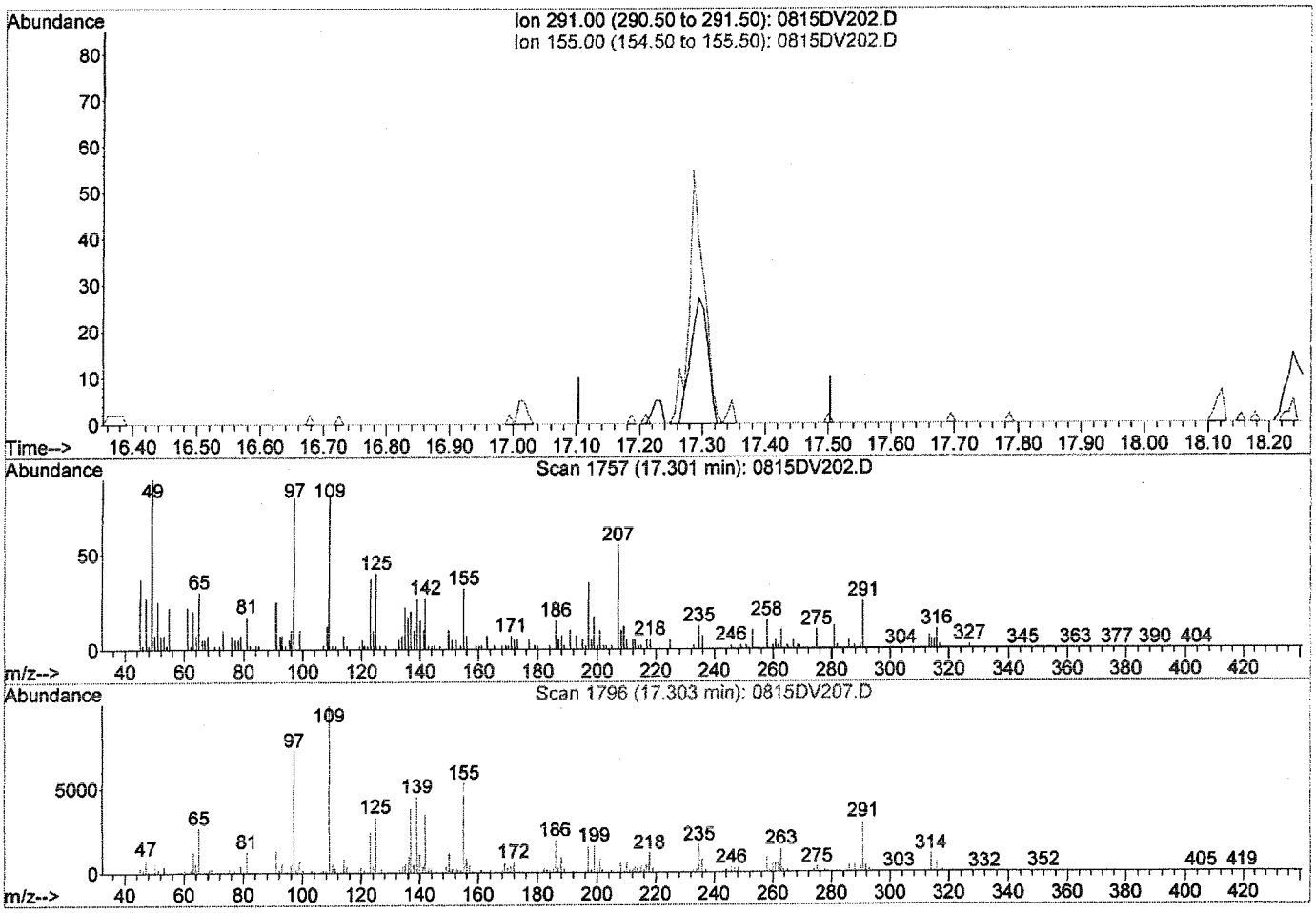
08/19/13

0815DV202.D 081513_525.M Mon Aug 19 12:49:15 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(33) Parathion (m)

17.30min 0.00ug/L

response 0

Ion	Exp%	Act%
291.00	100	0.00
155.00	179.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

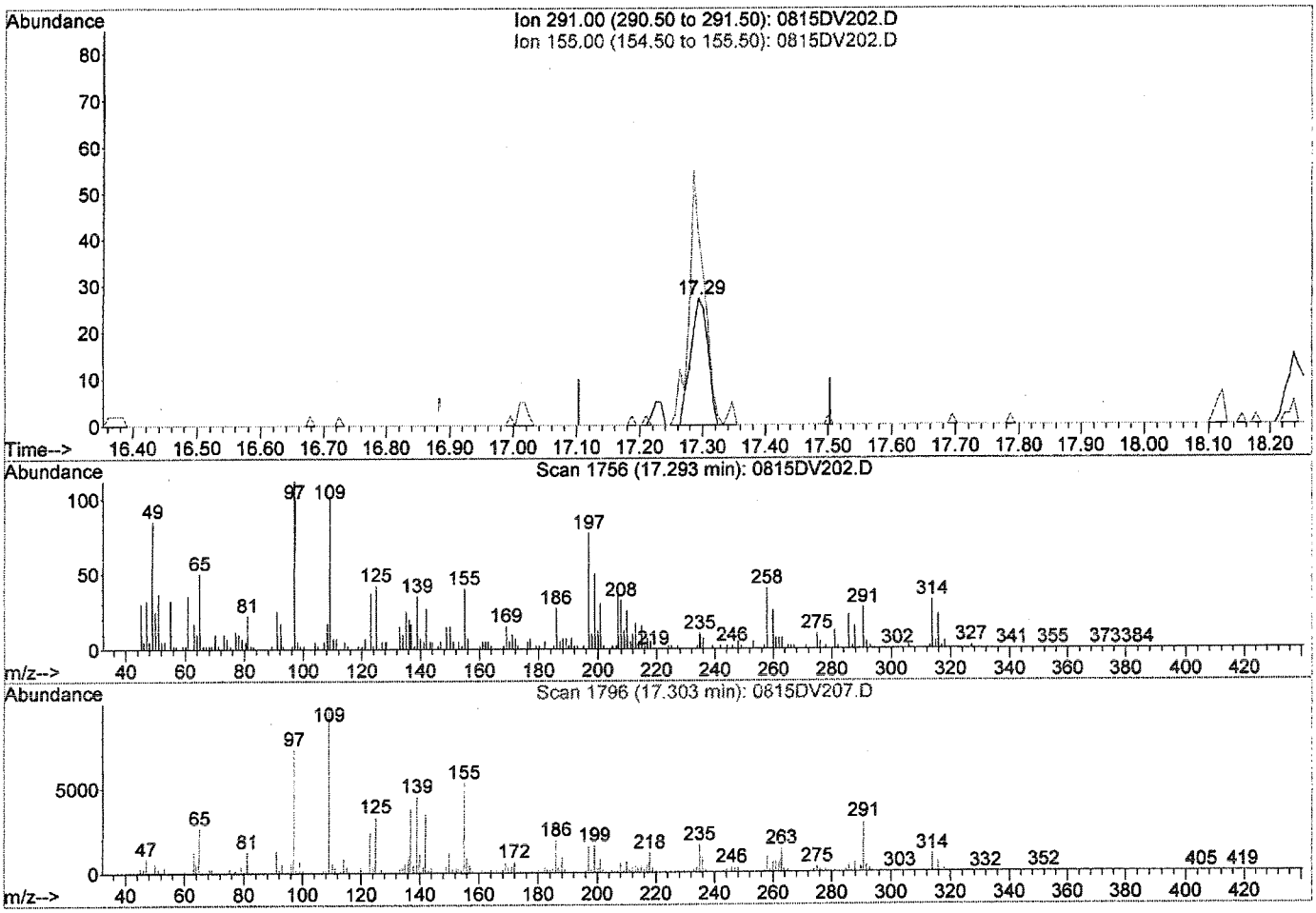
Before

0815DV202.D 081513_525.M Mon Aug 19 12:49:31 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(33) Parathion (m)

17.29min 90.13ug/L m

response 52

Ion	Exp%	Act%
291.00	100	100
155.00	179.40	148.15#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Missed Peak

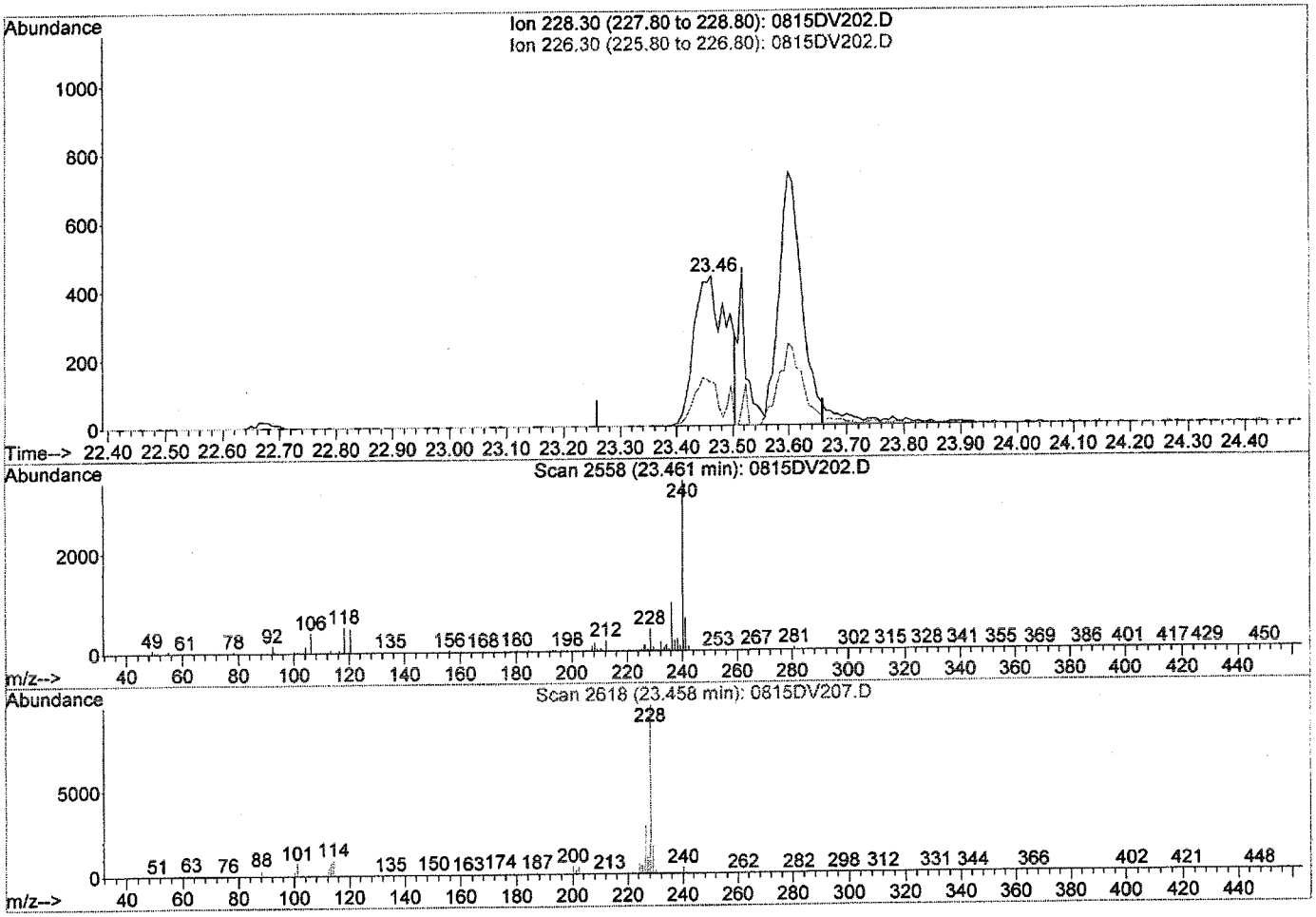
08/19/13

0815DV202.D 081513_525.M Mon Aug 19 12:49:36 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:52 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(42) Benz(a)anthracene (m)

23.46min 14.82ug/L

response 1778

Ion	Exp%	Act%
228.30	100	100
226.30	28.30	28.93
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

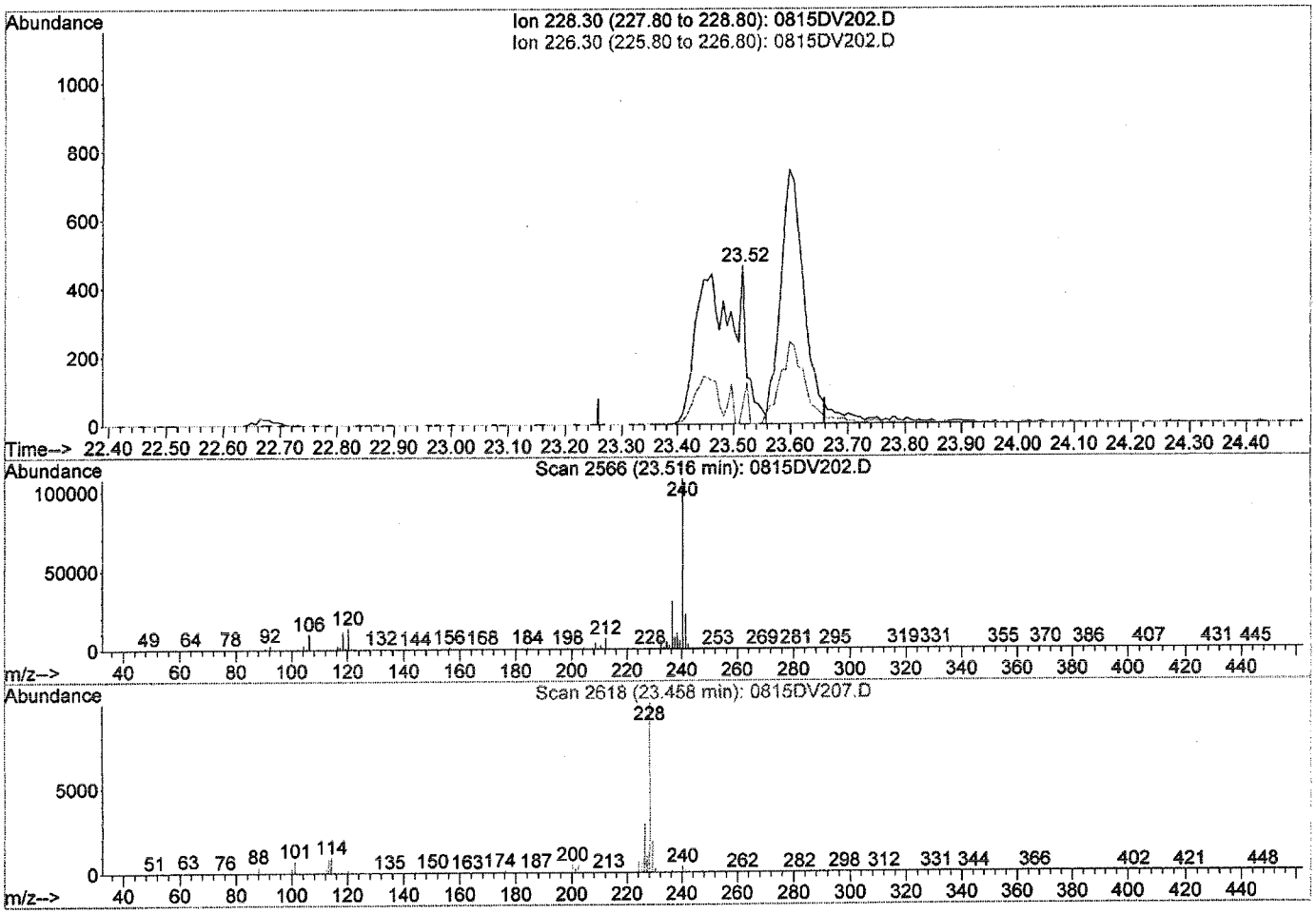
Before

0815DV202.D 081513_525.M Mon Aug 19 12:50:38 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV202.D Vial: 0
Acq On : 15-08-2013 18:57 Operator:
Sample : ICAL 20 ppB | DWSTD06-63I Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:53 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV202.D

(42) Benz(a)anthracene (m)

23.52min 18.55ug/L m

response 2226

Ion	Exp%	Act%
228.30	100	100
226.30	28.30	12.12
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Baseline/Shoulder

08/19/13

0815DV202.D 081513_525.M Mon Aug 19 12:50:46 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV203.D Vial: 0
Acq On : 15-08-2013 19:34 Operator:
Sample : ICAL 50ppb | DWSTD06-63H Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:29 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	186448	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	355414	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	325213	2500.00	ug/L	-0.01
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	1050	61.24	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 6.12%#			
34) Triphenyl phosphate	22.67	169	421	72.20	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 7.22%#			
49) Perylene-d12	29.12	264	2730	30.77	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 3.08%#			
Target Compounds						Qvalue
2) Isophorone	6.42	82	1351	51.22	ug/L	98
4) Hexachlorocyclopentadiene	9.54	237	493	109.80	ug/L	87
5) Dichlobenil	9.65	171	2893	68.26	ug/L	95
6) EPTC	9.79	128	864	72.78	ug/L	93
7) Dimethyl phthalate	11.05	163	5736	70.13	ug/L	96
8) Acenaphthylene	11.06	152	5077	60.05	ug/L	91
9) Acenaphthene	11.51	153	4956	58.65	ug/L	99
10) Diethyl phthalate	12.74	149	5173	59.36	ug/L	99
11) Fluorene	12.71	165	5069	64.99	ug/L	99
12) Propachlor	12.99	120	1867	71.33	ug/L	95
13) Trifluralin	13.73	264	435	86.90	ug/L	99
15) Hexachlorobenzene	14.20	284	1810	75.10	ug/L	90
16) Atraton	14.28	196	691	47.25	ug/L	98
17) Prometon	14.41	210	1148	59.60	ug/L	86
18) Simazine	14.39	201	576	55.03	ug/L	95
19) Atrazine	14.51	215	443	57.02	ug/L	90
20) Propazine	14.60	214	1426	56.32	ug/L	97
21) Diazinon	15.08	137	858	53.60	ug/L	90
22) Phenanthrene	14.94	178	8727	64.61	ug/L	98
23) Anthracene	15.05	178	7631	57.78	ug/L	98
24) Terbacil	15.21	117	239	47.06	ug/L	89
25) Acetochlor	16.07	146	886	45.50	ug/L	78
26) Metribuzin	15.94	198	594	79.94	ug/L	87
27) Alachlor	16.29	160	1798	59.12	ug/L	98
28) Bromacil	16.77	207	822	76.97	ug/L	90
29) Dibutyl phthalate	16.84	149	6493	47.09	ug/L	99
30) Malathion	17.00	173	1122	62.41	ug/L	89
31) Metolachlor	17.16	162	5325	63.91	ug/L	98
32) Cyanazine	17.24	225	603	61.35	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV203.D Vial: 0
Acq On : 15-08-2013 19:34 Operator:
Sample : ICAL 50ppb | DWSTD06-63H Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:29 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

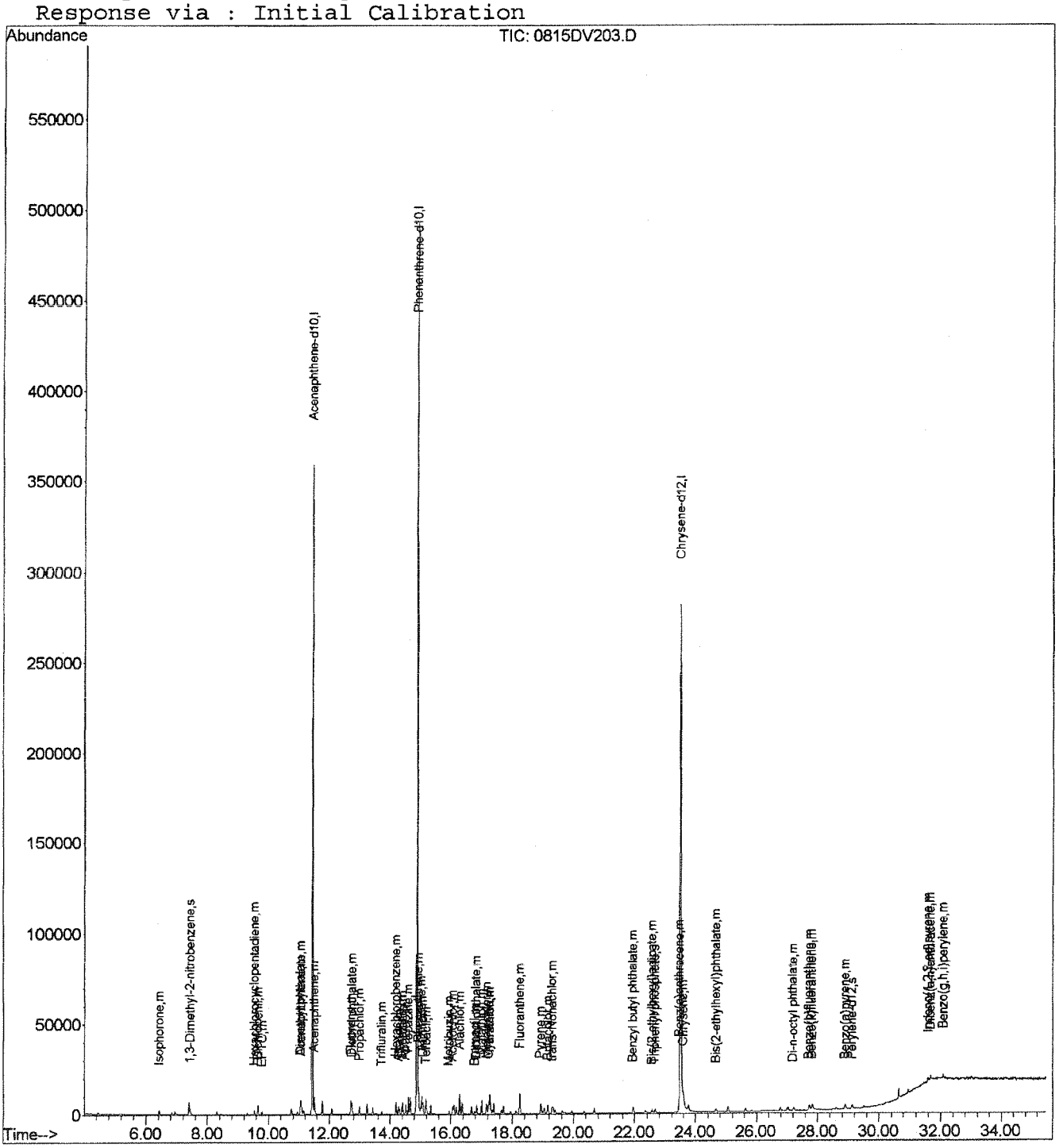
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.29	291	203	124.79	ug/L	#	64
36)	Fluoranthene	18.24	202	6504	55.96	ug/L		99
37)	Butachlor	19.15	160	1280	66.43	ug/L		91
38)	trans-Nonachlor	19.30	409	419	75.78	ug/L		93
39)	Pyrene	18.93	202	6172	65.65	ug/L		96
40)	Benzyl butyl phthalate	21.95	149	1850	81.69	ug/L		100
41)	Bis(2-ethylhexyl)adipate	22.56	129	1030	79.97	ug/L		95
42)	Benz(a)anthracene	23.45	228	5453	48.35	ug/L		96
43)	Chrysene	23.60	228	6938	56.66	ug/L		98
44)	Bis(2-ethylhexyl)phthalate	24.67	149	2379	100.85	ug/L		99
45)	Di-n-octyl phthalate	27.22	149	3130	97.45	ug/L		99
46)	Benzo(b)fluoranthene	27.73	252	3999	36.22	ug/L		92
47)	Benzo(k)fluoranthene	27.83	252	4815	38.24	ug/L		96
48)	Benzo(a)pyrene	28.90	252	3526	50.76	ug/L		95
50)	Indeno(1,2,3-cd)pyrene	31.60	276	2213	36.18	ug/L		92
51)	Dibenz(a,h)anthracene	31.68	278	2703	31.33	ug/L		84
52)	Benzo(g,h,i)perylene	32.09	276	2984	56.52	ug/L		86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV203.D Vial: 0
Acq On : 15-08-2013 19:34 Operator:
Sample : ICAL 50ppb | DWSTD06-63H Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV204.D Vial: 0
Acq On : 15-08-2013 20:21 Operator:
Sample : ICAL 100ppb | DWSTD06-63G Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:30 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	182541	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.90	188	346886	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	321763	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	2723	129.44	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 12.94%#			
34) Triphenyl phosphate	22.67	169	1425	124.82	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 12.48%#			
49) Perylene-d12	29.12	264	8413	95.37	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 9.54%#			
Target Compounds						Qvalue
2) Isophorone	6.42	82	2460	95.06	ug/L	81
4) Hexachlorocyclopentadiene	9.54	237	970	167.58	ug/L	95
5) Dichlobenil	9.65	171	5370	118.10	ug/L	91
6) EPTC	9.79	128	1637	116.38	ug/L	97
7) Dimethyl phthalate	11.04	163	10528	125.38	ug/L	100
8) Acenaphthylene	11.07	152	9489	114.17	ug/L	94
9) Acenaphthene	11.51	153	9270	112.06	ug/L	85
10) Diethyl phthalate	12.75	149	9852	115.15	ug/L	98
11) Fluorene	12.71	165	9243	120.68	ug/L	96
12) Propachlor	13.00	120	3529	115.04	ug/L	88
13) Trifluralin	13.73	264	990	110.69	ug/L	100
15) Hexachlorobenzene	14.20	284	3225	137.09	ug/L	98
16) Atraton	14.28	196	1485	103.50	ug/L	83
17) Prometon	14.42	210	2277	105.26	ug/L	91
18) Simazine	14.40	201	1252	121.85	ug/L	91
19) Atrazine	14.51	215	828	108.97	ug/L	94
20) Propazine	14.60	214	2772	111.94	ug/L	95
21) Diazinon	15.08	137	1656	105.20	ug/L	94
22) Phenanthrene	14.94	178	15822	120.02	ug/L	97
23) Anthracene	15.05	178	14910	115.66	ug/L	97
24) Terbacil	15.21	117	454	91.32	ug/L	77
25) Acetochlor	16.07	146	2568	133.79	ug/L	85
26) Metribuzin	15.94	198	1210	111.04	ug/L	87
27) Alachlor	16.29	160	3840	114.05	ug/L	100
28) Bromacil	16.78	207	1696	119.14	ug/L	94
29) Dibutyl phthalate	16.84	149	13604	100.85	ug/L	99
30) Malathion	17.01	173	2659	150.83	ug/L	91
31) Metolachlor	17.16	162	10780	108.93	ug/L	97
32) Cyanazine	17.25	225	1141	117.63	ug/L	89

(#) = qualifier out of range (m) = manual integration
0815DV204.D 081513_525.M Mon Aug 19 13:15:36 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV204.D Vial: 0
Acq On : 15-08-2013 20:21 Operator:
Sample : ICAL 100ppb | DWSTD06-63G Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:30 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

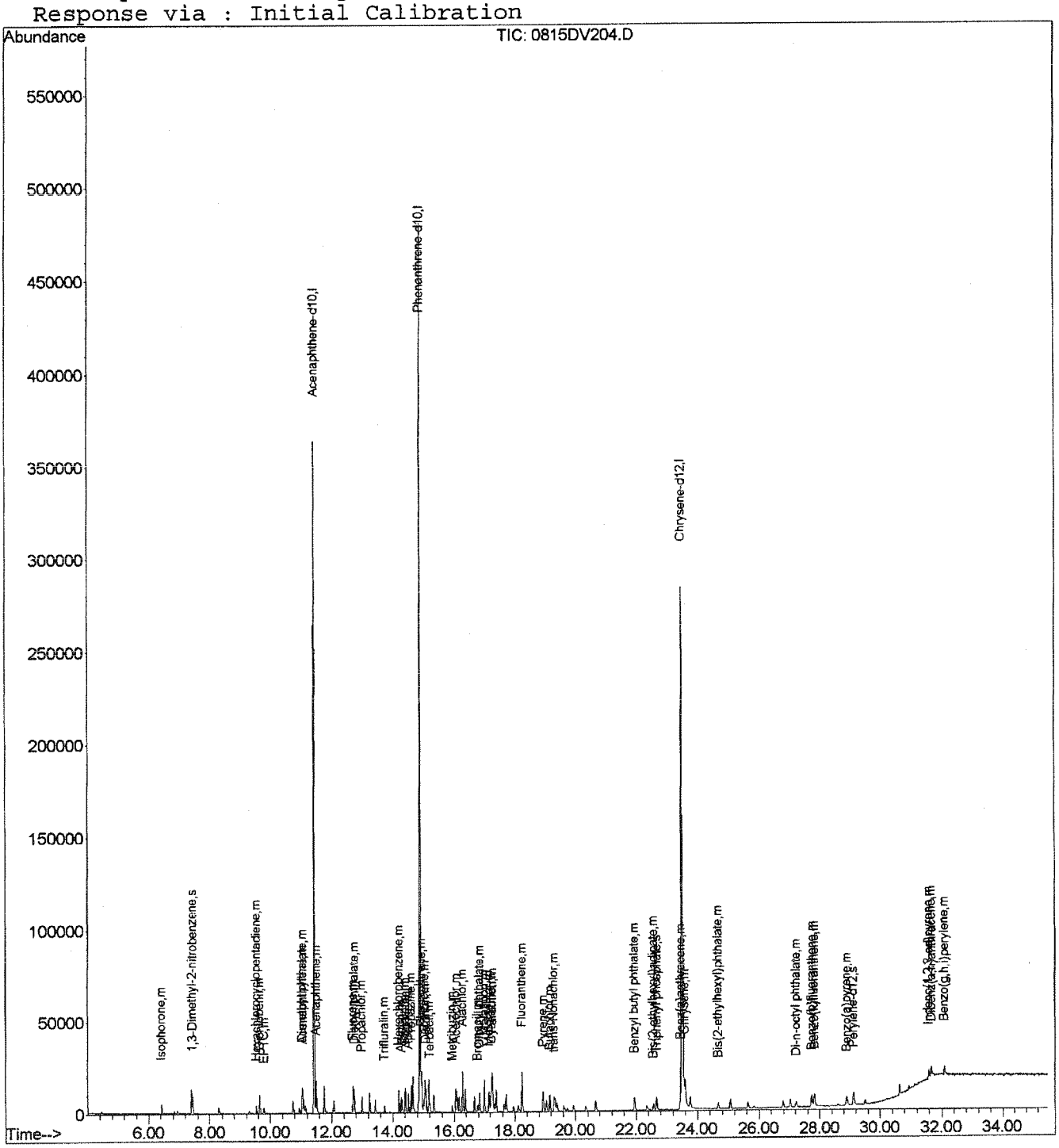
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	Parathion	17.29	291	535	202.34	ug/L	99
36)	Fluoranthene	18.24	202	13016	112.47	ug/L	99
37)	Butachlor	19.15	160	2546	95.27	ug/L	94
38)	trans-Nonachlor	19.29	409	798	113.55	ug/L	99
39)	Pyrene	18.93	202	11950	110.98	ug/L	96
40)	Benzyl butyl phthalate	21.96	149	3977	109.91	ug/L	93
41)	Bis(2-ethylhexyl)adipate	22.56	129	2086	99.82	ug/L	97
42)	Benz(a)anthracene	23.45	228	10676	95.35	ug/L	100
43)	Chrysene	23.60	228	12539	103.50	ug/L	94
44)	Bis(2-ethylhexyl)phthalate	24.67	149	4517	121.17	ug/L	96
45)	Di-n-octyl phthalate	27.23	149	6563	118.11	ug/L	97
46)	Benzo(b)fluoranthene	27.73	252	8345	76.20	ug/L	96
47)	Benzo(k)fluoranthene	27.83	252	10599	84.86	ug/L	94
48)	Benzo(a)pyrene	28.90	252	7354	86.51	ug/L	96
50)	Indeno(1,2,3-cd)pyrene	31.60	276	4396	66.04	ug/L	92
51)	Dibenz(a,h)anthracene	31.68	278	5817	67.92	ug/L	94
52)	Benzo(g,h,i)perylene	32.10	276	6257	95.75	ug/L	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV204.D Vial: 0
Acq On : 15-08-2013 20:21 Operator:
Sample : ICAL 100ppb | DWSTD06-63G Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



0815DV204.D 081513_525.M Mon Aug 19 13:15:36 2013 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV205.D Vial: 0
Acq On : 15-08-2013 21:07 Operator:
Sample : ICAL 200ppb | DWSTD06-63F Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:31 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	174086	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	323319	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	310227	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	4396	204.92	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 20.49%#			
34) Triphenyl phosphate	22.67	169	2706	202.04	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 20.20%#			
49) Perylene-d12	29.12	264	16055	187.46	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 18.75%#			
Target Compounds						Qvalue
2) Isophorone	6.42	82	4816	194.20	ug/L	93
4) Hexachlorocyclopentadiene	9.54	237	1870	283.57	ug/L	94
5) Dichlobenil	9.65	171	10172	222.14	ug/L	96
6) EPTC	9.78	128	3146	207.54	ug/L	95
7) Dimethyl phthalate	11.04	163	19861	239.99	ug/L	98
8) Acenaphthylene	11.07	152	19255	240.63	ug/L	100
9) Acenaphthene	11.51	153	17456	221.26	ug/L	100
10) Diethyl phthalate	12.75	149	18219	222.09	ug/L	98
11) Fluorene	12.70	165	18229	247.87	ug/L	99
12) Propachlor	13.00	120	7022	212.83	ug/L	92
13) Trifluralin	13.73	264	2500	179.20	ug/L	100
15) Hexachlorobenzene	14.20	284	5980	272.74	ug/L	99
16) Atraton	14.28	196	2881	213.29	ug/L	97
17) Prometon	14.42	210	4784	218.00	ug/L	95
18) Simazine	14.40	201	2321	239.88	ug/L	96
19) Atrazine	14.51	215	1746	245.18	ug/L	86
20) Propazine	14.61	214	5435	234.45	ug/L	93
21) Diazinon	15.08	137	3489	233.48	ug/L	90
22) Phenanthrene	14.94	178	28619	232.91	ug/L	96
23) Anthracene	15.05	178	27383	227.91	ug/L	92
24) Terbacil	15.22	117	979	209.54	ug/L	97
25) Acetochlor	16.07	146	4411	243.59	ug/L	91
26) Metribuzin	15.95	198	2672	192.64	ug/L	100
27) Alachlor	16.29	160	7273	217.05	ug/L	98
28) Bromacil	16.78	207	3377	209.79	ug/L	96
29) Dibutyl phthalate	16.84	149	27971	221.36	ug/L	99
30) Malathion	17.01	173	5795	348.97	ug/L	93
31) Metolachlor	17.16	162	21469	207.22	ug/L	93
32) Cyanazine	17.24	225	2385	256.77	ug/L	83

(#) = qualifier out of range (m) = manual integration
0815DV205.D 081513_525.M Mon Aug 19 13:15:38 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV205.D Vial: 0
Acq On : 15-08-2013 21:07 Operator:
Sample : ICAL 200ppb | DWSTD06-63F Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:31 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

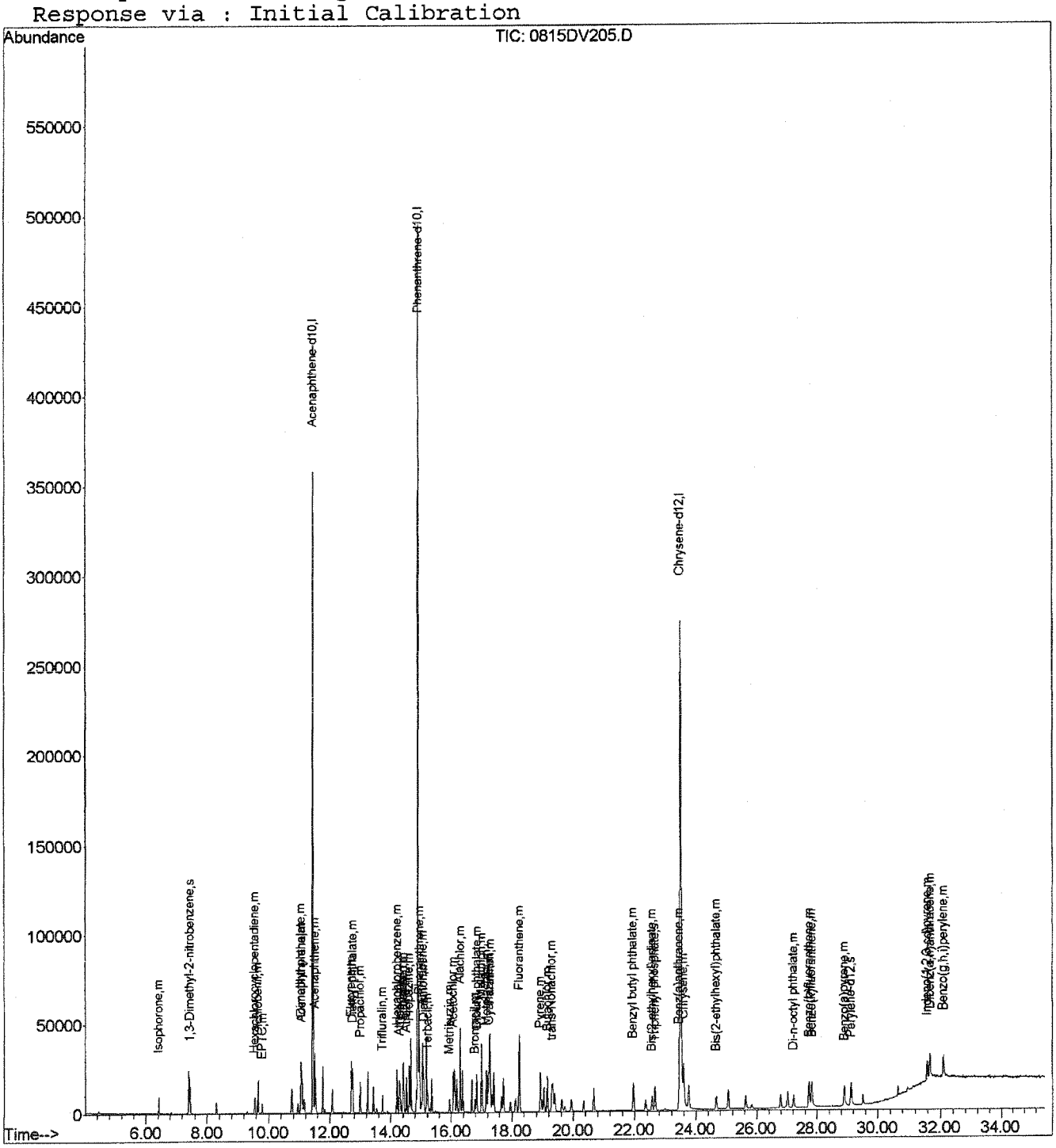
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.30	291	1217	377.85	ug/L	#	78
36)	Fluoranthene	18.24	202	25930	229.41	ug/L		99
37)	Butachlor	19.16	160	5459	164.87	ug/L		83
38)	trans-Nonachlor	19.30	409	1621	200.89	ug/L		97
39)	Pyrene	18.93	202	23441	206.24	ug/L		98
40)	Benzyl butyl phthalate	21.95	149	8879	178.06	ug/L		98
41)	Bis(2-ethylhexyl)adipate	22.57	129	5012	157.27	ug/L		99
42)	Benz(a)anthracene	23.45	228	21686	199.37	ug/L		100
43)	Chrysene	23.60	228	23803	203.77	ug/L		97
44)	Bis(2-ethylhexyl)phthalate	24.67	149	10022	175.94	ug/L		97
45)	Di-n-octyl phthalate	27.23	149	14959	171.04	ug/L		98
46)	Benzo(b)fluoranthene	27.73	252	18351	172.69	ug/L		97
47)	Benzo(k)fluoranthene	27.83	252	21937	181.24	ug/L		99
48)	Benzo(a)pyrene	28.90	252	15817	169.68	ug/L		100
50)	Indeno(1,2,3-cd)pyrene	31.60	276	10418	152.02	ug/L		84
51)	Dibenz(a,h)anthracene	31.68	278	13229	158.96	ug/L		97
52)	Benzo(g,h,i)perylene	32.10	276	13355	185.23	ug/L		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV205.D Vial: 0
Acq On : 15-08-2013 21:07 Operator:
Sample : ICAL 200ppb | DWSTD06-63F Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV206.D Vial: 0
Acq On : 15-08-2013 21:53 Operator:
Sample : ICAL 500ppb | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:32 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Acenaphthene-d10	11.44	162	188015	2500.00	ug/L		0.00
14) Phenanthrene-d10	14.89	188	340251	2500.00	ug/L		0.00
35) Chrysene-d12	23.50	240	326670	2500.00	ug/L		0.00
System Monitoring Compounds							
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	11952	481.01	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 48.10%#				
34) Triphenyl phosphate	22.67	169	8525	510.41	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 51.04%#				
49) Perylene-d12	29.12	264	45776	496.03	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 49.60%#				
Target Compounds							Qvalue
2) Isophorone	6.41	82	13972	513.67	ug/L		90
4) Hexachlorocyclopentadiene	9.54	237	5763	693.40	ug/L		97
5) Dichlobenil	9.65	171	28747	560.86	ug/L		96
6) EPTC	9.78	128	8848	493.99	ug/L		97
7) Dimethyl phthalate	11.05	163	57014	613.18	ug/L		98
8) Acenaphthylene	11.07	152	55242	621.46	ug/L		97
9) Acenaphthene	11.51	153	50033	587.20	ug/L		97
10) Diethyl phthalate	12.74	149	55184	610.86	ug/L		98
11) Fluorene	12.70	165	52266	644.50	ug/L		92
12) Propachlor	12.99	120	19090	492.24	ug/L		86
13) Trifluralin	13.73	264	8934	429.87	ug/L		94
15) Hexachlorobenzene	14.20	284	17460	756.69	ug/L		97
16) Atraton	14.29	196	8757	595.49	ug/L		95
17) Prometon	14.42	210	13212	547.23	ug/L		97
18) Simazine	14.40	201	6264	596.79	ug/L		96
19) Atrazine	14.52	215	4876	640.52	ug/L	#	71
20) Propazine	14.61	214	15278	617.83	ug/L		95
21) Diazinon	15.08	137	9631	583.51	ug/L		98
22) Phenanthrene	14.94	178	81400	629.50	ug/L		96
23) Anthracene	15.05	178	80869	639.58	ug/L		98
24) Terbacil	15.22	117	2670	531.27	ug/L		97
25) Acetochlor	16.06	146	12556	631.98	ug/L		87
26) Metribuzin	15.94	198	8049	454.14	ug/L		95
27) Alachlor	16.30	160	20853	554.02	ug/L		89
28) Bromacil	16.80	207	10153	523.29	ug/L		93
29) Dibutyl phthalate	16.84	149	87590	647.20	ug/L		97
30) Malathion	17.01	173	19340	1066.10	ug/L		96
31) Metolachlor	17.16	162	61992	524.59	ug/L		92
32) Cyanazine	17.24	225	6445	616.82	ug/L		80

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV206.D Vial: 0
Acq On : 15-08-2013 21:53 Operator:
Sample : ICAL 500ppb | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:32 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

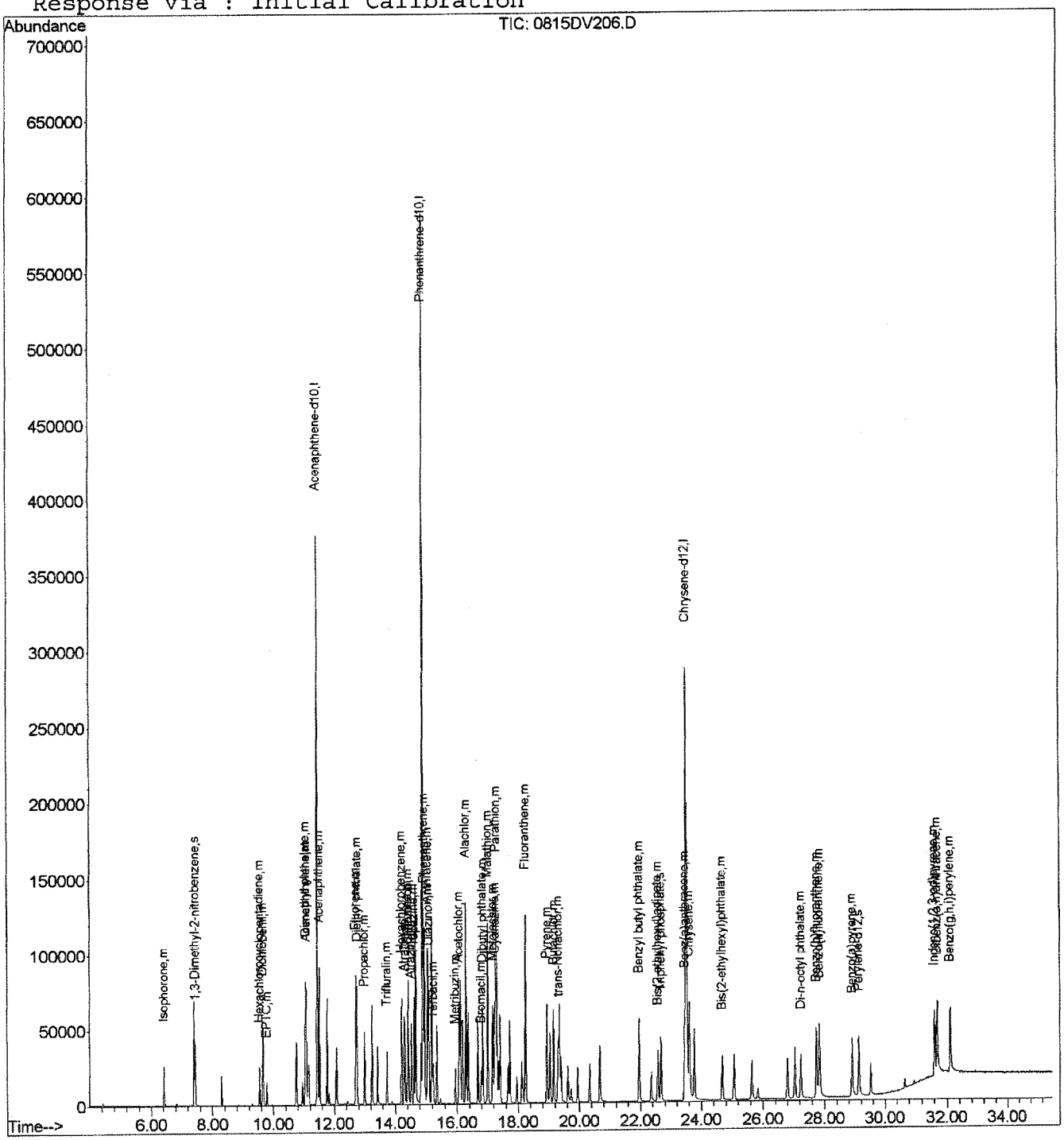
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.29	291	5305	1271.30	ug/L	#	67
36)	Fluoranthene	18.24	202	73731	595.54	ug/L		98
37)	Butachlor	19.15	160	17566	417.55	ug/L		97
38)	trans-Nonachlor	19.30	409	4513	477.41	ug/L		96
39)	Pyrene	18.93	202	68449	531.72	ug/L		98
40)	Benzyl butyl phthalate	21.96	149	33061	472.03	ug/L		98
41)	Bis(2-ethylhexyl)adipate	22.57	129	20840	431.63	ug/L		92
42)	Benz(a)anthracene	23.45	228	67236	571.65	ug/L		95
43)	Chrysene	23.60	228	67056	545.16	ug/L		99
44)	Bis(2-ethylhexyl)phthalate	24.67	149	41091	446.98	ug/L		96
45)	Di-n-octyl phthalate	27.23	149	62103	432.28	ug/L		97
46)	Benzo(b)fluoranthene	27.73	252	58340	510.07	ug/L		98
47)	Benzo(k)fluoranthene	27.83	252	70218	540.59	ug/L		94
48)	Benzo(a)pyrene	28.90	252	53893	499.24	ug/L		95
50)	Indeno(1,2,3-cd)pyrene	31.59	276	37920	497.23	ug/L		80
51)	Dibenz(a,h)anthracene	31.68	278	47659	527.23	ug/L		92
52)	Benzo(g,h,i)perylene	32.09	276	46174	548.53	ug/L		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV206.D Vial: 0
Acq On : 15-08-2013 21:53 Operator:
Sample : ICAL 500ppb | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV207.D Vial: 0
Acq On : 15-08-2013 22:39 Operator:
Sample : ICAL 1000ppb | DWSTD06-62M Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:32 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	196868	2500.00 ug/L	0.00
14) Phenanthrene-d10	14.90	188	356410	2500.00 ug/L	0.00
35) Chrysene-d12	23.51	240	340805	2500.00 ug/L	0.00
System Monitoring Compounds					
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	27903	1026.93 ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 102.69%		
34) Triphenyl phosphate	22.67	169	20382	1134.40 ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 113.44%		
49) Perylene-d12	29.13	264	115151	1141.69 ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 114.17%		
Target Compounds					Qvalue
2) Isophorone	6.42	82	30498	1044.21 ug/L	99
4) Hexachlorocyclopentadiene	9.55	237	12284	1303.38 ug/L	93
5) Dichlobenil	9.65	171	57805	1065.46 ug/L	84
6) EPTC	9.78	128	19701	1003.69 ug/L	96
7) Dimethyl phthalate	11.05	163	116116	1149.67 ug/L	99
8) Acenaphthylene	11.07	152	111039	1148.82 ug/L	100
9) Acenaphthene	11.51	153	100655	1128.19 ug/L	93
10) Diethyl phthalate	12.75	149	111592	1149.11 ug/L	97
11) Fluorene	12.71	165	105073	1202.58 ug/L	98
12) Propachlor	12.99	120	45644	1062.28 ug/L	100
13) Trifluralin	13.73	264	26833	1075.93 ug/L	96
15) Hexachlorobenzene	14.20	284	34061	1409.23 ug/L	96
16) Atraton	14.29	196	23499	1422.76 ug/L	98
17) Prometon	14.42	210	33665	1309.72 ug/L #	82
18) Simazine	14.41	201	14869	1279.25 ug/L	89
19) Atrazine	14.52	215	11039	1346.93 ug/L	91
20) Propazine	14.61	214	35145	1323.96 ug/L	93
21) Diazinon	15.09	137	23508	1247.85 ug/L	85
22) Phenanthrene	14.95	178	159722	1179.20 ug/L	94
23) Anthracene	15.05	178	168038	1268.73 ug/L	95
24) Terbacil	15.25	117	6802	1233.70 ug/L	94
25) Acetochlor	16.07	146	29513	1322.20 ug/L	91
26) Metribuzin	15.95	198	22135	1097.73 ug/L	96
27) Alachlor	16.30	160	49569	1179.84 ug/L	95
28) Bromacil	16.82	207	26557	1228.72 ug/L	96
29) Dibutyl phthalate	16.85	149	183205	1260.69 ug/L	99
30) Malathion	17.01	173	43437	2164.35 ug/L	92
31) Metolachlor	17.16	162	151178	1165.69 ug/L	89
32) Cyanazine	17.25	225	14863	1224.67 ug/L	86

(#) = qualifier out of range (m) = manual integration
0815DV207.D 081513_525.M Mon Aug 19 13:15:41 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV207.D Vial: 0
Acq On : 15-08-2013 22:39 Operator:
Sample : ICAL 1000ppb | DWSTD06-62M Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:32 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

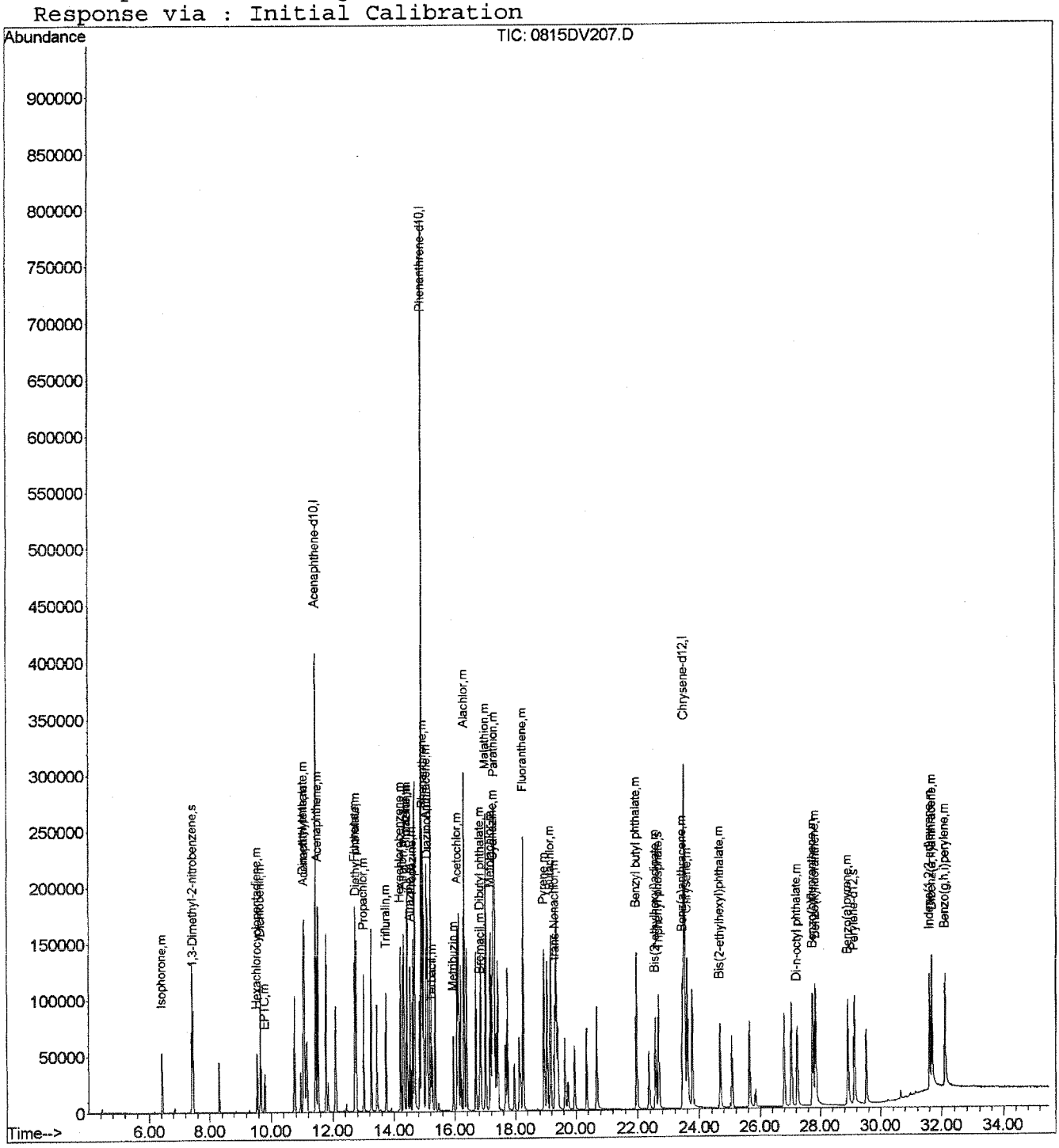
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	Parathion	17.30	291	11785	2486.51	ug/L	100
36)	Fluoranthene	18.25	202	146084	1076.39	ug/L	95
37)	Butachlor	19.16	160	45093	931.71	ug/L	92
38)	trans-Nonachlor	19.30	409	10179	1007.94	ug/L	89
39)	Pyrene	18.94	202	143840	1028.60	ug/L	100
40)	Benzyl butyl phthalate	21.96	149	75173	924.13	ug/L	97
41)	Bis(2-ethylhexyl)adipate	22.57	129	49912	878.07	ug/L	98
42)	Benz(a)anthracene	23.46	228	143042	1122.28	ug/L	100
43)	Chrysene	23.60	228	138316	1077.87	ug/L	98
44)	Bis(2-ethylhexyl)phthalate	24.68	149	102868	921.66	ug/L	97
45)	Di-n-octyl phthalate	27.23	149	158784	904.44	ug/L	99
46)	Benzo(b)fluoranthene	27.74	252	129938	1052.26	ug/L	99
47)	Benzo(k)fluoranthene	27.83	252	149770	1075.18	ug/L	97
48)	Benzo(a)pyrene	28.91	252	123182	1041.91	ug/L	99
50)	Indeno(1,2,3-cd)pyrene	31.60	276	85649	1029.94	ug/L	81
51)	Dibenz(a,h)anthracene	31.68	278	108514	1098.57	ug/L	86
52)	Benzo(g,h,i)perylene	32.10	276	104166	1125.60	ug/L	76

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV207.D Vial: 0
Acq On : 15-08-2013 22:39 Operator:
Sample : ICAL 1000ppb | DWSTD06-62M Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV208.D Vial: 0
Acq On : 15-08-2013 23:25 Operator:
Sample : ICAL 2000ppb | DWSTD06-63E Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:33 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Acenaphthene-d10	11.44	162	183158	2500.00	ug/L		0.00
14) Phenanthrene-d10	14.90	188	330752	2500.00	ug/L		0.00
35) Chrysene-d12	23.51	240	312809	2500.00	ug/L		0.00
System Monitoring Compounds							
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	57277	2151.10	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 215.11%#				
34) Triphenyl phosphate	22.67	169	42588	2713.75	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 271.38%#				
49) Perylene-d12	29.13	264	238848	2374.12	ug/L		0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 237.41%#				
Target Compounds							Qvalue
2) Isophorone	6.41	82	64456	2245.78	ug/L		84
4) Hexachlorocyclopentadiene	9.54	237	30197	3013.48	ug/L		92
5) Dichlobenil	9.65	171	123546	2431.28	ug/L		94
6) EPTC	9.78	128	40543	2109.28	ug/L		94
7) Dimethyl phthalate	11.04	163	246357	2432.33	ug/L		100
8) Acenaphthylene	11.06	152	234275	2395.60	ug/L		94
9) Acenaphthene	11.51	153	212873	2564.58	ug/L		99
10) Diethyl phthalate	12.75	149	241430	2507.92	ug/L		100
11) Fluorene	12.70	165	220613	2542.18	ug/L		97
12) Propachlor	13.00	120	98211	2285.48	ug/L		94
13) Trifluralin	13.73	264	64463	2519.33	ug/L		100
15) Hexachlorobenzene	14.19	284	69398	3094.00	ug/L		93
16) Atraton	14.29	196	45024	2667.19	ug/L		83
17) Prometon	14.43	210	64238	2678.94	ug/L		92
18) Simazine	14.42	201	29744	2512.14	ug/L		92
19) Atrazine	14.53	215	21882	2732.19	ug/L		99
20) Propazine	14.62	214	68102	2644.81	ug/L		98
21) Diazinon	15.08	137	49008	2442.11	ug/L		91
22) Phenanthrene	14.94	178	340062	2705.37	ug/L		100
23) Anthracene	15.05	178	327300	2662.90	ug/L		99
24) Terbacil	15.26	117	14130	2546.53	ug/L		91
25) Acetochlor	16.07	146	61140	2618.80	ug/L	#	72
26) Metribuzin	15.94	198	50077	2543.28	ug/L		98
27) Alachlor	16.29	160	95240	2240.26	ug/L		93
28) Bromacil	16.85	207	55865	2650.72	ug/L	#	69
29) Dibutyl phthalate	16.85	149	399880	2794.22	ug/L		99
30) Malathion	17.01	173	101176	4814.70	ug/L		79
31) Metolachlor	17.17	162	321538	2523.20	ug/L		98
32) Cyanazine	17.26	225	28836	2209.10	ug/L		86

(#) = qualifier out of range (m) = manual integration
0815DV208.D 081513_525.M Mon Aug 19 13:15:43 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV208.D Vial: 0
Acq On : 15-08-2013 23:25 Operator:
Sample : ICAL 2000ppb | DWSTD06-63E Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:33 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

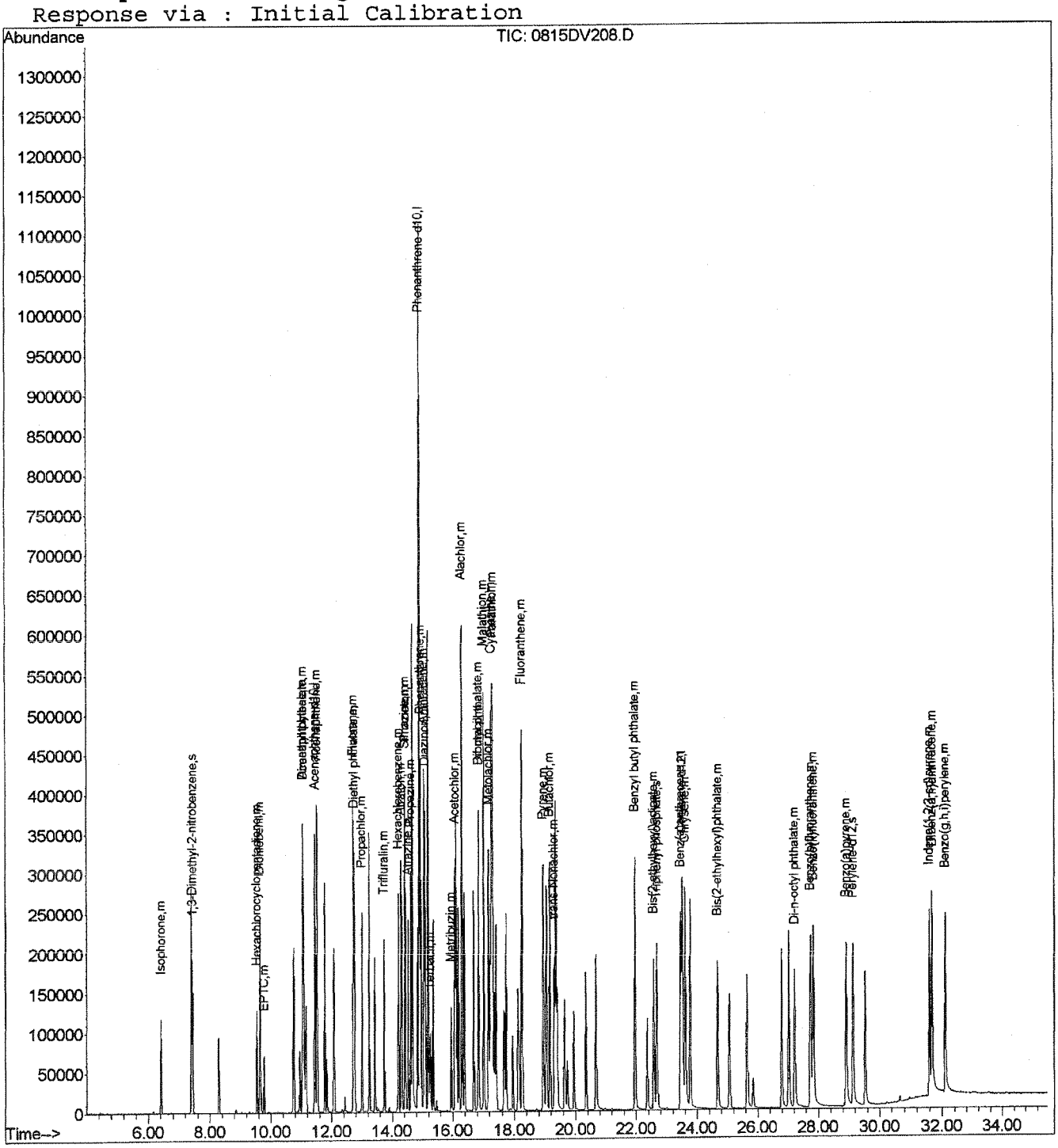
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.31	291	26462	5319.03	ug/L	#	75
36)	Fluoranthene	18.25	202	289105	2103.76	ug/L		91
37)	Butachlor	19.16	160	95211	1933.78	ug/L		88
38)	trans-Nonachlor	19.30	409	21322	2357.62	ug/L		96
39)	Pyrene	18.94	202	308863	2253.69	ug/L		96
40)	Benzyl butyl phthalate	21.96	149	172693	2030.00	ug/L		93
41)	Bis(2-ethylhexyl)adipate	22.57	129	123009	2047.98	ug/L		96
42)	Benz(a)anthracene	23.45	228	310123	2434.62	ug/L		99
43)	Chrysene	23.60	228	297849	2528.81	ug/L		98
44)	Bis(2-ethylhexyl)phthalate	24.67	149	258022	2138.50	ug/L		97
45)	Di-n-octyl phthalate	27.22	149	397853	2094.92	ug/L		98
46)	Benzo(b)fluoranthene	27.75	252	291491	2376.33	ug/L		100
47)	Benzo(k)fluoranthene	27.84	252	326707	2394.70	ug/L		97
48)	Benzo(a)pyrene	28.91	252	286254	2433.50	ug/L		99
50)	Indeno(1,2,3-cd)pyrene	31.60	276	203223	2420.59	ug/L		78
51)	Dibenz(a,h)anthracene	31.68	278	249589	2481.13	ug/L		93
52)	Benzo(g,h,i)perylene	32.11	276	233945	2531.69	ug/L		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV208.D Vial: 0
Acq On : 15-08-2013 23:25 Operator:
Sample : ICAL 2000ppb | DWSTD06-63E Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV209.D Vial: 0
Acq On : 16-08-2013 00:12 Operator:
Sample : ICAL 4000ppb | DWSTD06-63D Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:34 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	178805	2500.00 ug/L	0.00
14) Phenanthrene-d10	14.90	188	325612	2500.00 ug/L	0.00
35) Chrysene-d12	23.52	240	289347	2500.00 ug/L	0.00
System Monitoring Compounds					
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	110033	3955.49 ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 395.55%#		
34) Triphenyl phosphate	22.68	169	78548	6391.17 ug/L	0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 639.12%#		
49) Perylene-d12	29.14	264	430830	4151.70 ug/L	0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 415.17%#		
Target Compounds					Qvalue
2) Isophorone	6.41	82	119775	3971.18 ug/L	85
4) Hexachlorocyclopentadiene	9.54	237	53752	4895.77 ug/L	98
5) Dichlobenil	9.65	171	203325	4090.02 ug/L	91
6) EPTC	9.78	128	81294	4046.52 ug/L	90
7) Dimethyl phthalate	11.05	163	434690	4039.83 ug/L	98
8) Acenaphthylene	11.07	152	410259	3913.74 ug/L	98
9) Acenaphthene	11.51	153	366749	4525.95 ug/L	96
10) Diethyl phthalate	12.75	149	419438	4153.79 ug/L	98
11) Fluorene	12.71	165	394384	4298.52 ug/L	98
12) Propachlor	13.00	120	182815	4009.41 ug/L	100
13) Trifluralin	13.73	264	118390	4362.67 ug/L	94
15) Hexachlorobenzene	14.20	284	108630	4919.54 ug/L	97
16) Atraton	14.31	196	84202	4470.66 ug/L	99
17) Prometon	14.44	210	120752	5108.60 ug/L	91
18) Simazine	14.44	201	57137	4332.58 ug/L	82
19) Atrazine	14.54	215	41352	4867.05 ug/L	87
20) Propazine	14.62	214	123733	4588.72 ug/L	95
21) Diazinon	15.09	137	92088	3993.15 ug/L	99
22) Phenanthrene	14.95	178	581316	4697.67 ug/L	95
23) Anthracene	15.06	178	591866	4891.41 ug/L	93
24) Terbacil	15.30	117	27410	4497.37 ug/L	97
25) Acetochlor	16.08	146	117024	4406.55 ug/L	91
26) Metribuzin	15.96	198	97166	4792.19 ug/L	98
27) Alachlor	16.30	160	190376	4012.69 ug/L	97
28) Bromacil	16.87	207	104927	4795.56 ug/L	97
29) Dibutyl phthalate	16.85	149	691124	4594.59 ug/L	98
30) Malathion	17.02	173	188541	8013.86 ug/L	96
31) Metolachlor	17.18	162	581814	4352.01 ug/L	95
32) Cyanazine	17.28	225	58697	3757.19 ug/L	86

(#) = qualifier out of range (m) = manual integration
0815DV209.D 081513_525.M Mon Aug 19 13:15:45 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV209.D Vial: 0
Acq On : 16-08-2013 00:12 Operator:
Sample : ICAL 4000ppb | DWSTD06-63D Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:34 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

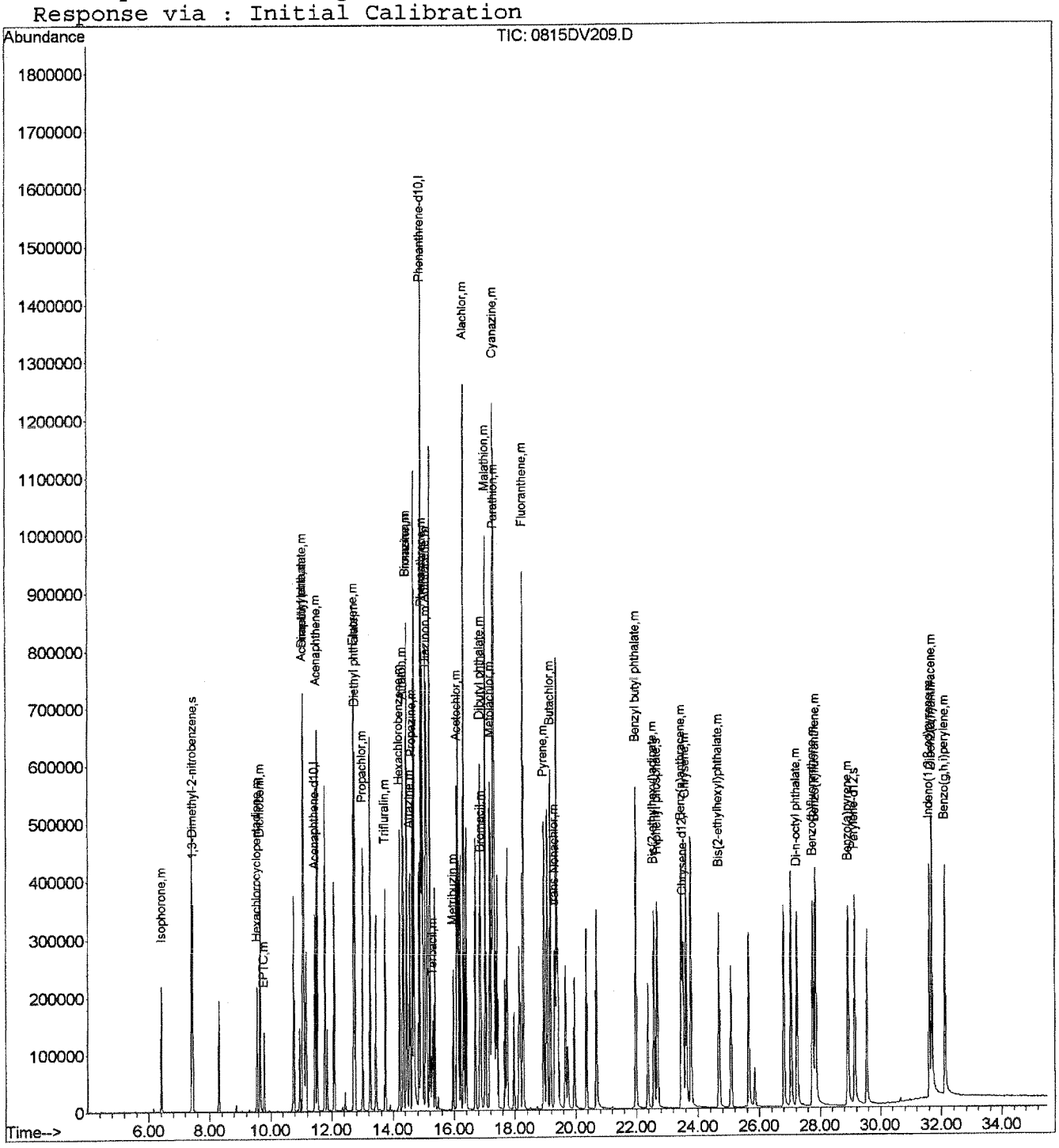
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.32	291	49518	8913.24	ug/L	#	83
36)	Fluoranthene	18.26	202	527891	3642.53	ug/L		97
37)	Butachlor	19.17	160	178886	3476.08	ug/L		98
38)	trans-Nonachlor	19.29	409	32353	4083.36	ug/L		93
39)	Pyrene	18.94	202	532448	3900.88	ug/L		99
40)	Benzyl butyl phthalate	21.98	149	308066	3462.02	ug/L		99
41)	Bis(2-ethylhexyl)adipate	22.57	129	226366	3579.48	ug/L		95
42)	Benz(a)anthracene	23.47	228	536143	4118.95	ug/L		99
43)	Chrysene	23.62	228	506711	4650.93	ug/L		98
44)	Bis(2-ethylhexyl)phthalate	24.68	149	494486	3805.71	ug/L		99
45)	Di-n-octyl phthalate	27.23	149	759687	3717.66	ug/L		99
46)	Benzo(b)fluoranthene	27.76	252	522867	4176.60	ug/L		100
47)	Benzo(k)fluoranthene	27.85	252	568405	4155.60	ug/L		96
48)	Benzo(a)pyrene	28.91	252	498274	4201.64	ug/L		100
50)	Indeno(1,2,3-cd)pyrene	31.61	276	374080	4301.75	ug/L		87
51)	Dibenz(a,h)anthracene	31.69	278	451410	4294.95	ug/L		100
52)	Benzo(g,h,i)perylene	32.12	276	421469	4474.24	ug/L		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV209.D Vial: 0
Acq On : 16-08-2013 00:12 Operator:
Sample : ICAL 4000ppb | DWSTD06-63D Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV210.D Vial: 0
Acq On : 16-08-2013 00:58 Operator:
Sample : ICAL 6000ppb | DWSTD06-63C Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:35 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Acenaphthene-d10	11.45	162	171122	2500.00 ug/L	0.00
14) Phenanthrene-d10	14.90	188	310755	2500.00 ug/L	0.00
35) Chrysene-d12	23.53	240	286270	2500.00 ug/L	0.01
System Monitoring Compounds					
3) 1,3-Dimethyl-2-nitrobenzen	7.44	134	158849	5634.70 ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 563.47%#		
34) Triphenyl phosphate	22.69	169	119770	-2500.00 ug/L	0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = -250.00%#		
49) Perylene-d12	29.15	264	630783	5651.59 ug/L	0.02
Spiked Amount 1000.000	Range 70 - 130		Recovery = 565.16%#		
Target Compounds					Qvalue
2) Isophorone	6.42	82	178745	5766.30 ug/L	90
4) Hexachlorocyclopentadiene	9.55	237	76740	6646.24 ug/L	96
5) Dichlobenil	9.65	171	296287	6221.01 ug/L	94
6) EPTC	9.79	128	123823	6048.83 ug/L	95
7) Dimethyl phthalate	11.06	163	633900	5686.35 ug/L	98
8) Acenaphthylene	11.07	152	606378	5522.20 ug/L	100
9) Acenaphthene	11.52	153	526618	6790.64 ug/L	93
10) Diethyl phthalate	12.75	149	597483	5785.24 ug/L	92
11) Fluorene	12.71	165	557973	5931.87 ug/L	98
12) Propachlor	13.00	120	271402	5763.77 ug/L	99
13) Trifluralin	13.74	264	181595	6453.93 ug/L	91
15) Hexachlorobenzene	14.21	284	153547	7286.15 ug/L	95
16) Atraton	14.32	196	134966	6594.71 ug/L	91
17) Prometon	14.46	210	180790	8019.33 ug/L	89
18) Simazine	14.46	201	88504	6261.43 ug/L	82
19) Atrazine	14.56	215	60398	6957.89 ug/L	88
20) Propazine	14.64	214	187964	6831.77 ug/L	97
21) Diazinon	15.10	137	145458	5705.87 ug/L	96
22) Phenanthrene	14.96	178	849813	7195.75 ug/L	98
23) Anthracene	15.07	178	856954	7420.79 ug/L	94
24) Terbacil	15.33	117	44555m	6818.50 ug/L	
25) Acetochlor	16.08	146	178281	6198.32 ug/L	89
26) Metribuzin	15.98	198	147363	7303.64 ug/L	100
27) Alachlor	16.31	160	307149	5998.90 ug/L	93
28) Bromacil	16.92	207	162515	7360.75 ug/L	94
29) Dibutyl phthalate	16.86	149	1006245	6556.43 ug/L	99
30) Malathion	17.04	173	286185	11328.92 ug/L	79
31) Metolachlor	17.18	162	897758	6562.95 ug/L	98
32) Cyanazine	17.30	225	115052	6089.05 ug/L	76

(#) = qualifier out of range (m) = manual integration
0815DV210.D 081513_525.M Mon Aug 19 13:15:47 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV210.D Vial: 0
Acq On : 16-08-2013 00:58 Operator:
Sample : ICAL 6000ppb | DWSTD06-63C Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:45:35 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Initial Calibration
DataAcq Meth :

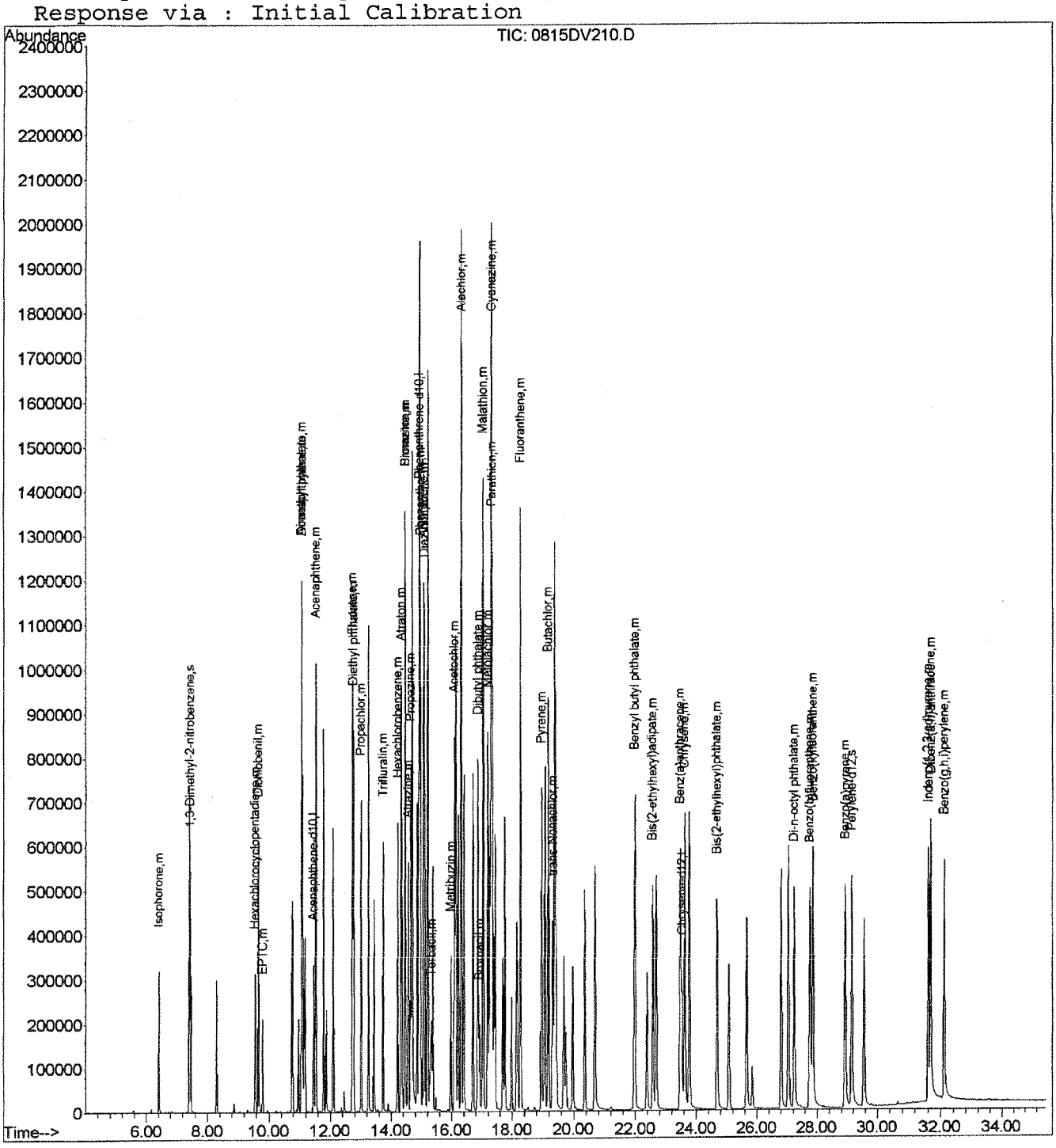
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	Parathion	17.33	291	77900	12987.01	ug/L	87
36)	Fluoranthene	18.27	202	808769	5065.17	ug/L	99
37)	Butachlor	19.18	160	277760	4936.58	ug/L	99
38)	trans-Nonachlor	19.31	409	41934	5660.24	ug/L	96
39)	Pyrene	18.96	202	763785	5333.09	ug/L	98
40)	Benzyl butyl phthalate	21.99	149	459521	4747.99	ug/L	95
41)	Bis(2-ethylhexyl)adipate	22.58	129	335737	4883.98	ug/L	98
42)	Benz(a)anthracene	23.48	228	765012	5509.31	ug/L	99
43)	Chrysene	23.63	228	716729	6649.33	ug/L	98
44)	Bis(2-ethylhexyl)phthalate	24.68	149	728182	5121.79	ug/L	92
45)	Di-n-octyl phthalate	27.24	149	1143551	5085.12	ug/L	100
46)	Benzo(b)fluoranthene	27.77	252	747304	5613.79	ug/L	98
47)	Benzo(k)fluoranthene	27.87	252	799270	5562.39	ug/L	97
48)	Benzo(a)pyrene	28.93	252	739687	5859.48	ug/L	97
50)	Indeno(1,2,3-cd)pyrene	31.62	276	542569	5810.37	ug/L	94
51)	Dibenz(a,h)anthracene	31.70	278	634097	5624.98	ug/L	96
52)	Benzo(g,h,i)perylene	32.12	276	596589	5979.93	ug/L	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV210.D Vial: 0
Acq On : 16-08-2013 00:58 Operator:
Sample : ICAL 6000ppb | DWSTD06-63C Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 13:00 2013 Quant Results File: 081513_525.R

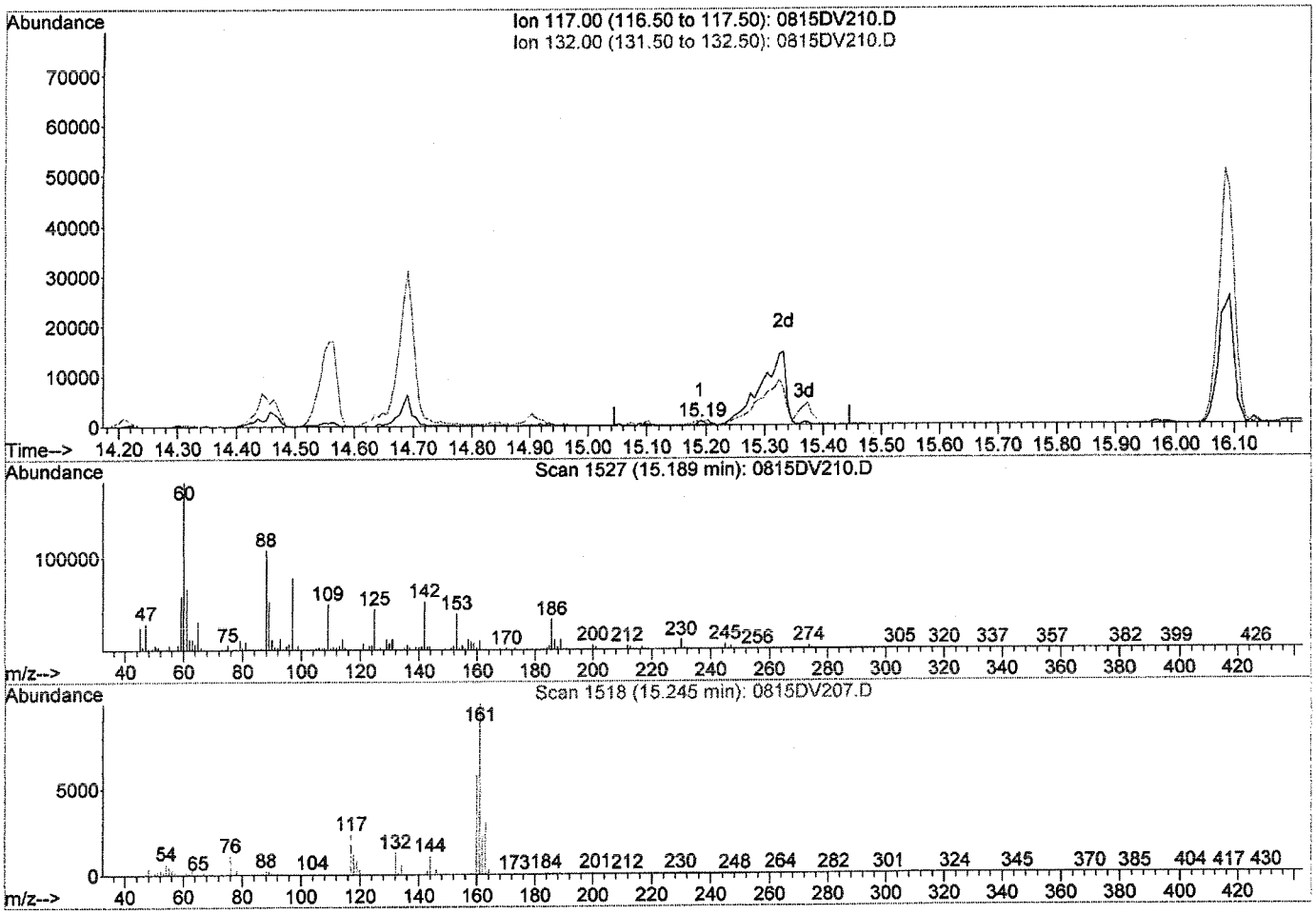
Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 13:07:10 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV210.D Vial: 0
Acq On : 16-08-2013 00:58 Operator:
Sample : ICAL 6000ppb | DWSTD06-63C Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 12:48 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV210.D

(24) Terbacil (m)

15.19min 176.33ug/L

response 790

Ion	Exp%	Act%
117.00	100	100
132.00	59.20	124.17#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

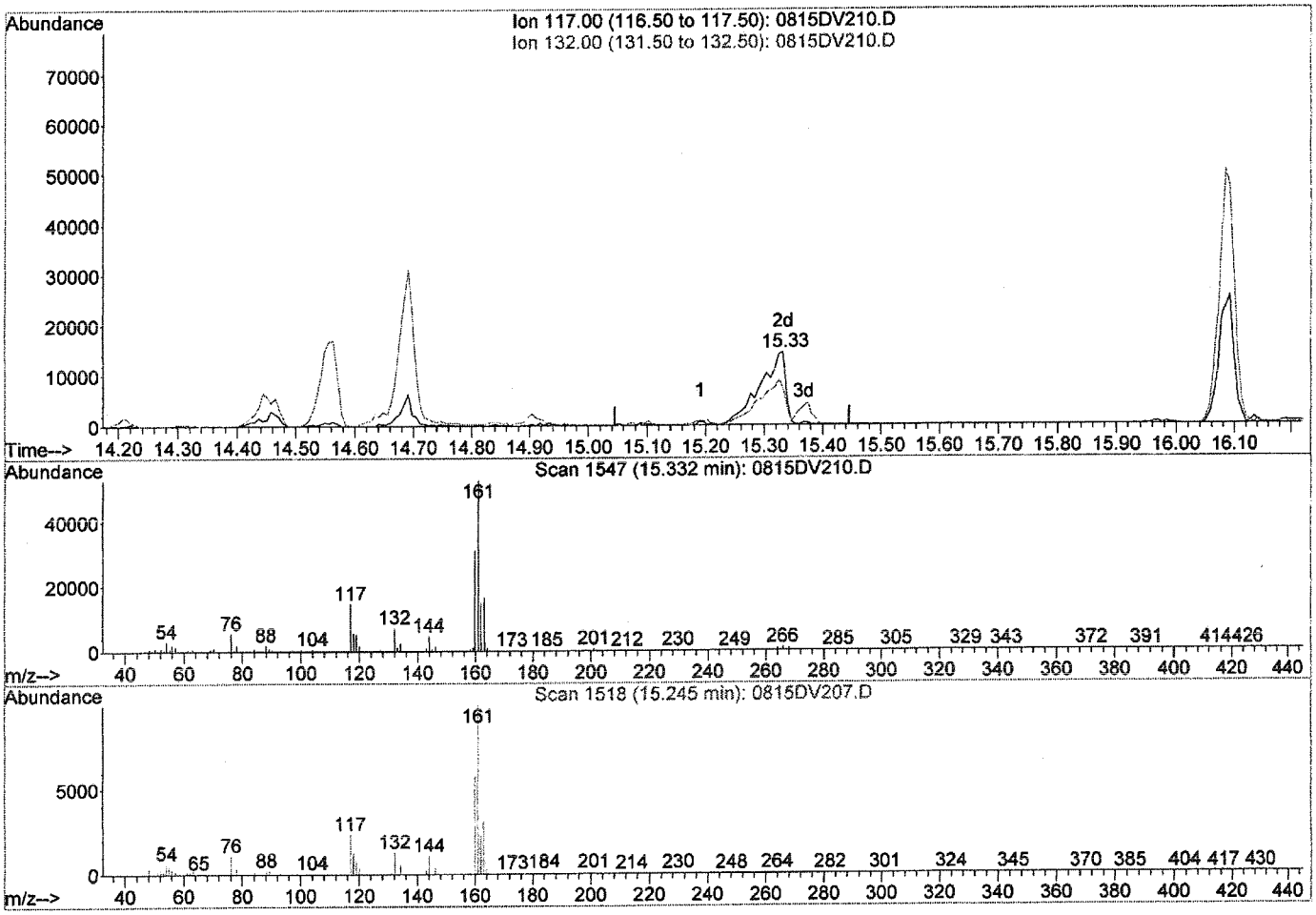
Before

0815DV210.D 081513_525.M Mon Aug 19 12:57:30 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\081513-525\0815DV210.D Vial: 0
Acq On : 16-08-2013 00:58 Operator:
Sample : ICAL 6000ppb | DWSTD06-63C Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 13:00 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL
Last Update : Mon Aug 19 12:45:06 2013
Response via : Multiple Level Calibration



TIC: 0815DV210.D

(24) Terbacil (m)

15.33min 6818.50ug/L m

response 44555

Ion	Exp%	Act%
117.00	100	100
132.00	59.20	49.24
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Wrong Peak

08/19/13

0815DV210.D 081513_525.M Mon Aug 19 12:57:39 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV213.D Vial: 0
Acq On : 16-08-2013 03:16 Operator:
Sample : ICV 3 | DWSTD06-48F 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 14:19:51 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Mon Aug 19 14:19:19 2013
Response via : Initial Calibration
DataAcq Meth :

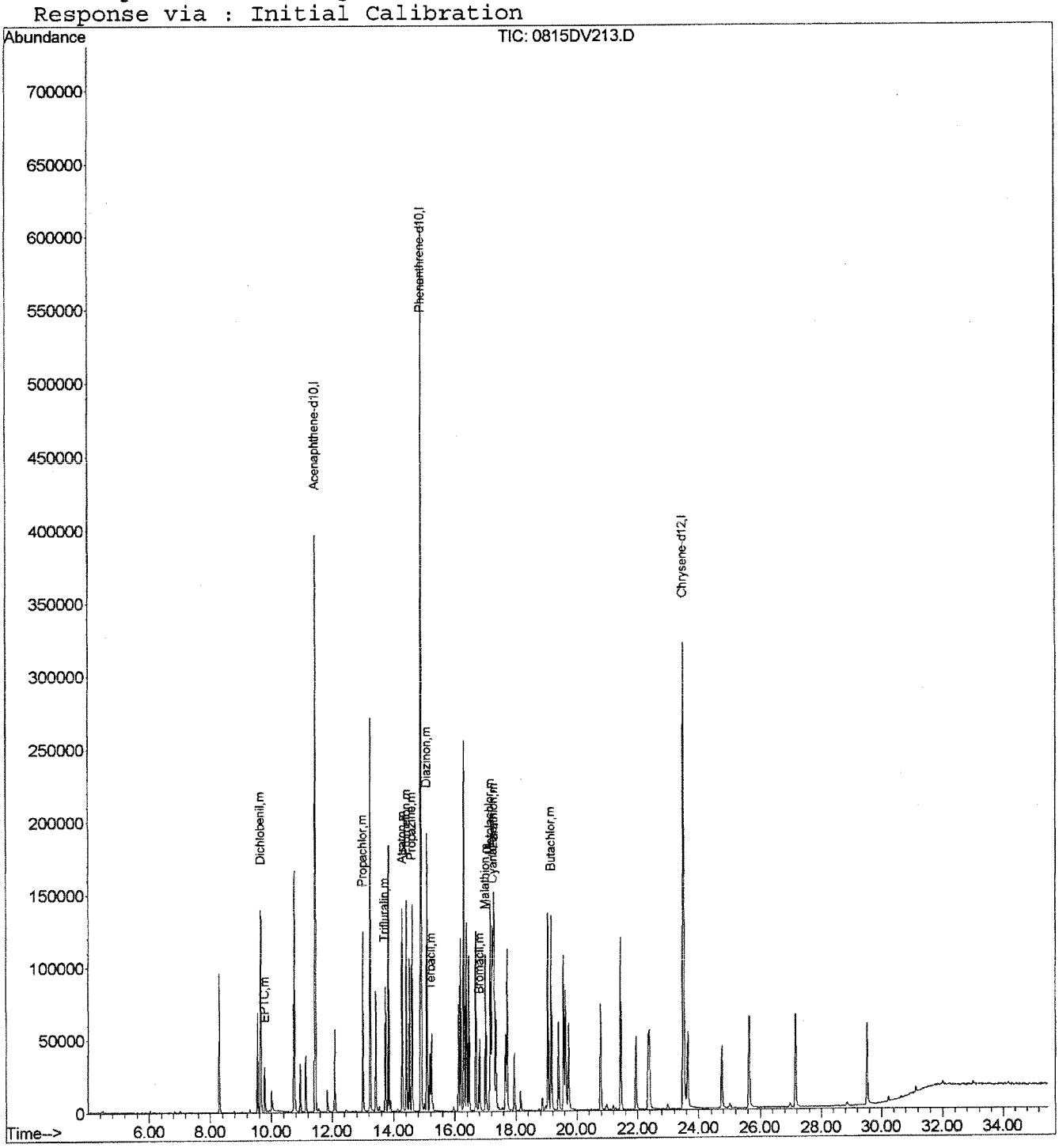
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	205408	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	379931	2500.00	ug/L	0.00
35) Chrysene-d12	23.51	240	374380	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	0.00	134	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
34) Triphenyl phosphate	0.00	169	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
49) Perylene-d12	0.00	264	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
Target Compounds						Qvalue
5) Dichlobenil	9.65	171	71902	1183.18	ug/L	92
6) EPTC	9.79	128	18993	905.81	ug/L	94
12) Propachlor	12.99	120	41604	844.72	ug/L	95
13) Trifluralin	13.73	264	22522	780.03	ug/L	96
16) Atraton	14.28	196	20829	900.93	ug/L	94
17) Prometon	14.42	210	28986	846.92	ug/L	98
20) Propazine	14.61	214	31387	858.21	ug/L	98
21) Diazinon	15.08	137	26606	1060.16	ug/L	84
24) Terbacil	15.23	117	6329	898.03	ug/L	98
28) Bromacil	16.81	207	23622	848.94	ug/L	97
30) Malathion	17.00	173	23581	990.09	ug/L	76
31) Metolachlor	17.17	162	139144	859.32	ug/L	92
32) Cyanazine	17.25	225	13205	894.62	ug/L	90
33) Parathion	17.30	291	6150	1002.84	ug/L #	64
37) Butachlor	19.16	160	41634	838.63	ug/L	98

(#) = qualifier out of range (m) = manual integration
0815DV213.D 081513_525.M Mon Aug 19 15:50:45 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\081513-525\0815DV213.D Vial: 0
Acq On : 16-08-2013 03:16 Operator:
Sample : ICV 3 | DWSTD06-48F 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 19 15:53 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Mon Aug 19 14:43:17 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\082613-525\0826DV003.D Vial: 0
Acq On : 26-08-2013 12:45 Operator:
Sample : DWSTD06-64G ICV 1 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 11:44:59 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 11:20:44 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	174526	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	302582	2500.00	ug/L	0.00
35) Chrysene-d12	23.51	240	277626	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	0.00	134	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
34) Triphenyl phosphate	0.00	169	0d	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
49) Perylene-d12	0.00	264	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
Target Compounds						Qvalue
2) Isophorone	6.41	82	23904	815.77	ug/L	97
4) Hexachlorocyclopentadiene	9.54	237	8433	700.55	ug/L	96
7) Dimethyl phthalate	11.05	163	91397	836.35	ug/L	97
8) Acenaphthylene	11.07	152	93438	907.78	ug/L	98
9) Acenaphthene	11.52	153	68619	766.33	ug/L	93
10) Diethyl phthalate	12.75	149	85755	803.82	ug/L	99
11) Fluorene	12.71	165	79810	802.20	ug/L	94
15) Hexachlorobenzene	14.20	284	26150	871.67	ug/L	96
18) Simazine	14.41	201	10337	833.57	ug/L	95
19) Atrazine	14.52	215	8090	860.13	ug/L	95
22) Phenanthrene	14.95	178	127247	915.23	ug/L	96
23) Anthracene	15.05	178	125704	942.36	ug/L	97
27) Alachlor	16.30	160	36579	914.58	ug/L	94
29) Dibutyl phthalate	16.84	149	126707	763.73	ug/L	99
33) Parathion	17.13	291	3268m	708.03	ug/L	
36) Fluoranthene	18.25	202	114081	926.83	ug/L	96
38) trans-Nonachlor	19.30	409	7140	798.17	ug/L	99
39) Pyrene	18.93	202	107530	848.50	ug/L	97
40) Benzyl butyl phthalate	21.96	149	50273	761.12	ug/L	93
41) Bis(2-ethylhexyl)adipate	22.57	129	32732	727.57	ug/L	98
42) Benz(a)anthracene	23.45	228	106151	838.68	ug/L	98
43) Chrysene	23.60	228	105556	937.41	ug/L	95
44) Bis(2-ethylhexyl)phthalate	24.67	149	70960	755.72	ug/L	98
45) Di-n-octyl phthalate	27.23	149	102985	725.27	ug/L	98
46) Benzo(b)fluoranthene	27.73	252	98479	846.79	ug/L	99
47) Benzo(k)fluoranthene	27.83	252	113771	852.60	ug/L	100
48) Benzo(a)pyrene	28.90	252	92771	877.61	ug/L	96
50) Indeno(1,2,3-cd)pyrene	31.60	276	63038	808.19	ug/L	84
51) Dibenz(a,h)anthracene	31.69	278	78328	799.92	ug/L	100

(#) = qualifier out of range (m) = manual integration
0826DV003.D 081513_525.M Tue Aug 27 11:46:27 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\082613-525\0826DV003.D Vial: 0
Acq On : 26-08-2013 12:45 Operator:
Sample : DWSTD06-64G ICV 1 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 11:44:59 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 11:20:44 2013
Response via : Initial Calibration
DataAcq Meth :

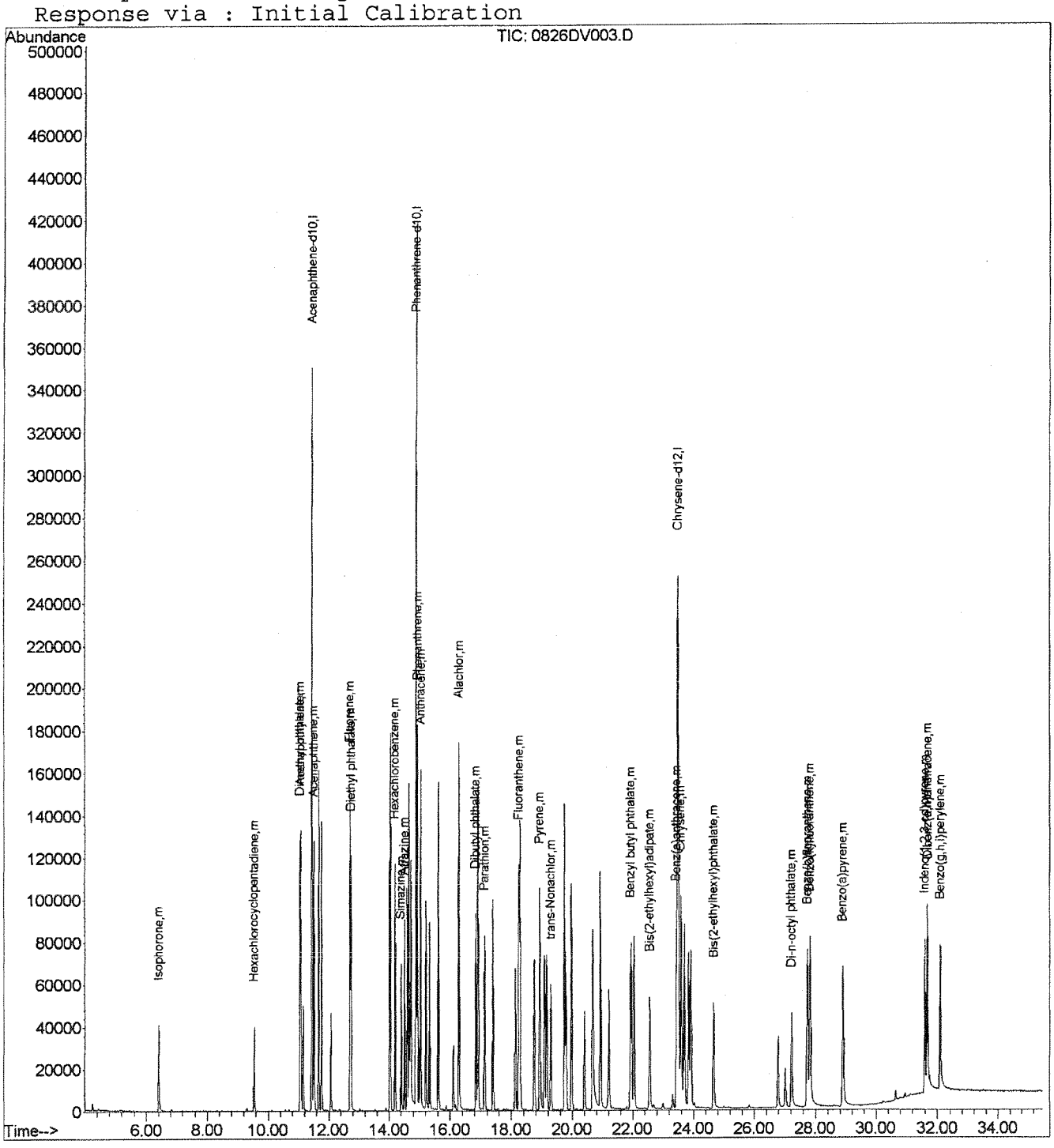
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52) Benzo(g,h,i)perylene	32.10	276	70408	760.74	ug/L	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\082613-525\0826DV003.D Vial: 0
Acq On : 26-08-2013 12:45 Operator:
Sample : DWSTD06-64G ICV 1 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 11:49 2013 Quant Results File: 081513_525.R

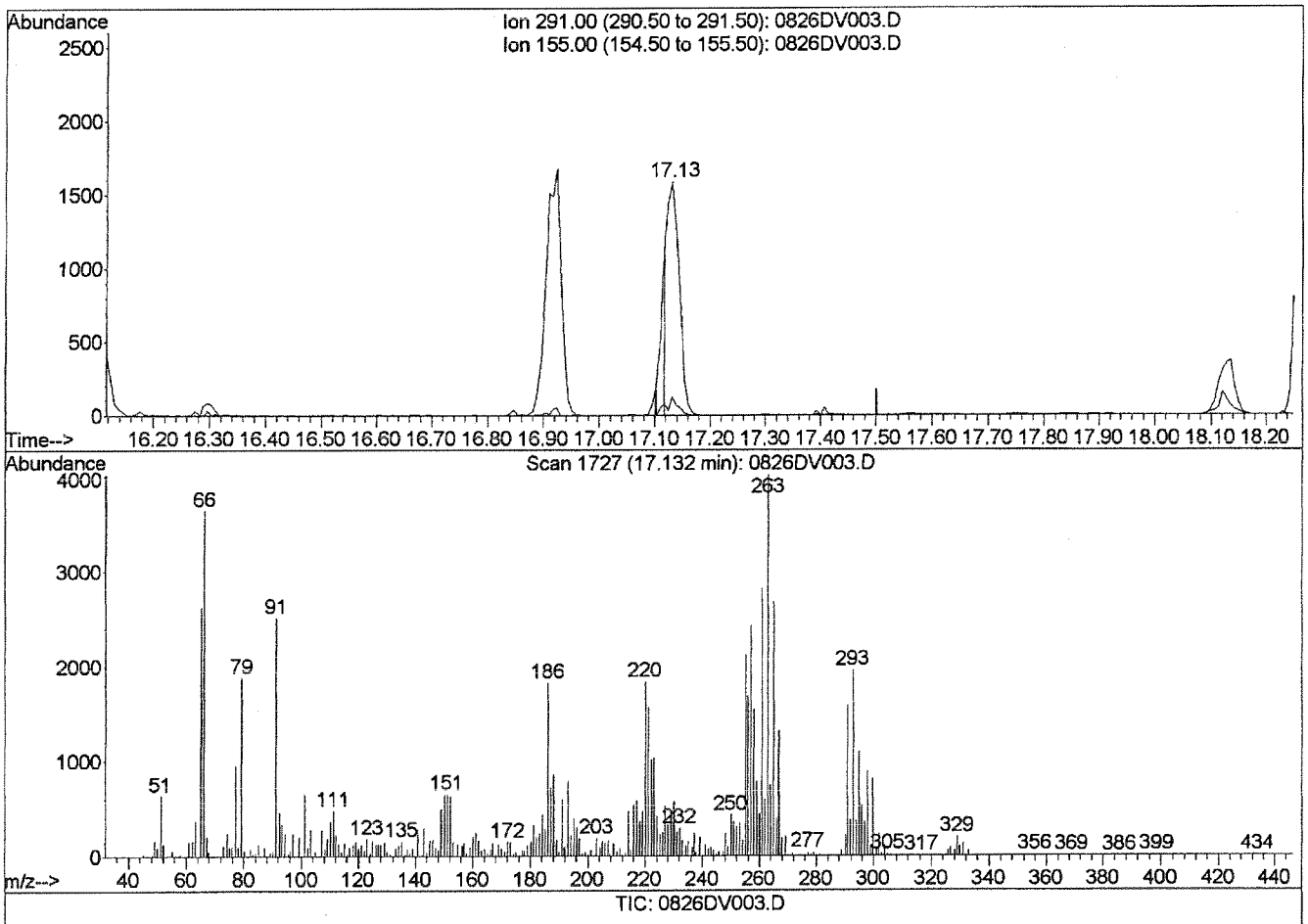
Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 11:44:44 2013
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS22\DATA\082613-525\0826DV003.D Vial: 0
Acq On : 26-08-2013 12:45 Operator:
Sample : DWSTD06-64G ICV 1 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 11:48 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 11:44:44 2013
Response via : Multiple Level Calibration



(33) Parathion (m)

17.13min 543.45ug/L

response 2364

Ion	Exp%	Act%
291.00	100	100
155.00	179.40	7.82#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

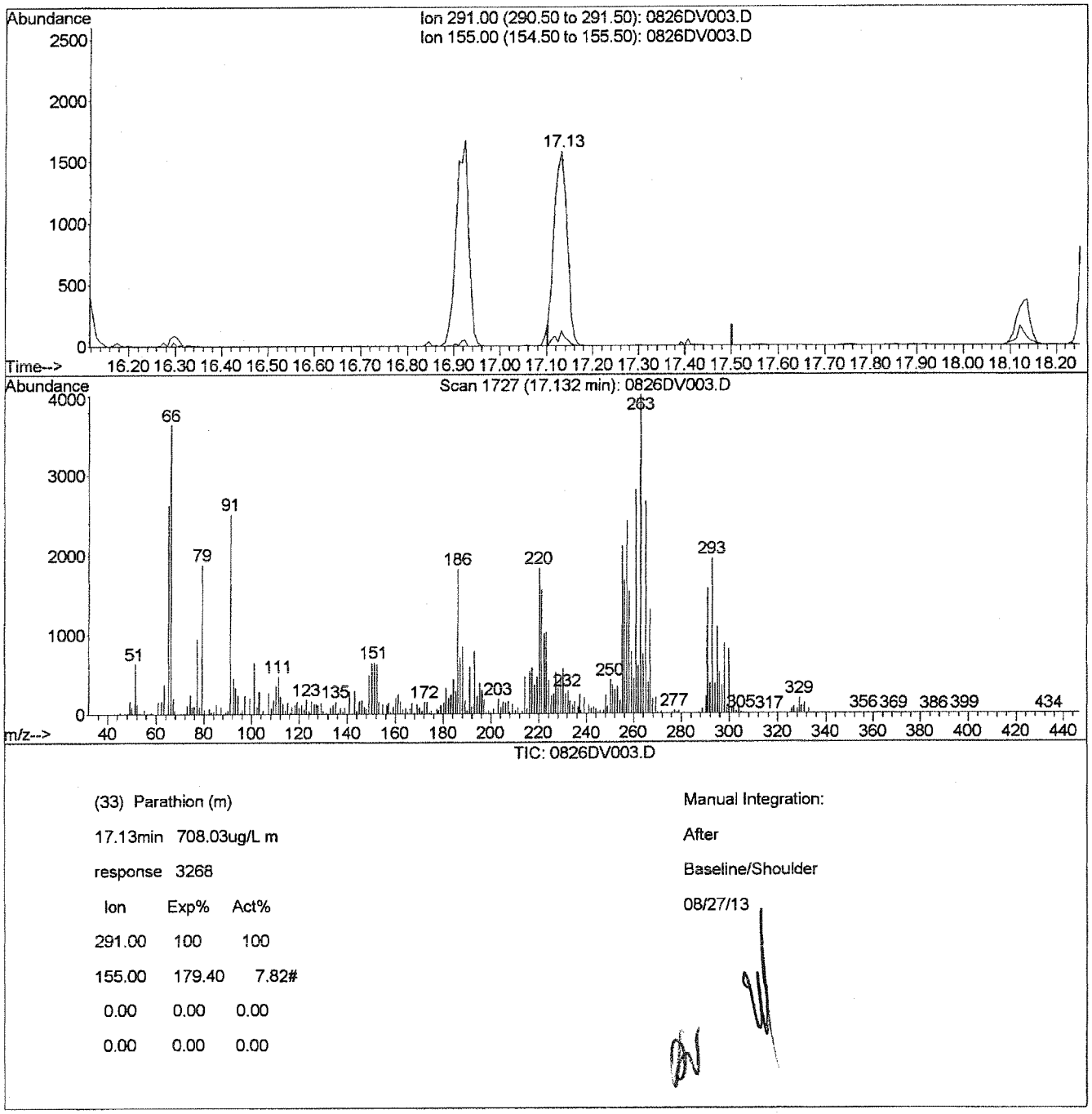
Before

0826DV003.D 081513_525.M Tue Aug 27 11:45:33 2013

Quantitation Report (Qedit)

Data File : J:\MS22\DATA\082613-525\0826DV003.D Vial: 0
Acq On : 26-08-2013 12:45 Operator:
Sample : DWSTD06-64G ICV 1 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 11:48 2013 Quant Results File: temp.res

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 11:44:44 2013
Response via : Multiple Level Calibration



(33) Parathion (m)

17.13min 708.03ug/L m

response 3268

Ion	Exp%	Act%
291.00	100	100
155.00	179.40	7.82#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Baseline/Shoulder

08/27/13

0826DV003.D 081513_525.M Tue Aug 27 11:45:42 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\082613-525\0826DV006.D Vial: 0
Acq On : 26-08-2013 18:14 Operator:
Sample : DWSTD06-64I ICV 2 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 07:57:27 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 07:27:14 2013
Response via : Initial Calibration
DataAcq Meth :

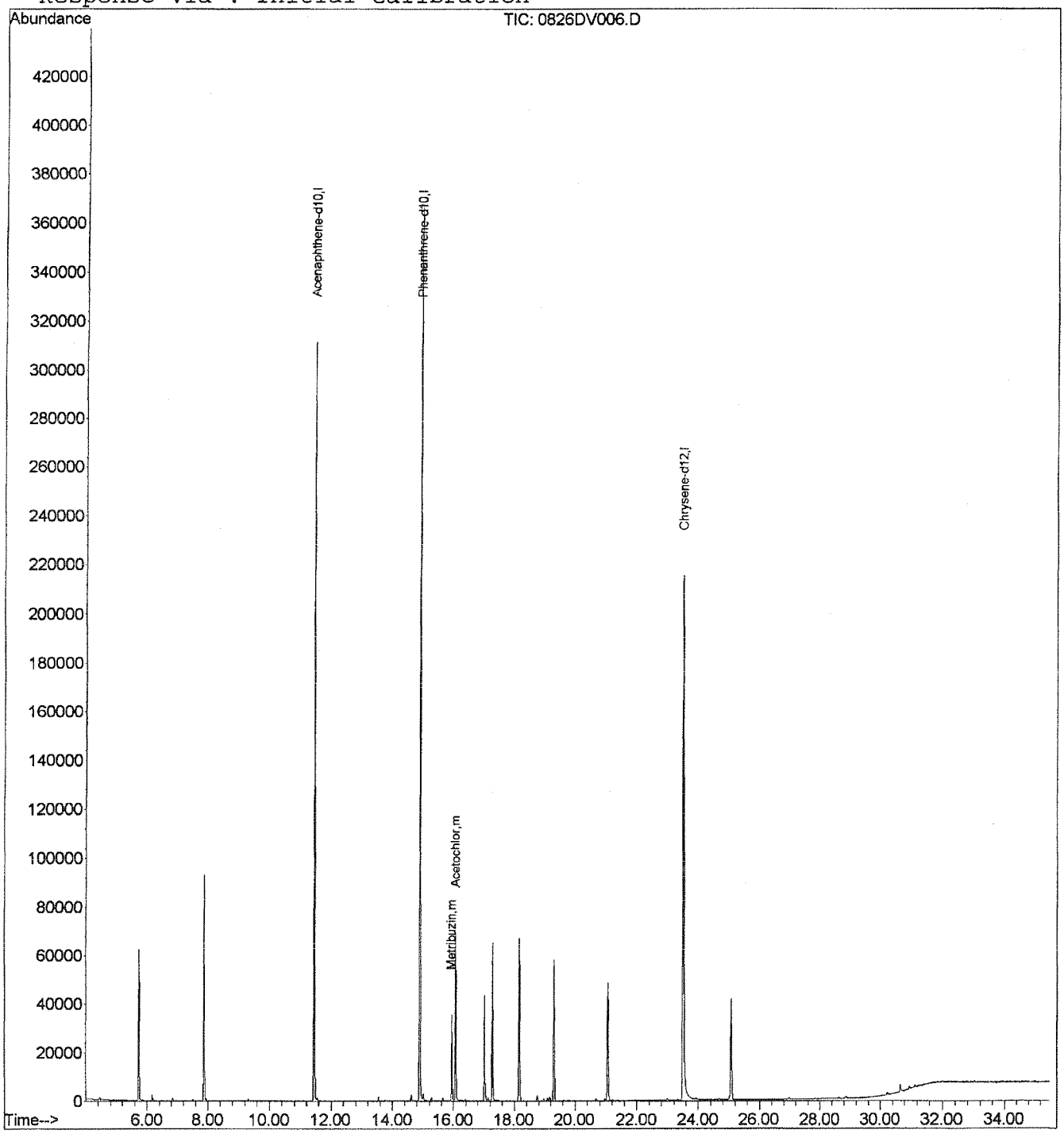
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.45	162	154592	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.90	188	264157	2500.00	ug/L	0.00
35) Chrysene-d12	23.51	240	250355	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	0.00	134	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
34) Triphenyl phosphate	0.00	169	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
49) Perylene-d12	0.00	264	0	0.00	ug/L	
Spiked Amount 1000.000	Range 70 - 130		Recovery =	0.00%#		
Target Compounds						Qvalue
25) Acetochlor	16.07	146	13654	703.03	ug/L	100
26) Metribuzin	15.95	198	12112	727.00	ug/L	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\082613-525\0826DV006.D Vial: 0
Acq On : 26-08-2013 18:14 Operator:
Sample : DWSTD06-64I ICV 2 @ 1000ppb Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 27 8:14 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Tue Aug 27 07:27:14 2013
Response via : Initial Calibration



Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/20/2013

Continuing Calibration Verification Summary
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration Date: 08/15/2013
Calibration ID: CAL12715
Analysis Lot: KWG130474
Units: ug/L

File ID: J:\MS22\DATA\092013-525\0920JLE003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,3-Dimethyl-2-nitrobenzene	500	410		0.338	0.307	NA	-18	± 30 %	Linear
Hexachlorocyclopentadiene	500	450		0.158	0.151	NA	-10	± 30 %	Quadratic
Hexachlorobenzene	500	540		0.236	0.272	NA	7	± 30 %	Quadratic
Simazine	500	500		0.0936	0.101	NA	0	± 30 %	Quadratic
Atrazine	500	480		0.0682	0.0736	NA	-4	± 30 %	Quadratic
Alachlor	500	510		0.305	0.329	NA	2	± 30 %	Quadratic
trans-Nonachlor	500	430		0.0690	0.0691	NA	-13	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	500	510		0.335	0.400	NA	3	± 30 %	Quadratic
Triphenyl Phosphate	500	480		0.116	0.134	NA	-4	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	500	510		0.757	0.802	NA	2	± 30 %	Quadratic
Benzo(a)pyrene	500	490		0.759	0.896	NA	-2	± 30 %	Quadratic
Perylene-d12	500	450		0.759	0.754	NA	-10	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS22\DATA\092013-525\0920JLE003.D
Lab ID: KWG1310474-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/20/2013 19:08
Date Quantitated: 09/20/2013 20:57
Batch ID: KWG130474
Analysis Method: 525.2
MethodJoinID: MJ901

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JF 09-25-13

Secondary Review: _____

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE003.D Vial: 0
Acq On : 20-09-2013 19:08 Operator:
Sample : CCV @ 500ppm | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 20 20:53:49 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	190813	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	294936	2500.00	ug/L	0.00
35) Chrysene-d12	23.50	240	283156	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	11698	412.02	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 41.20%#			
34) Triphenyl phosphate	22.66	169	7889	481.91	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 48.19%#			
49) Perylene-d12	29.11	264	42673	451.30	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 45.13%#			
Target Compounds						Qvalue
2) Isophorone	6.41	82	15018	474.16	ug/L	94
4) Hexachlorocyclopentadiene	9.54	237	5779	450.57	ug/L	86
5) Dichlobenil	9.65	171	28134	495.96	ug/L	96
6) EPTC	9.78	128	8754	460.59	ug/L	97
7) Dimethyl phthalate	11.04	163	56651	476.09	ug/L	98
8) Acenaphthylene	11.06	152	52964	469.67	ug/L	99
9) Acenaphthene	11.51	153	48025	490.56	ug/L	93
10) Diethyl phthalate	12.74	149	51186	442.91	ug/L	98
11) Fluorene	12.70	165	52149	480.94	ug/L	98
12) Propachlor	12.99	120	19679	439.62	ug/L	98
13) Trifluralin	13.72	264	10929	439.58	ug/L	98
15) Hexachlorobenzene	14.20	284	16022	537.40	ug/L	99
16) Atraton	14.28	196	8329	478.91	ug/L	91
17) Prometon	14.42	210	12808	491.08	ug/L	94
18) Simazine	14.40	201	5964	502.27	ug/L	79
19) Atrazine	14.51	215	4341	480.87	ug/L	89
20) Propazine	14.61	214	13392	478.07	ug/L	95
21) Diazinon	15.08	137	9420	501.69	ug/L	97
22) Phenanthrene	14.94	178	70931	523.40	ug/L	99
23) Anthracene	15.05	178	72784	559.78	ug/L	99
24) Terbacil	15.22	117	2599	492.36	ug/L	96
25) Acetochlor	16.06	146	11818	545.00	ug/L	97
26) Metribuzin	15.94	198	8365	469.90	ug/L	95
27) Alachlor	16.29	160	19378	511.37	ug/L	98
28) Bromacil	16.79	207	10413	496.17	ug/L	99
29) Dibutyl phthalate	16.84	149	81752	515.50	ug/L	100
30) Malathion	17.00	173	18616	1005.37	ug/L	89
31) Metolachlor	17.16	162	59297	483.05	ug/L	96
32) Cyanazine	17.24	225	6139	535.77	ug/L	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE003.D Vial: 0
Acq On : 20-09-2013 19:08 Operator:
Sample : CCV @ 500ppm | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 20 20:53:49 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

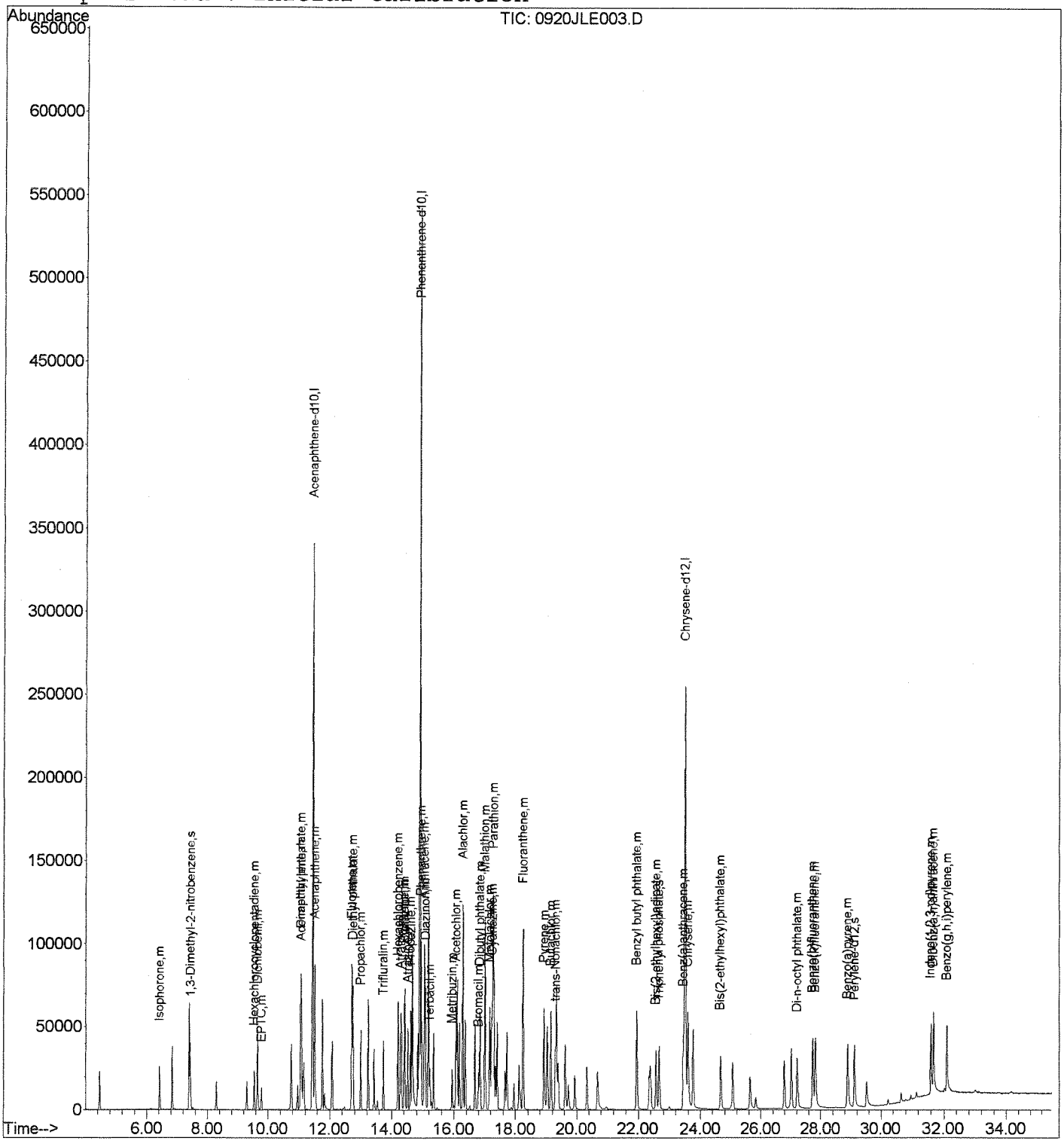
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	Parathion	17.28	291	5650	1164.33	ug/L	#	55
36)	Fluoranthene	18.24	202	64448	518.17	ug/L		99
37)	Butachlor	19.15	160	18034	496.20	ug/L		87
38)	trans-Nonachlor	19.30	409	3913	433.18	ug/L		86
39)	Pyrene	18.93	202	61266	478.73	ug/L		100
40)	Benzyl butyl phthalate	21.94	149	34217	524.64	ug/L		99
41)	Bis(2-ethylhexyl)adipate	22.56	129	22675	514.72	ug/L		97
42)	Benz(a)anthracene	23.44	228	58616	465.05	ug/L		100
43)	Chrysene	23.59	228	58561	509.90	ug/L		95
44)	Bis(2-ethylhexyl)phthalate	24.67	149	45446	511.78	ug/L		97
45)	Di-n-octyl phthalate	27.21	149	67816	504.51	ug/L		100
46)	Benzo(b)fluoranthene	27.73	252	52891	463.80	ug/L		92
47)	Benzo(k)fluoranthene	27.81	252	61382	464.74	ug/L		97
48)	Benzo(a)pyrene	28.89	252	50717	488.23	ug/L		94
50)	Indeno(1,2,3-cd)pyrene	31.59	276	36392	480.24	ug/L		99
51)	Dibenz(a,h)anthracene	31.67	278	46666	487.10	ug/L		93
52)	Benzo(g,h,i)perylene	32.09	276	42839	470.61	ug/L		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092013-525\0920JLE003.D Vial: 0
Acq On : 20-09-2013 19:08 Operator:
Sample : CCV @ 500ppm | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 20 20:57 2013 Quant Results File: 081513_525.R

Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration



Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/23/2013

Continuing Calibration Verification Summary
Semivolatile Organics by EPA method 525.2

Calibration Type: Internal Standard
Analysis Method: 525.2

Calibration Date: 08/15/2013
Calibration ID: CAL12715
Analysis Lot: KWG130474
Units: ug/L

File ID: J:\MS22\DATA\092313-525\0923JLE003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,3-Dimethyl-2-nitrobenzene	500	470		0.338	0.347	NA	-7	± 30 %	Linear
Hexachlorocyclopentadiene	500	480		0.158	0.162	NA	-4	± 30 %	Quadratic
Hexachlorobenzene	500	530		0.236	0.269	NA	6	± 30 %	Quadratic
Simazine	500	480		0.0936	0.0958	NA	-5	± 30 %	Quadratic
Atrazine	500	480		0.0682	0.0728	NA	-5	± 30 %	Quadratic
Alachlor	500	510		0.305	0.327	NA	2	± 30 %	Quadratic
trans-Nonachlor	500	450		0.0690	0.0717	NA	-10	± 30 %	Quadratic
Bis(2-ethylhexyl) Adipate	500	530		0.335	0.410	NA	5	± 30 %	Quadratic
Triphenyl Phosphate	500	500		0.116	0.139	NA	0	± 30 %	Quadratic
Bis(2-ethylhexyl) Phthalate	500	530		0.757	0.836	NA	6	± 30 %	Quadratic
Benzo(a)pyrene	500	500		0.759	0.918	NA	0	± 30 %	Quadratic
Perylene-d12	500	450		0.759	0.756	NA	-9	± 30 %	Quadratic

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS22\DATA\092313-525\0923JLE003.D
Lab ID: KWG1310516-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 09/23/2013 17:12
Date Quantitated: 09/23/2013 18:49
Batch ID: KWG130474
Analysis Method: 525.2
MethodJoinID: MJ901

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JLH 09/25/13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS22\DATA\092313-525\0923JLE003.D			**Instrument:**	MS22
Acqu Date:	09/23/2013 17:12	**Quant Date:**	09/23/2013 18:49	**Vial:**	0
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1310516-2			**Soln Conc. Units:**	ug/L

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	525.2 SVO	**Collect Date:**		**Receive Date:**	09/25/2013

Analysis Lot:	KWG130474	**Prep Lot:**		**Report Group:**	
Analysis Method:	525.2	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS22\METHODS\081513_525.M			**Calibration ID:**	CAL12715
Title:					
Tune Ref:	J:\MS22\DATA\092313-525\0923JLE002.D			**Method ID:**	MJ901
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Acenaphthene-d10	11.44	0.00	162	194009	2,500.00	OK
2	Phenanthrene-d10	14.89	0.00	188	300813	2,500.00	OK
3	Chrysene-d12	23.50	0.00	240	286038	2,500.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	1,3-Dimethyl-2-nitrobenzene	7.43			134	13477	465.25		70-130	NA	
2	Triphenyl Phosphate	22.66			169	8345	498.82		70-130	NA	
3	Perylene-d12	29.11			264	43249	452.67		70-130	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Isophorone	6.41			82	16310	505.60			
1	Hexachlorocyclopentadiene	9.54			237	6268	478.75			
1	Dichlobenil	9.64			171	28993	502.74			
1	EPTC	9.78			128	9212	476.15			
1	Dimethyl Phthalate	11.04			163	58219	481.16			
1	Acenaphthylene	11.06			152	55937	487.94			
1	Acenaphthene	11.50			153	48753	489.79			
1	Diethyl Phthalate	12.74			149	53744	457.03			
1	Fluorene	12.70			165	54192	491.44			
1	Propachlor	12.99			120	19899	437.30			
1	Trifluralin	13.72			264	11606	456.32			
2	Hexachlorobenzene	14.19			284	16178	531.81			
2	Atraton	14.28			196	8150	460.46			
2	Prometon	14.41			210	13079	491.65			
2	Simazine	14.39			201	5765	476.92			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS22\DATA\092313-525\0923JLE003.D		**Instrument:** MS22
Acqu Date:	09/23/2013 17:12	**Quant Date:** 09/23/2013 18:49	**Vial:** 0
Run Type:	CCV		**Dilution:** 1.0
Lab ID:	KWG1310516-2		**Soln Conc. Units:** ug/L

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Atrazine	14.51			215	4381	475.98			
2	Propazine	14.60			214	13618	476.68			
2	Diazinon	15.08			137	9862	514.30			
2	Phenanthrene	14.94			178	70591	510.72			
2	Anthracene	15.04			178	72508	546.76			
2	Terbacil	15.22			117	2685	498.36			
2	Acetochlor	16.06			146	12495	564.96			
2	Metribuzin	15.93			198	8445	465.62			
2	Alachlor	16.28			160	19686	509.44			
2	Bromacil	16.79			207	10517	491.60			
2	Di-n-butyl Phthalate	16.84			149	85212	526.15			
2	Malathion	17.00			173	19304	1,021			
2	Metolachlor	17.15			162	60963	486.75			
2	Cyanazine	17.23			225	6096	521.62			
2	Parathion	17.29			291	5613	1,137			
3	Fluoranthene	18.23			202	64271	511.65			
3	Butachlor	19.15			160	18414	501.21			
3	trans-Nonachlor	19.29			409	4104	449.11			
3	Pyrene	18.92			202	61647	476.90			
3	Benzyl butyl phthalate	21.94			149	35616	539.11			
3	Bis(2-ethylhexyl) Adipate	22.56			129	23445	525.39			
3	Benz(a)anthracene	23.44			228	58449	459.37			
3	Chrysene	23.59			228	57697	497.32			
3	Bis(2-ethylhexyl) Phthalate	24.66			149	47832	529.14			
3	Di-n-octyl Phthalate	27.21			149	71796	523.95			
3	Benzo(b)fluoranthene	27.72			252	54069	468.90			
3	Benzo(k)fluoranthene	27.81			252	62076	465.22			
3	Benzo(a)pyrene	28.88			252	52530	499.80			
3	Indeno(1,2,3-cd)pyrene	31.59			276	36808	480.77			
3	Dibenz(a,h)anthracene	31.67			278	46805	483.96			
3	Benzo(g,h,i)perylene	32.08			276	43908	476.89			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092313-525\0923JLE003.D Vial: 0
Acq On : 23-09-2013 17:12 Operator:
Sample : CCV @ 500ppm | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 18:46:15 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Acenaphthene-d10	11.44	162	194009	2500.00	ug/L	0.00
14) Phenanthrene-d10	14.89	188	300813	2500.00	ug/L	-0.01
35) Chrysene-d12	23.50	240	286038	2500.00	ug/L	0.00
System Monitoring Compounds						
3) 1,3-Dimethyl-2-nitrobenzen	7.43	134	13477	465.25	ug/L	0.00
Spiked Amount 1000.000	Range 70 - 130		Recovery = 46.52%#			
34) Triphenyl phosphate	22.66	169	8345	498.82	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 49.88%#			
49) Perylene-d12	29.11	264	43249	452.67	ug/L	-0.01
Spiked Amount 1000.000	Range 70 - 130		Recovery = 45.27%#			
Target Compounds						Qvalue
2) Isophorone	6.41	82	16310	505.60	ug/L	94
4) Hexachlorocyclopentadiene	9.54	237	6268	478.75	ug/L	97
5) Dichlobenil	9.64	171	28993	502.74	ug/L	96
6) EPTC	9.78	128	9212	476.15	ug/L	93
7) Dimethyl phthalate	11.04	163	58219	481.16	ug/L	94
8) Acenaphthylene	11.06	152	55937	487.94	ug/L	98
9) Acenaphthene	11.50	153	48753	489.79	ug/L	92
10) Diethyl phthalate	12.74	149	53744	457.03	ug/L	99
11) Fluorene	12.70	165	54192	491.44	ug/L	98
12) Propachlor	12.99	120	19899	437.30	ug/L	99
13) Trifluralin	13.72	264	11606	456.32	ug/L	92
15) Hexachlorobenzene	14.19	284	16178	531.81	ug/L	96
16) Atraton	14.28	196	8150	460.46	ug/L	87
17) Prometon	14.41	210	13079	491.65	ug/L	93
18) Simazine	14.39	201	5765	476.92	ug/L	85
19) Atrazine	14.51	215	4381	475.98	ug/L	99
20) Propazine	14.60	214	13618	476.68	ug/L	95
21) Diazinon	15.08	137	9862	514.30	ug/L	90
22) Phenanthrene	14.94	178	70591	510.72	ug/L	98
23) Anthracene	15.04	178	72508	546.76	ug/L	99
24) Terbacil	15.22	117	2685	498.36	ug/L	95
25) Acetochlor	16.06	146	12495	564.96	ug/L	94
26) Metribuzin	15.93	198	8445	465.62	ug/L	99
27) Alachlor	16.28	160	19686	509.44	ug/L	98
28) Bromacil	16.79	207	10517	491.60	ug/L	100
29) Dibutyl phthalate	16.84	149	85212	526.15	ug/L	99
30) Malathion	17.00	173	19304	1020.66	ug/L	82
31) Metolachlor	17.15	162	60963	486.75	ug/L	100
32) Cyanazine	17.23	225	6096	521.62	ug/L	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS22\DATA\092313-525\0923JLE003.D Vial: 0
Acq On : 23-09-2013 17:12 Operator:
Sample : CCV @ 500ppm | DWSTD06-620 Inst :
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Sep 23 18:46:15 2013 Quant Results File: 081513_525.RES

Quant Method : J:\MS22\METHODS\081513_525.M (RTE Integrator)
Title : 081513_525.m | MJ901 CAL12715
Last Update : Wed Sep 04 12:32:11 2013
Response via : Initial Calibration
DataAcq Meth :

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
33)	Parathion	17.29	291	5613	1137.34 ug/L	#	68
36)	Fluoranthene	18.23	202	64271	511.65 ug/L		99
37)	Butachlor	19.15	160	18414	501.21 ug/L		95
38)	trans-Nonachlor	19.29	409	4104	449.11 ug/L		88
39)	Pyrene	18.92	202	61647	476.90 ug/L		93
40)	Benzyl butyl phthalate	21.94	149	35616	539.11 ug/L		97
41)	Bis(2-ethylhexyl)adipate	22.56	129	23445	525.39 ug/L		88
42)	Benz(a)anthracene	23.44	228	58449	459.37 ug/L		99
43)	Chrysene	23.59	228	57697	497.32 ug/L		100
44)	Bis(2-ethylhexyl)phthalate	24.66	149	47832	529.14 ug/L		94
45)	Di-n-octyl phthalate	27.21	149	71796	523.95 ug/L		97
46)	Benzo(b)fluoranthene	27.72	252	54069	468.90 ug/L		98
47)	Benzo(k)fluoranthene	27.81	252	62076	465.22 ug/L		97
48)	Benzo(a)pyrene	28.88	252	52530	499.80 ug/L		97
50)	Indeno(1,2,3-cd)pyrene	31.59	276	36808	480.77 ug/L		92
51)	Dibenz(a,h)anthracene	31.67	278	46805	483.96 ug/L		84
52)	Benzo(g,h,i)perylene	32.08	276	43908	476.89 ug/L		80

(#) = qualifier out of range (m) = manual integration

Organic Analysis:
Semivolatile Organics by EPA method 525.2

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1310290	**Prep Method:**	METHOD	**Prep Date:**	09/20/13 05:30
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1309458-001	Entry Point A	525.2 SVO	DRINKING WATER	1020ml	1ml
K1309638-001	13254-BW-4	525.2 SVO	WATER	1030ml	1ml
K1309638-002	13254-BW-2	525.2 SVO	WATER	1030ml	1ml
K1309638-004	13253-BW-3	525.2 SVO	WATER	1030ml	1ml
K1309638-005	13253-Well D	525.2 SVO	WATER	1030ml	1ml
K1309638-008	13255-BW-1	525.2 SVO	WATER	1030ml	1ml
K1309638-010	13255-DUP	525.2 SVO	WATER	1030ml	1ml
K1309638-011	13255-Rinse	525.2 SVO	WATER	1030ml	1ml
KWG1310290-1	Lab Control Sample	525.2 SVO	WATER	1000ml	1ml
KWG1310290-2	Matrix Spike	525.2 SVO	DRINKING WATER	1020ml	1ml
KWG1310290-3	Method Blank	525.2 SVO	WATER	1000ml	1ml

Lab Code	Parent Lab Code	Comments
KWG1310290-1		DWSTD06-66 A, 100 uL
KWG1310290-2	K1309458-001	DWSTD06-66 A, 100 uL

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1309458-001	1284688	DWSTD06-56 F	20uL			
K1309638-001	1284689	DWSTD06-56 F	20uL			
K1309638-002	1284690	DWSTD06-56 F	20uL			
K1309638-004	1284691	DWSTD06-56 F	20uL			
K1309638-005	1284692	DWSTD06-56 F	20uL			
K1309638-008	1284693	DWSTD06-56 F	20uL			
K1309638-010	1284694	DWSTD06-56 F	20uL			
K1309638-011	1284695	DWSTD06-56 F	20uL			
KWG1310290-1	1284696	DWSTD06-56 F	20uL	DWSTD06-51 E	100uL	
KWG1310290-2	1284697	DWSTD06-56 F	20uL	DWSTD06-51 E	100uL	
KWG1310290-3	1284698	DWSTD06-56 F	20uL			

Comments:

Started By: RHayes Assisted By:

Completed By: RHayes Assisted By:

Training: Yes / No Yes / No

Reviewed By: Date: Storage: To inst

Chain of Custody

Relinquished By: Date: 9/20/13

Received By: DN Date: 9/20/13

Extracts Examined: Yes / No

COLUMBIA ANALYTICAL SERVICES, INC.

Service Request No.: As Listed **Date Extracted:** 9-20-13

Analyst: Rob Hayes **Method:** 525

Workgroup#:

Semivolatile Compounds in Water

Lab ID	Client ID	Sample Volume (ml)	pH	Surr (uL)	MS (uL)	ISTD (uL)	Res. Cl2 (ppm)	Final Volume (ml)	
K1309458-001		1020	2	20		5	<0.1	1	
K1309638-001	*	1030	2	20		5	<0.1	1	
-002	*	1030	2	20		5	<0.1	1	
-004	*	1030	2	20		5	<0.1	1	
-005	*	1030	2	20		5	<0.1	1	
-008	*	1030	2	20		5	<0.1	1	
-010	*	1030	2	20		5	<0.1	1	
-011	*	1030	2	20		5	<0.1	1	
MB		1000	2	20		5	<0.1	1	
LCS		1000	2	20	100/100	5	<0.1	1	
K1309458-001	MS *	1020	2	20	100/100	5	<0.1	1	
MRL		1000	2	20	10/10	5	<0.1	1	

Comments: * Particulate matter noted on extraction disk

DCM Lot # DI297 **Speedisk Lot#** 9261 **Sulfate Lot #** 8/16/13-132070

Ethyl Acetate Lot # 11473 **Methanol Lot#** 41907 **1/1 Ethyl Acetate/ DCM** SUDO1-71H

Surrogate ID/Conc: DUSTDO6-56F 50ppm XP 2-1-14 **N-evap temp:** 34°C

Spike ID/Conc: DUSTDO6-51E 10ppm XP 10/13 / DUSTDO6-66A 10ppm XP 11/13

ISTD ID/Conc: DUSTDO6-48C 500ppm XP 3/31/15

Vial: Amber **Extract Storage:** To Inst **Extracts Received:**

Reviewed By:	Date:

Preparation Information Benchsheet

Prep Run#: 192212 **Prep WorkFlow:** OrgExtDW(14/30) **Status:** Draft
Team: Semivoa GC **Prep Method:** Method **Prep Date/Time:** 9/20/13 05:57 AM
Number of Copies to make: 2

#	Lab Code	Client ID	B#	√	Test	Matrix	Amt Ext.	pH	Int Vol	Final Vol	Surr Added	Spike Added
1	K1309458-001	Entry Point A	.21		525.2/SVO	Drinking Water						
2	K1309458-001	Entry Point A	.21		508.1/PEST_CL	Drinking Water						
3	K1309638-001	13254-BW-4	.26		508.1/PEST_CL	Water						
4	K1309638-001	13254-BW-4	.26		525.2/SVO	Water						
5	K1309638-002	13254-BW-2	.26		508.1/PEST_CL	Water						
6	K1309638-002	13254-BW-2	.26		525.2/SVO	Water						
7	K1309638-004	13253-BW-3	.27		508.1/PEST_CL	Water						
8	K1309638-004	13253-BW-3	.27		525.2/SVO	Water						
9	K1309638-005	13253-Well D	.26		525.2/SVO	Water						
10	K1309638-005	13253-Well D	.26		508.1/PEST_CL	Water						
11	K1309638-008	13255-BW-1	.26		525.2/SVO	Water						
12	K1309638-008	13255-BW-1	.26		508.1/PEST_CL	Water						
13	K1309638-010	13255-DUP	.26		525.2/SVO	Water						
14	K1309638-010	13255-DUP	.26		508.1/PEST_CL	Water						
15	K1309638-011	13255-Rinse	.26		508.1/PEST_CL	Water						
16	K1309638-011	13255-Rinse	.26		525.2/SVO	Water						

Comments: used for ID only

Surrogate ID: _____ Spike ID: _____

Witnessed By: _____

Analyst: _____ Assisted By: _____

Injection Log

Directory: J:\MS22\DATA\092013-525

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		0920JLE001.d	1.	DCM		20-09-22013 29:4
2		0920JLE002.d	1.	DWSTD06-56B IPC Sol		20-09-22013 30:2
3		0920JLE003.d	1.	CCV @ 500ppm | DWSTD06-62O		20-09-22013 31:0
4		0920JLE004.d	1.	092013 LCS		20-09-22013 33:0
5		0920JLE005.d	1.	092013 MRL		20-09-22013 33:4
6		0920JLE006.d	1.	92013MB		20-09-22013 34:2
7		0920JLE007.d	1.	K1309458-1		20-09-22013 35:1
8		0920JLE008.d	1.	K1309458-1 MS		20-09-22013 35:5
9		0920JLE009.d	1.	K1309638-4		21-09-22013 12:4
10		0920JLE010.d	1.	K1309638-11		21-09-22013 13:3
11		0920JLE011.d	1.	K1309638-1		21-09-22013 14:1
12		0920JLE012.d	1.	K1309638-2		21-09-22013 15:0
13		0920JLE013.d	1.	K1309638-5		21-09-22013 15:5
14		0920JLE014.d	1.	K1309638-8		21-09-22013 16:3

CAL 12715

KWG 1304714

RUN 558105

Injection Log

Directory: J:\MS22\DATA\092313-525

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1		0923JLE001.d	1.	DCM		23-09-22013 27:4
2		0923JLE002.d	1.	DWSTD06-56B IPC Sol		23-09-22013 28:2
3		0923JLE003.d	1.	CCV @ 500ppm | DWSTD06-62O		23-09-22013 29:1
4		0923JLE004.d	1.	K1309638-10		23-09-22013 30:4

CAL12715

KWG1312057b

Volatile Organic Compounds

Organic Analysis:
Volatile Organic Compounds

Validation Package

u:\Stealth\Crystal.rpt\DividerB.rpt

Organic Analysis:
Volatile Organic Compounds

Validation Package

QC Reports

u:\Stealth\Crystal.rpt\DividerC.rpt

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1309439-003	96	94	99
13254-BW-4	K1309638-001	95	95	101
13254-BW-2	K1309638-002	96	96	100
Trip Blank 2	K1309638-003	95	93	99
13253-BW-3	K1309638-004	96	95	99
13253-Well D	K1309638-005	98	92	99
Trip Blank 1	K1309638-006	95	92	98
13255-BW-1	K1309638-008	94	93	99
Trip Blank 3	K1309638-009	96	93	100
13255-DUP	K1309638-010	93	93	99
13255-Rinse	K1309638-011	96	95	99
Trip Blank 4	K1309638-012	96	91	98
Method Blank	KWG1310087-4	94	92	98
Batch QCMS	KWG1310087-1	99	92	100
Batch QCDMS	KWG1310087-2	99	94	99
Lab Control Sample	KWG1310087-3	97	94	102

Surrogate Recovery Control Limits (%)

Sur1 =	4-Bromofluorobenzene	68-117
Sur2 =	Dibromofluoromethane	73-122
Sur3 =	Toluene-d8	65-144

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013
Time Analyzed: 09:20

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\091713\0917F003.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1310078-1
Analysis Lot: KWG1310078

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	965,184	6.43	393,203	9.61	332,735	11.94
	Upper Limit ==>	1,930,368	6.93	786,406	10.11	665,470	12.44
	Lower Limit ==>	482,592	5.93	196,602	9.11	166,368	11.44
	ICAL Result ==>	1,118,048	6.43	448,052	9.61	377,387	11.94
Associated Analyses							
Lab Control Sample	KWG1310087-3	1,019,868	6.42	421,891	9.60	349,368	11.94
Batch QCMS	KWG1310087-1	998,870	6.43	401,105	9.60	344,722	11.93
Batch QCDMS	KWG1310087-2	1,018,995	6.43	409,462	9.60	352,669	11.94
Method Blank	KWG1310087-4	965,738	6.43	384,125	9.60	302,091	11.94
Batch QC	K1309439-003	956,578	6.43	381,430	9.61	307,804	11.94
Trip Blank 2	K1309638-003	959,356	6.43	382,822	9.61	302,257	11.94
Trip Blank 1	K1309638-006	944,688	6.43	372,768	9.61	290,366	11.94
13253-BW-3	K1309638-004	963,631	6.43	387,525	9.60	304,769	11.94
13253-Well D	K1309638-005	956,435	6.43	378,924	9.61	304,475	11.94
Trip Blank 3	K1309638-009	946,548	6.43	382,521	9.61	298,727	11.94
Trip Blank 4	K1309638-012	964,476	6.43	382,324	9.61	295,496	11.94
13254-BW-4	K1309638-001	941,389	6.42	378,151	9.60	297,261	11.94
13254-BW-2	K1309638-002	933,441	6.43	377,453	9.61	286,268	11.94
13255-BW-1	K1309638-008	947,480	6.43	374,962	9.60	294,692	11.94
13255-DUP	K1309638-010	952,501	6.43	379,038	9.60	289,795	11.94
13255-Rinse	K1309638-011	941,827	6.43	379,110	9.61	295,408	11.94

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: Batch QC
Lab Code: K1309439-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG1310087

		Batch QCMS KWG1310087-1 Matrix Spike			Batch QCDMS KWG1310087-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	10.4	10.0	104	9.80	10.0	98	49-136	6	30
1,1-Dichloroethene	ND	11.8	10.0	118	11.1	10.0	111	59-171	7	30
Carbon Tetrachloride	ND	9.41	10.0	94	9.08	10.0	91	53-161	4	30
Benzene	ND	10.2	10.0	102	9.72	10.0	97	63-144	5	30
Trichloroethene (TCE)	ND	10.1	10.0	101	9.41	10.0	94	53-139	7	30
Toluene	0.10	10.5	10.0	104	9.93	10.0	98	71-136	5	30
Chlorobenzene	ND	10.2	10.0	102	9.74	10.0	97	69-126	4	30
Ethylbenzene	ND	10.2	10.0	102	9.63	10.0	96	66-136	6	30
1,2-Dichlorobenzene	ND	10.3	10.0	103	9.89	10.0	99	72-119	4	30
1,1,2-Trichloroethane	ND	10.2	10.0	102	10.0	10.0	100	74-124	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1310087

Lab Control Sample
KWG1310087-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Vinyl Chloride	8.04	10.0	80	55-123
Methylene Chloride	9.33	10.0	93	71-122
trans-1,2-Dichloroethene	8.47	10.0	85	67-125
1,1-Dichloroethene	9.47	10.0	95	66-129
cis-1,2-Dichloroethene	8.53	10.0	85	71-118
Carbon Tetrachloride	7.51	10.0	75	55-140
Benzene	8.52	10.0	85	69-124
1,2-Dichloroethane (EDC)	8.59	10.0	86	56-142
Trichloroethene (TCE)	8.44	10.0	84	67-128
1,2-Dichloropropane	9.42	10.0	94	67-126
Toluene	8.73	10.0	87	69-124
Tetrachloroethene (PCE)	7.39	10.0	74	62-126
Chlorobenzene	8.59	10.0	86	72-116
Ethylbenzene	8.30	10.0	83	67-121
Styrene	8.53	10.0	85	74-121
m,p-Xylenes	17.2	20.0	86	69-121
o-Xylene	8.41	10.0	84	71-119
1,1,1-Trichloroethane (TCA)	7.47	10.0	75	59-136
1,4-Dichlorobenzene	8.67	10.0	87	73-115
1,2-Dichlorobenzene	9.02	10.0	90	72-115
1,2,4-Trichlorobenzene	8.53	10.0	85	58-126
1,1,2-Trichloroethane	8.33	10.0	83	74-118

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	09/17/2013
		Time Analyzed:	12:57

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS27
Lab Code:	KWG1310087-4	**File ID:**	J:\MS27\DATA\091713\0917F009.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1310087

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310087-3	J:\MS27\DATA\091713\0917F004.D	09/17/13	10:41
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/13	11:08
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/13	11:35
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/13	13:24
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/13	14:19
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/13	14:46
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/13	15:13
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/13	15:40
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/13	16:08
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/13	16:35
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/13	17:49
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/13	18:16
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/13	18:44
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/13	19:11
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/13	19:38

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Extracted: 09/17/2013
Date Analyzed: 09/17/2013
Time Analyzed: 10:41

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG1310087-3

Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS27
File ID: J:\MS27\DATA\091713\0917F004.D

Level: Low
Extraction Lot: KWG1310087

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/13	11:08
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/13	11:35
Method Blank	KWG1310087-4	J:\MS27\DATA\091713\0917F009.D	09/17/13	12:57
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/13	13:24
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/13	14:19
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/13	14:46
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/13	15:13
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/13	15:40
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/13	16:08
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/13	16:35
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/13	17:49
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/13	18:16
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/13	18:44
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/13	19:11
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/13	19:38

Organic Analysis:
Volatile Organic Compounds

Validation Package

Raw Data

u:\Stealth\Crystal.rpt\DividerD.rpt

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Volatile Organic Compounds

Sample Name:	13254-BW-4	**Units:**	ug/L
Lab Code:	K1309638-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.080**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	101	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F018.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 17:49
Date Quantitated: 09/18/2013 10:46
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F018.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 17:49	**Quant Date:**	09/18/2013 10:46	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-001			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282915	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.42	-0.01	96	941389	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	378151	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	297261	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.67	-0.01	0.00	113	240553	9.47	95	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	936393	10.09	101	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	316763	9.50	95	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene	8.19		0.00	92	4990	0.0800	0.080	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F018.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 17:49	**Quant Date:**	09/18/2013 10:46	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-001			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F018.D Vial: 16
Acq On : 17 Sep 2013 5:49 pm Operator: KS
Sample : K1309638-001 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:39:33 2013 Quant Results File: 081213MS27_8260.RES

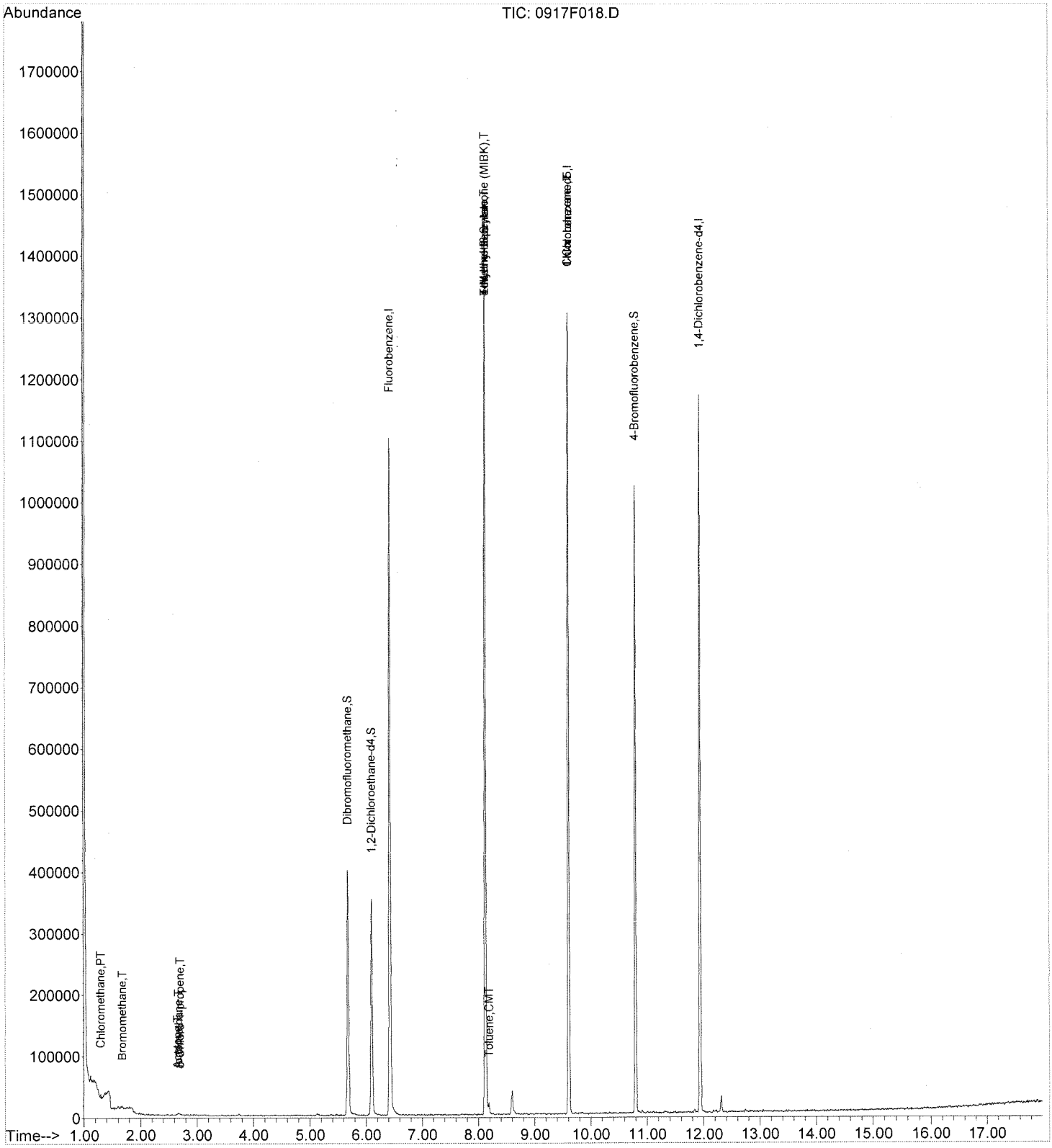
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

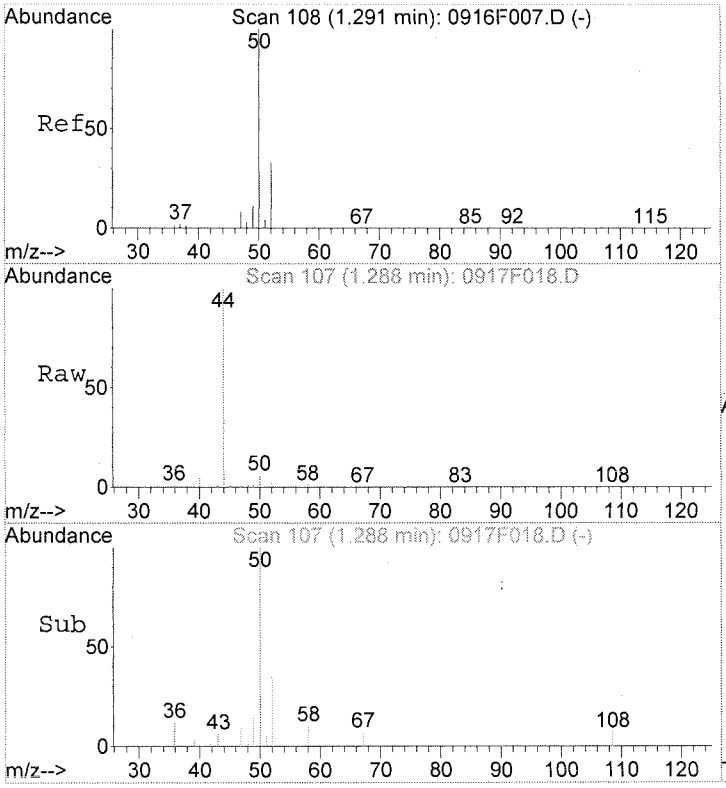
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.42	96	941389	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	378151	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	297261	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.67	113	240553	9.47	PPB		0.00
Spiked Amount 10.000			Recovery =	94.70%			
47) 1,2-Dichloroethane-d4	6.10	65	237378	9.73	PPB		0.00
Spiked Amount 10.000			Recovery =	97.30%			
62) Toluene-d8	8.12	98	936393	10.09	PPB		0.00
Spiked Amount 10.000			Recovery =	100.90%			
84) 4-Bromofluorobenzene	10.79	95	316763	9.50	PPB		0.00
Spiked Amount 10.000			Recovery =	95.00%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	2453	0.08	PPB		93
6) Bromomethane	1.67	96	796	0.04	PPB	#	60
14) Acetone	2.65	43	1430	0.48	PPB	#	11
15) Iodomethane	2.67	142	2623	0.24	PPB		83
18) 3-Chloro-1-propene	2.70	76	1274	0.10	PPB	#	1
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7838	1.75	PPB	#	1
63) Toluene	8.19	92	4990	0.08	PPB		83
67) Ethyl methacrylate	8.12	69	2083	0.10	PPB	#	1
74) 1-Chlorohexane	9.60	91	2057	0.06	PPB		79

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F018.D Vial: 16
Acq On : 17 Sep 2013 5:49 pm Operator: KS
Sample : K1309638-001 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:46 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

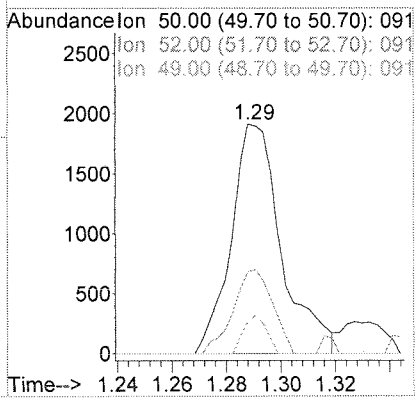


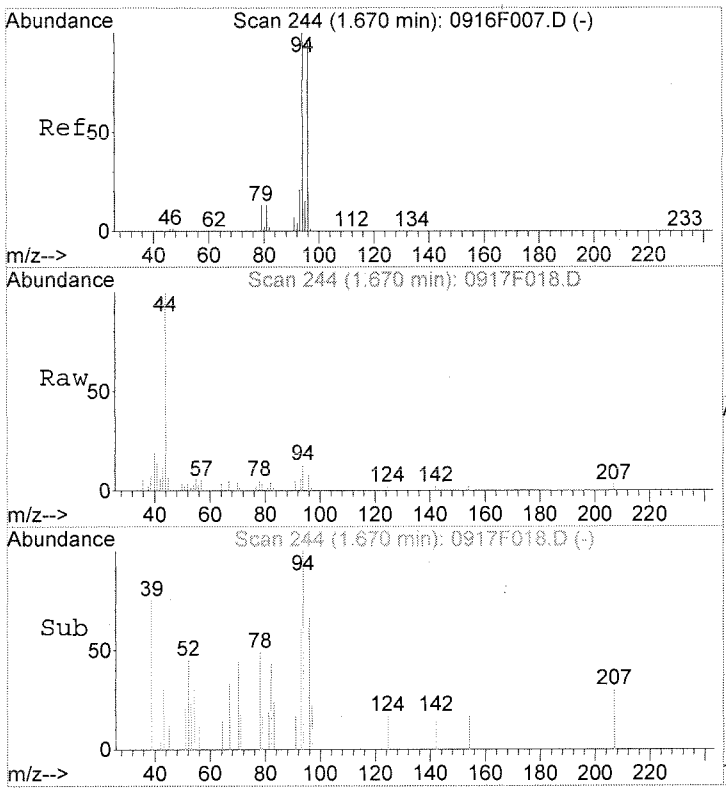


#3
Chloromethane
Concen: 0.08 PPB
RT: 1.29 min Scan# 107
Delta R.T. -0.00 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 50 Resp: 2453

Ion	Ratio	Lower	Upper
50	100		
52	35.8	2.5	62.5
49	14.4	0.0	40.3

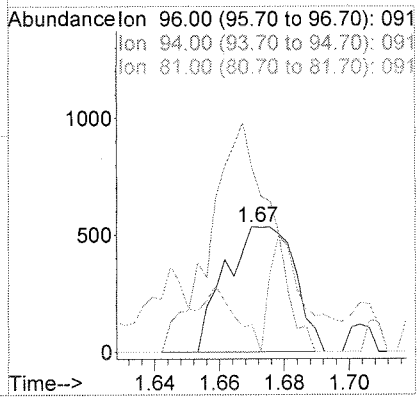


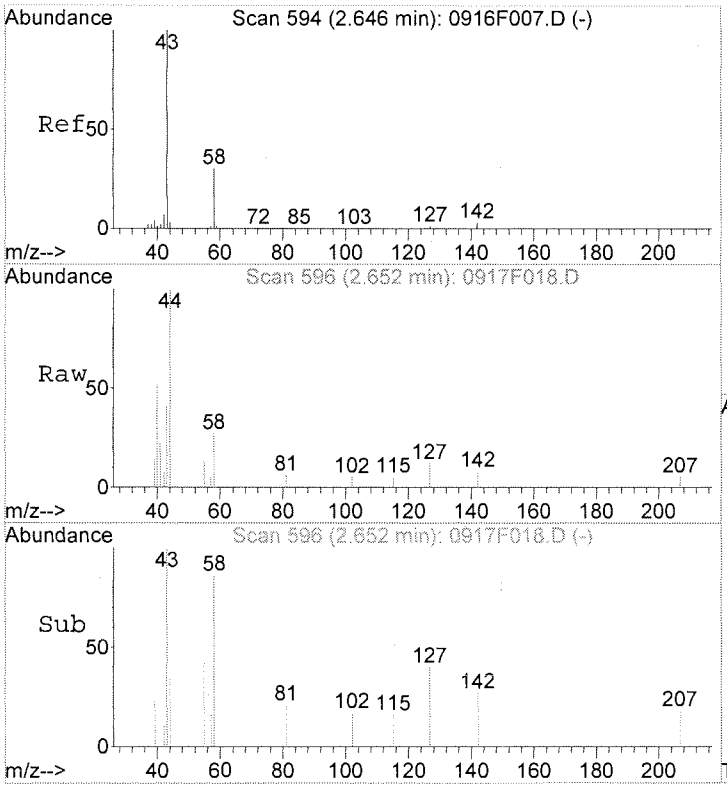


#6
Bromomethane
Concen: 0.04 PPB
RT: 1.67 min Scan# 244
Delta R.T. 0.00 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 96 Resp: 796

Ion	Ratio	Lower	Upper
96	100		
94	149.2	77.3	137.3#
81	0.0	0.0	43.8

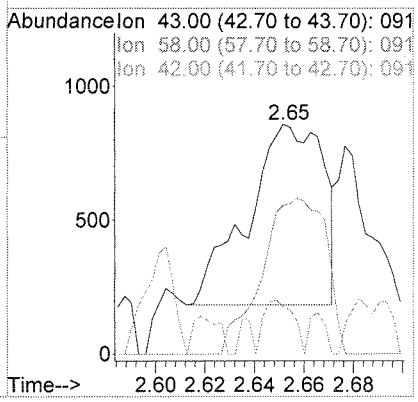


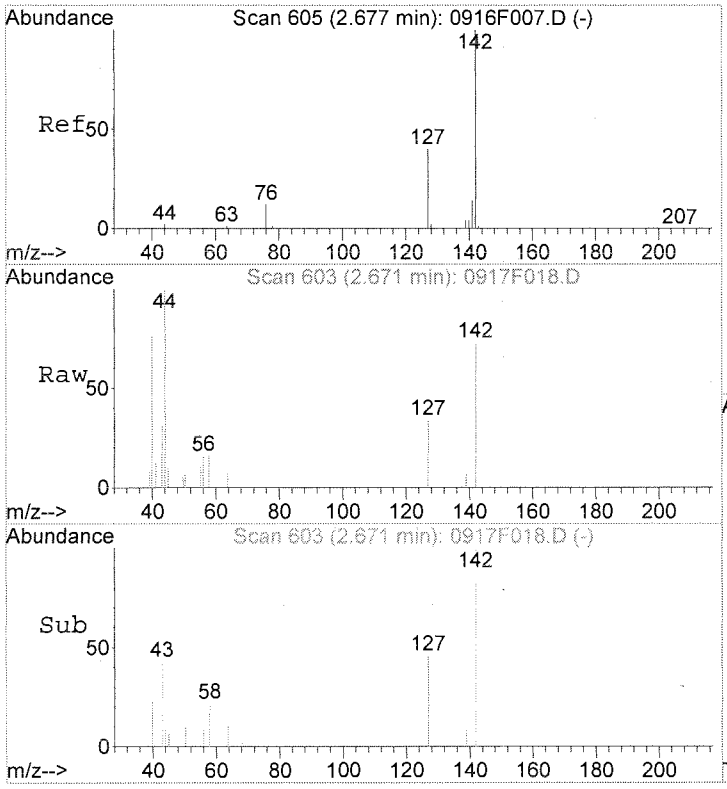


#14
Acetone
Concen: 0.48 PPB
RT: 2.65 min Scan# 596
Delta R.T. 0.01 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 43 Resp: 1430

Ion	Ratio	Lower	Upper
43	100		
58	82.5	0.0	59.8#
42	26.1	0.0	37.4

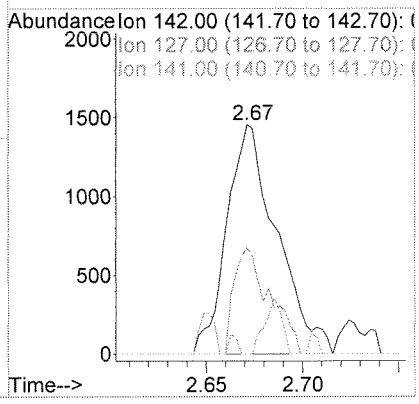


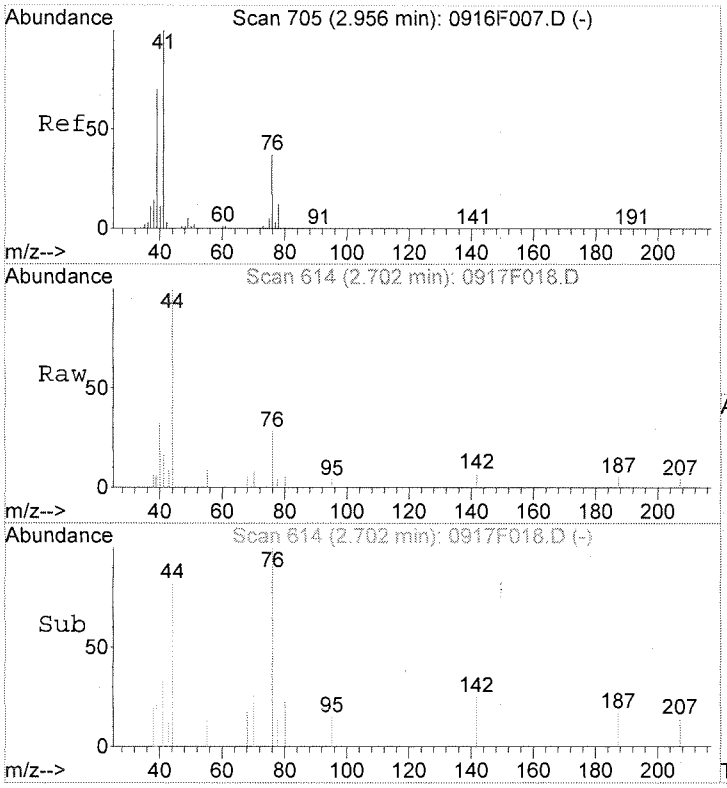


#15
Iodomethane
Concen: 0.24 PPB
RT: 2.67 min Scan# 603
Delta R.T. -0.00 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion:142 Resp: 2623

Ion	Ratio	Lower	Upper
142	100		
127	46.3	9.8	69.8
141	0.0	0.0	44.5

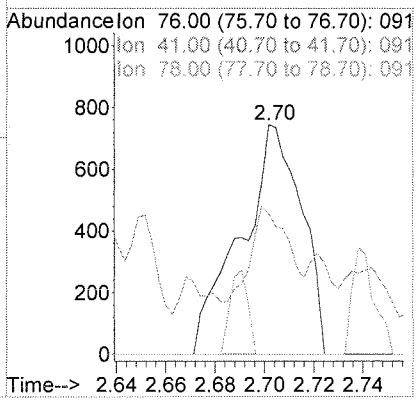


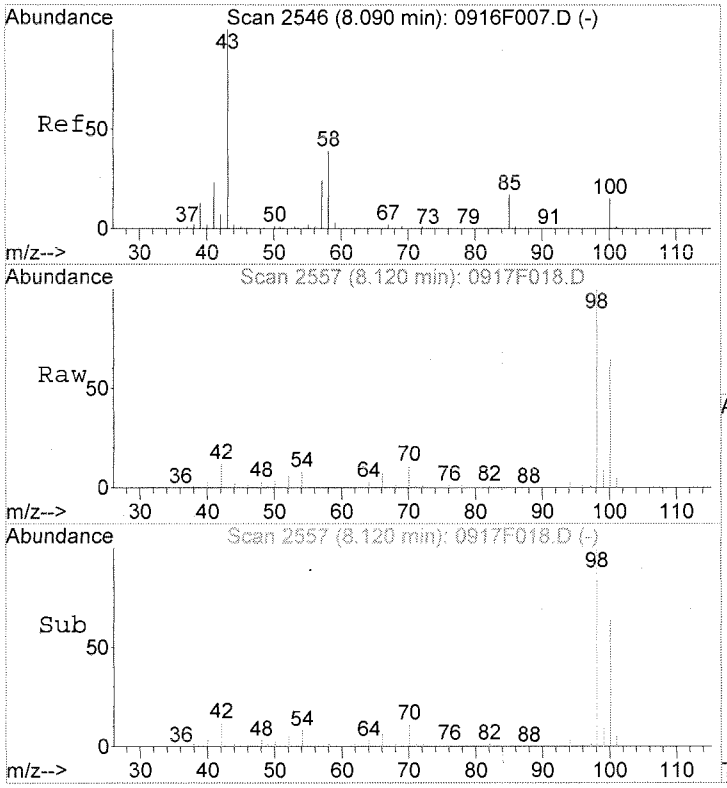


#18
3-Chloro-1-propene
Concen: 0.10 PPB
RT: 2.70 min Scan# 614
Delta R.T. -0.25 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 76 Resp: 1274

Ion	Ratio	Lower	Upper
76	100		
41	29.3	248.6	308.6#
78	0.0	0.0	69.6

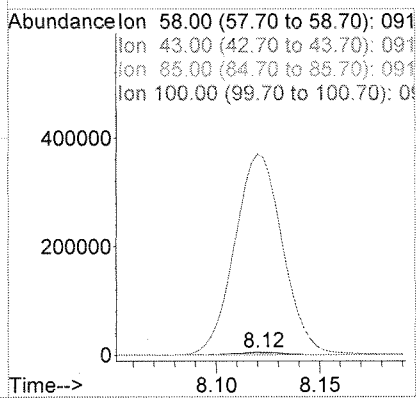


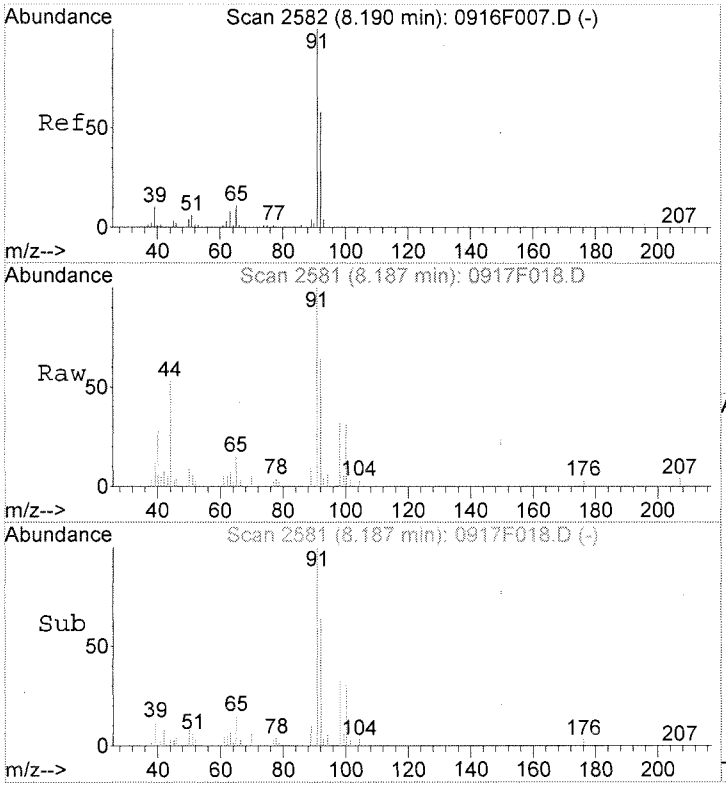


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.75 PPB
RT: 8.12 min Scan# 2557
Delta R.T. 0.03 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 58 Resp: 7838

Ion	Ratio	Lower	Upper
58	100		
43	42.7	232.7	292.7#
85	0.0	14.7	74.7#
100	7535.8	8.0	68.0#

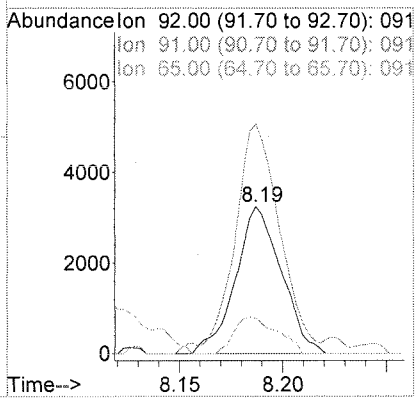


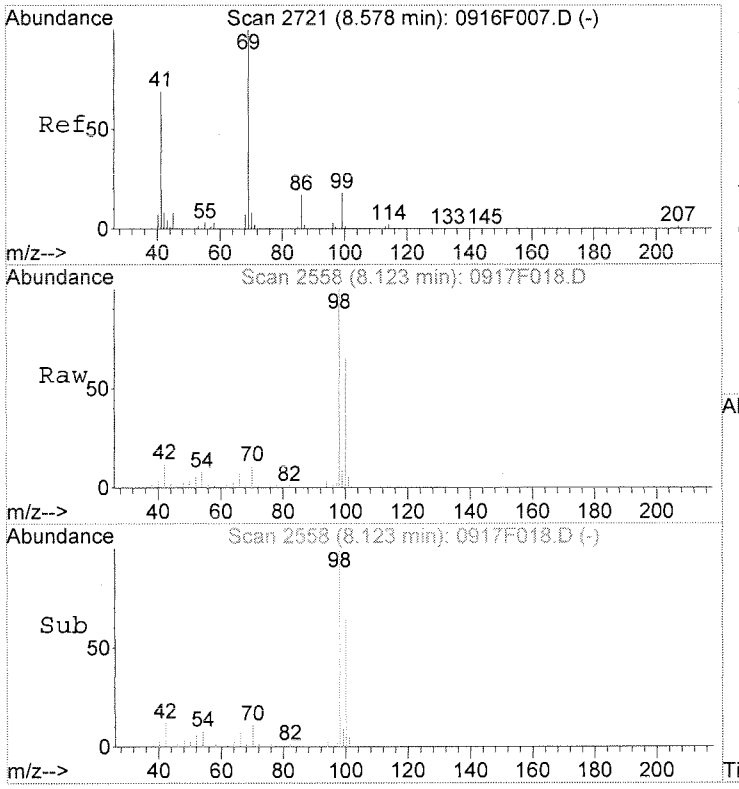


#63
Toluene
Concen: 0.08 PPB
RT: 8.19 min Scan# 2581
Delta R.T. -0.00 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 92 Resp: 4990

Ion	Ratio	Lower	Upper
92	100		
91	149.8	144.2	204.2
65	23.8	0.0	50.2

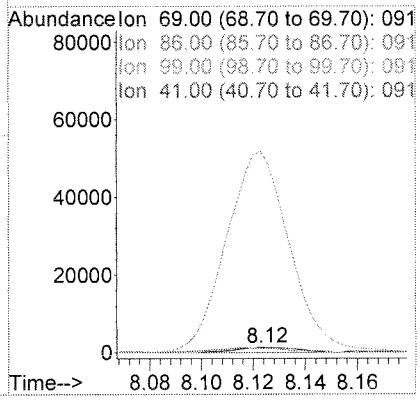


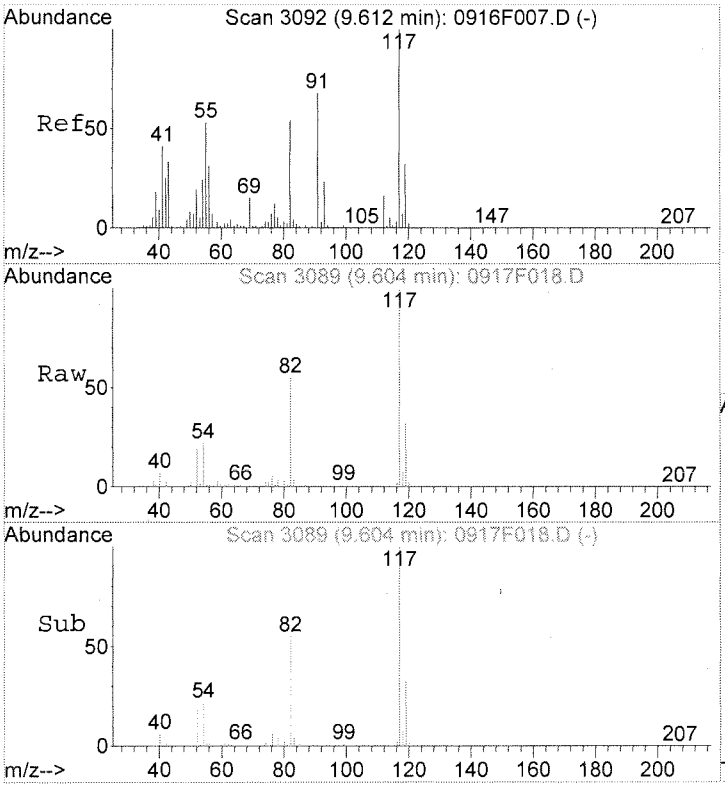


#67
Ethyl methacrylate
Concen: 0.10 PPB
RT: 8.12 min Scan# 2558
Delta R.T. -0.45 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 69 Resp: 2083

Ion	Ratio	Lower	Upper
69	100		
86	93.2	0.0	46.7#
99	3862.7	0.0	47.9#
41	83.0	40.5	100.5

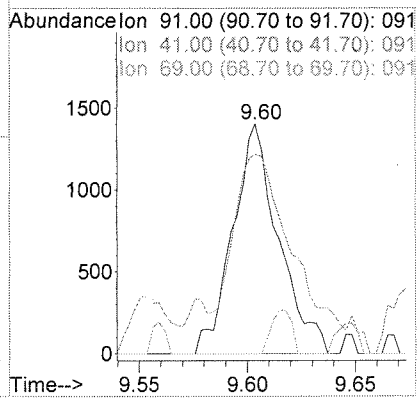




#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.60 min Scan# 3089
Delta R.T. -0.01 min
Lab File: 0917F018.D
Acq: 17 Sep 2013 5:49 pm

Tgt Ion: 91 Resp: 2057

Ion	Ratio	Lower	Upper
91	100		
41	69.9	29.5	89.5
69	0.0	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13254-BW-2
Lab Code: K1309638-002

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.14**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	96	73-122	09/17/13	Acceptable
Toluene-d8	100	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F019.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 18:16
Date Quantitated: 09/18/2013 11:00
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F019.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 18:16	**Quant Date:**	09/18/2013 11:00	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-002			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282916	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	933441	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	377453	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	286268	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Ree	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	241407	9.59	96	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	920943	10.01	100	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	319876	9.61	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene	8.19		0.00	92	8637	0.1400	0.14	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F019.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 18:16	**Quant Date:**	09/18/2013 11:00	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-002			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes	9.85		0.00	106	2441	0.0600	0.11	U	
2	o-Xylene				106	0d		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene	11.96		0.00	146	2423	0.0500	0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F019.D Vial: 16
Acq On : 17 Sep 2013 6:16 pm Operator: KS
Sample : K1309638-002 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:52:34 2013 Quant Results File: 081213MS27_8260.RES

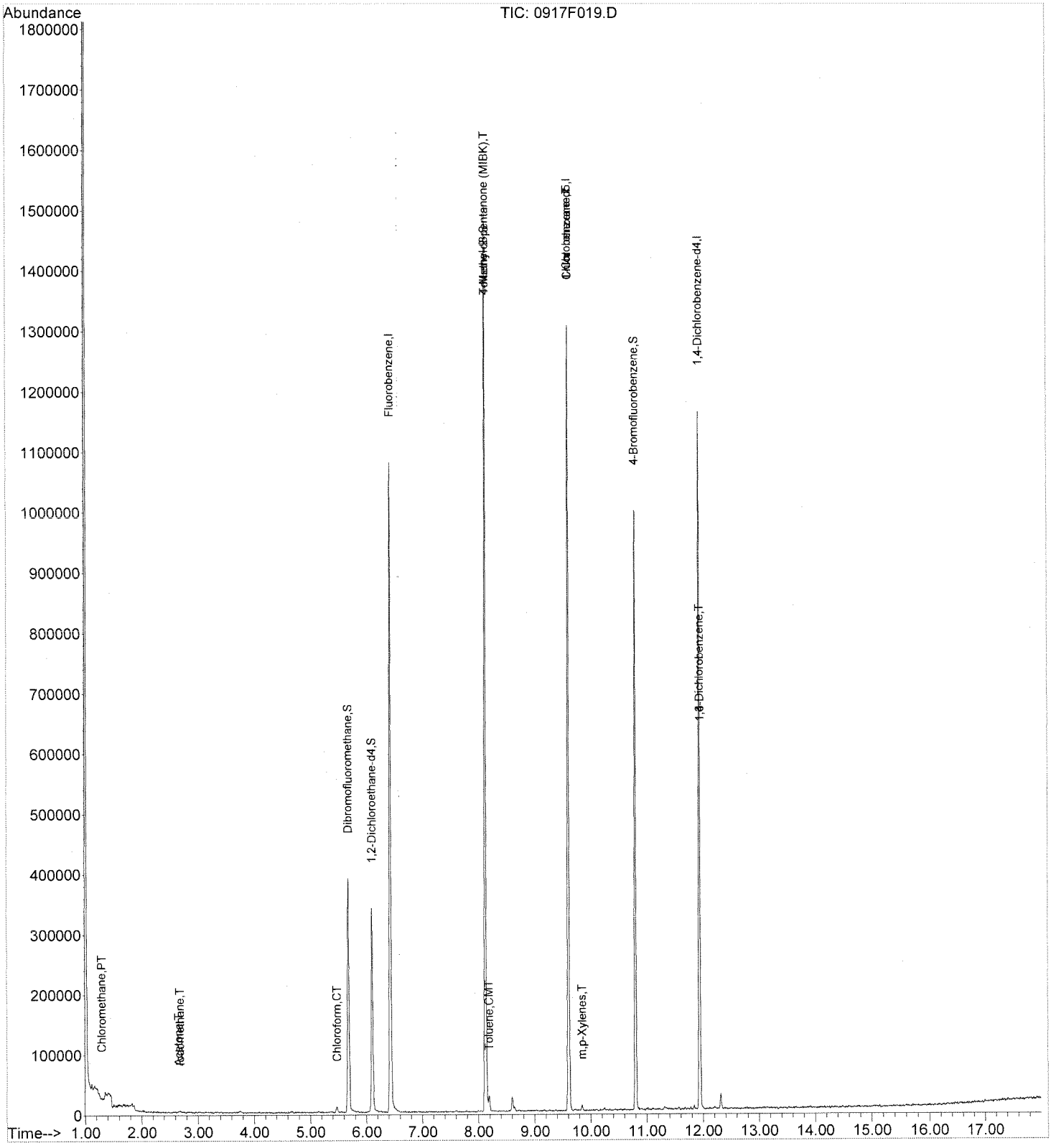
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

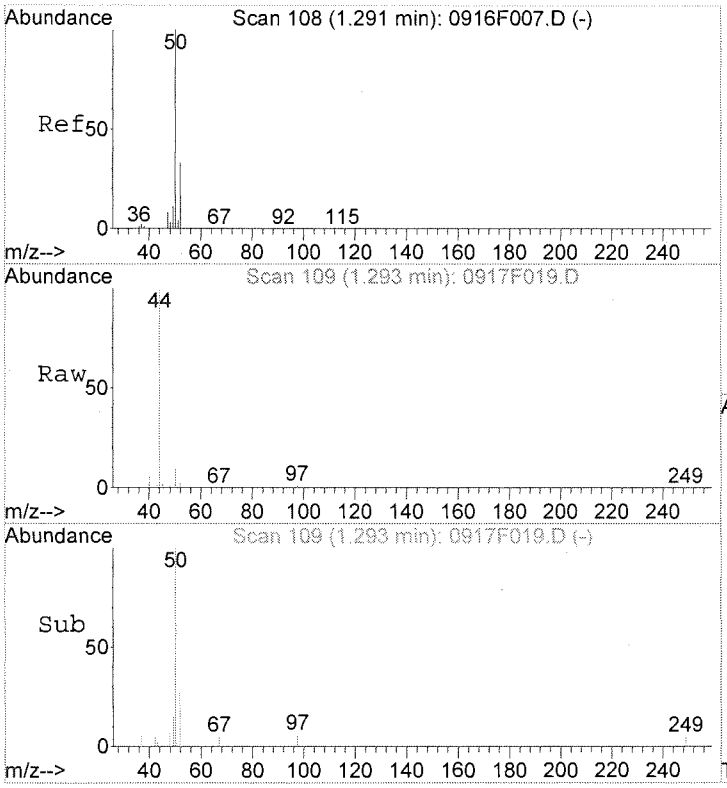
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	933441	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	377453	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	286268	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	241407	9.59	PPB		0.00
Spiked Amount 10.000			Recovery = 95.90%				
47) 1,2-Dichloroethane-d4	6.10	65	232051	9.59	PPB		0.00
Spiked Amount 10.000			Recovery = 95.90%				
62) Toluene-d8	8.12	98	920943	10.01	PPB		0.00
Spiked Amount 10.000			Recovery = 100.10%				
84) 4-Bromofluorobenzene	10.79	95	319876	9.61	PPB		0.00
Spiked Amount 10.000			Recovery = 96.10%				
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1886	0.06	PPB		91
14) Acetone	2.65	43	1014	0.34	PPB		55
15) Iodomethane	2.68	142	1392	0.13	PPB		82
40) Chloroform	5.47	83	7445	0.17	PPB		91
61) 4-Methyl-2-pentanone (MIBK	8.12	58	8001	1.80	PPB	#	1
63) Toluene	8.19	92	8637	0.14	PPB		88
74) 1-Chlorohexane	9.61	91	1373	0.04	PPB		74
78) m,p-Xylenes	9.85	106	2441	0.06	PPB		83
98) 1,3-Dichlorobenzene	11.96	146	2423	0.05	PPB		83
99) 1,4-Dichlorobenzene	11.96	146	2423	0.05	PPB		82

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F019.D Vial: 16
Acq On : 17 Sep 2013 6:16 pm Operator: KS
Sample : K1309638-002 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:00 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

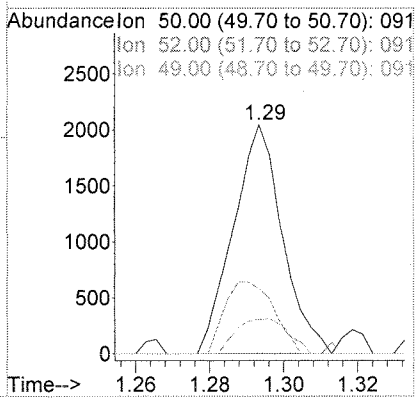


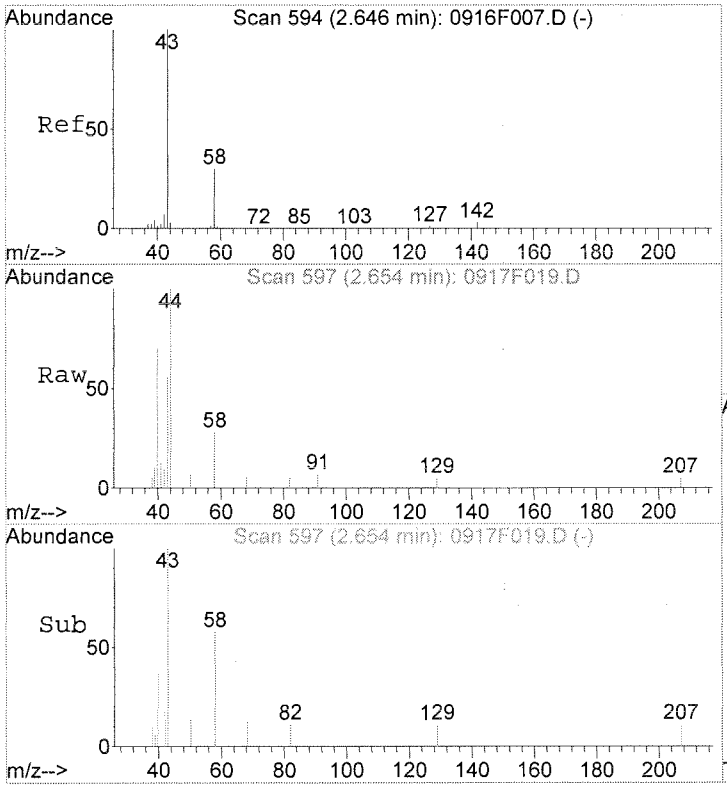


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 50 Resp: 1886

Ion	Ratio	Lower	Upper
50	100		
52	28.3	2.5	62.5
49	14.9	0.0	40.3

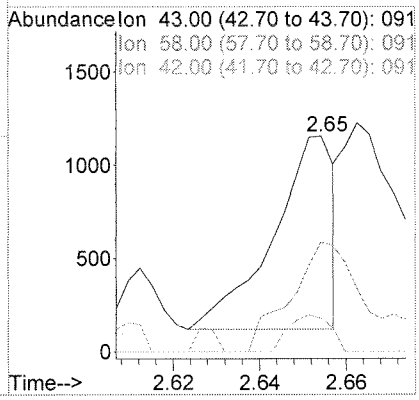


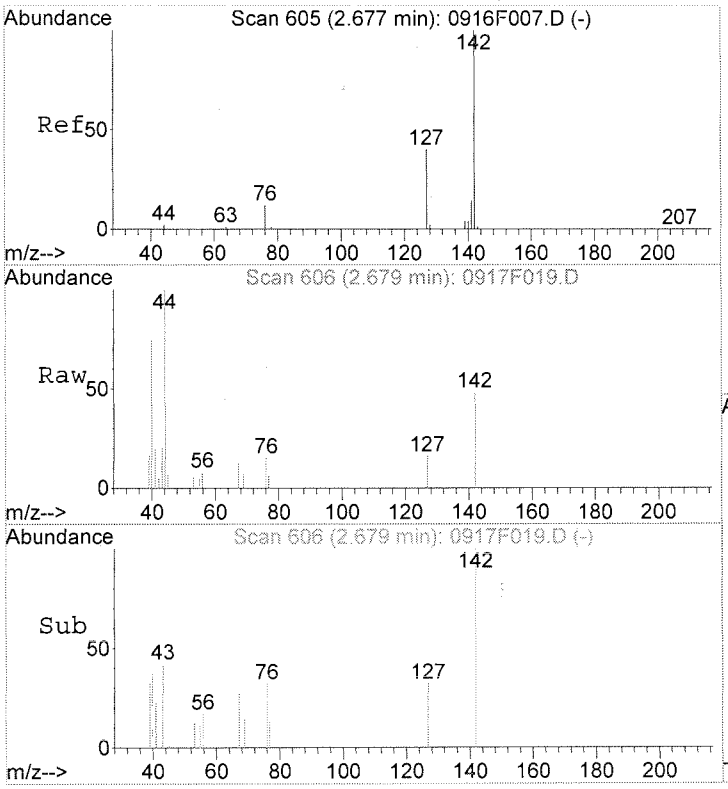


#14
Acetone
Concen: 0.34 PPB
RT: 2.65 min Scan# 597
Delta R.T. 0.01 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 43 Resp: 1014

Ion	Ratio	Lower	Upper
43	100		
58	56.5	0.0	59.8
42	17.2	0.0	37.4

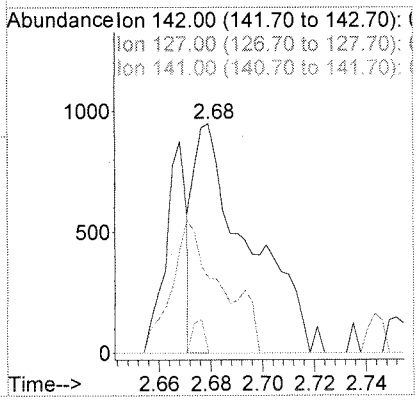


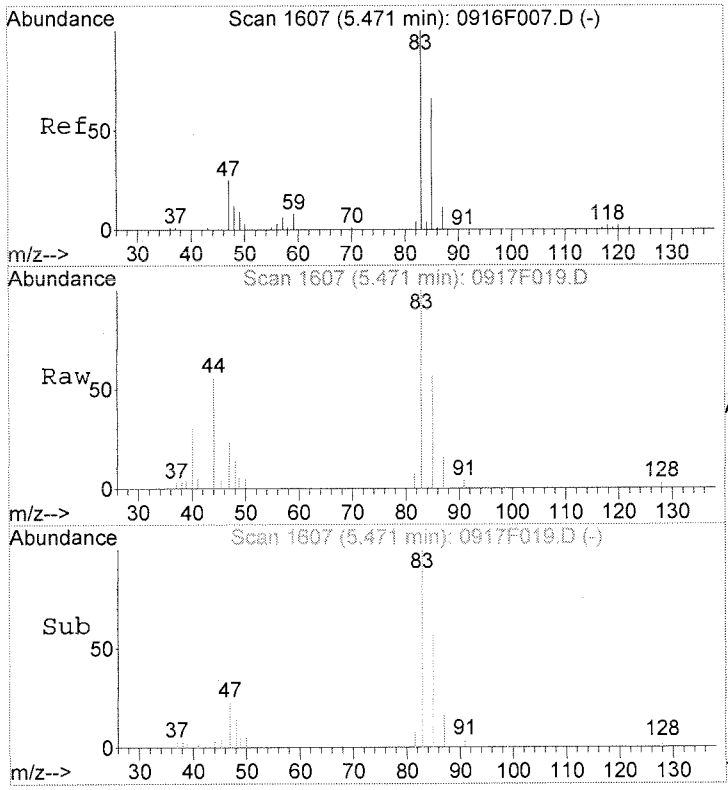


#15
Iodomethane
Concen: 0.13 PPB
RT: 2.68 min Scan# 606
Delta R.T. 0.01 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion:142 Resp: 1392

Ion	Ratio	Lower	Upper
142	100		
127	32.5	9.8	69.8
141	0.0	0.0	44.5

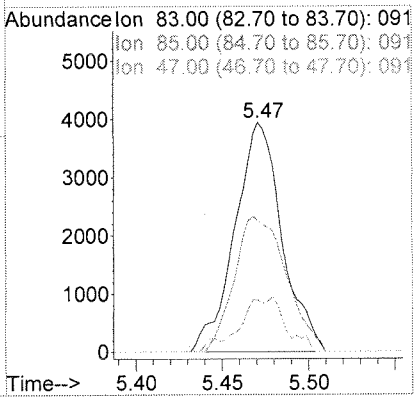


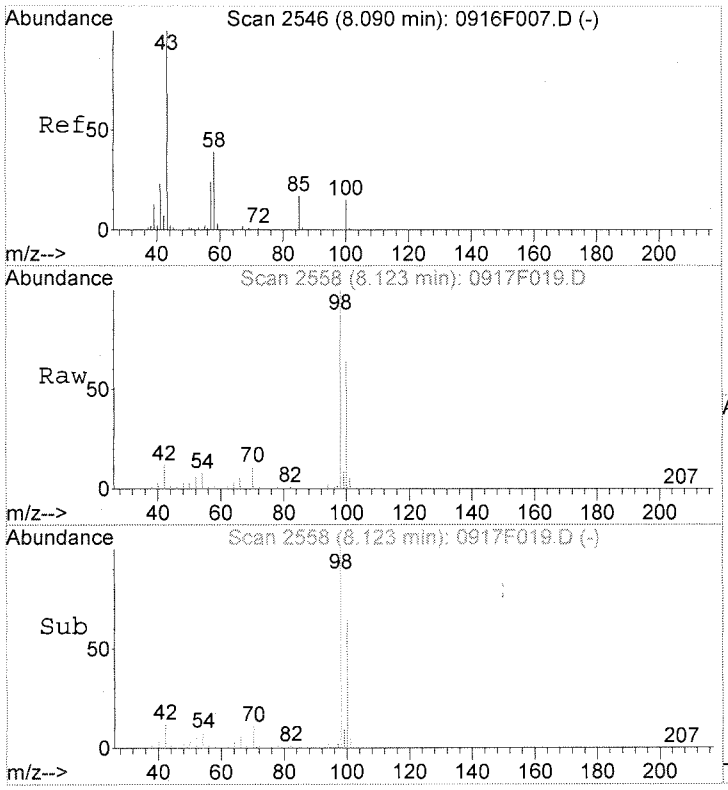


#40
Chloroform
Concen: 0.17 PPB
RT: 5.47 min Scan# 1607
Delta R.T. 0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 83 Resp: 7445

Ion	Ratio	Lower	Upper
83	100		
85	57.4	35.4	95.4
47	22.5	0.0	55.1

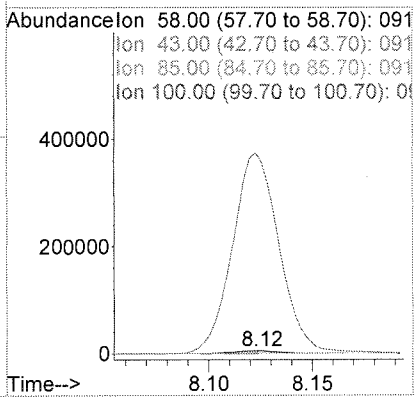


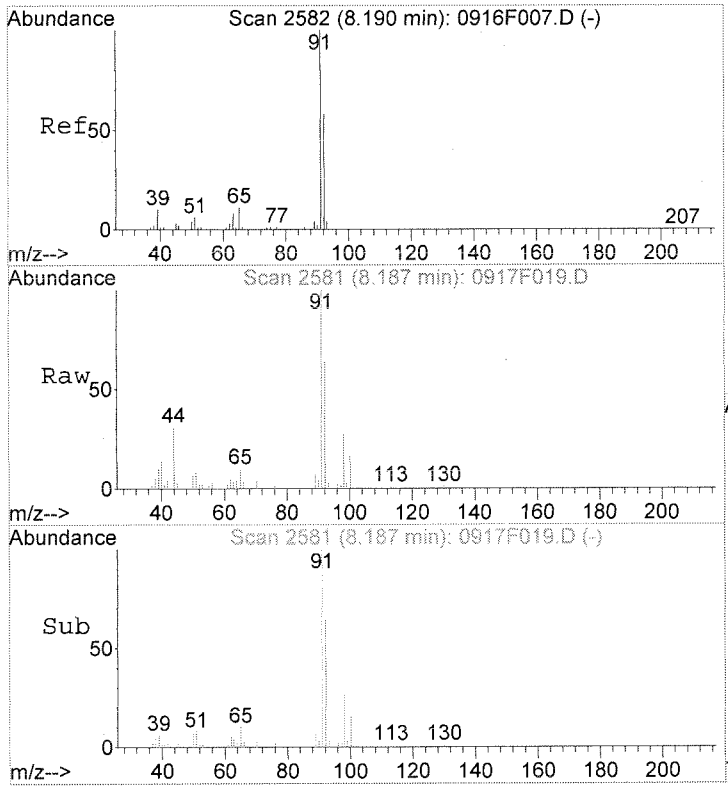


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.80 PPB
RT: 8.12 min Scan# 2558
Delta R.T. 0.04 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 58 Resp: 8001

Ion	Ratio	Lower	Upper
58	100		
43	45.5	232.7	292.7#
85	3.0	14.7	74.7#
100	7141.6	8.0	68.0#

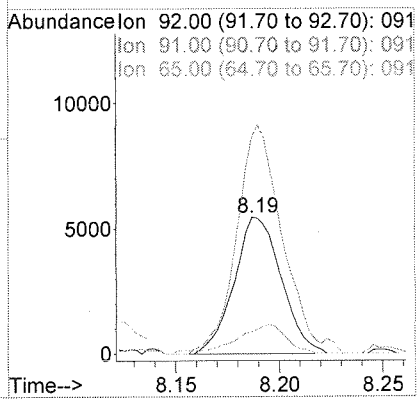


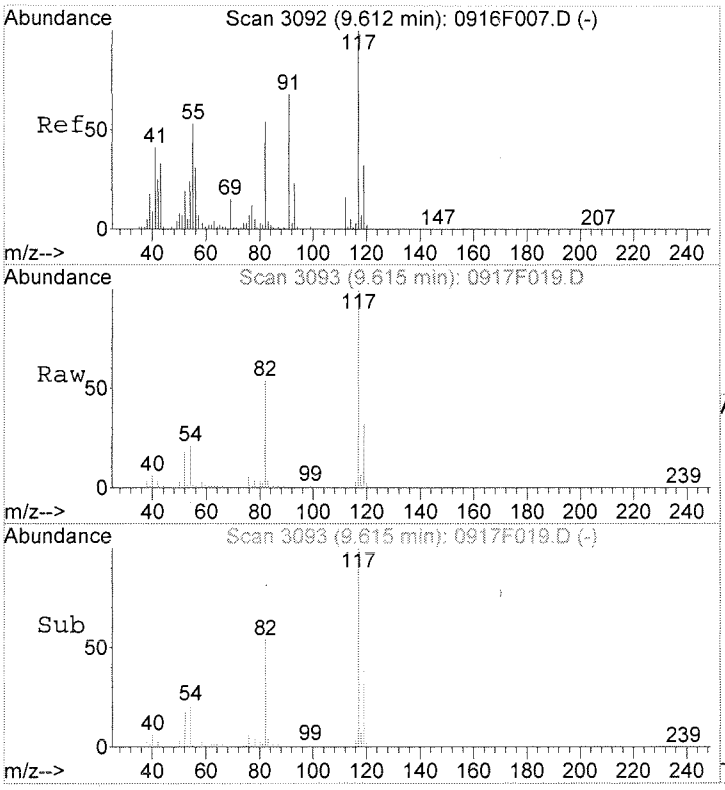


#63
Toluene
Concen: 0.14 PPB
RT: 8.19 min Scan# 2581
Delta R.T. -0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 92 Resp: 8637

Ion	Ratio	Lower	Upper
92	100		
91	157.3	144.2	204.2
65	16.2	0.0	50.2

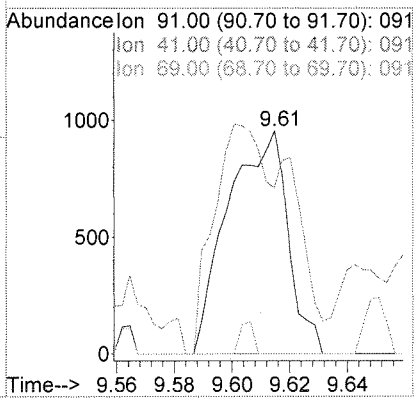


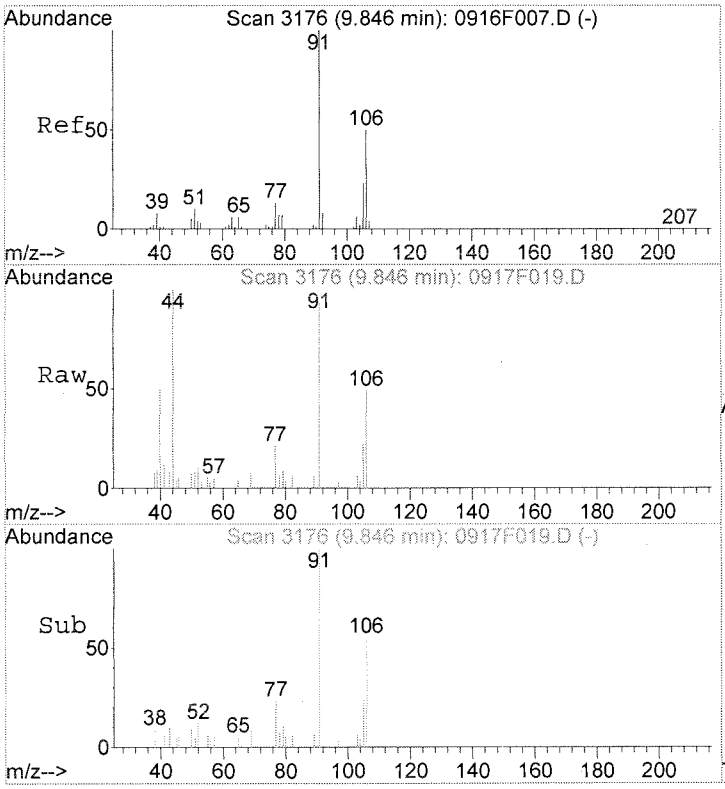


#74
1-Chlorohexane
Concen: 0.04 PPB
RT: 9.61 min Scan# 3093
Delta R.T. 0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion: 91 Resp: 1373

Ion	Ratio	Lower	Upper
91	100		
41	74.3	29.5	89.5
69	0.0	0.0	49.9

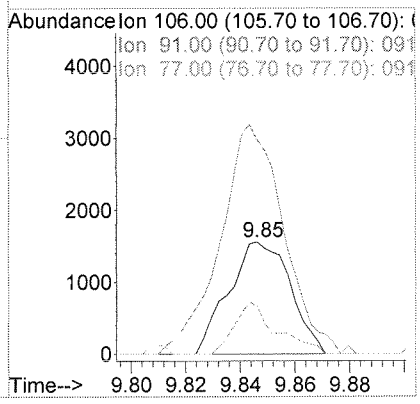


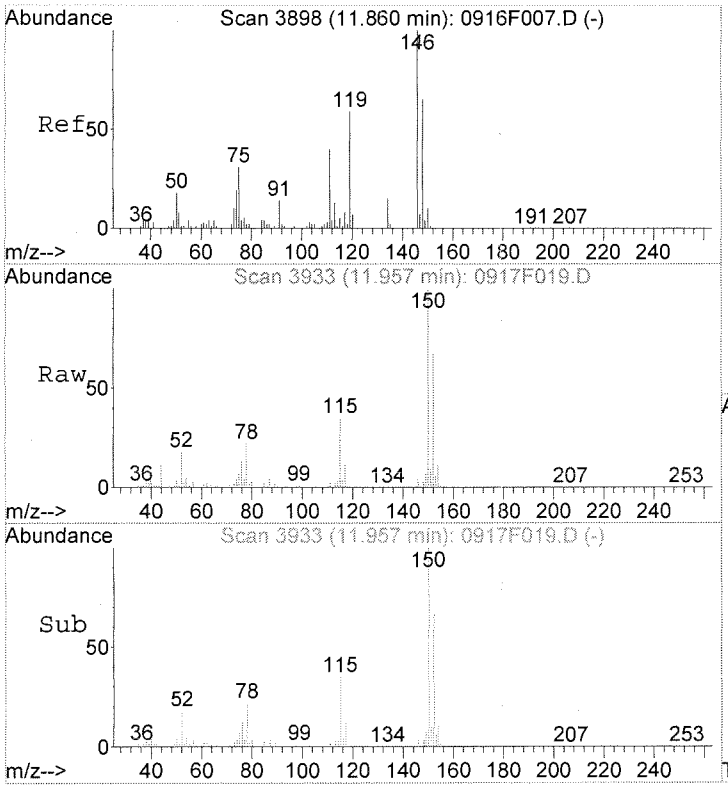


#78
m,p-Xylenes
Concen: 0.06 PPB
RT: 9.85 min Scan# 3176
Delta R.T. -0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion:106 Resp: 2441

Ion	Ratio	Lower	Upper
106	100		
91	180.3	173.6	233.6
77	42.1	0.0	55.7

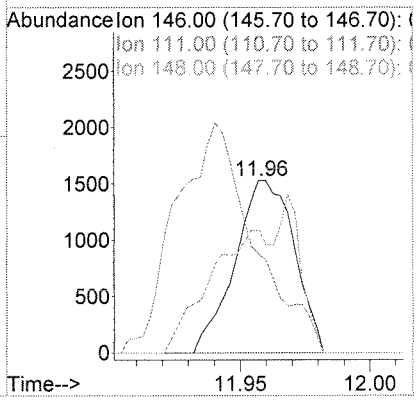


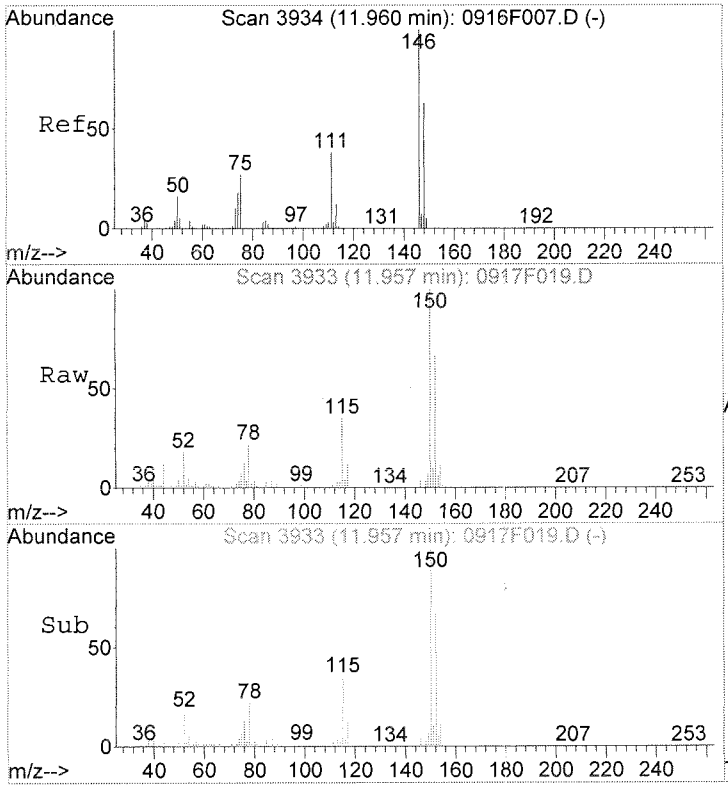


#98
1,3-Dichlorobenzene
Concen: 0.05 PPB
RT: 11.96 min Scan# 3933
Delta R.T. 0.10 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion:146 Resp: 2423

Ion	Ratio	Lower	Upper
146	100		
111	57.3	9.6	69.6
148	71.0	33.4	93.4

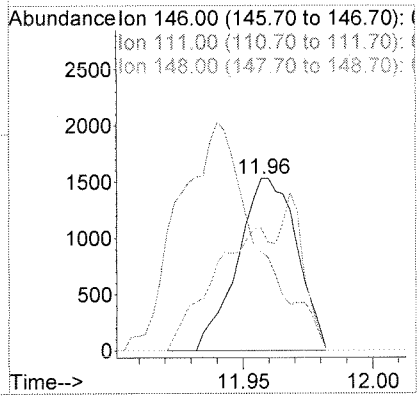




#99
1,4-Dichlorobenzene
Concen: 0.05 PPB
RT: 11.96 min Scan# 3933
Delta R.T. -0.00 min
Lab File: 0917F019.D
Acq: 17 Sep 2013 6:16 pm

Tgt Ion:146 Resp: 2423

Ion	Ratio	Lower	Upper
146	100		
111	57.3	7.9	67.9
148	71.0	33.1	93.1



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/11/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 2
Lab Code: K1309638-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F012.D
Lab ID: K1309638-003
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 14:19
Date Quantitated: 09/18/2013 11:35
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.19.13

Secondary Review: [illegible] 91913

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F012.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 14:19	**Quant Date:**	09/18/2013 11:35	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-003			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282917	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	959356	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	382822	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	302257	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	239682	9.26	93	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	935424	9.89	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	320446	9.49	95	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride	3.16	0.01	0.00	84	1679	0.0700	0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene				92	0d		0.054	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F012.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 14:19	**Quant Date:**	09/18/2013 11:35	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-003			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0**d**		0.11	U	
2	o-Xylene				106	0**d**		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0**d**		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F012.D Vial: 11
Acq On : 17 Sep 2013 2:19 pm Operator: KS
Sample : K1309638-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:28:38 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

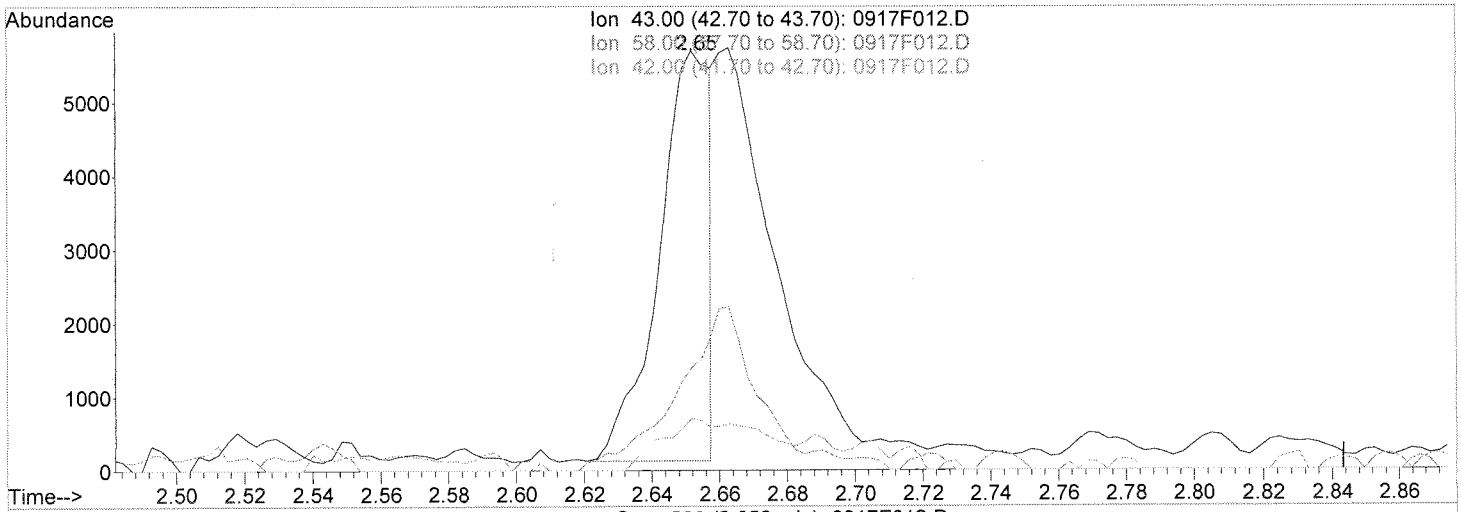
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	959356	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	382822	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	302257	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	239682	9.26	PPB		0.00
Spiked Amount 10.000			Recovery =	92.60%			
47) 1,2-Dichloroethane-d4	6.10	65	245279	9.87	PPB		0.00
Spiked Amount 10.000			Recovery =	98.70%			
62) Toluene-d8	8.12	98	935424	9.89	PPB		0.00
Spiked Amount 10.000			Recovery =	98.90%			
84) 4-Bromofluorobenzene	10.79	95	320446	9.49	PPB		0.00
Spiked Amount 10.000			Recovery =	94.90%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	2026	0.06	PPB		69
14) Acetone	2.66	43	12512m	4.10	PPB		
15) Iodomethane	2.68	142	2704	0.24	PPB		98
21) Methylene Chloride	3.16	84	1679	0.07	PPB	#	67
26) Hexane	3.75	57	1646	0.05	PPB		68
34) 2-Butanone	5.13	72	2918	2.38	PPB	#	79
39) Tetrahydrofuran	5.37	71	7033	5.40	PPB	#	78
40) Chloroform	5.47	83	3685	0.08	PPB		98
61) 4-Methyl-2-pentanone (MIBK	8.13	58	8144	1.78	PPB	#	1
74) 1-Chlorohexane	9.61	91	2041	0.06	PPB		68

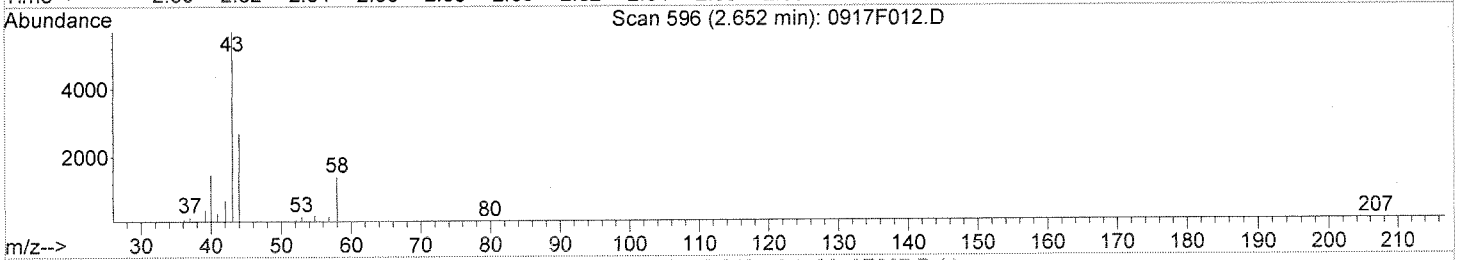
(#) = qualifier out of range (m) = manual integration

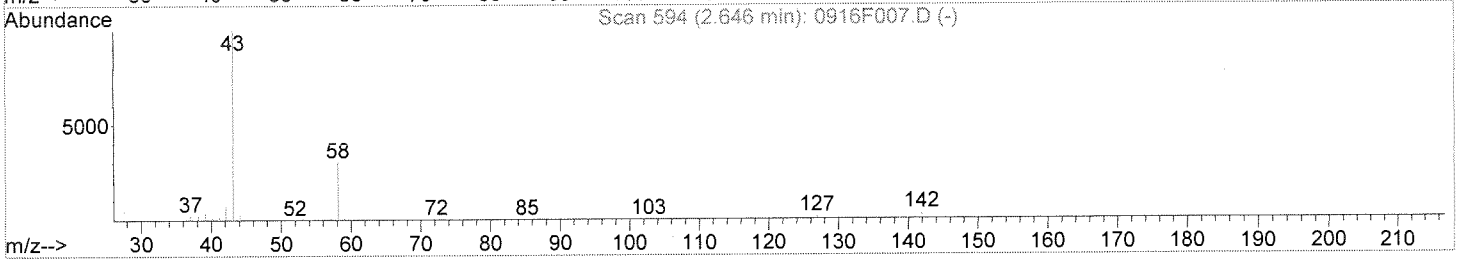
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F012.D Vial: 11
Acq On : 17 Sep 2013 2:19 pm Operator: KS
Sample : K1309638-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:32 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F012.D

(14) Acetone (T)

2.65min 1.94PPB

response 5907

Ion	Exp%	Act%
43.00	100	100
58.00	29.80	23.31
42.00	7.40	12.66
0.00	0.00	0.00

Manual Integration:

Before

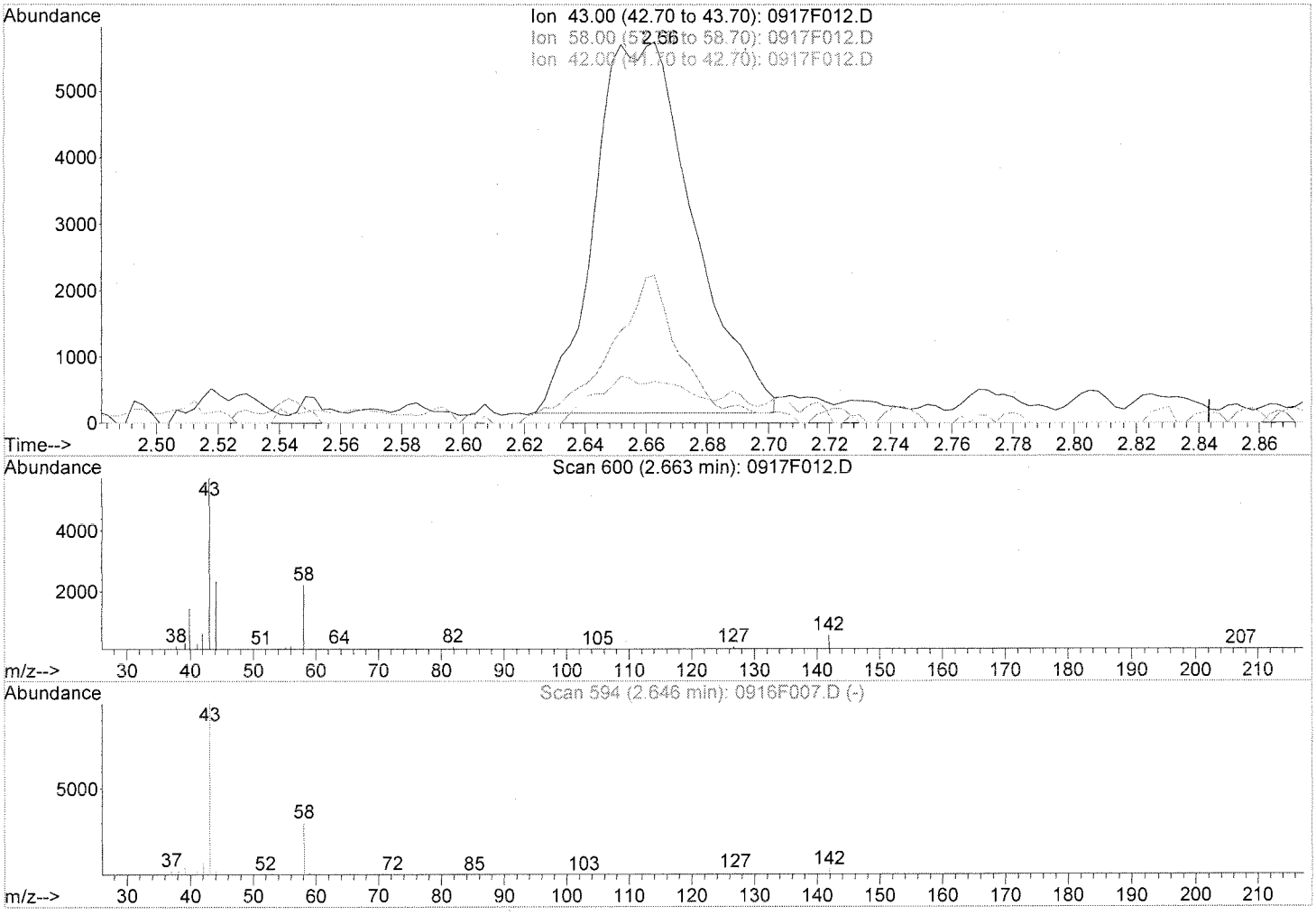
KS
9.18.13

9/19/13

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F012.D Vial: 11
Acq On : 17 Sep 2013 2:19 pm Operator: KS
Sample : K1309638-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:33 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F012.D

(14) Acetone (T)

2.66min 4.10PPB m

response 12512

Ion	Exp%	Act%
43.00	100	100
58.00	29.80	38.76
42.00	7.40	10.96
0.00	0.00	0.00

Manual Integration:

After

Split peak

09/18/13 KS

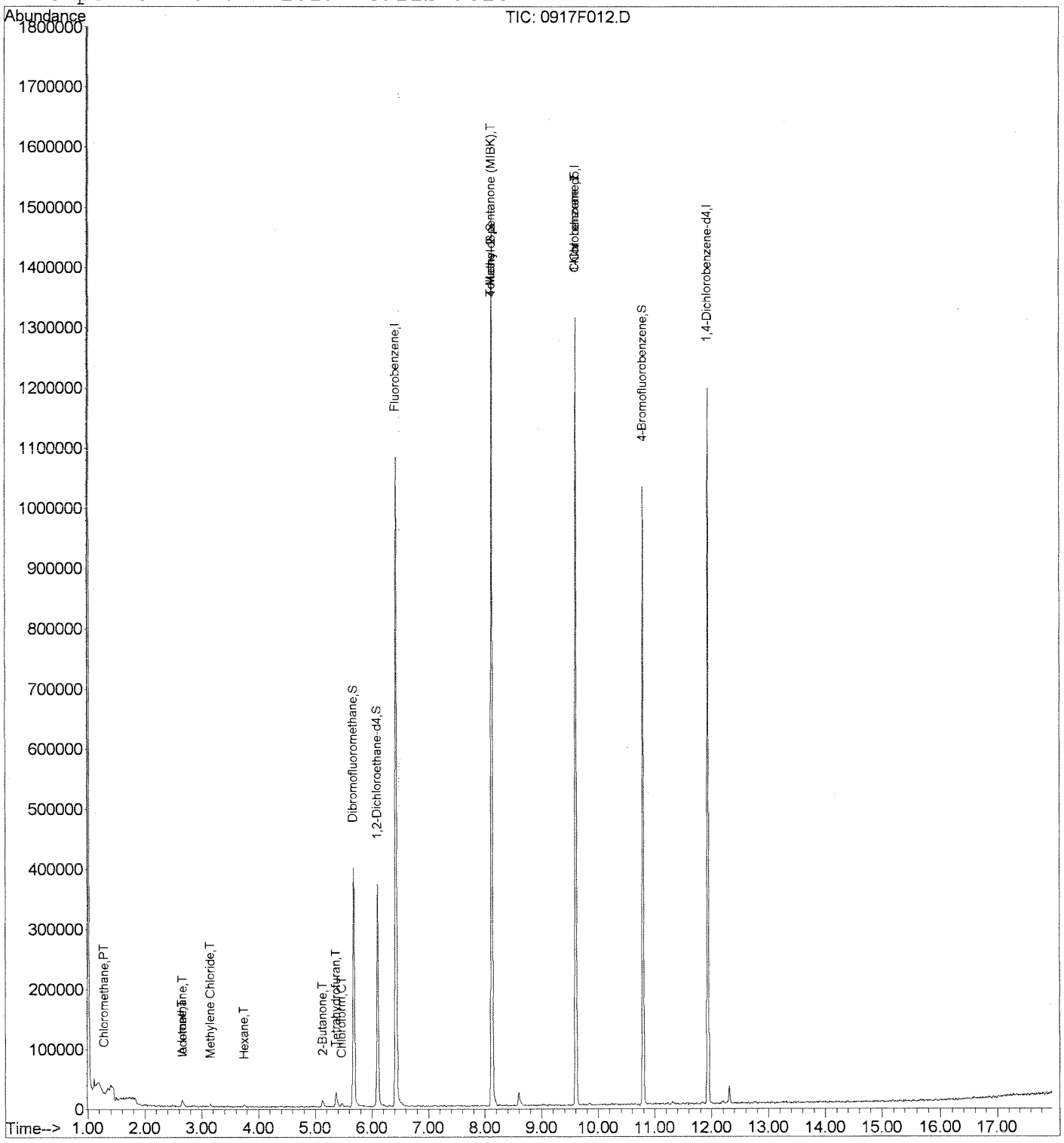
9/19/13

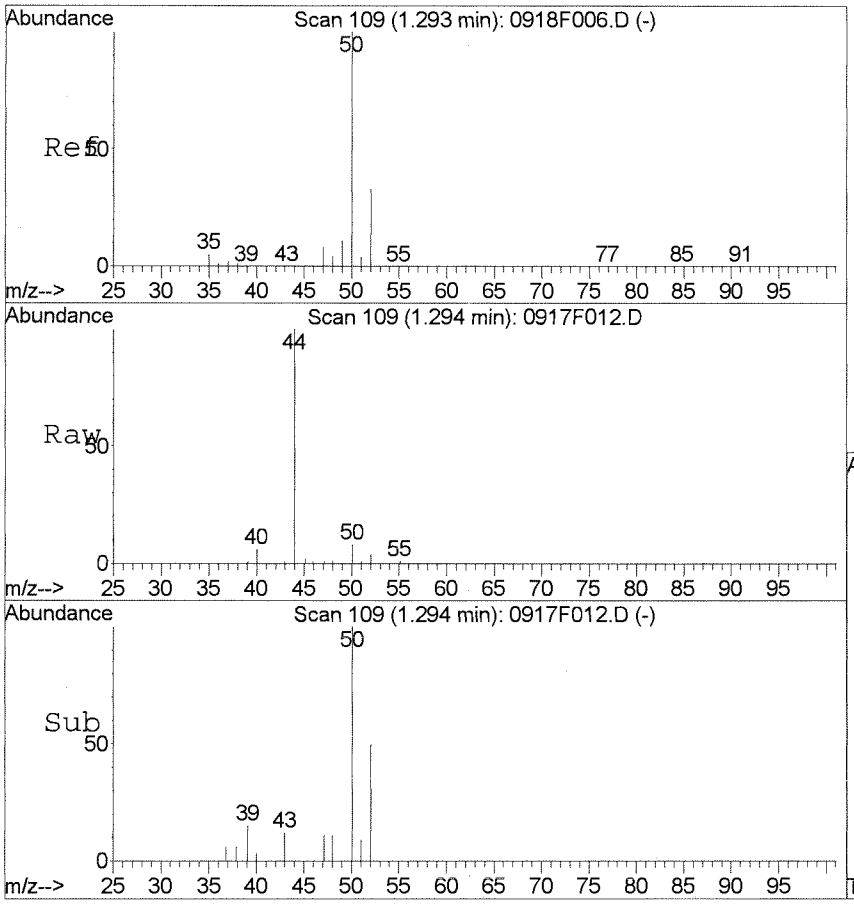
0917F012.D 081213MS27_8260.M Wed Sep 18 11:29:40 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F012.D Vial: 11
Acq On : 17 Sep 2013 2:19 pm Operator: KS
Sample : K1309638-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:35 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Sep 16 10:39:31 2013
Response via : Initial Calibration

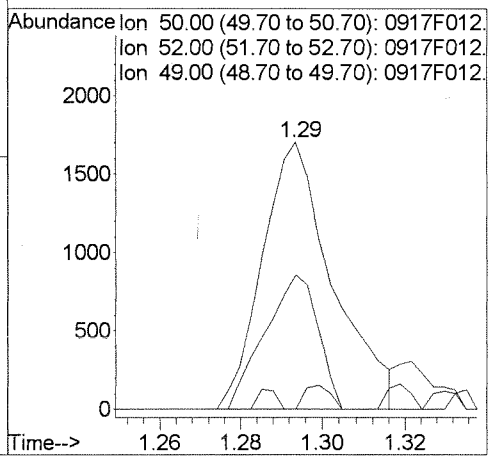


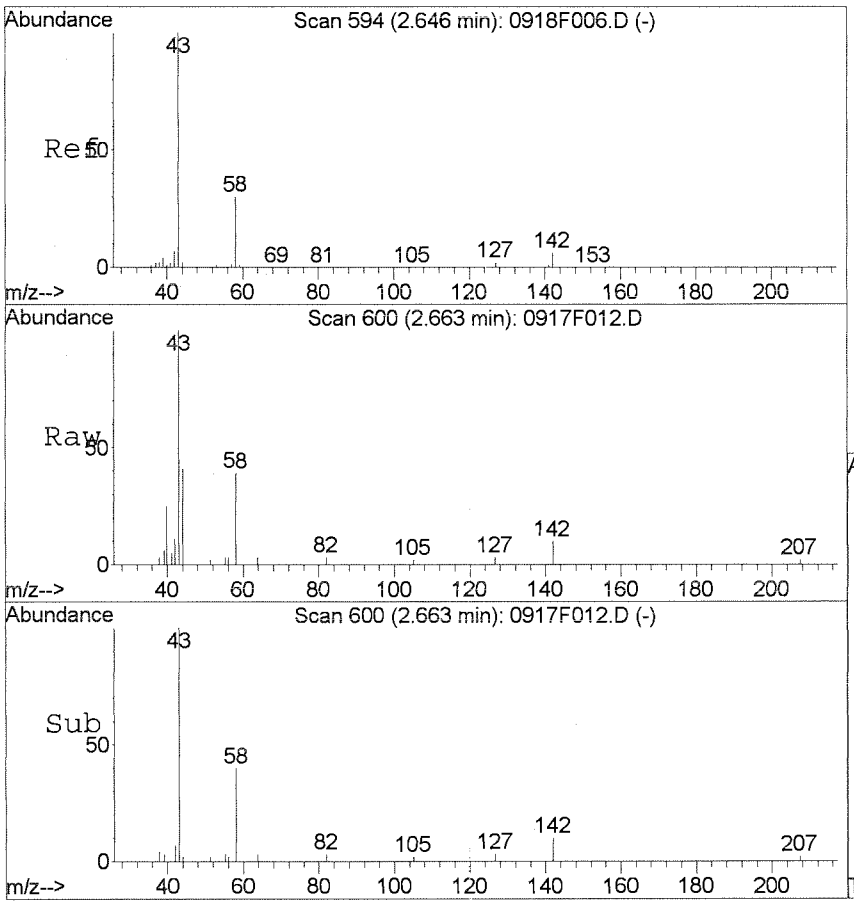


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 50 Resp: 2026

Ion	Ratio	Lower	Upper
50	100		
52	50.3	2.5	62.5
49	0.0	0.0	40.3

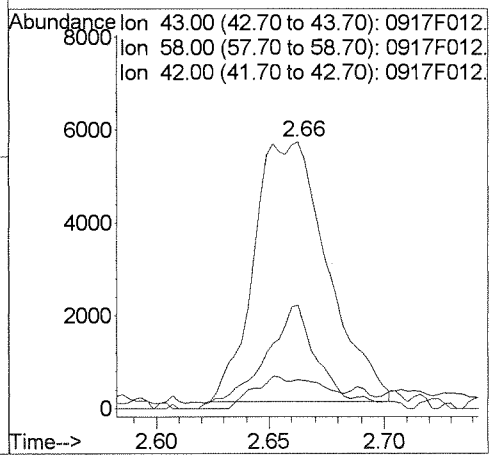


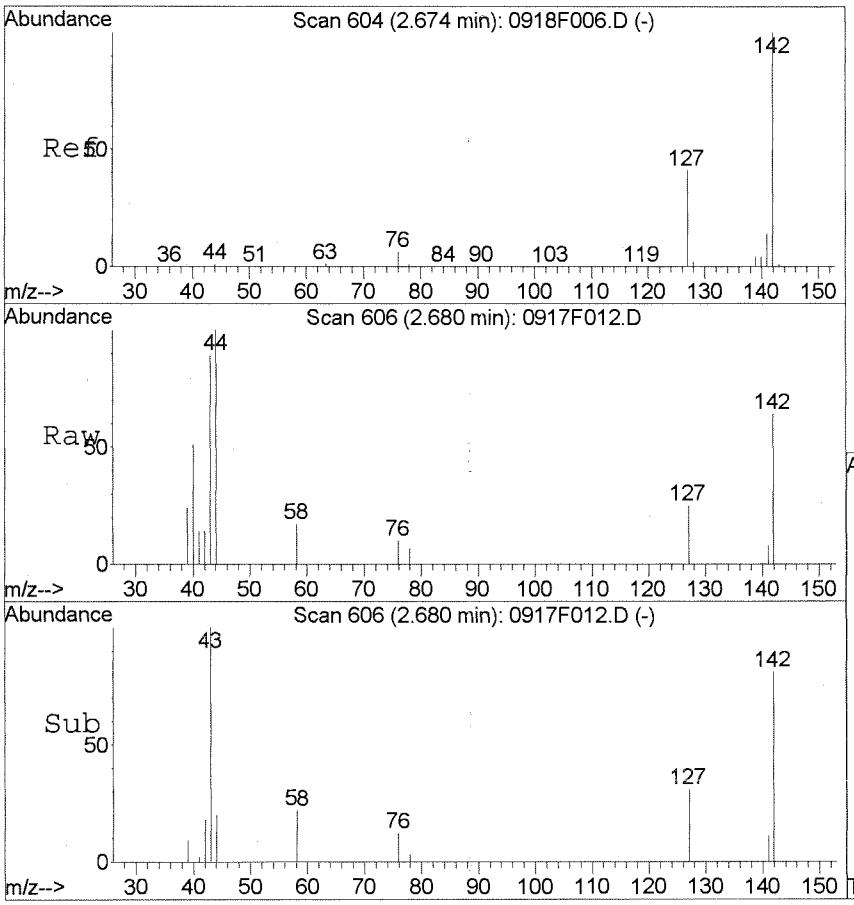


#14
Acetone
Concen: 4.10 PPB m
RT: 2.66 min Scan# 600
Delta R.T. 0.02 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 43 Resp: 12512

Ion	Ratio	Lower	Upper
43	100		
58	38.8	0.0	59.8
42	11.0	0.0	37.4

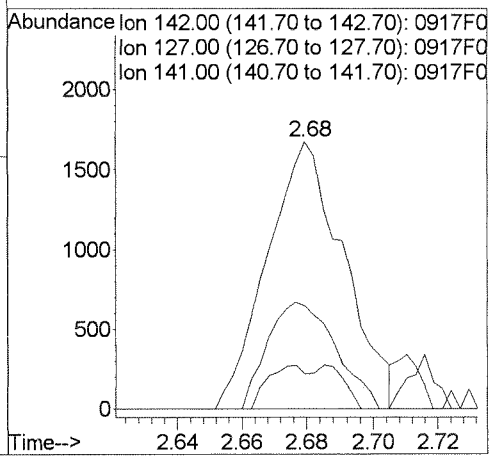


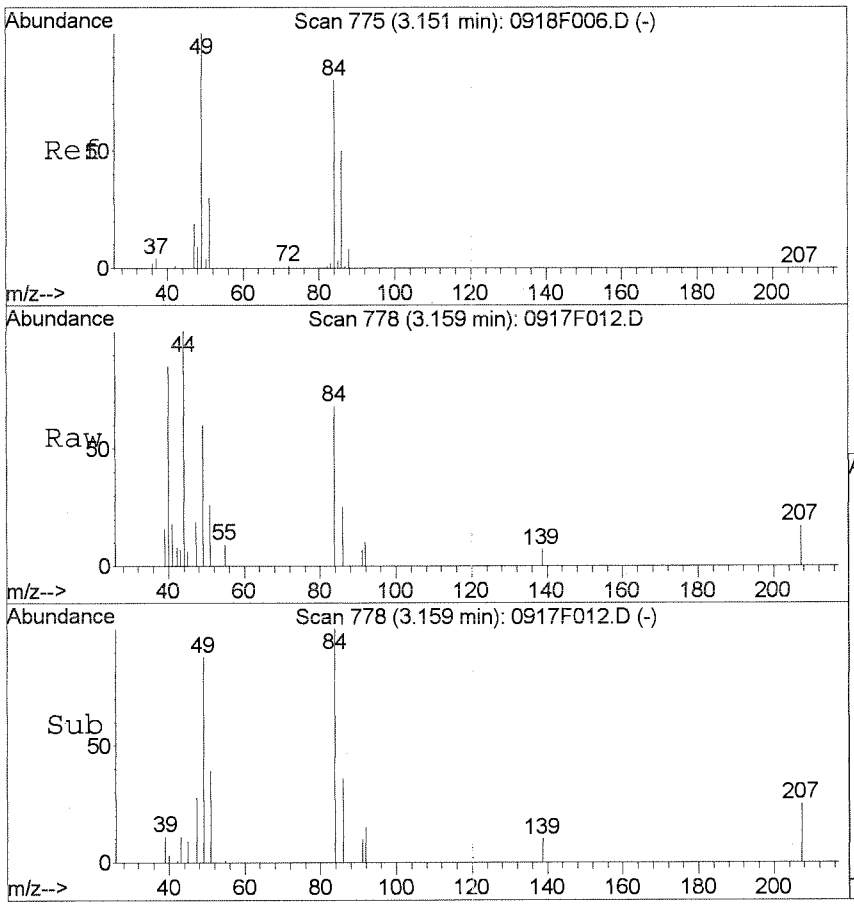


#15
Iodomethane
Concen: 0.24 PPB
RT: 2.68 min Scan# 606
Delta R.T. 0.01 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion:142 Resp: 2704

Ion	Ratio	Lower	Upper
142	100		
127	38.8	9.8	69.8
141	13.1	0.0	44.5

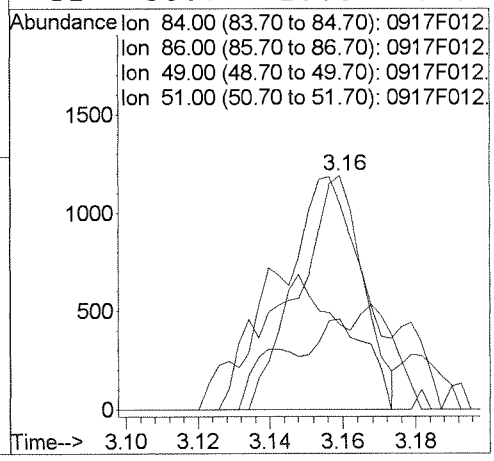


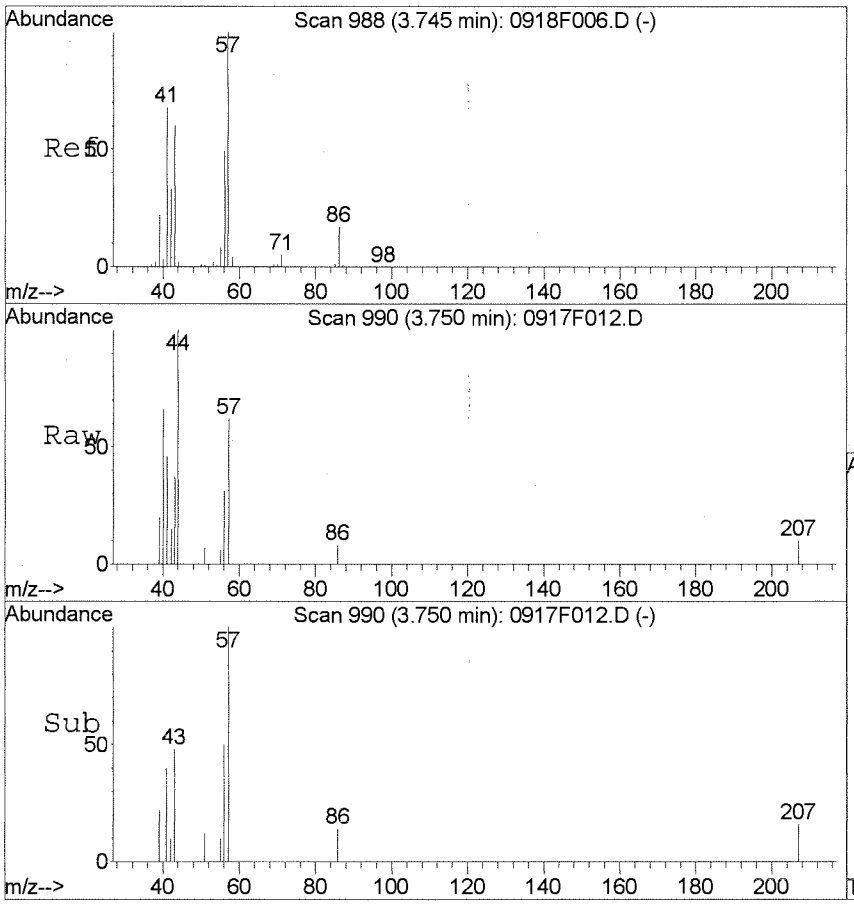


#21
Methylene Chloride
Concen: 0.07 PPB
RT: 3.16 min Scan# 778
Delta R.T. 0.01 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 84 Resp: 1679

Ion	Ratio	Lower	Upper
84	100		
86	36.3	35.0	95.0
49	76.6	93.9	153.9#
51	38.7	10.0	70.0

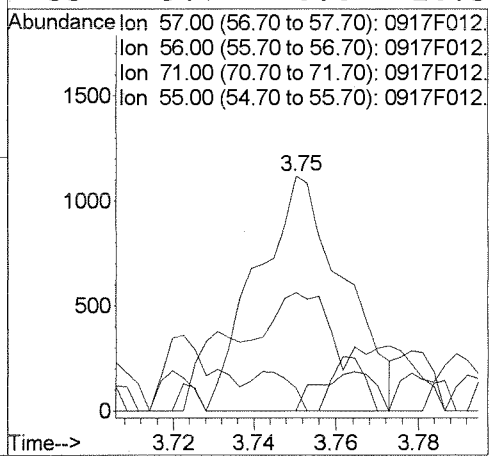


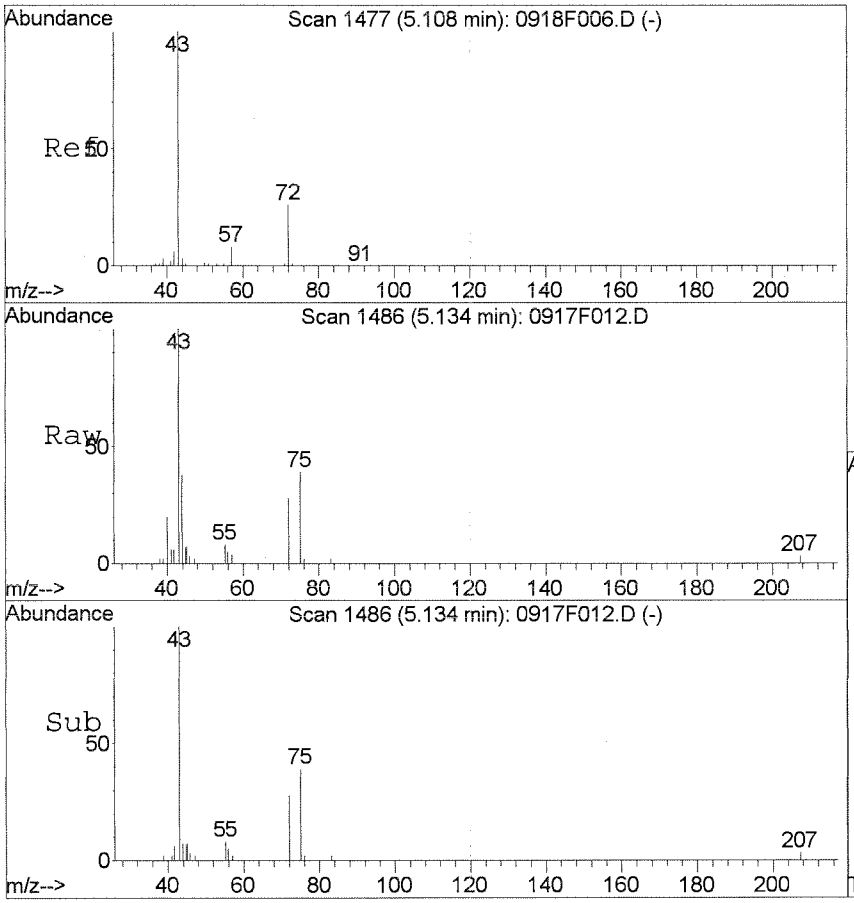


#26
Hexane
Concen: 0.05 PPB
RT: 3.75 min Scan# 990
Delta R.T. 0.01 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 57 Resp: 1646

Ion	Ratio	Lower	Upper
57	100		
56	22.6	18.7	78.7
71	0.0	0.0	35.1
55	9.7	0.0	20.5

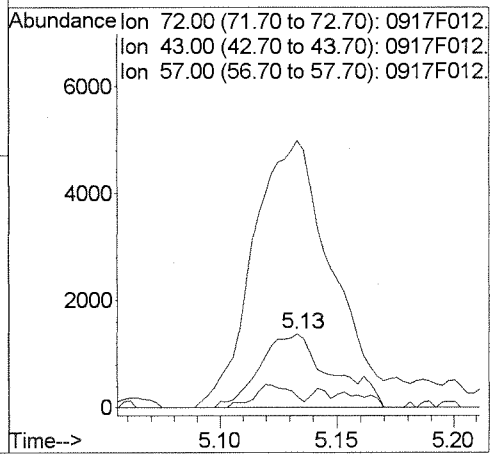


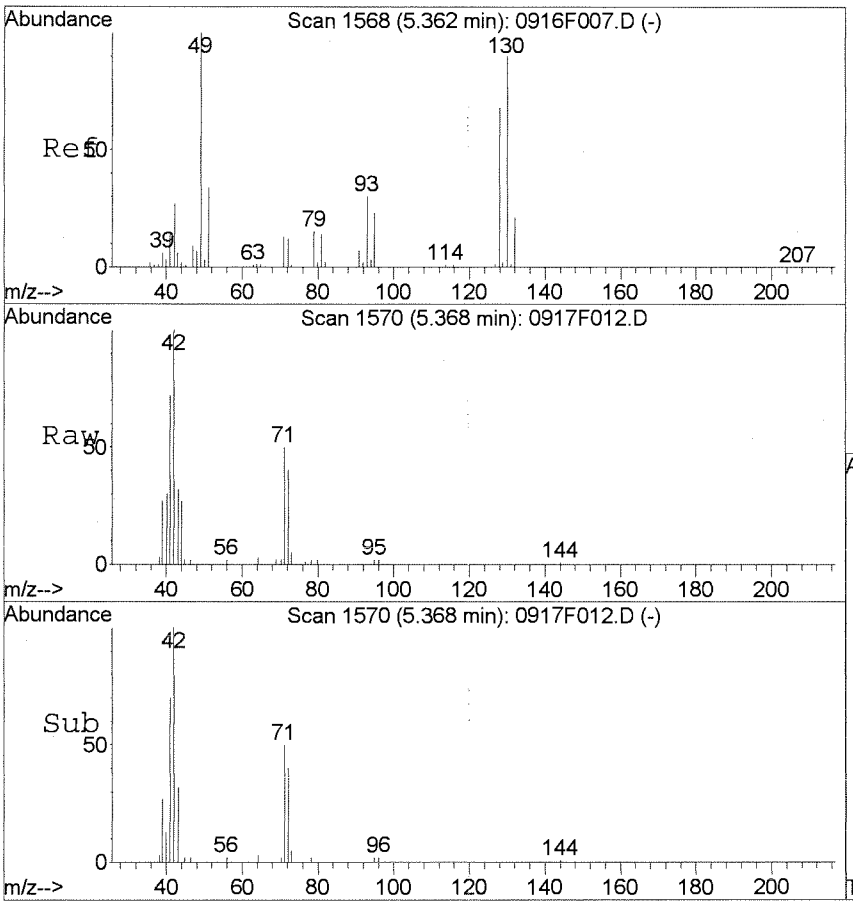


#34
2-Butanone
Concen: 2.38 PPB
RT: 5.13 min Scan# 1486
Delta R.T. 0.03 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 72 Resp: 2918

Ion	Ratio	Lower	Upper
72	100		
43	346.6	363.3	423.3#
57	14.3	1.8	61.8

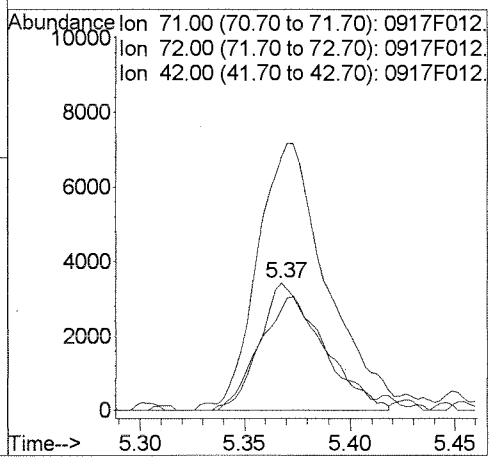


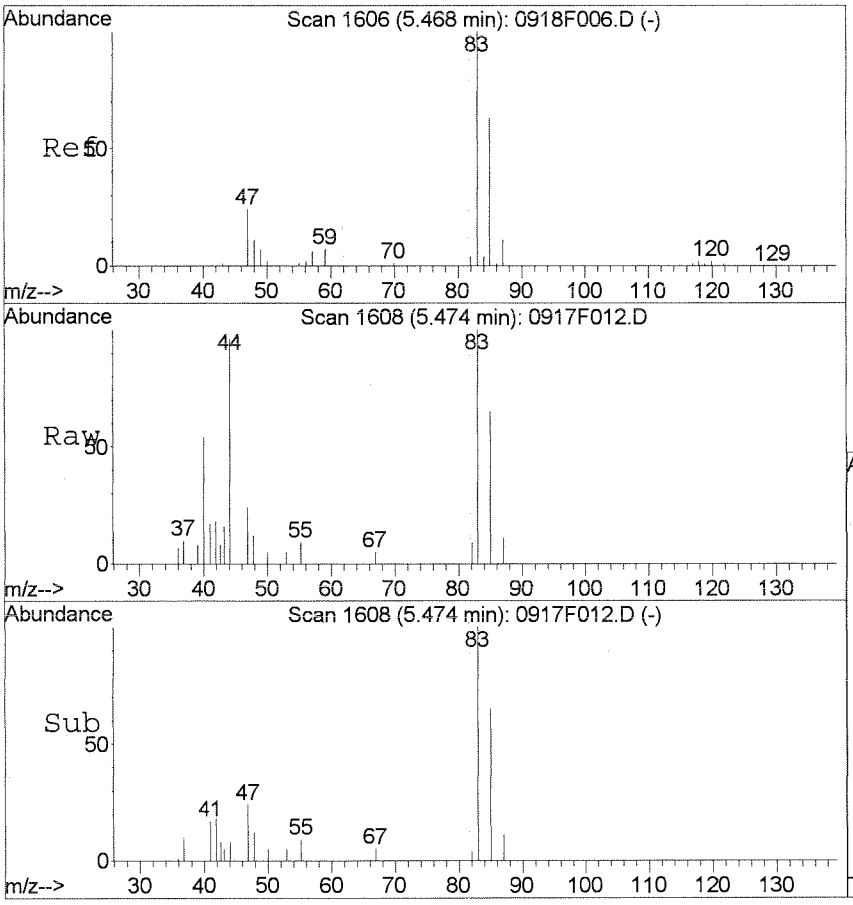


#39
Tetrahydrofuran
Concen: 5.40 PPB
RT: 5.37 min Scan# 1570
Delta R.T. 0.01 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 71 Resp: 7033

Ion	Ratio	Lower	Upper
71	100		
72	79.0	69.2	129.2
42	193.4	201.1	261.1#

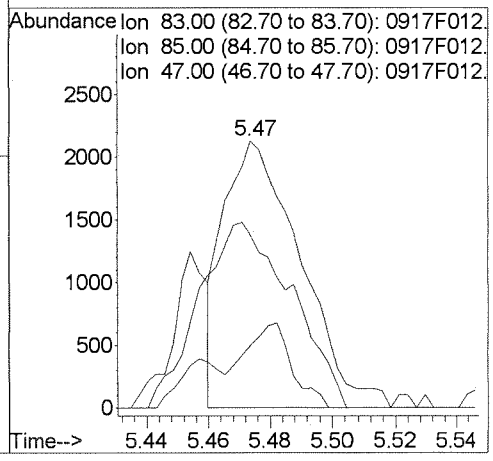


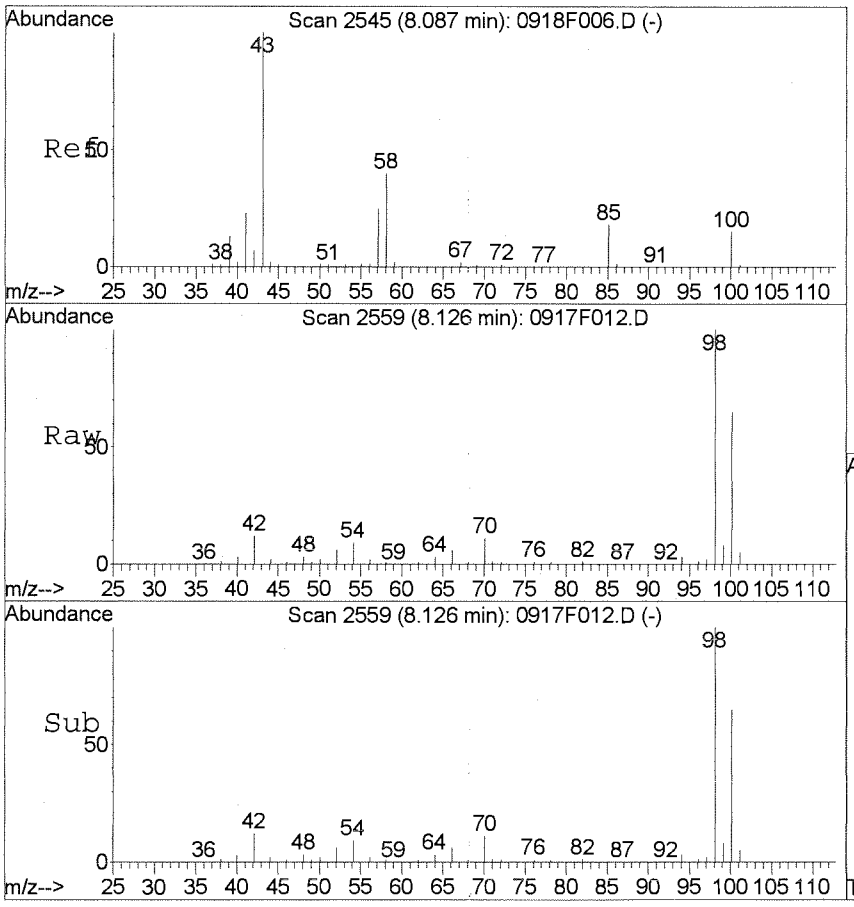


#40
Chloroform
Concen: 0.08 PPB
RT: 5.47 min Scan# 1608
Delta R.T. 0.01 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 83 Resp: 3685

Ion	Ratio	Lower	Upper
83	100		
85	64.5	35.4	95.4
47	23.6	0.0	55.1

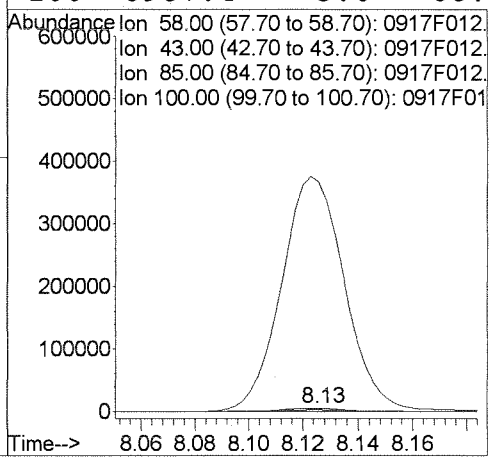


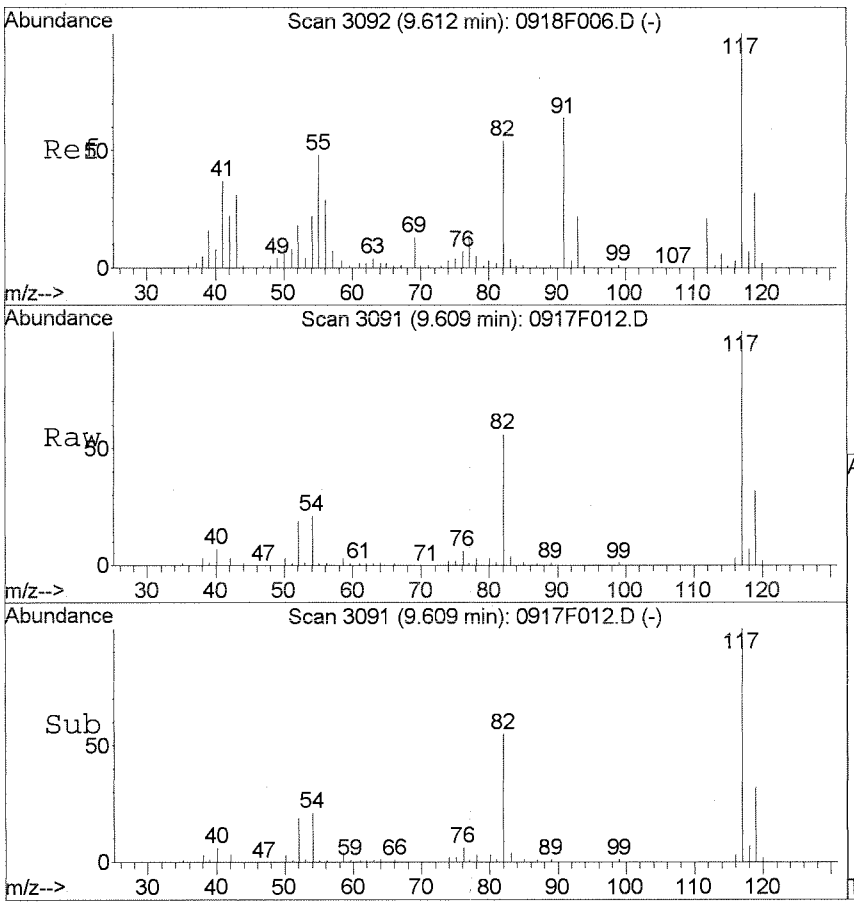


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.78 PPB
RT: 8.13 min Scan# 2559
Delta R.T. 0.04 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 58 Resp: 8144

Ion	Ratio	Lower	Upper
58	100		
43	48.7	232.7	292.7#
85	0.0	14.7	74.7#
100	6987.4	8.0	68.0#

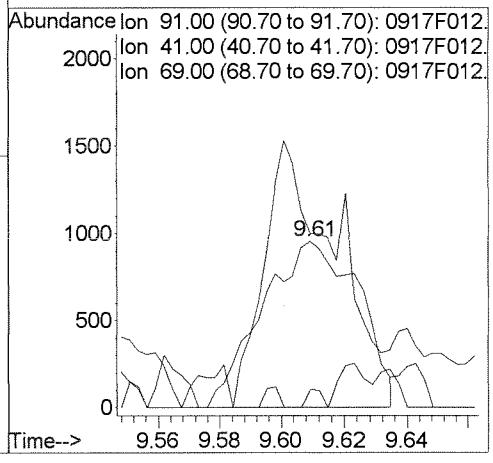




#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.61 min Scan# 3091
Delta R.T. -0.00 min
Lab File: 0917F012.D
Acq: 17 Sep 2013 2:19 pm

Tgt Ion: 91 Resp: 2041

Ion	Ratio	Lower	Upper
91	100		
41	86.7	29.5	89.5
69	10.9	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13253-BW-3
Lab Code: K1309638-004

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.10**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F014.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 15:13
Date Quantitated: 09/17/2013 16:02
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F014.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 15:13	**Quant Date:**	09/17/2013 16:02	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-004			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282918	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	963631	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	387525	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	304769	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	247741	9.53	95	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	940727	9.90	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	329566	9.64	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene	8.19		0.00	92	6408	0.1000	0.10	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F014.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 15:13	**Quant Date:**	09/17/2013 16:02	**Vial:**	13
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-004			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F014.D Vial: 13
Acq On : 17 Sep 2013 3:13 pm Operator: KS
Sample : K1309638-004 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 15:55:40 2013 Quant Results File: 081213MS27_8260.RES

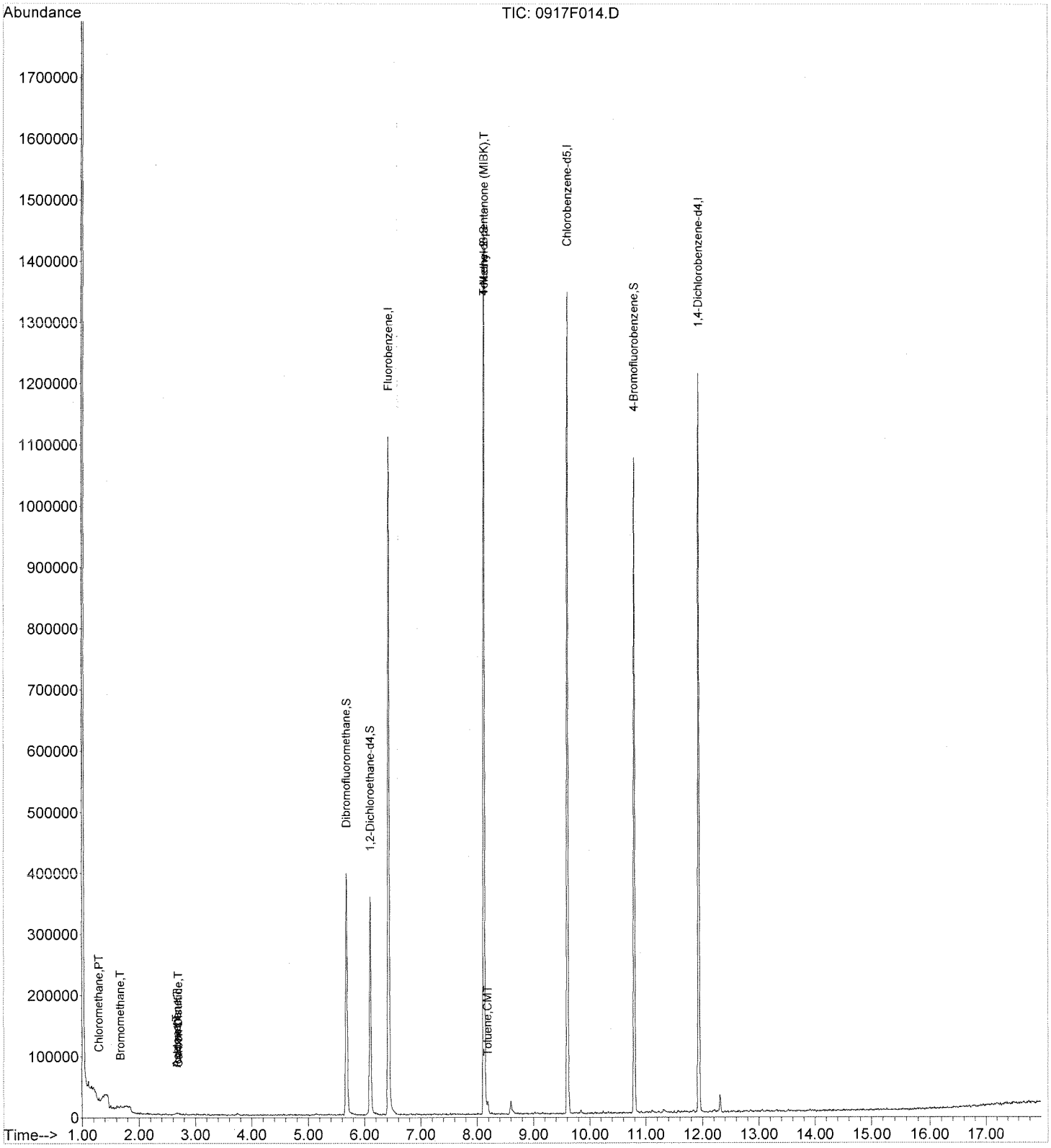
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

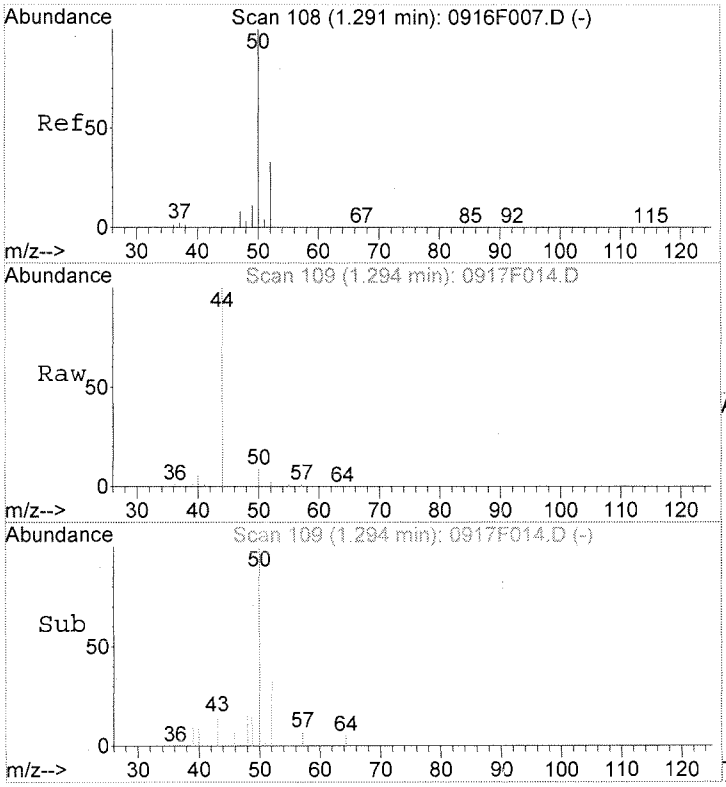
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	963631	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	387525	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	304769	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	247741	9.53	PPB		0.00
Spiked Amount 10.000			Recovery =	95.30%			
47) 1,2-Dichloroethane-d4	6.10	65	245850	9.85	PPB		0.00
Spiked Amount 10.000			Recovery =	98.50%			
62) Toluene-d8	8.12	98	940727	9.90	PPB		0.00
Spiked Amount 10.000			Recovery =	99.00%			
84) 4-Bromofluorobenzene	10.79	95	329566	9.64	PPB		0.00
Spiked Amount 10.000			Recovery =	96.40%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1969	0.06	PPB		96
6) Bromomethane	1.67	96	680	0.04	PPB	#	86
14) Acetone	2.66	43	2329	0.76	PPB		65
15) Iodomethane	2.67	142	892	0.08	PPB		90
16) Carbon Disulfide	2.70	76	1352	0.02	PPB		74
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7505	1.64	PPB	#	1
63) Toluene	8.19	92	6408	0.10	PPB		94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F014.D Vial: 13
Acq On : 17 Sep 2013 3:13 pm Operator: KS
Sample : K1309638-004 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:02 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

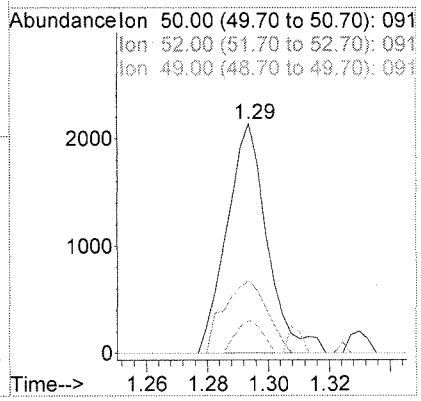


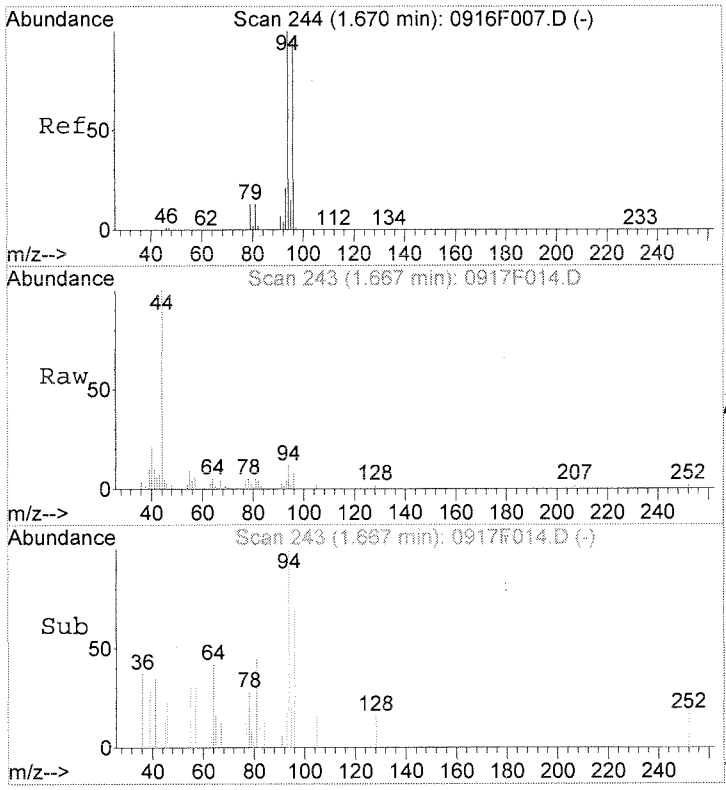


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 50 Resp: 1969

Ion	Ratio	Lower	Upper
50	100		
52	31.6	2.5	62.5
49	14.3	0.0	40.3

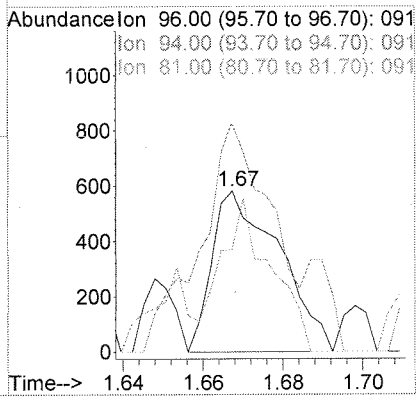


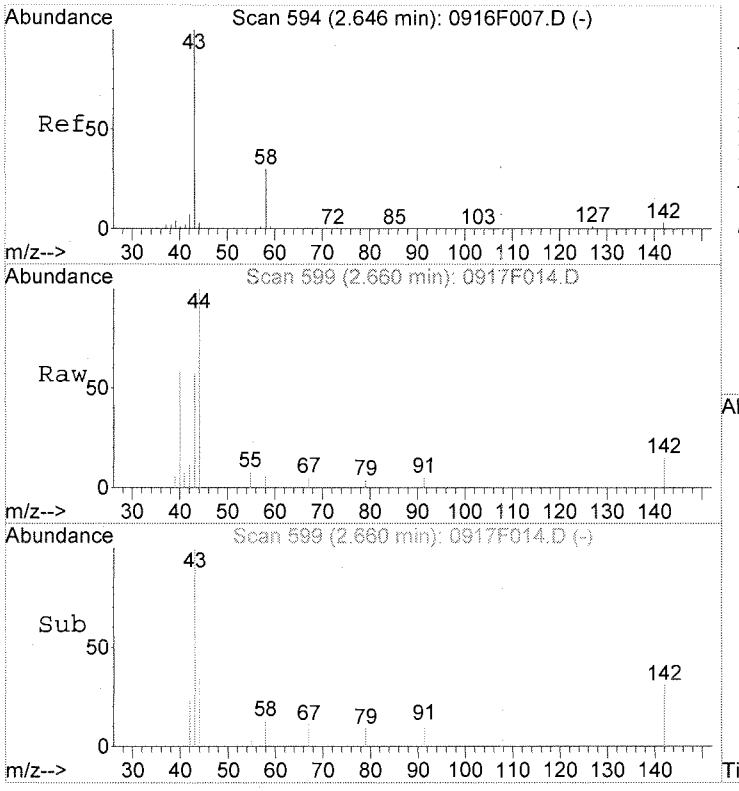


#6
Bromomethane
Concen: 0.04 PPB
RT: 1.67 min Scan# 243
Delta R.T. 0.00 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 96 Resp: 680

Ion	Ratio	Lower	Upper
96	100		
94	107.6	77.3	137.3
81	63.6	0.0	43.8#

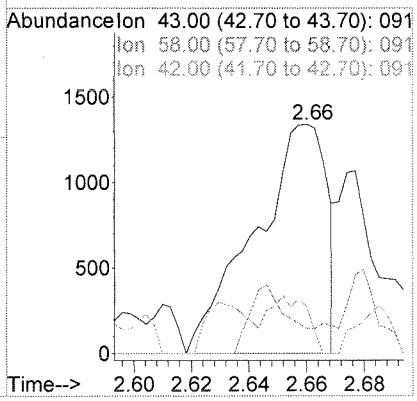


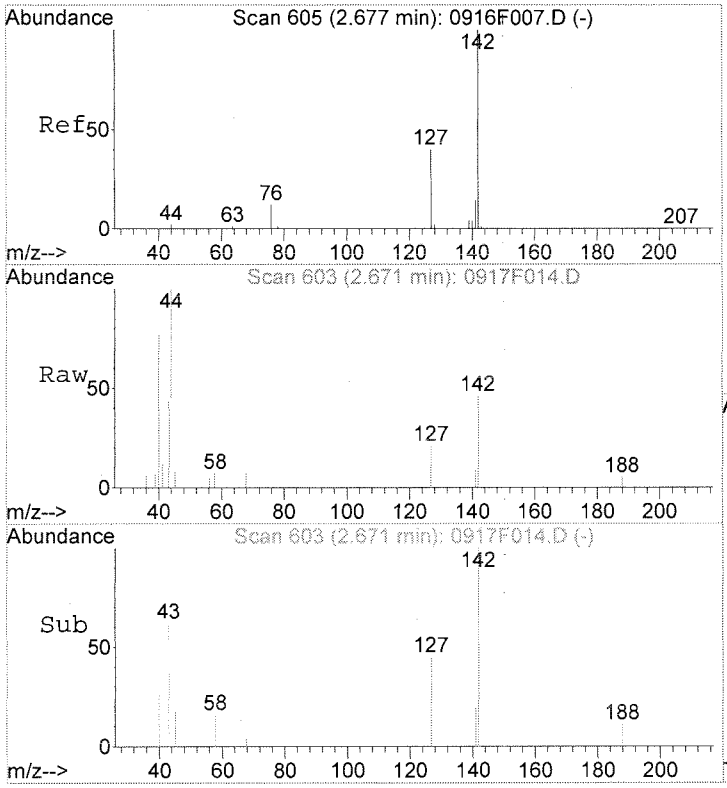


#14
Acetone
Concen: 0.76 PPB
RT: 2.66 min Scan# 599
Delta R.T. 0.02 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 43 Resp: 2329

Ion	Ratio	Lower	Upper
43	100		
58	11.0	0.0	59.8
42	19.7	0.0	37.4

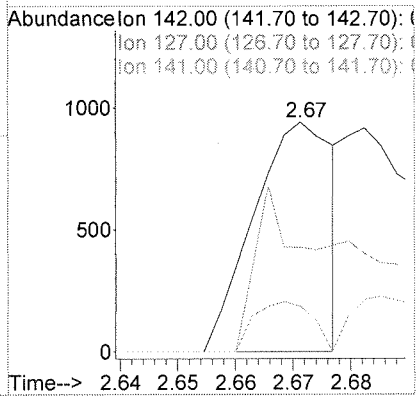


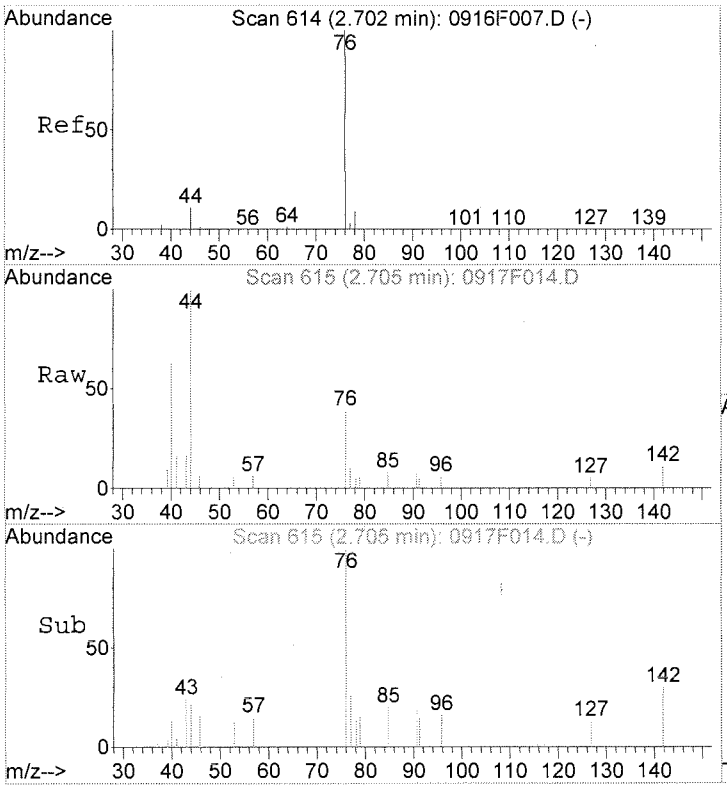


#15
Iodomethane
Concen: 0.08 PPB
RT: 2.67 min Scan# 603
Delta R.T. -0.00 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion:142 Resp: 892

Ion	Ratio	Lower	Upper
142	100		
127	45.4	9.8	69.8
141	19.6	0.0	44.5

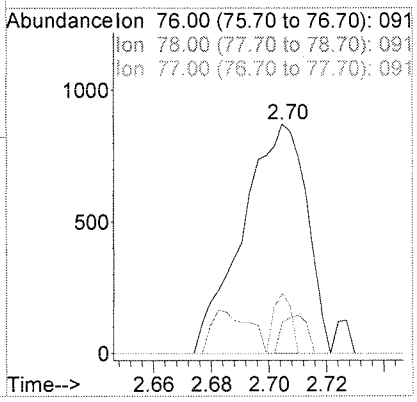


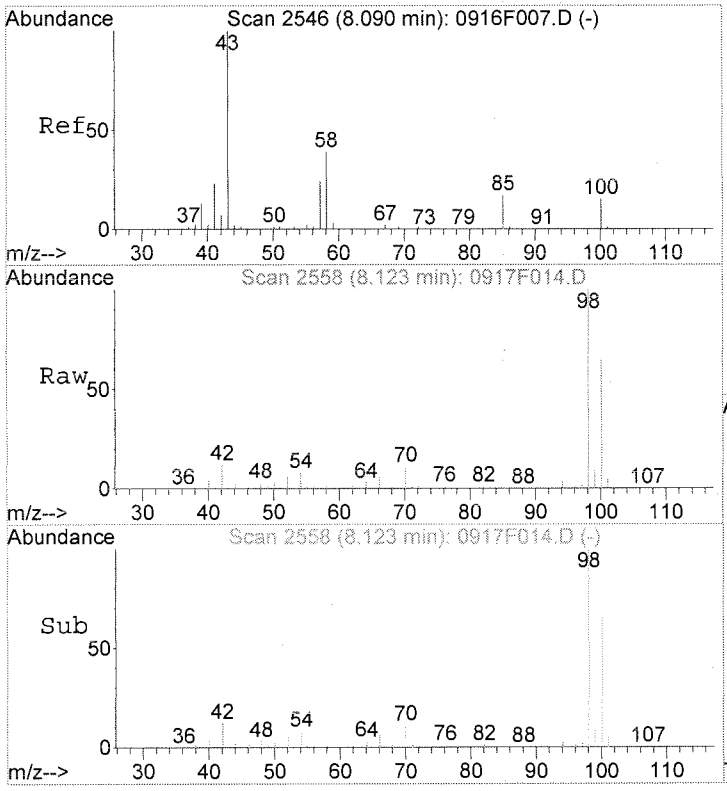


#16
Carbon Disulfide
Concen: 0.02 PPB
RT: 2.70 min Scan# 615
Delta R.T. 0.01 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 76 Resp: 1352

Ion	Ratio	Lower	Upper
76	100		
78	13.4	0.0	38.8
77	26.2	0.0	32.7

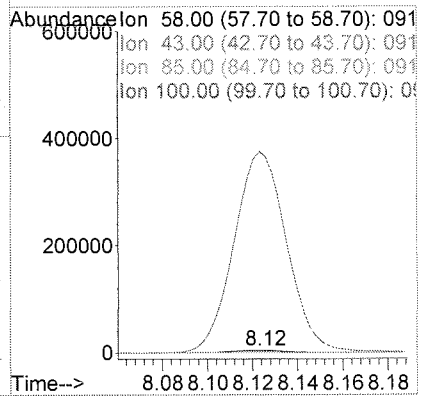


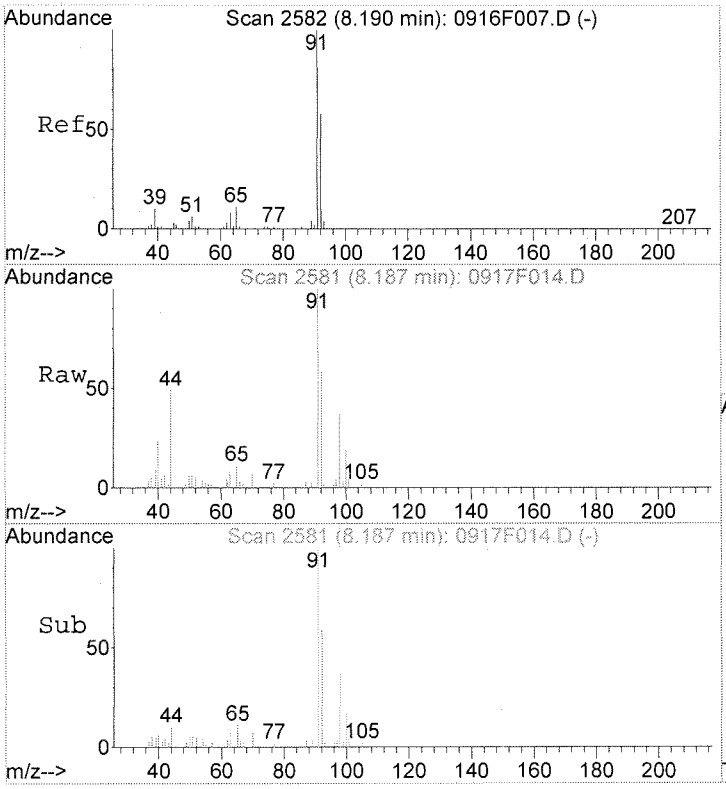


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.64 PPB
RT: 8.12 min Scan# 2558
Delta R.T. 0.04 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 58 Resp: 7505

Ion	Ratio	Lower	Upper
58	100		
43	46.5	232.7	292.7#
85	0.0	14.7	74.7#
100	7873.0	8.0	68.0#

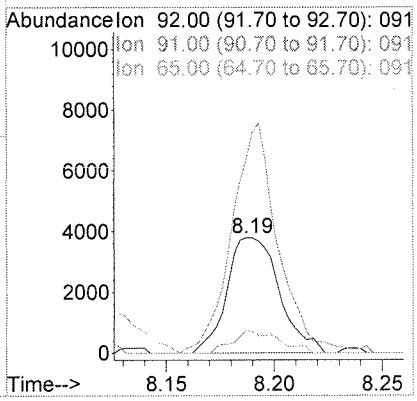




#63
Toluene
Concen: 0.10 PPB
RT: 8.19 min Scan# 2581
Delta R.T. -0.00 min
Lab File: 0917F014.D
Acq: 17 Sep 2013 3:13 pm

Tgt Ion: 92 Resp: 6408

Ion	Ratio	Lower	Upper
92	100		
91	165.3	144.2	204.2
65	19.3	0.0	50.2



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13253-Well D
Lab Code: K1309638-005

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	**0.51**		0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.60**		0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	**0.16**	J	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	**0.30**	J	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	**0.13**	J	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F015.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 15:40
Date Quantitated: 09/17/2013 16:08
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: [illegible] 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F015.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 15:40	**Quant Date:**	09/17/2013 16:08	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-005			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282919	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	956435	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	378924	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	304475	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	237357	9.20	92	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	937603	9.94	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	326427	9.77	98	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene	6.05		0.00	78	50178	0.5100	0.51		
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0d		0.095	U	
1	Toluene	8.19		0.00	92	36914	0.6000	0.60		
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F015.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 15:40	**Quant Date:**	09/17/2013 16:08	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-005			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene	9.72		0.00	106	5902	0.1600	0.16	J	
2	m,p-Xylenes	9.85		0.00	106	13153	0.3000	0.30	J	
2	o-Xylene	10.25	0.01	0.00	106	5641	0.1300	0.13	J	
2	Styrene				103	0d		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 15:59:30 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

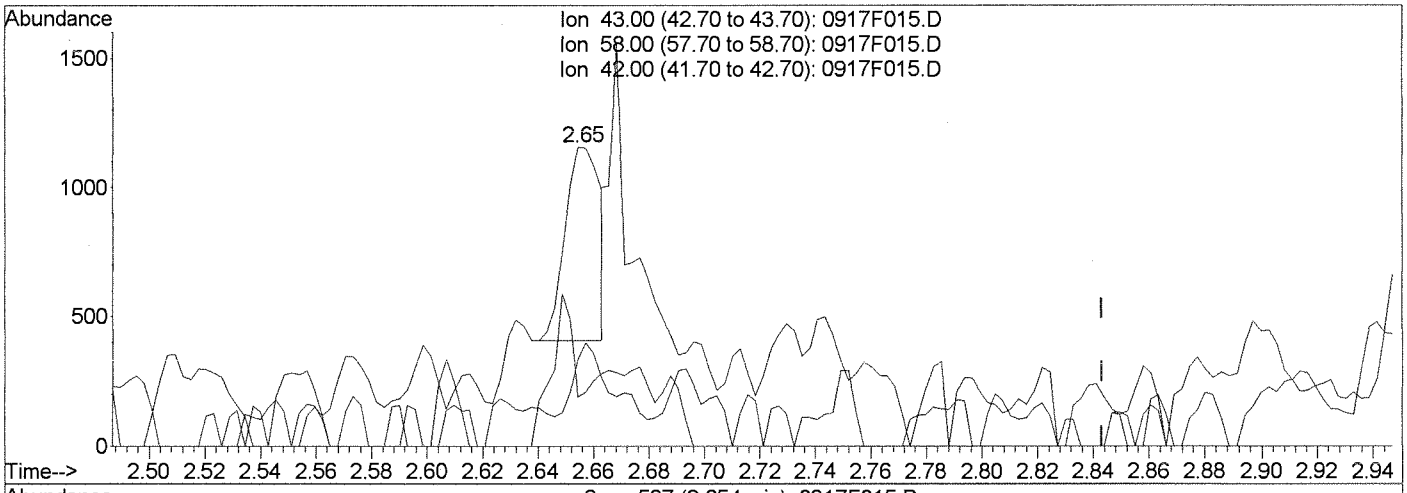
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	956435	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	378924	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	304475	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	237357	9.20	PPB		0.00
Spiked Amount 10.000			Recovery = 92.00%				
47) 1,2-Dichloroethane-d4	6.10	65	236491	9.54	PPB		0.00
Spiked Amount 10.000			Recovery = 95.40%				
62) Toluene-d8	8.12	98	937603	9.94	PPB		0.00
Spiked Amount 10.000			Recovery = 99.40%				
84) 4-Bromofluorobenzene	10.79	95	326427	9.77	PPB		0.00
Spiked Amount 10.000			Recovery = 97.70%				
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1967	0.06	PPB		83
6) Bromomethane	1.68	96	896	0.05	PPB	#	69
14) Acetone	2.67	43	2313m	0.76	PPB		
15) Iodomethane	2.67	142	2163m	0.19	PPB		
26) Hexane	3.74	57	2378m	0.08	PPB		
37) Methacrylonitrile	5.39	67	11972	2.10	PPB	#	12
48) Benzene	6.05	78	50178	0.51	PPB		98
61) 4-Methyl-2-pentanone (MIBK	8.13	58	7378	1.62	PPB	#	1
63) Toluene	8.19	92	36914	0.60	PPB		97
74) 1-Chlorohexane	9.60	91	2137	0.06	PPB		74
76) Ethylbenzene	9.72	106	5902	0.16	PPB		91
78) m,p-Xylenes	9.85	106	13153	0.30	PPB		91
79) o-Xylene	10.25	106	5641	0.13	PPB		92
89) n-Propylbenzene	11.01	91	7353	0.06	PPB		90
92) 1,3,5-Trimethylbenzene	11.20	105	3925	0.05	PPB		90
95) 1,2,4-Trimethylbenzene	11.57	105	9297	0.11	PPB		76
96) sec-Butylbenzene	11.57	105	9297	0.09	PPB		66

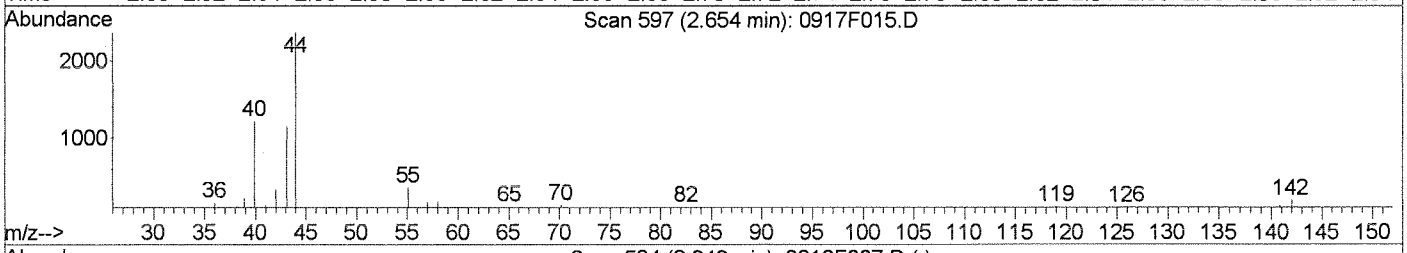
(#) = qualifier out of range (m) = manual integration

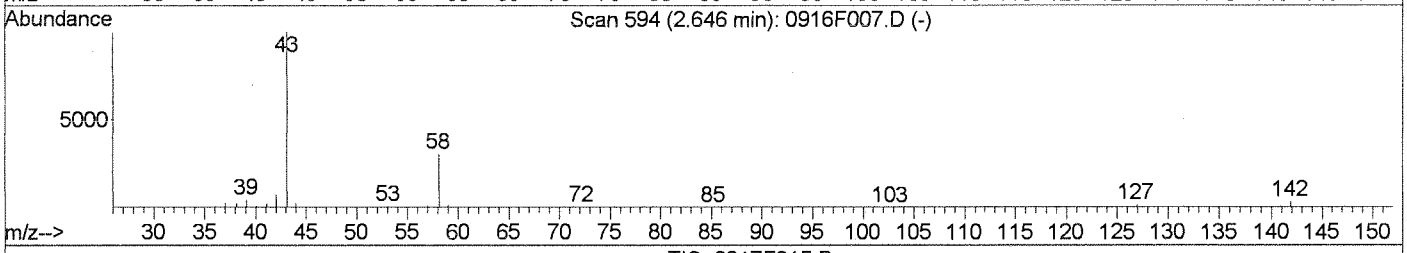
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:04 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F015.D

(14) Acetone (T)

2.65min 0.21PPB

response 648

Ion	Exp%	Act%
43.00	100	100
58.00	29.80	2.01
42.00	7.40	25.27
0.00	0.00	0.00

Manual Integration:

Before KS 9.17.13

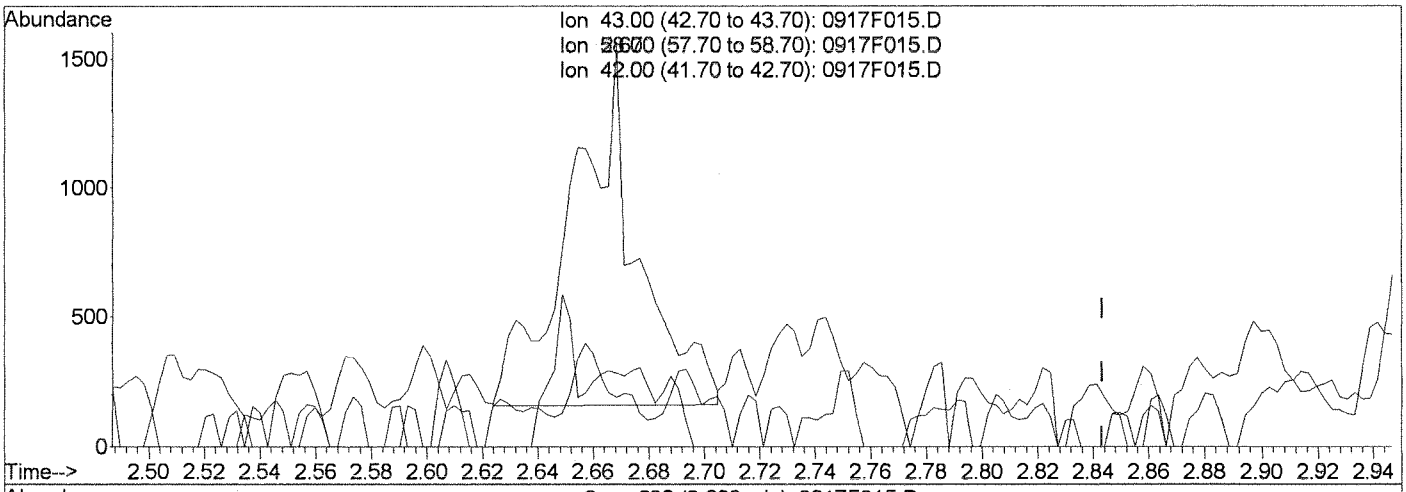
9/17/13

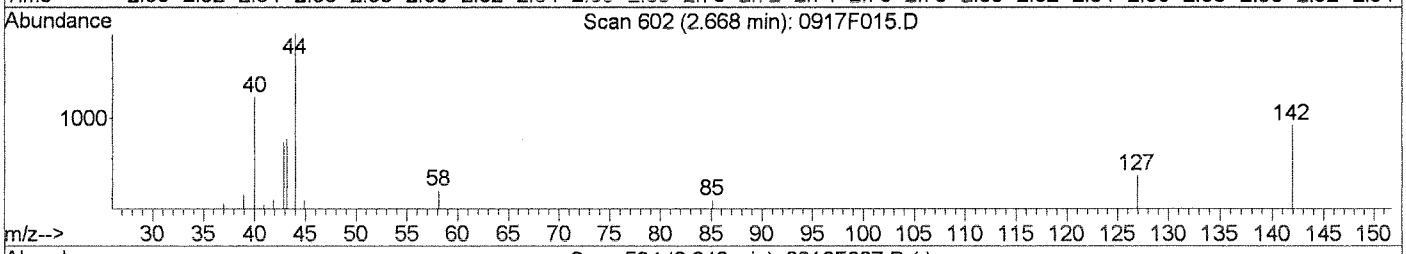
0917F015.D 081213MS27_8260.M Tue Sep 17 16:00:55 2013

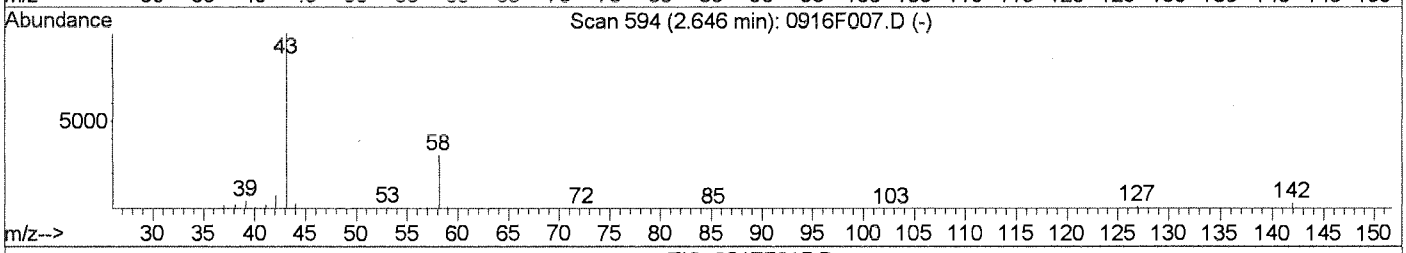
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:04 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F015.D

(14) Acetone (T)

2.67min 0.76PPB m

response 2313

Ion	Exp%	Act%
43.00	100	100
58.00	29.80	35.69
42.00	7.40	24.09
0.00	0.00	0.00

Manual Integration:

After KS

Baseline correction

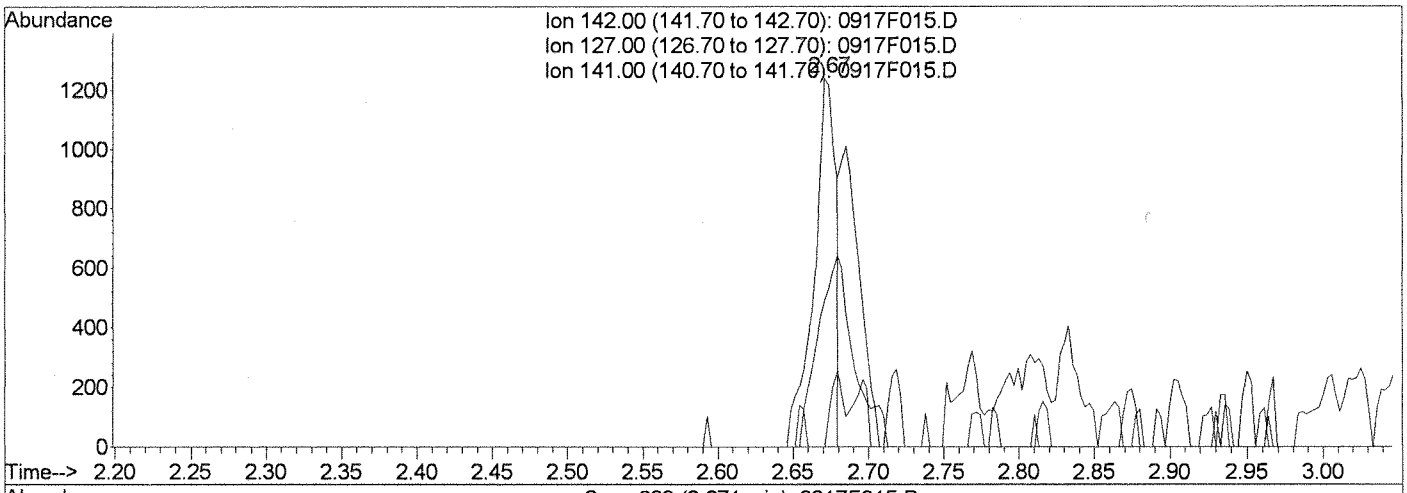
09/17/13

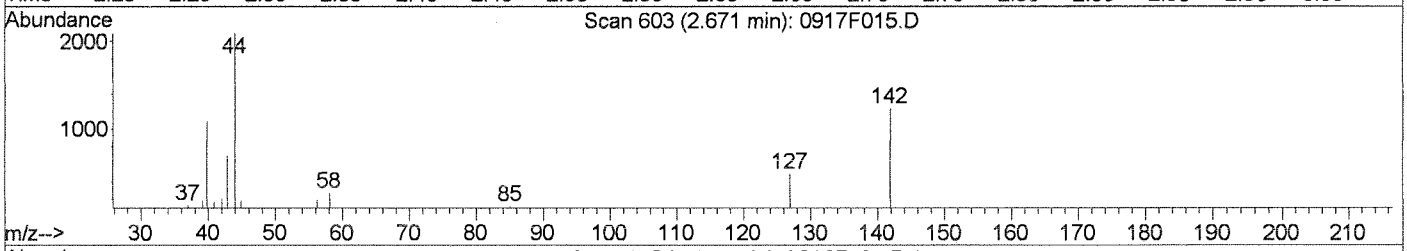
9/17/13

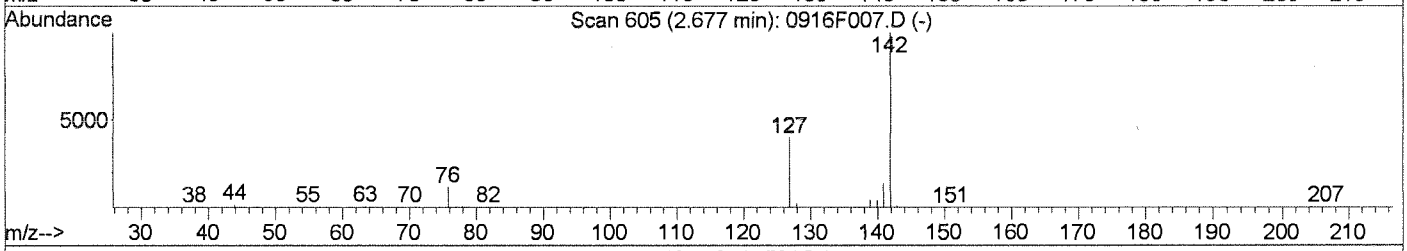
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:04 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Single Level Calibration







TIC: 0917F015.D

(15) Iodomethane (T)

2.67min 0.11PPB

response 1254

Ion	Exp%	Act%
142.00	100	100
127.00	39.80	39.52
141.00	14.50	0.00
0.00	0.00	0.00

Manual Integration:

Before

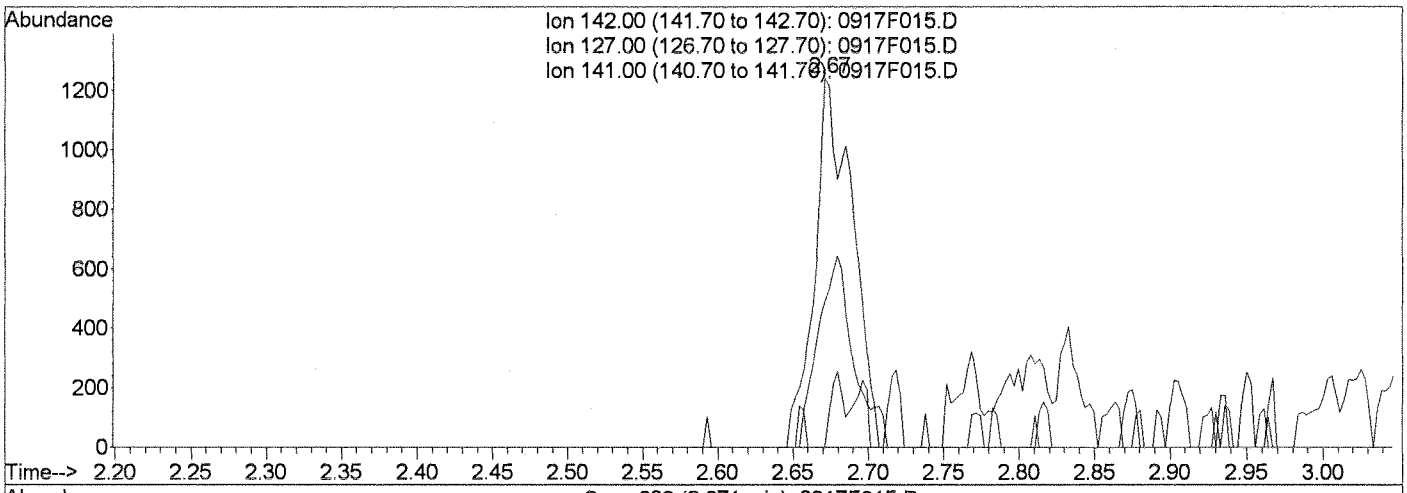
KS
9.17.13

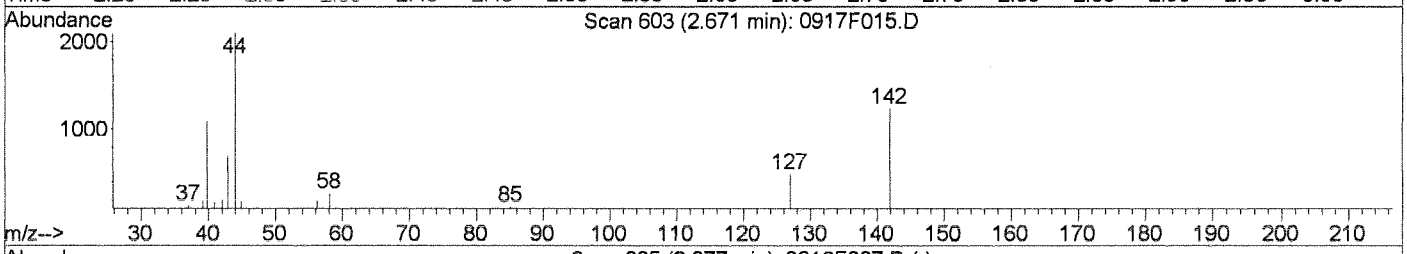
9/19/13

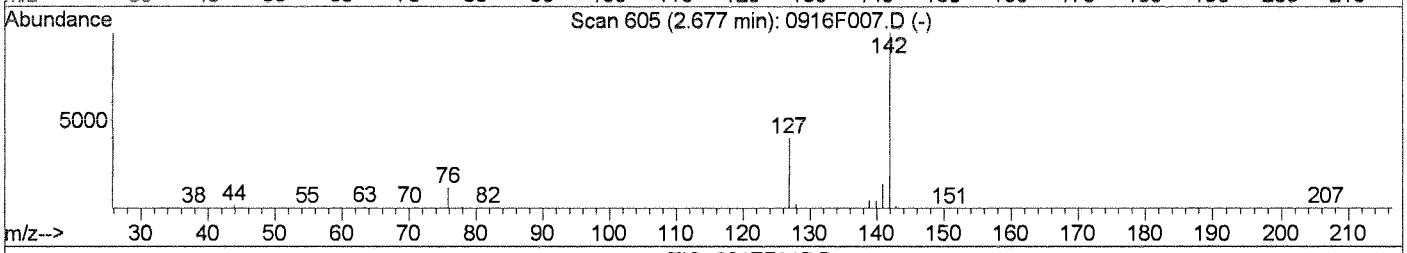
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:05 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Single Level Calibration







TIC: 0917F015.D

(15) Iodomethane (T)

2.67min 0.19PPB m

response 2163

Ion	Exp%	Act%
142.00	100	100
127.00	39.80	39.52
141.00	14.50	0.00
0.00	0.00	0.00

Manual Integration:

After

Split peak KS

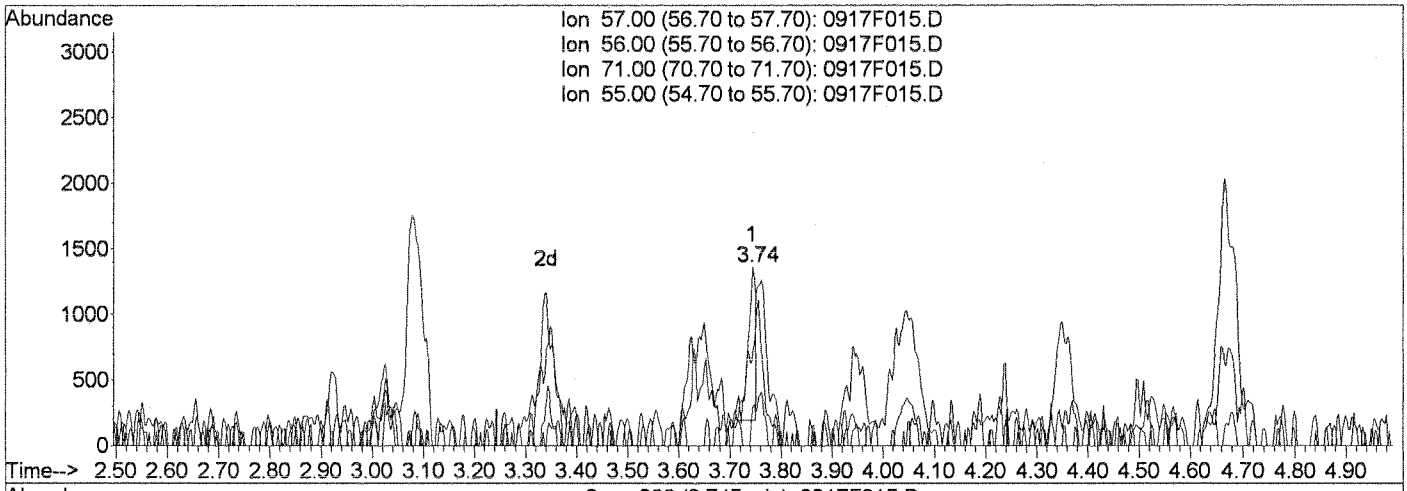
09/17/13

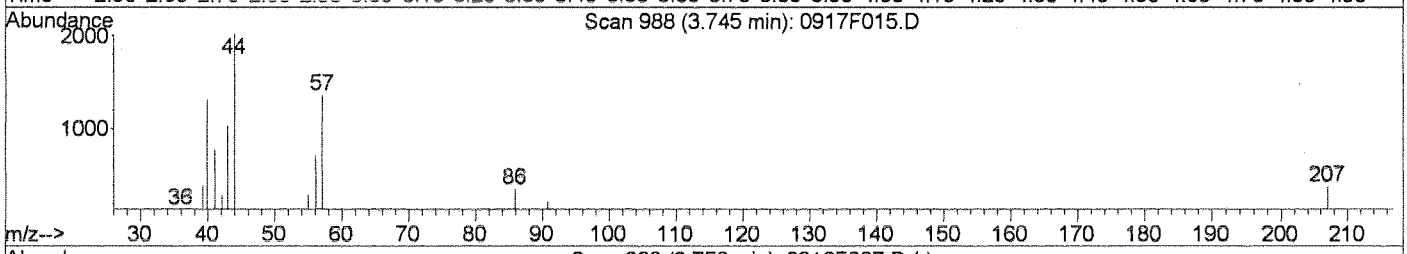
9/19/13

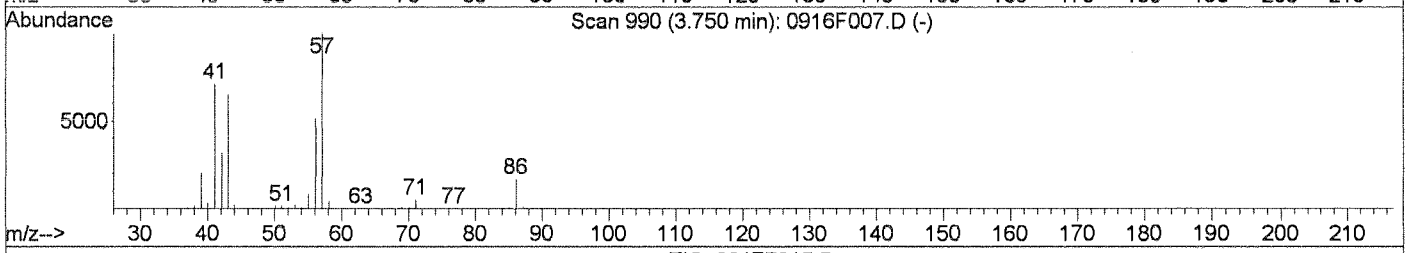
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:05 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F015.D

(26) Hexane (T)

3.74min 0.04PPB

response 1175

Ion	Exp%	Act%
57.00	100	100
56.00	48.70	33.39
71.00	5.10	0.00
55.00	8.10	10.02

Manual Integration:

Before

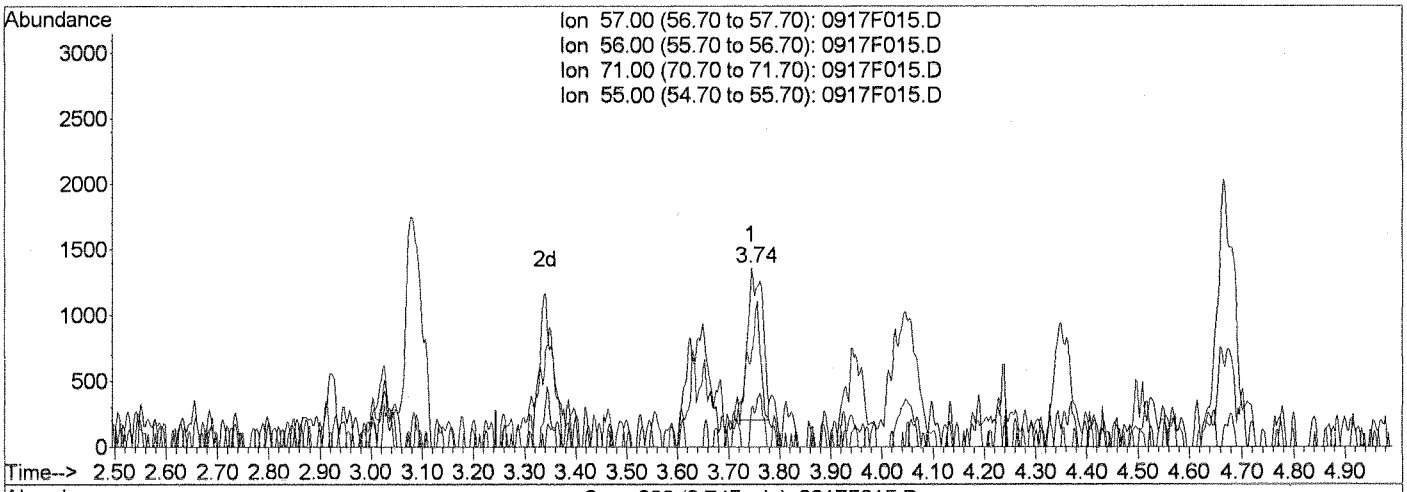
KE 9.17.13

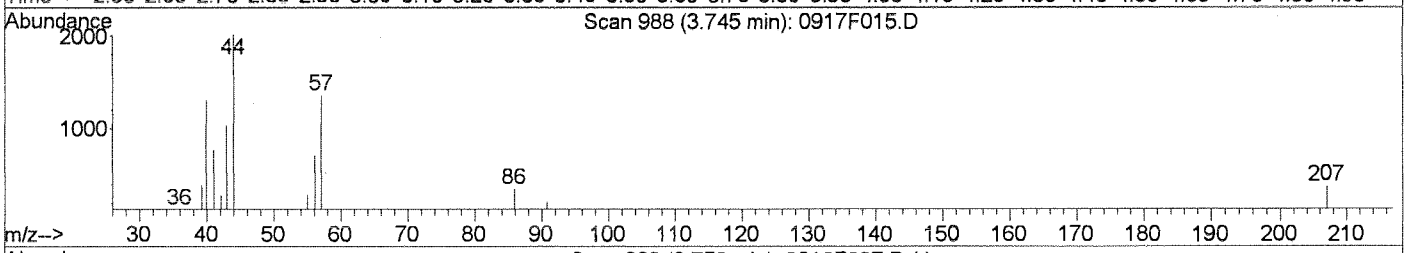
9/19/13

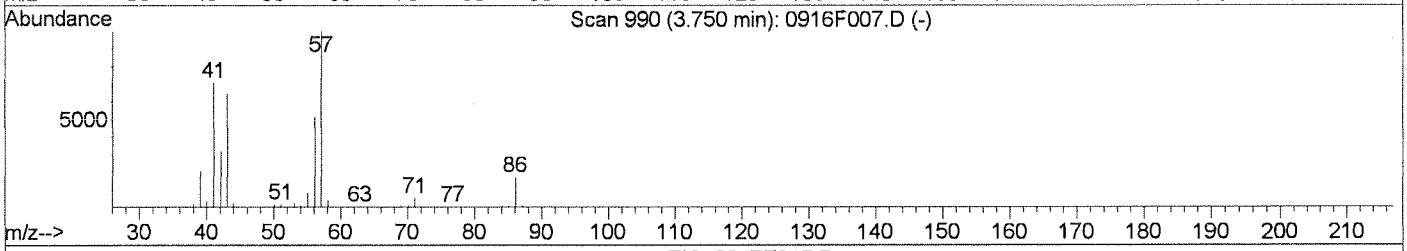
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:05 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F015.D

(26) Hexane (T)

3.74min 0.08PPB m

response 2378

Ion	Exp%	Act%
57.00	100	100
56.00	48.70	52.43
71.00	5.10	0.00
55.00	8.10	21.69#

Manual Integration:

After

Split peak

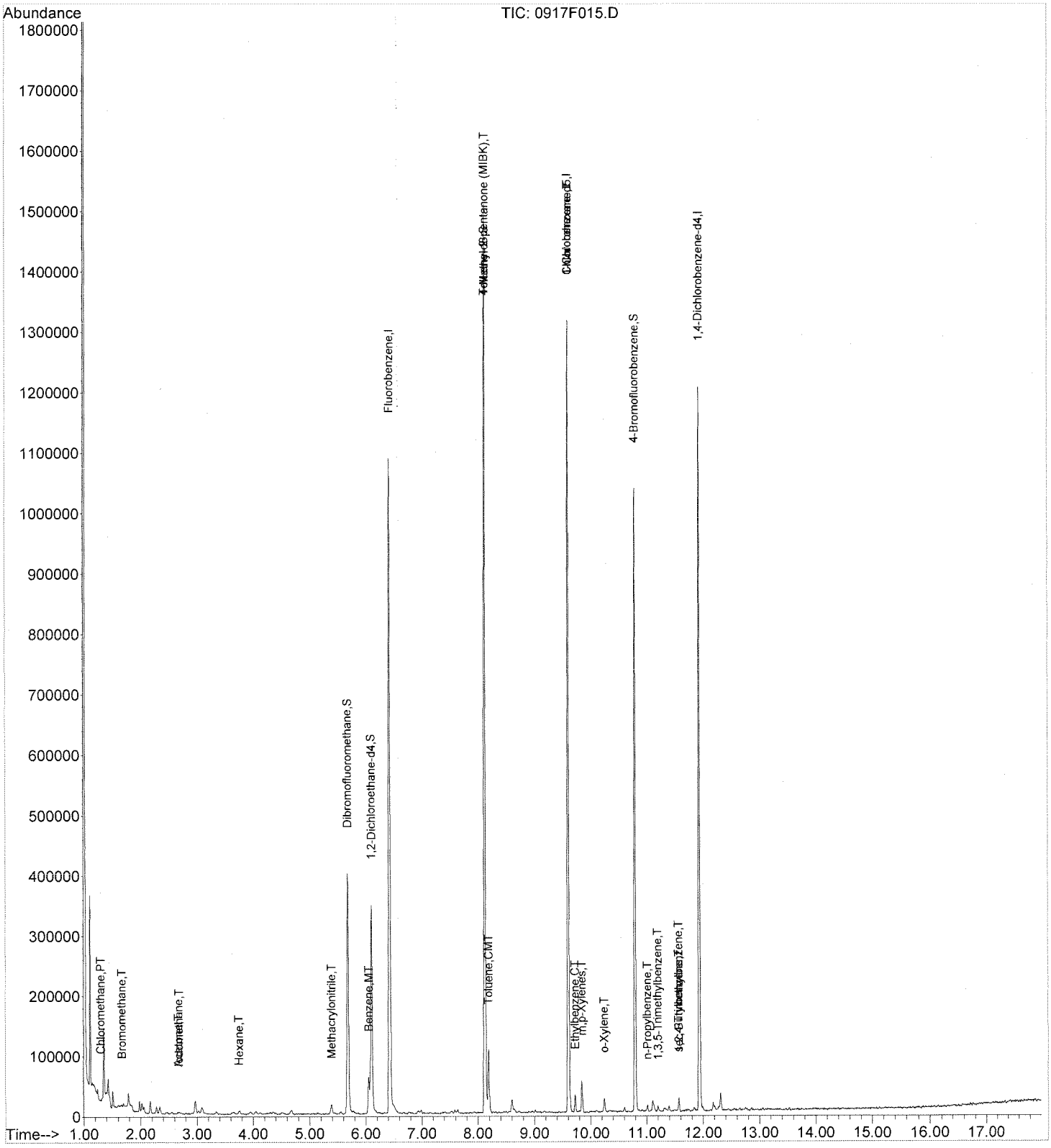
09/17/13 KS

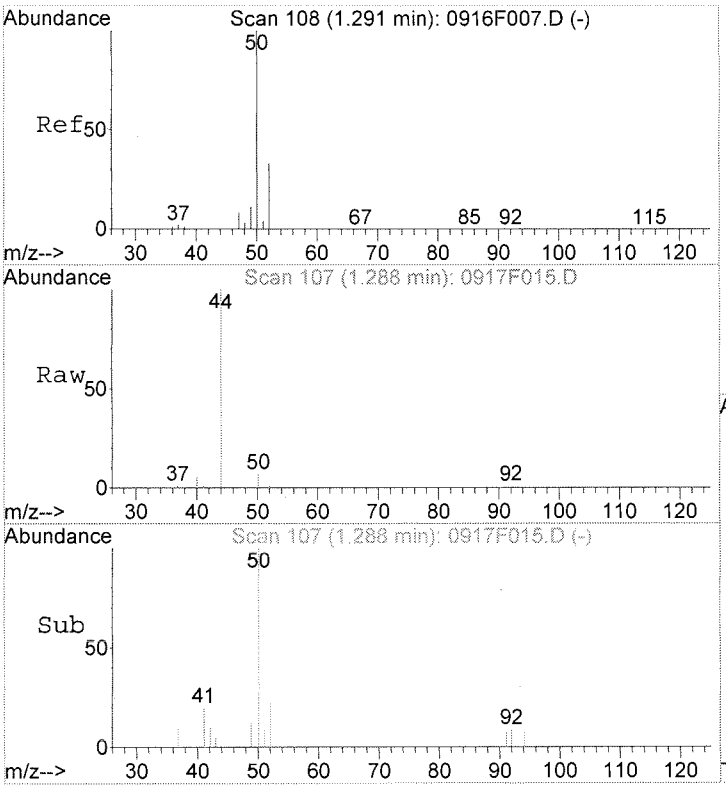
9/19/13

0917F015.D 081213MS27_8260.M Tue Sep 17 16:02:32 2013

Data File : J:\MS27\DATA\091713\0917F015.D Vial: 14
Acq On : 17 Sep 2013 3:40 pm Operator: KS
Sample : K1309638-005 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:08 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

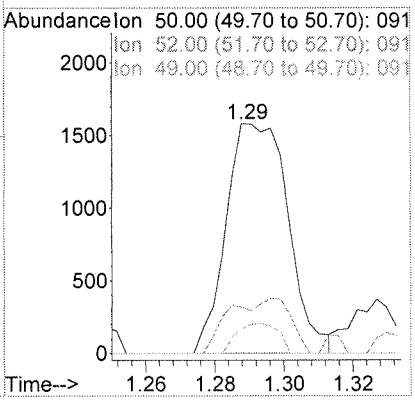


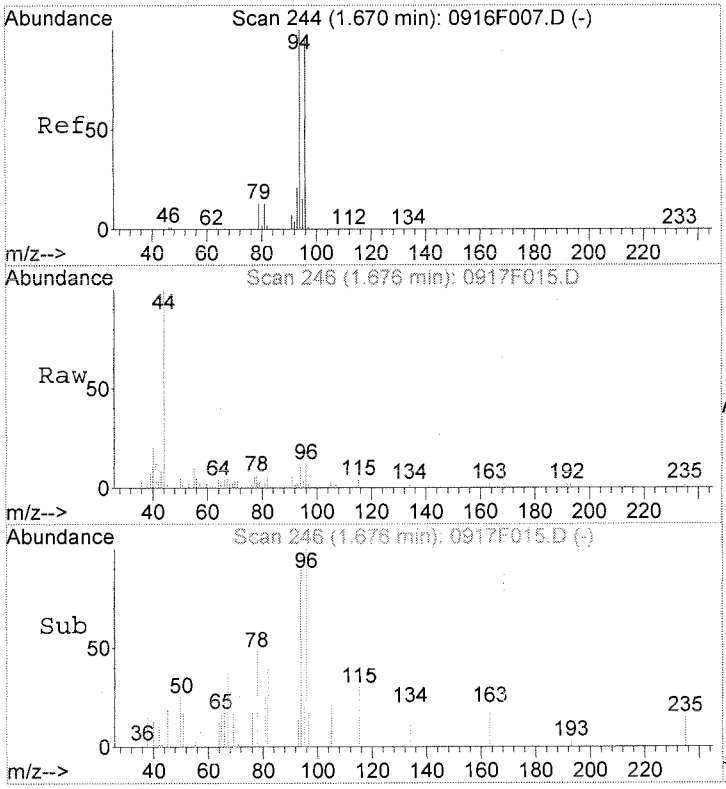


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 107
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 50 Resp: 1967

Ion	Ratio	Lower	Upper
50	100		
52	20.1	2.5	62.5
49	10.7	0.0	40.3

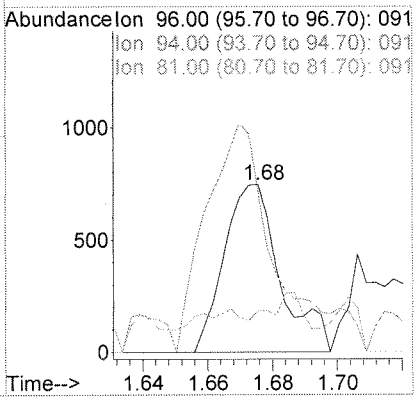


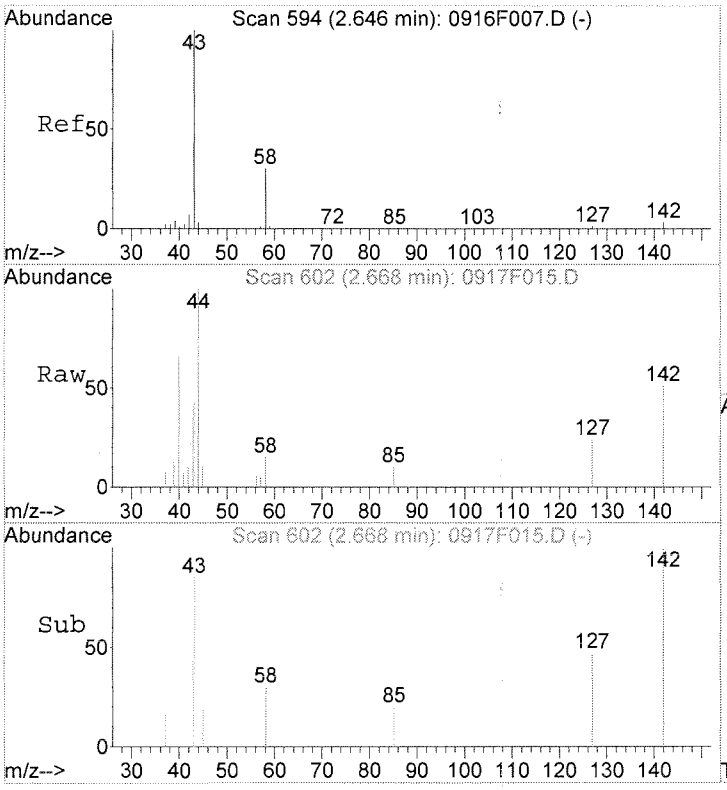


#6
Bromomethane
Concen: 0.05 PPB
RT: 1.68 min Scan# 246
Delta R.T. 0.01 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 96 Resp: 896

Ion	Ratio	Lower	Upper
96	100		
94	72.8	77.3	137.3#
81	8.8	0.0	43.8

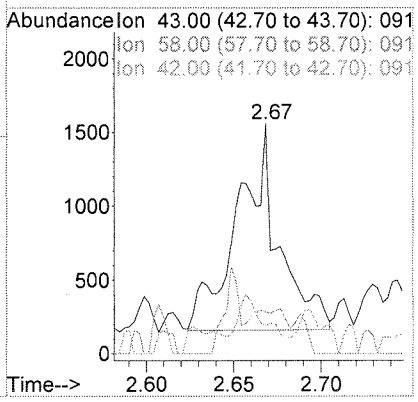


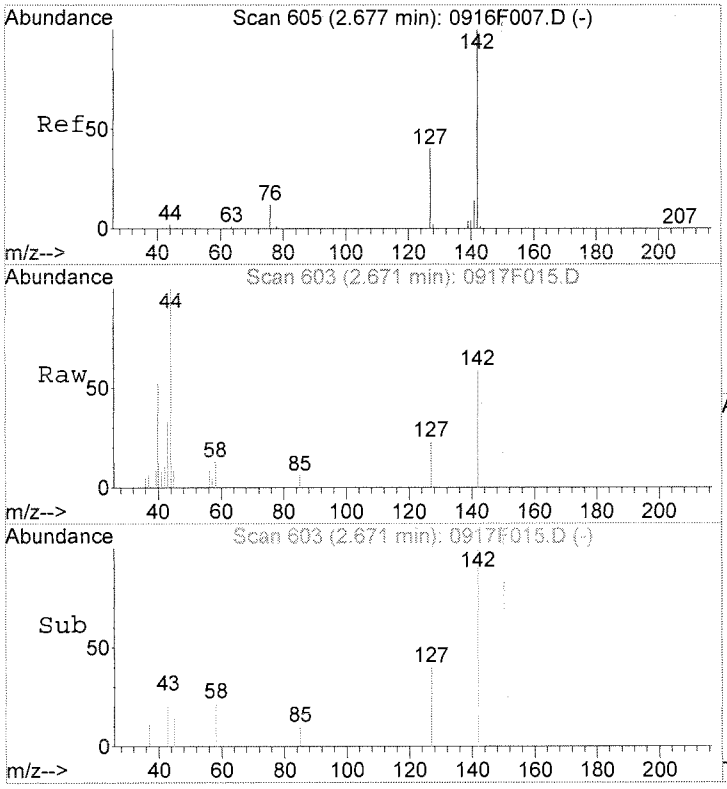


#14
Acetone
Concen: 0.76 PPB m
RT: 2.67 min Scan# 602
Delta R.T. 0.02 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 43 Resp: 2313

Ion	Ratio	Lower	Upper
43	100		
58	35.7	0.0	59.8
42	24.1	0.0	37.4

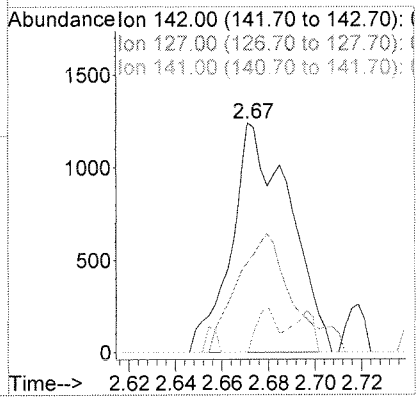


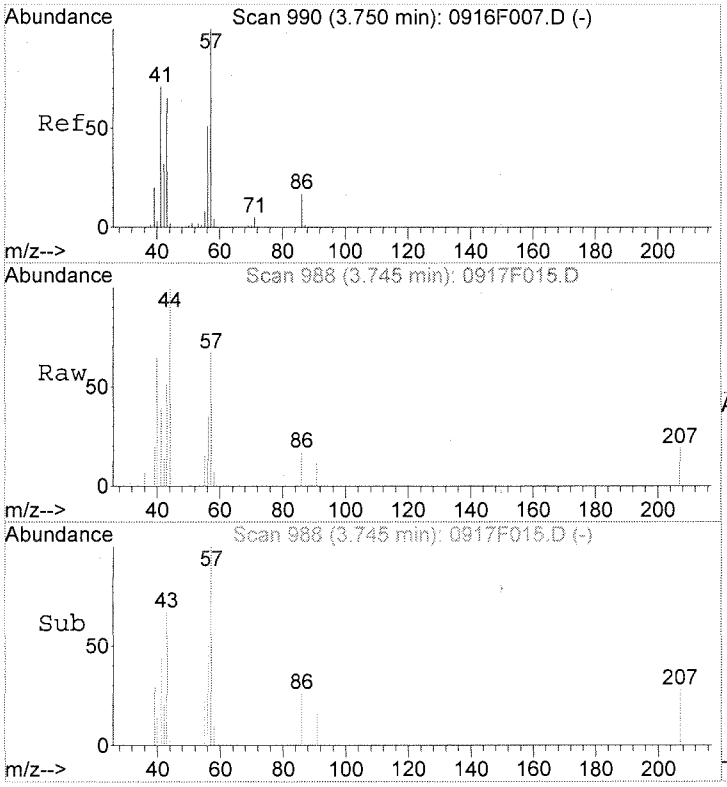


#15
Iodomethane
Concen: 0.19 PPB m
RT: 2.67 min Scan# 603
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:142 Resp: 2163

Ion	Ratio	Lower	Upper
142	100		
127	39.5	9.8	69.8
141	0.0	0.0	44.5

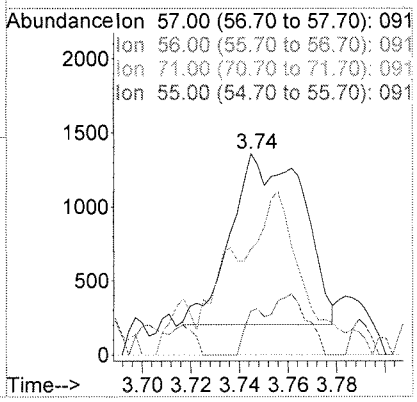


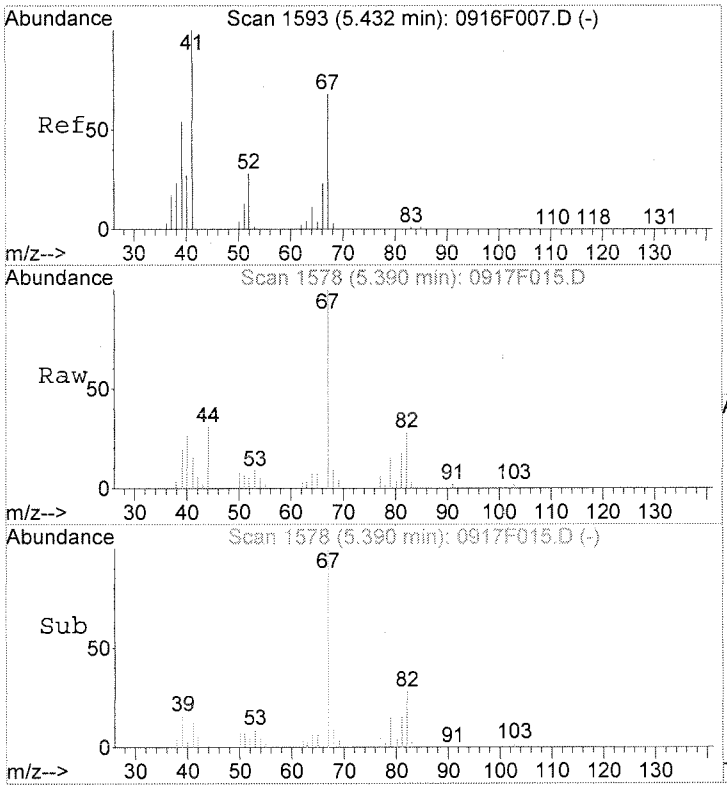


#26
Hexane
Concen: 0.08 PPB m
RT: 3.74 min Scan# 988
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 57 Resp: 2378

Ion	Ratio	Lower	Upper
57	100		
56	52.4	18.7	78.7
71	0.0	0.0	35.1
55	21.7	0.0	20.5#

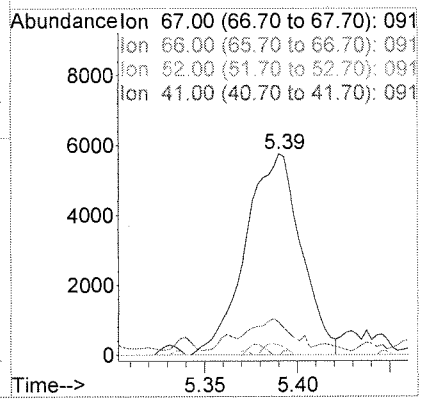


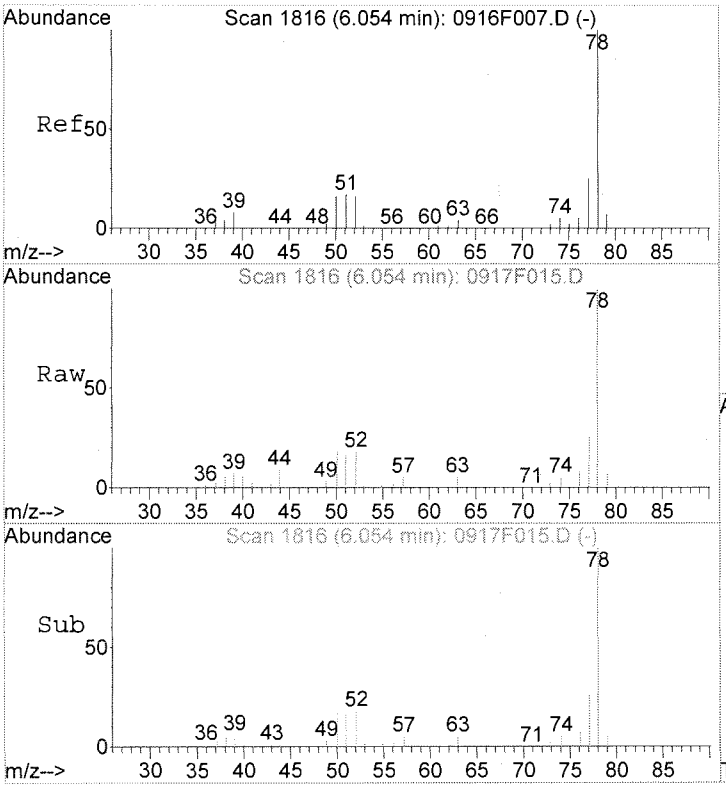


#37
Methacrylonitrile
Concen: 2.10 PPB
RT: 5.39 min Scan# 1578
Delta R.T. -0.04 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 67 Resp: 11972

Ion	Ratio	Lower	Upper
67	100		
66	0.0	4.6	64.6#
52	4.8	7.7	67.7#
41	12.3	108.0	168.0#

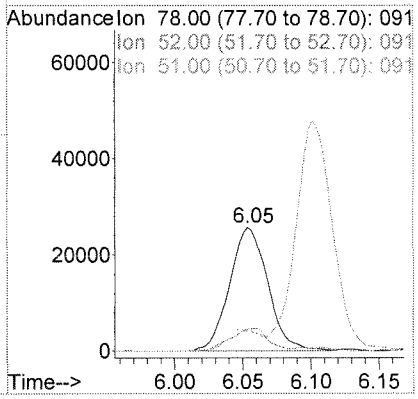


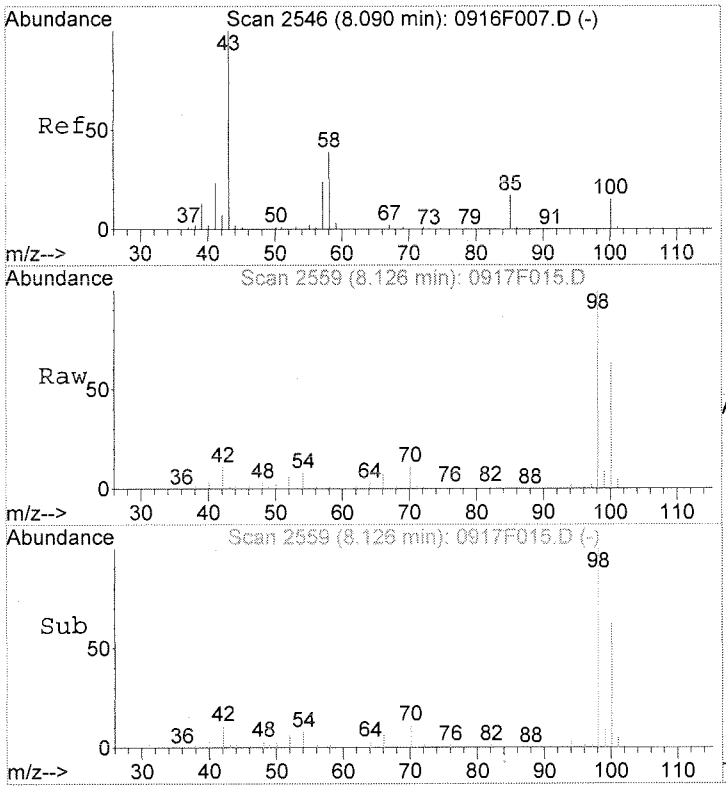


#48
Benzene
Concen: 0.51 PPB
RT: 6.05 min Scan# 1816
Delta R.T. 0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 78 Resp: 50178

Ion	Ratio	Lower	Upper
78	100		
52	17.6	0.0	46.3
51	15.7	0.0	46.6

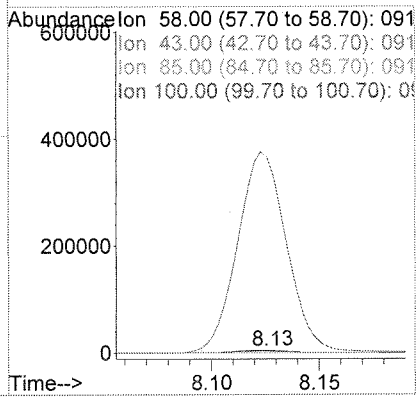


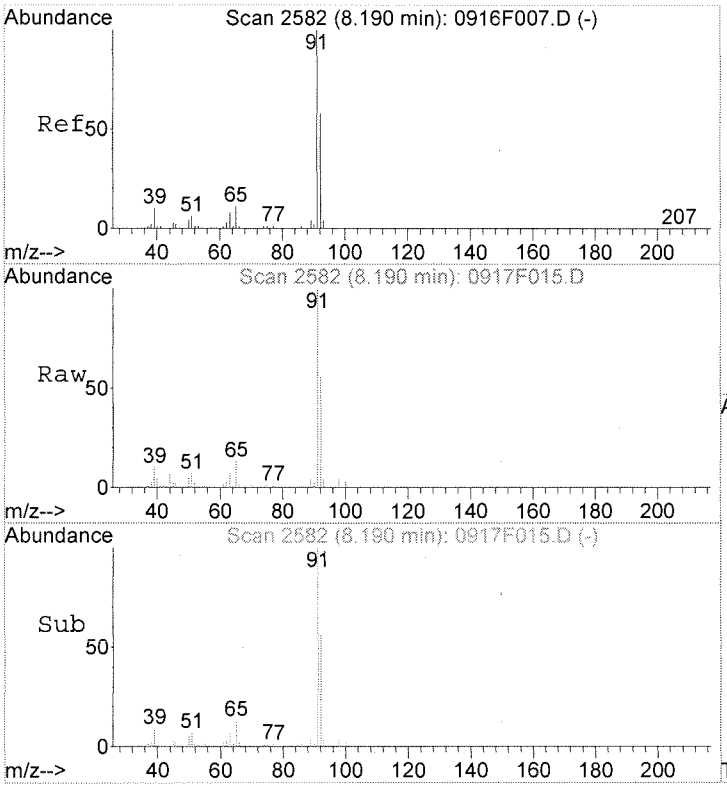


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.62 PPB
RT: 8.13 min Scan# 2559
Delta R.T. 0.04 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 58 Resp: 7378

Ion	Ratio	Lower	Upper
58	100		
43	59.4	232.7	292.7#
85	0.0	14.7	74.7#
100	7661.4	8.0	68.0#

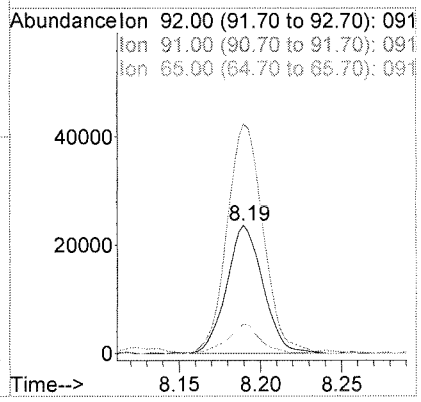


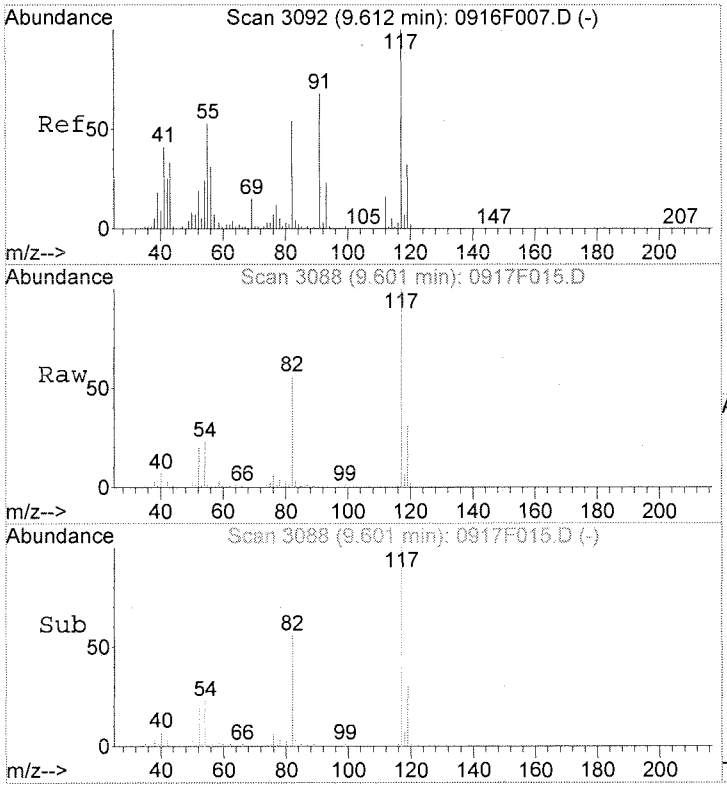


#63
Toluene
Concen: 0.60 PPB
RT: 8.19 min Scan# 2582
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 92 Resp: 36914

Ion	Ratio	Lower	Upper
92	100		
91	178.3	144.2	204.2
65	22.6	0.0	50.2

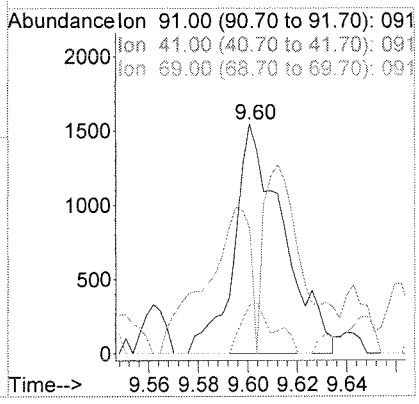


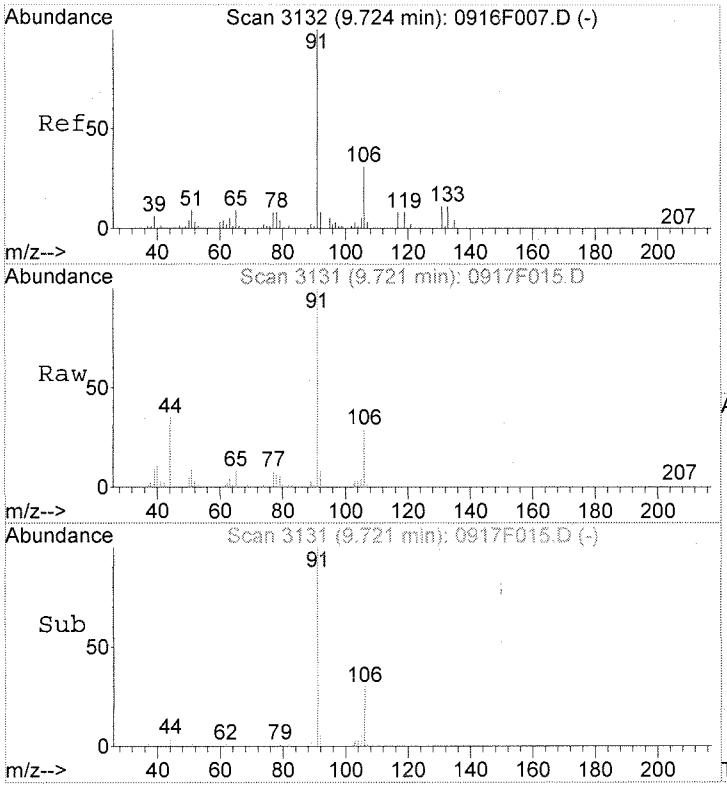


#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.60 min Scan# 3088
Delta R.T. -0.01 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 91 Resp: 2137

Ion	Ratio	Lower	Upper
91	100		
41	34.7	29.5	89.5
69	21.6	0.0	49.9

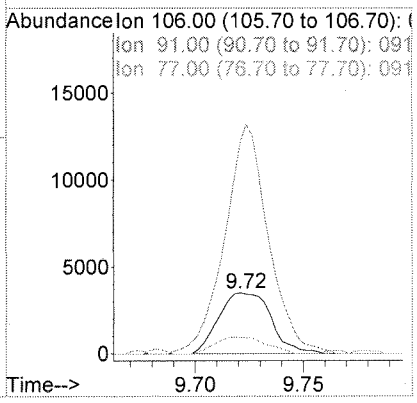


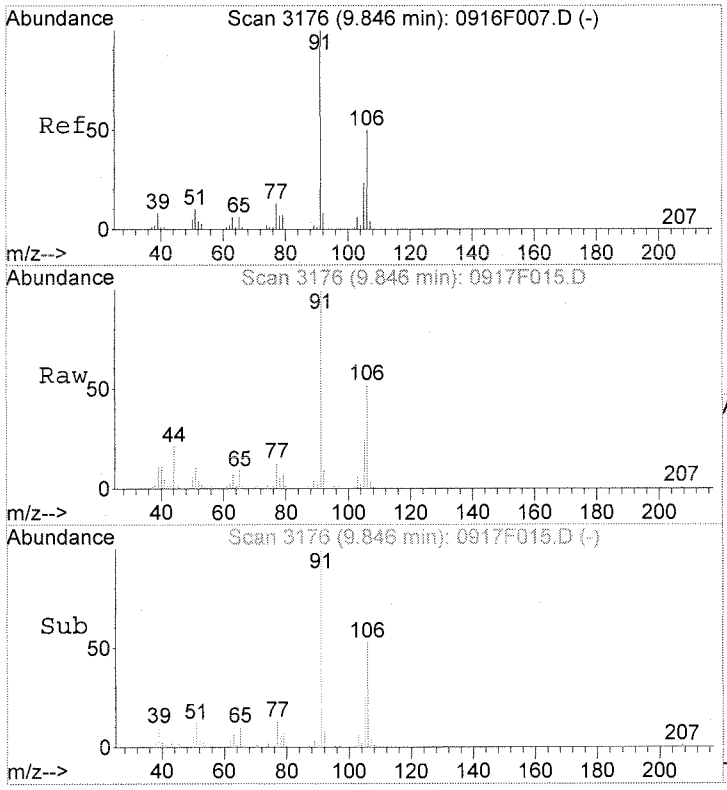


#76
Ethylbenzene
Concen: 0.16 PPB
RT: 9.72 min Scan# 3131
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:106 Resp: 5902

Ion	Ratio	Lower	Upper
106	100		
91	342.2	291.7	351.7
77	26.1	0.0	56.1

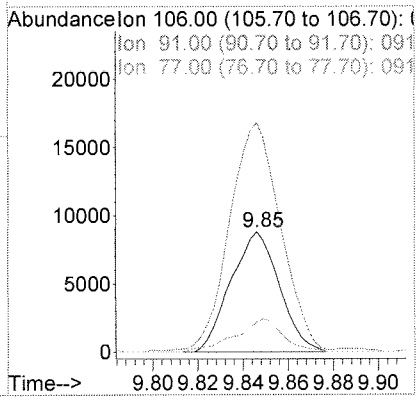


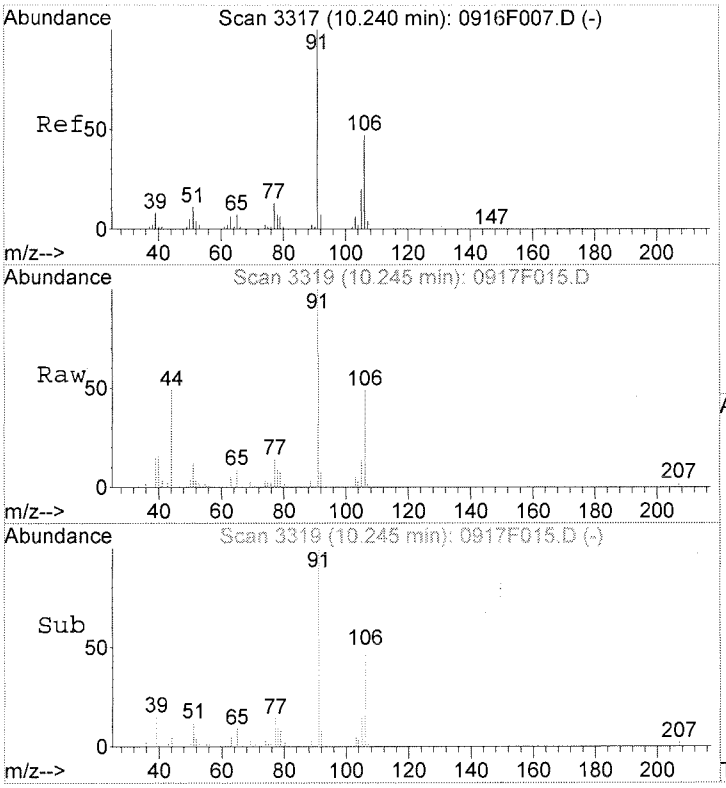


#78
m,p-Xylenes
Concen: 0.30 PPB
RT: 9.85 min Scan# 3176
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:106 Resp: 13153

Ion	Ratio	Lower	Upper
106	100		
91	188.9	173.6	233.6
77	25.3	0.0	55.7

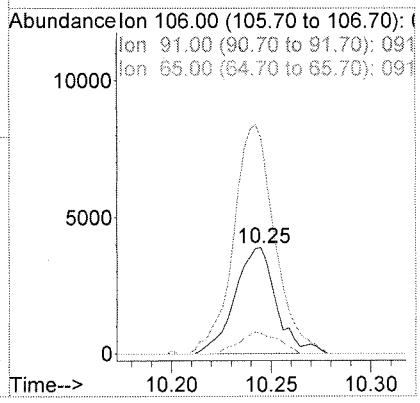


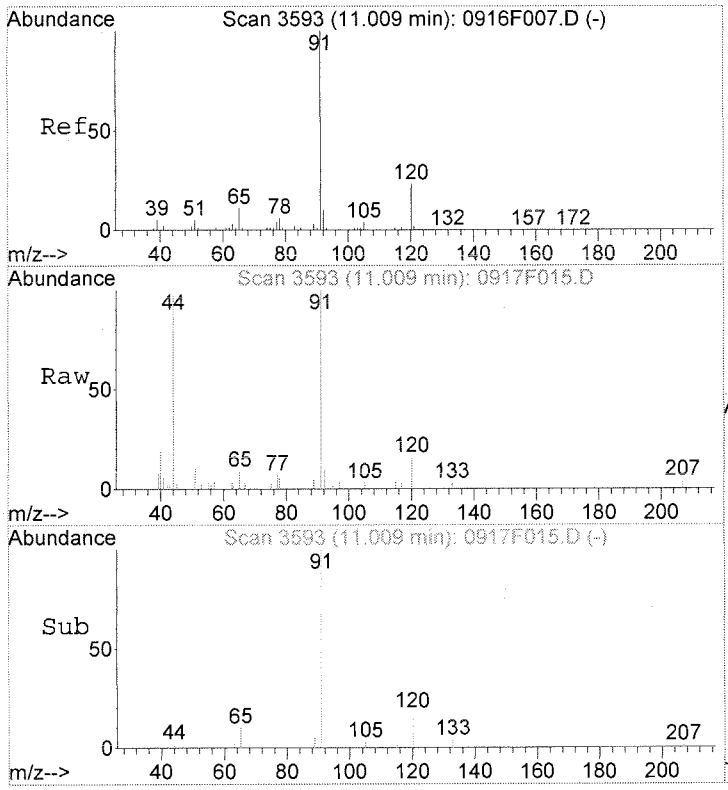


#79
o-Xylene
Concen: 0.13 PPB
RT: 10.25 min Scan# 3319
Delta R.T. 0.01 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:106 Resp: 5641

Ion	Ratio	Lower	Upper
106	100		
91	202.2	184.7	244.7
65	19.1	0.0	45.3

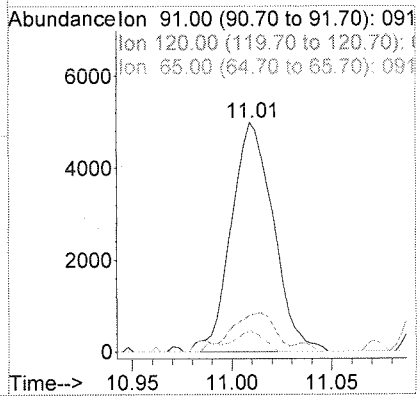


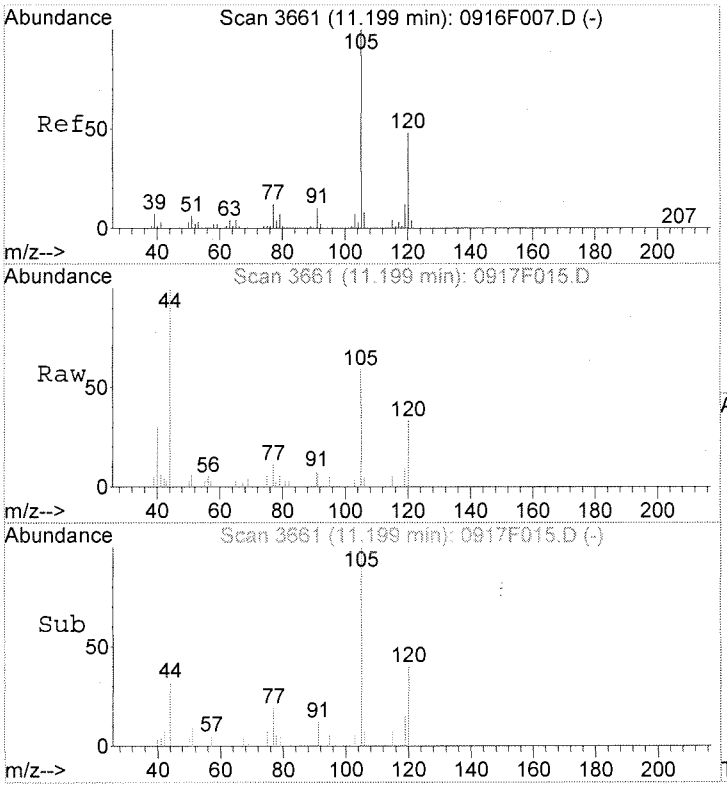


#89
n-Propylbenzene
Concen: 0.06 PPB
RT: 11.01 min Scan# 3593
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion: 91 Resp: 7353

Ion	Ratio	Lower	Upper
91	100		
120	16.1	0.0	52.7
65	9.0	0.0	40.0

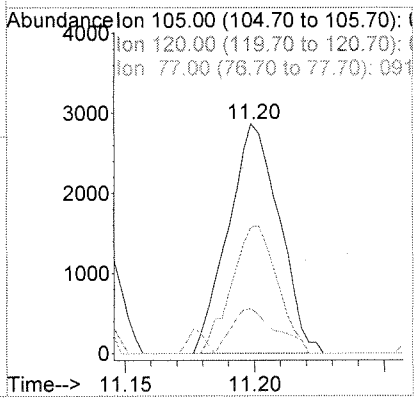


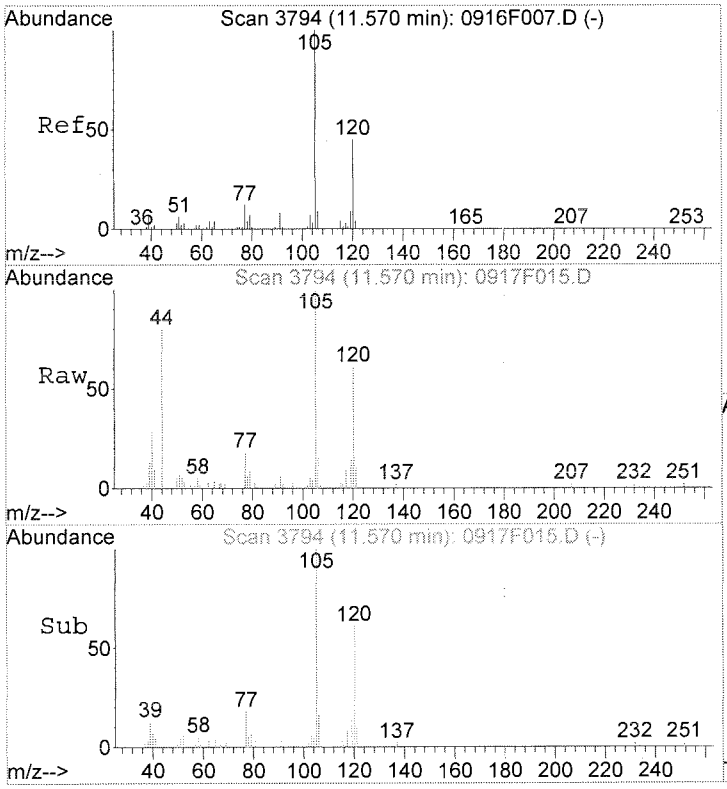


#92
1,3,5-Trimethylbenzene
Concen: 0.05 PPB
RT: 11.20 min Scan# 3661
Delta R.T. -0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:105 Resp: 3925

Ion	Ratio	Lower	Upper
105	100		
120	55.1	19.1	79.1
77	19.3	0.0	42.5

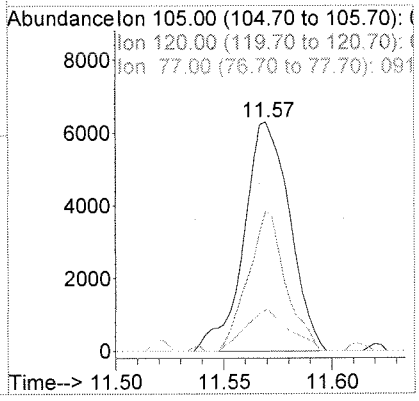


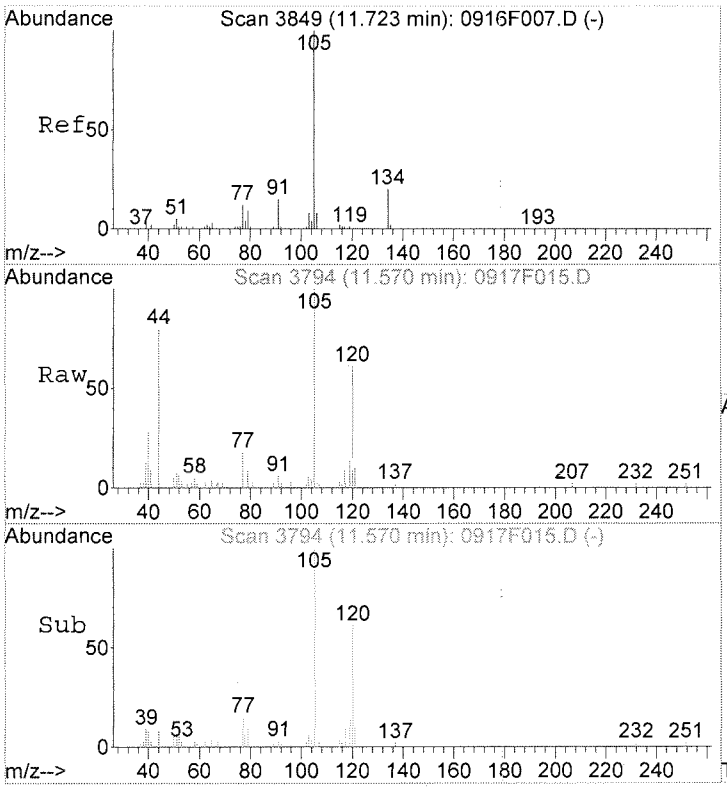


#95
1,2,4-Trimethylbenzene
Concen: 0.11 PPB
RT: 11.57 min Scan# 3794
Delta R.T. 0.00 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:105 Resp: 9297

Ion	Ratio	Lower	Upper
105	100		
120	61.5	14.4	74.4
77	18.1	0.0	42.0

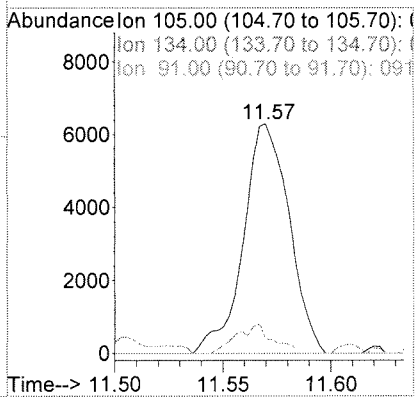




#96
sec-Butylbenzene
Concen: 0.09 PPB
RT: 11.57 min Scan# 3794
Delta R.T. -0.15 min
Lab File: 0917F015.D
Acq: 17 Sep 2013 3:40 pm

Tgt Ion:105 Resp: 9297

Ion	Ratio	Lower	Upper
105	100		
134	0.0	0.0	49.8
91	6.4	0.0	45.1



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/10/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 1
Lab Code: K1309638-006

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F013.D
Lab ID: K1309638-006
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 14:46
Date Quantitated: 09/17/2013 15:58
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9-18-13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F013.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 14:46	**Quant Date:**	09/17/2013 15:58	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-006			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282920	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	944688	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	372768	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	290366	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	234718	9.21	92	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	910549	9.78	98	65-144	OK	
2	4-Bromofluorobenzene	10.80	0.01	0.00	95	312475	9.50	95	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene				92	0d		0.054	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F013.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 14:46	**Quant Date:**	09/17/2013 15:58	**Vial:**	12
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-006			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F013.D Vial: 12
Acq On : 17 Sep 2013 2:46 pm Operator: KS
Sample : K1309638-006 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:20:19 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

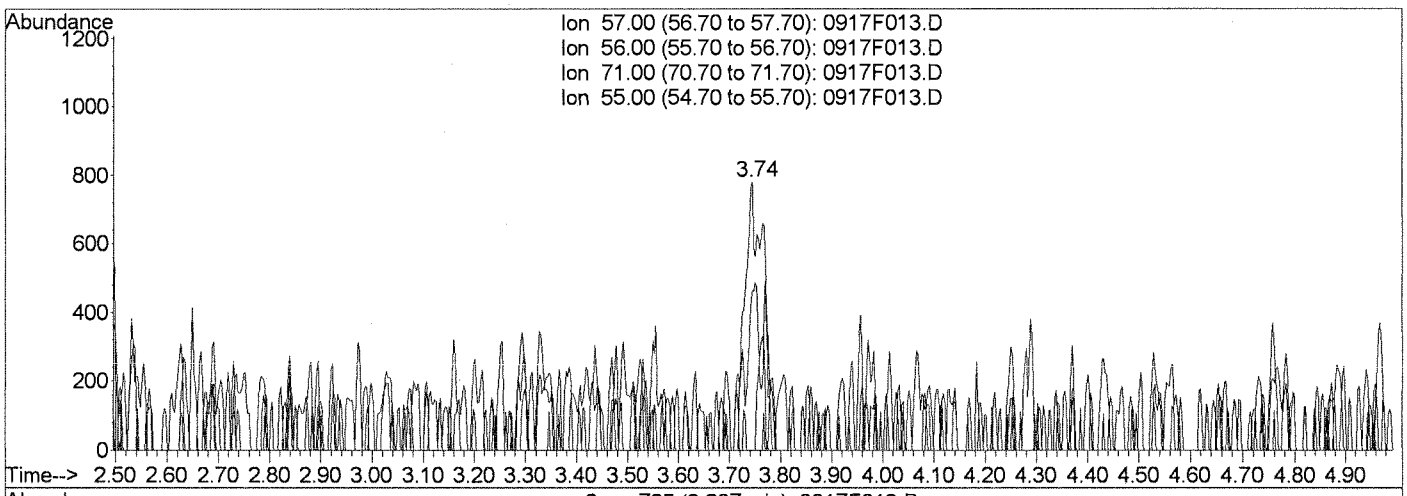
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	944688	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	372768	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	290366	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	234718	9.21	PPB		0.00
Spiked Amount 10.000			Recovery =	92.10%			
47) 1,2-Dichloroethane-d4	6.10	65	235658	9.63	PPB		0.00
Spiked Amount 10.000			Recovery =	96.30%			
62) Toluene-d8	8.12	98	910549	9.78	PPB		0.00
Spiked Amount 10.000			Recovery =	97.80%			
84) 4-Bromofluorobenzene	10.80	95	312475	9.50	PPB		0.00
Spiked Amount 10.000			Recovery =	95.00%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1666	0.05	PPB		96
6) Bromomethane	1.67	96	612	0.03	PPB	#	42
8) Dichlorofluoromethane	1.85	67	535	0.01	PPB	#	38
14) Acetone	2.66	43	11684	3.89	PPB		100
15) Iodomethane	2.68	142	2139	0.19	PPB		92
16) Carbon Disulfide	2.70	76	1812	0.03	PPB		81
17) 2-Propanol (Isopropyl Alco	2.83	45	584	1.53	PPB	#	39
18) 3-Chloro-1-propene	2.70	76	1812	0.14	PPB	#	1
19) Methyl Acetate	3.03	43	907	0.09	PPB		58
20) Acetonitrile	3.14	40	707	1.02	PPB	#	1
26) Hexane	3.74	57	1045	0.03	PPB		77
34) 2-Butanone	5.14	72	2810	2.33	PPB	#	45
39) Tetrahydrofuran	5.37	71	7188	5.60	PPB	#	82
40) Chloroform	5.47	83	4447	0.10	PPB		83
46) Isobutyl Alcohol	6.07	43	513	1.67	PPB	#	25
48) Benzene	6.06	78	517	0.01	PPB		62
50) tert-Amyl Methyl Ether	6.43	55	1229	0.10	PPB	#	1
58) 2-Nitropropane	7.64	41	532	0.13	PPB	#	16
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7462	1.66	PPB	#	1
63) Toluene	8.19	92	1208	0.02	PPB	#	60
67) Ethyl methacrylate	8.13	69	2975	0.14	PPB	#	1
74) 1-Chlorohexane	9.61	91	2146	0.06	PPB	#	57
89) n-Propylbenzene	11.00	91	657	0.01	PPB		59
93) 4-Chlorotoluene	11.24	91	554	0.01	PPB		77
95) 1,2,4-Trimethylbenzene	11.57	105	528	0.01	PPB	#	37
96) sec-Butylbenzene	11.73	105	635	0.01	PPB		60
97) p-Isopropyltoluene	11.88	119	610	0.01	PPB		76
100) n-Butylbenzene	12.28	91	644	0.01	PPB	#	68

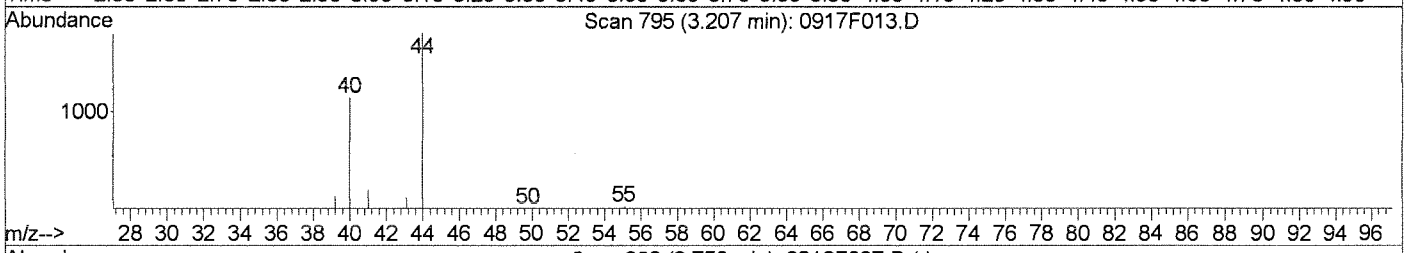
(#) = qualifier out of range (m) = manual integration

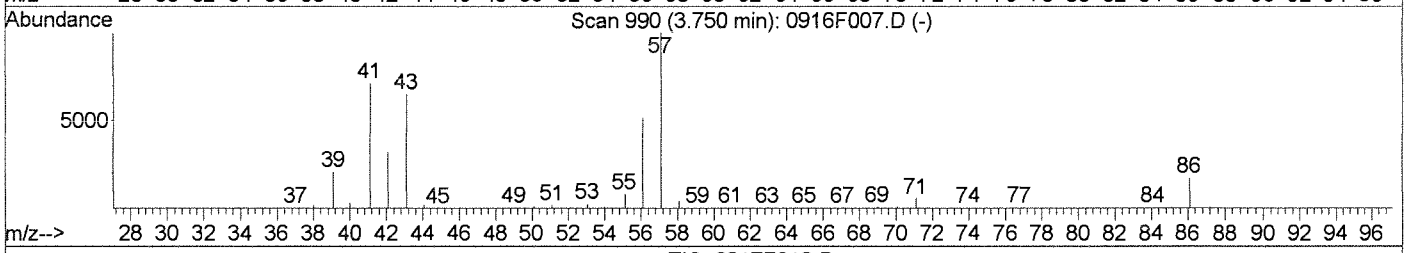
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F013.D Vial: 12
Acq On : 17 Sep 2013 2:46 pm Operator: KS
Sample : K1309638-006 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 15:55 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F013.D

(26) Hexane (T)

3.74min 0.06PPB m

response 1940

Ion	Exp%	Act%
57.00	100	100
56.00	48.70	59.36
71.00	5.10	0.00
55.00	8.10	0.00

Manual Integration:

After KS

Split peak

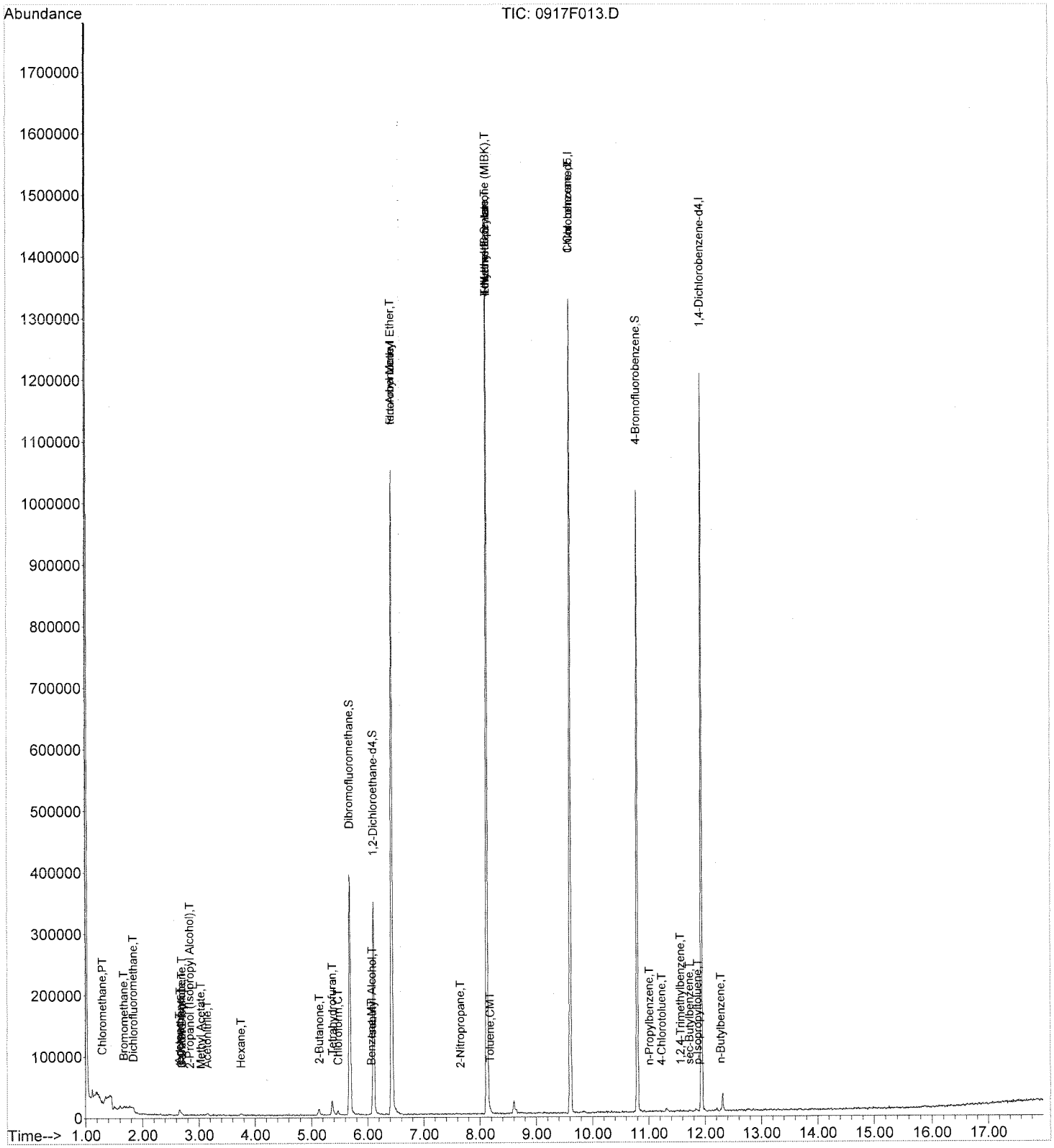
09/17/13

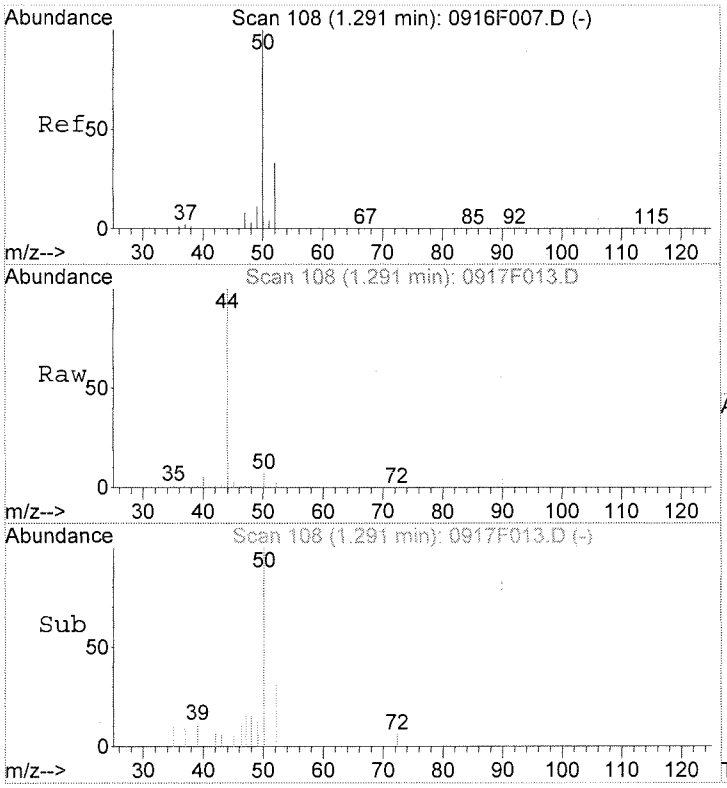
no Before
0.03ppb
before Man.
Int.

9/17/13

Data File : J:\MS27\DATA\091713\0917F013.D Vial: 12
Acq On : 17 Sep 2013 2:46 pm Operator: KS
Sample : K1309638-006 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:23 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

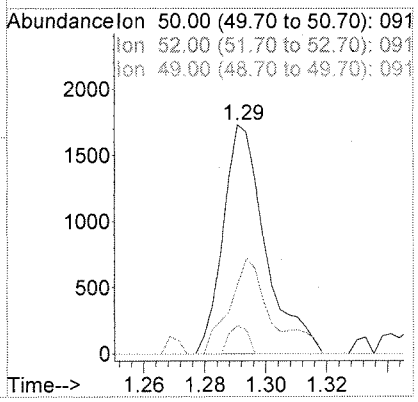


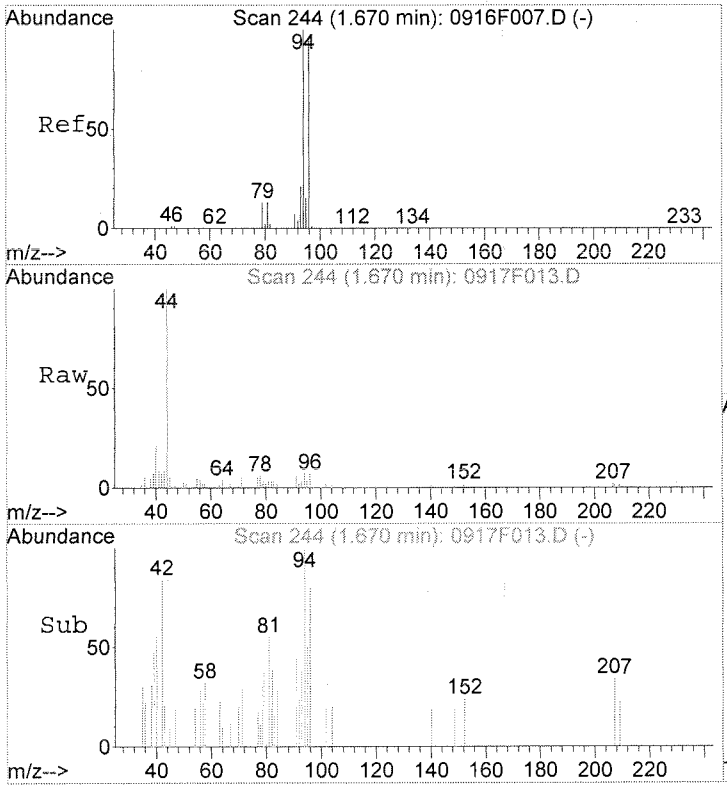


#3
Chloromethane
Concen: 0.05 PPB
RT: 1.29 min Scan# 108
Delta R.T. -0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 50 Resp: 1666

Ion	Ratio	Lower	Upper
50	100		
52	30.5	2.5	62.5
49	12.3	0.0	40.3

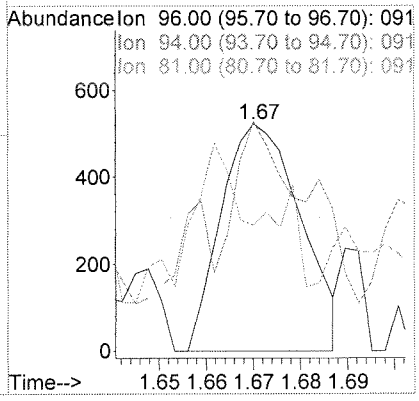


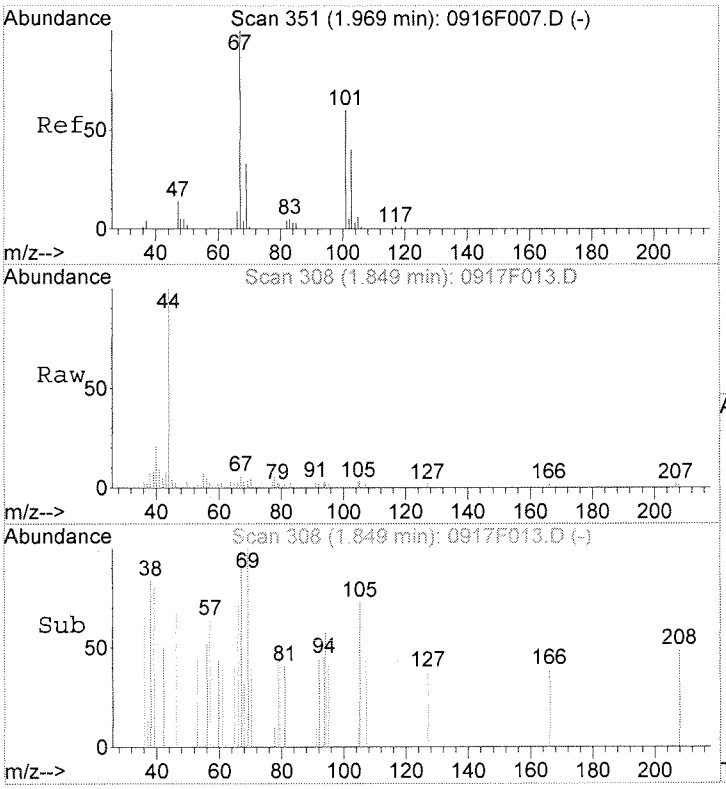


#6
Bromomethane
Concen: 0.03 PPB
RT: 1.67 min Scan# 244
Delta R.T. 0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 96 Resp: 612

Ion	Ratio	Lower	Upper
96	100		
94	40.7	77.3	137.3#
81	10.5	0.0	43.8

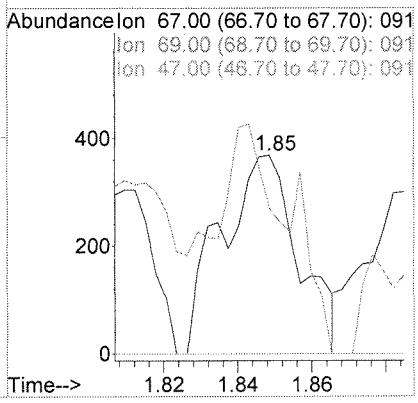


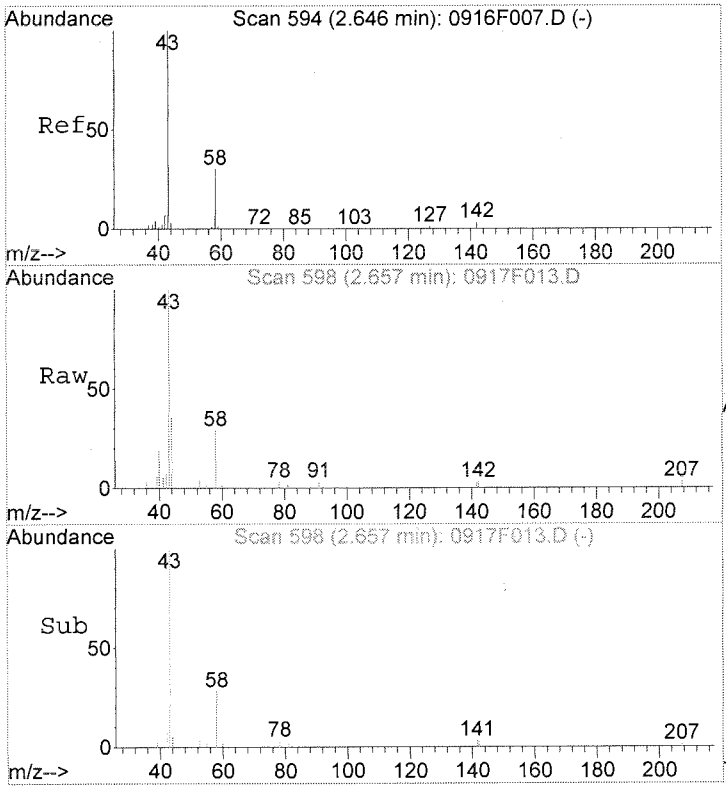


#8
Dichlorofluoromethane
Concen: 0.01 PPB
RT: 1.85 min Scan# 308
Delta R.T. -0.12 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 67 Resp: 535

Ion	Ratio	Lower	Upper
67	100		
69	73.1	2.0	62.0#
47	0.0	0.0	46.3

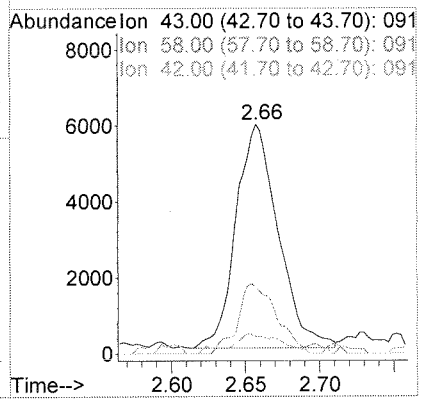


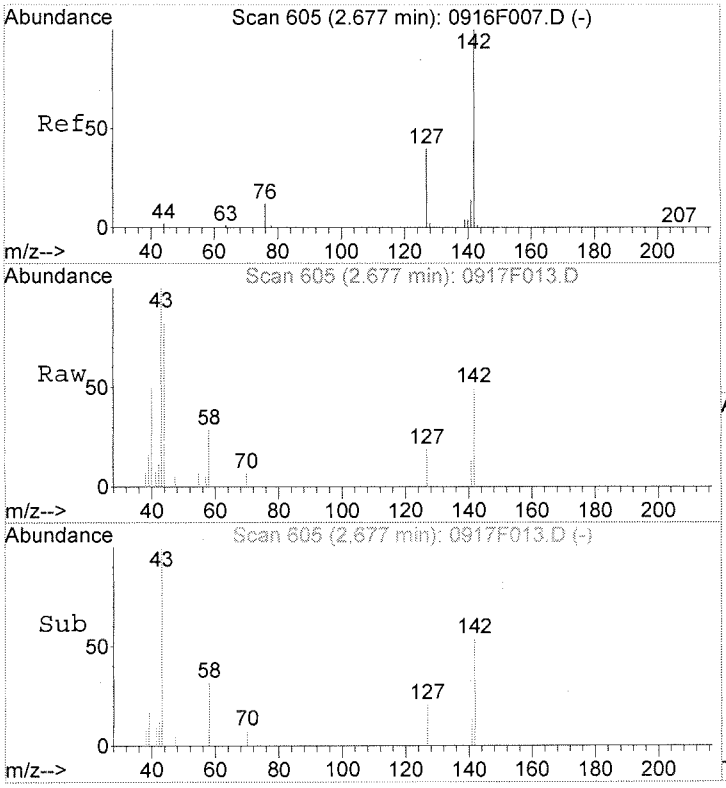


#14
Acetone
Concen: 3.89 PPB
RT: 2.66 min Scan# 598
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 43 Resp: 11684

Ion	Ratio	Lower	Upper
43	100		
58	29.9	0.0	59.8
42	7.8	0.0	37.4

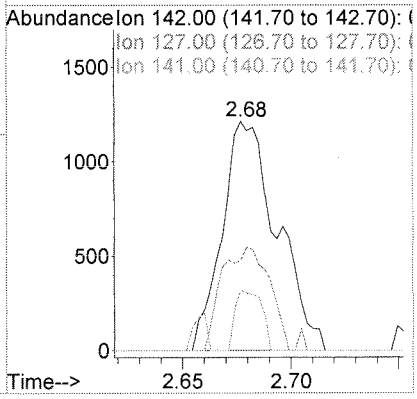


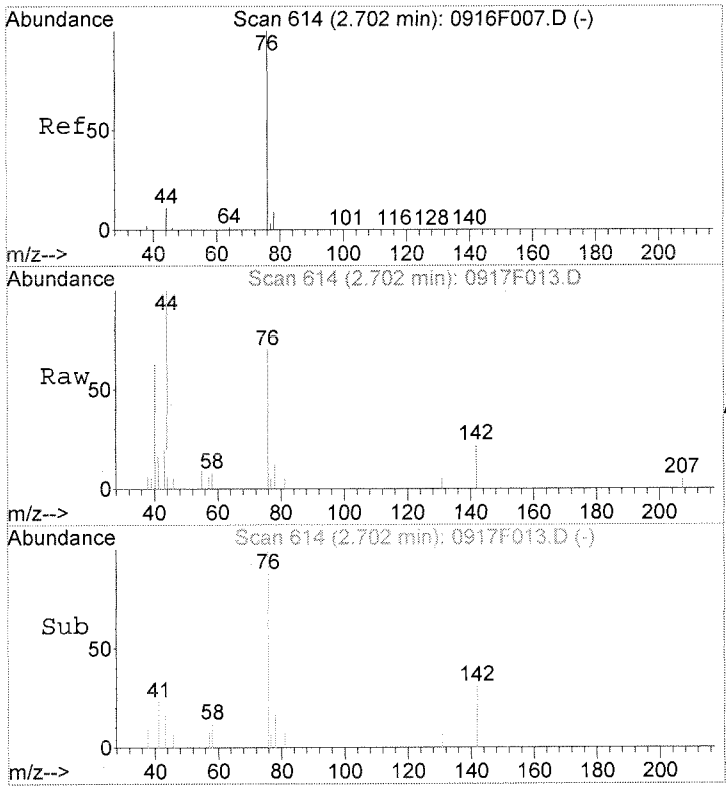


#15
Iodomethane
Concen: 0.19 PPB
RT: 2.68 min Scan# 605
Delta R.T. 0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion:142 Resp: 2139

Ion	Ratio	Lower	Upper
142	100		
127	39.1	9.8	69.8
141	26.1	0.0	44.5

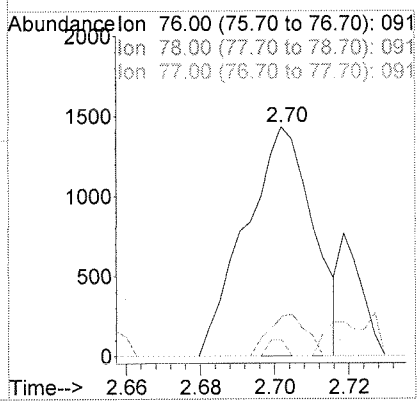


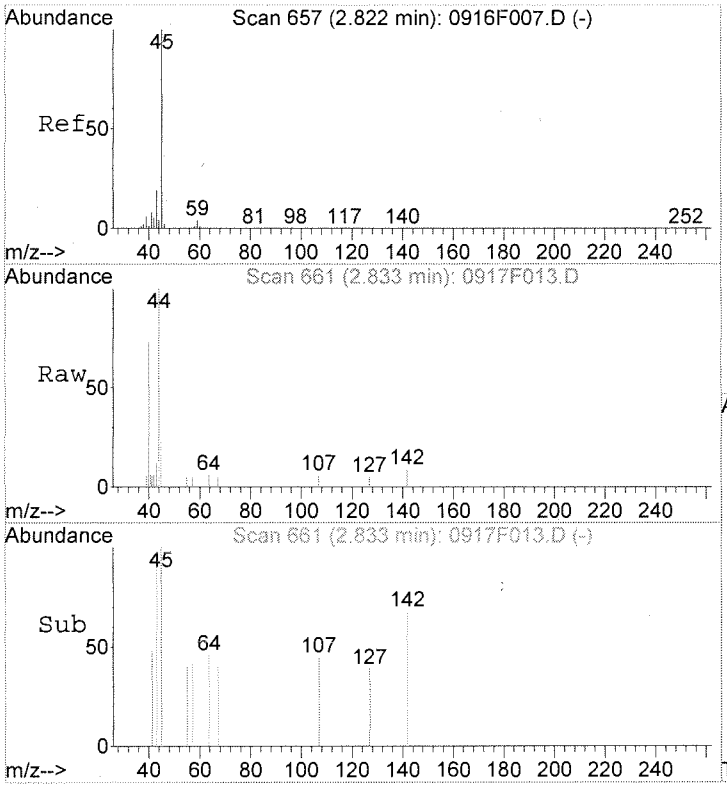


#16
Carbon Disulfide
Concen: 0.03 PPB
RT: 2.70 min Scan# 614
Delta R.T. 0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 76 Resp: 1812

Ion	Ratio	Lower	Upper
76	100		
78	16.2	0.0	38.8
77	6.6	0.0	32.7

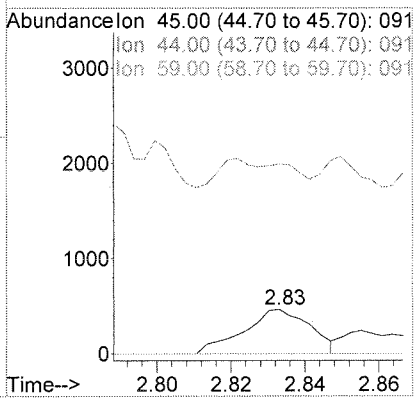


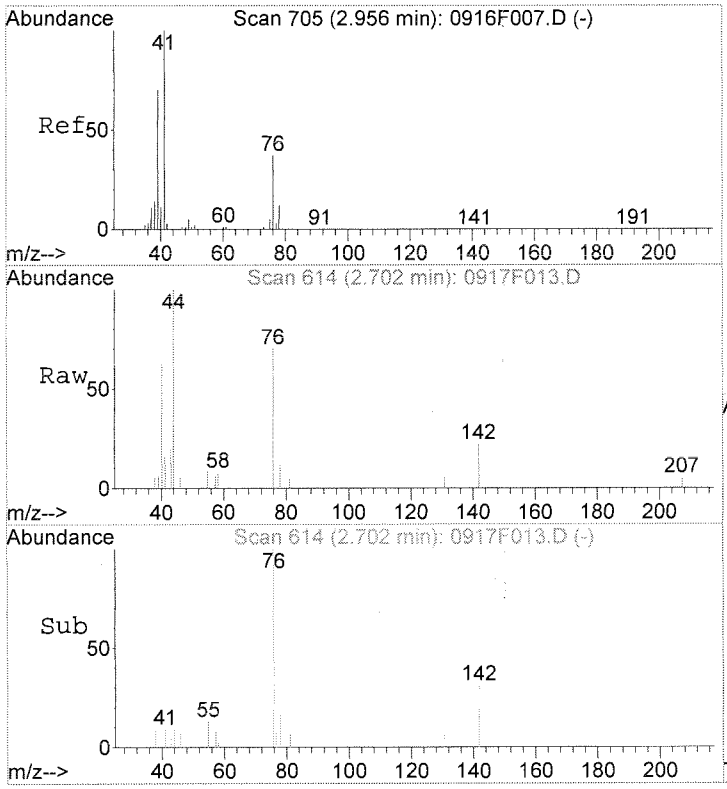


#17
2-Propanol (Isopropyl Alcohol)
Concen: 1.53 PPB
RT: 2.83 min Scan# 661
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 45 Resp: 584

Ion	Ratio	Lower	Upper
45	100		
44	42.8	0.0	33.5#
59	0.0	0.0	34.3

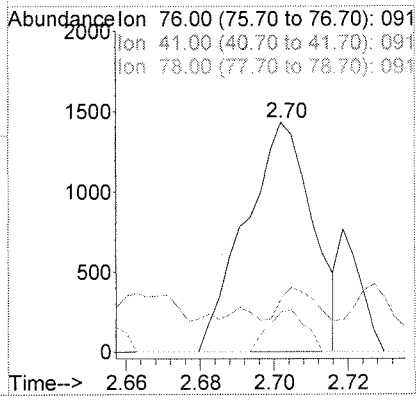


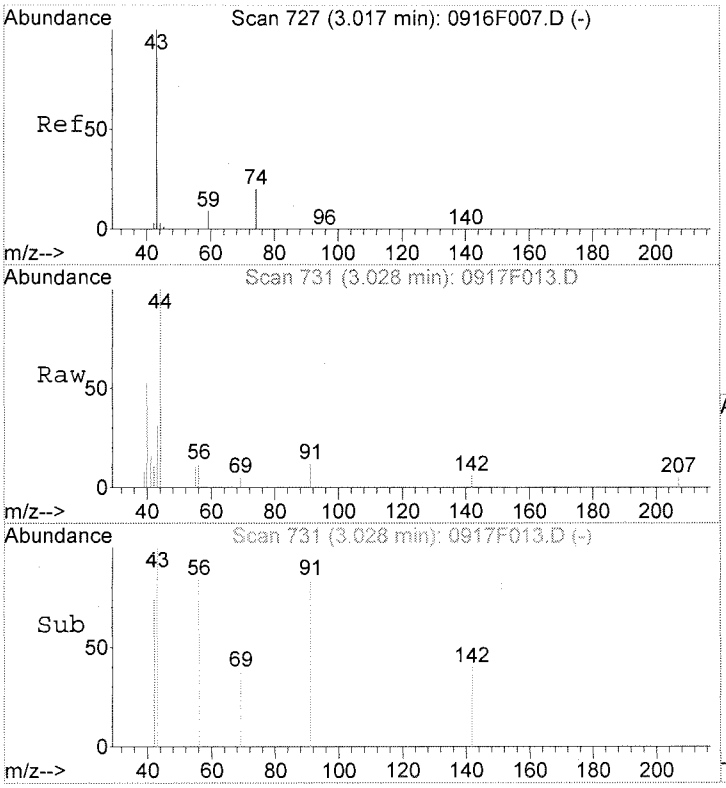


#18
3-Chloro-1-propene
Concen: 0.14 PPB
RT: 2.70 min Scan# 614
Delta R.T. -0.25 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 76 Resp: 1812

Ion	Ratio	Lower	Upper
76	100		
41	9.1	248.6	308.6#
78	16.2	0.0	69.6

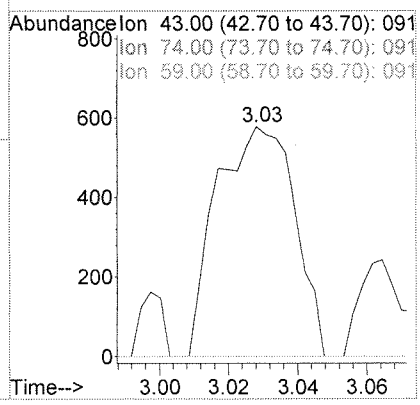


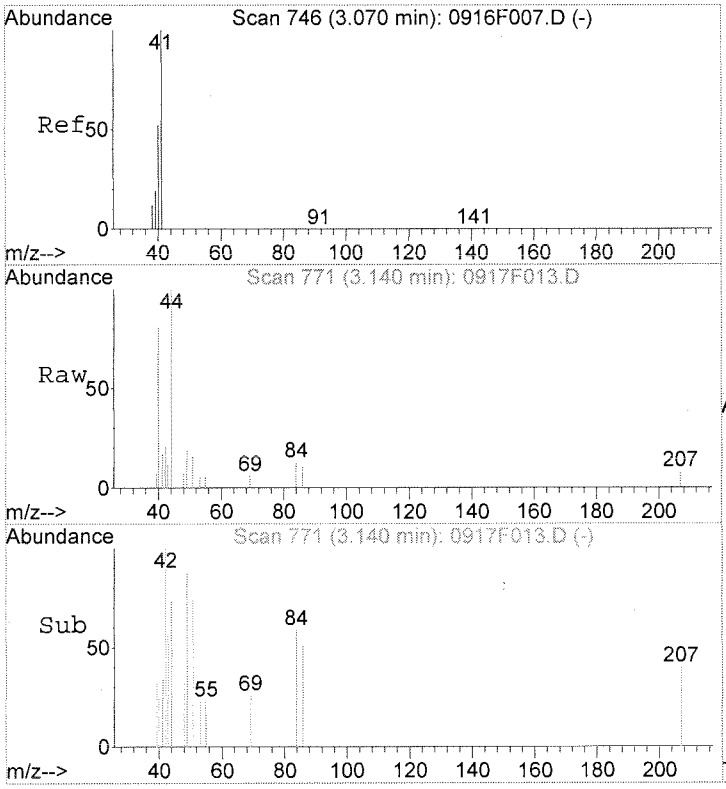


#19
Methyl Acetate
Concen: 0.09 PPB
RT: 3.03 min Scan# 731
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 43 Resp: 907

Ion	Ratio	Lower	Upper
43	100		
74	0.0	0.0	54.0
59	0.0	0.0	37.0

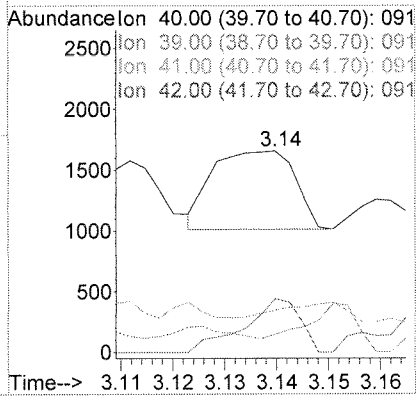


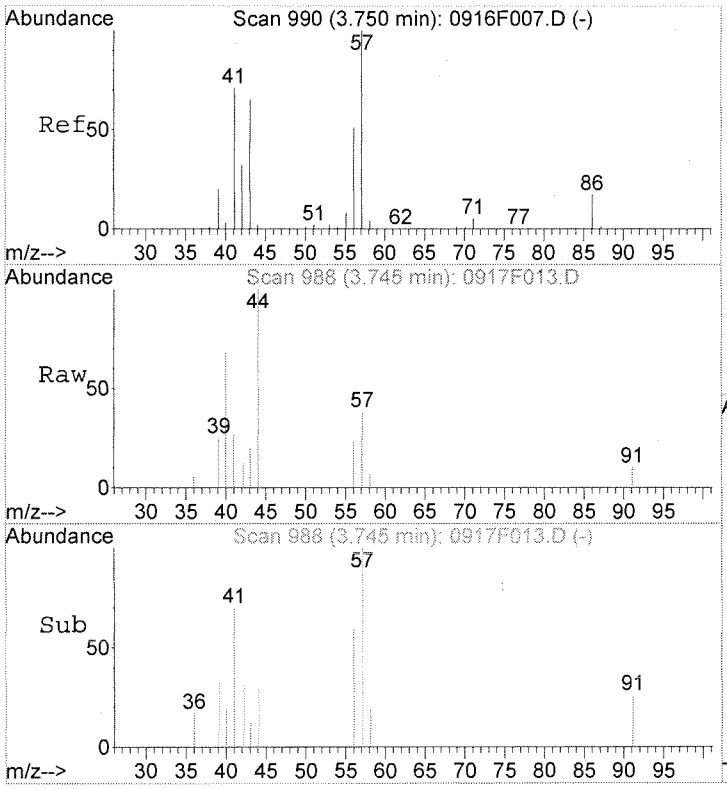


#20
Acetonitrile
Concen: 1.02 PPB
RT: 3.14 min Scan# 771
Delta R.T. 0.07 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 40 Resp: 707

Ion	Ratio	Lower	Upper
40	100		
39	0.0	7.5	67.5#
41	0.0	152.1	212.1#
42	68.3	0.0	32.7#

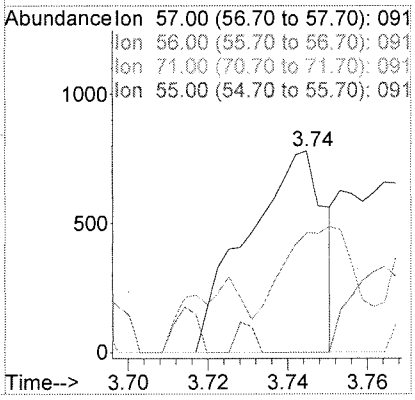


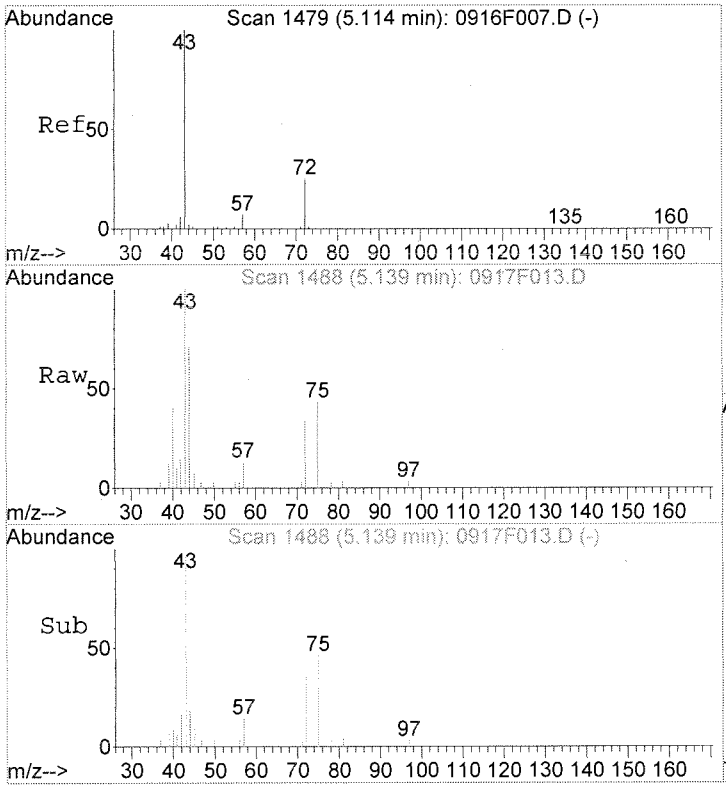


#26
Hexane
Concen: 0.03 PPB
RT: 3.74 min Scan# 988
Delta R.T. -0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 57 Resp: 1045

Ion	Ratio	Lower	Upper
57	100		
56	32.2	18.7	78.7
71	0.0	0.0	35.1
55	0.0	0.0	20.5

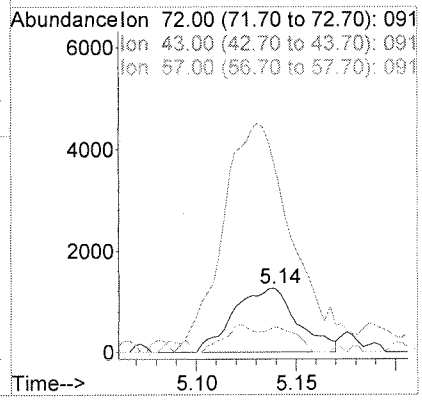


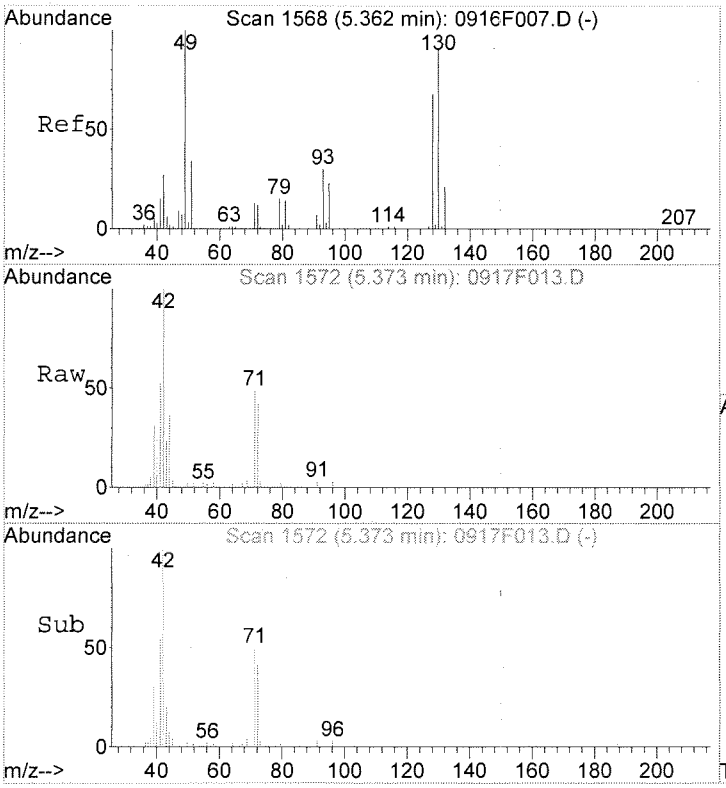


#34
2-Butanone
Concen: 2.33 PPB
RT: 5.14 min Scan# 1488
Delta R.T. 0.03 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 72 Resp: 2810

Ion	Ratio	Lower	Upper
72	100		
43	255.4	363.3	423.3#
57	31.1	1.8	61.8

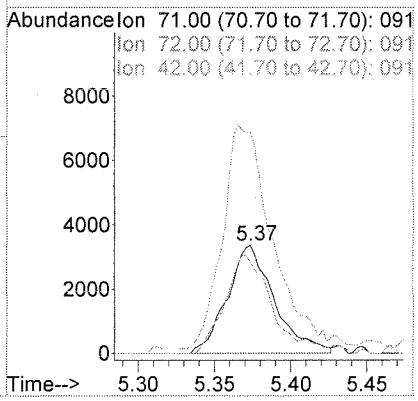


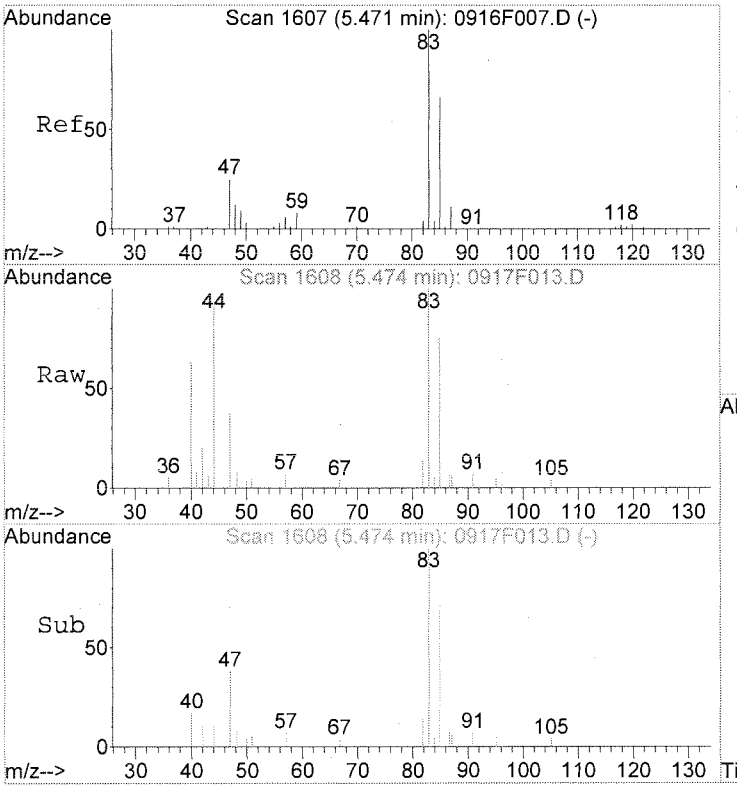


#39
Tetrahydrofuran
Concen: 5.60 PPB
RT: 5.37 min Scan# 1572
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 71 Resp: 7188

Ion	Ratio	Lower	Upper
71	100		
72	84.7	69.2	129.2
42	199.9	201.1	261.1#

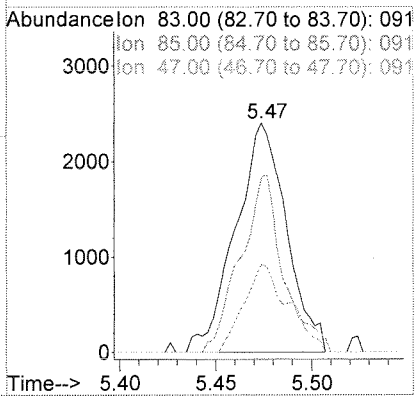


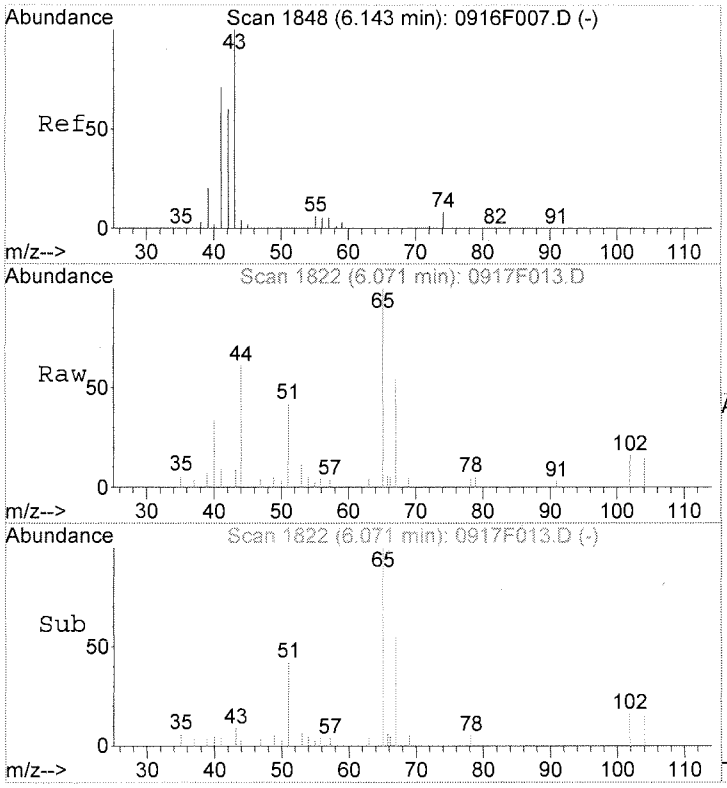


#40
Chloroform
Concen: 0.10 PPB
RT: 5.47 min Scan# 1608
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 83 Resp: 4447

Ion	Ratio	Lower	Upper
83	100		
85	76.4	35.4	95.4
47	38.1	0.0	55.1

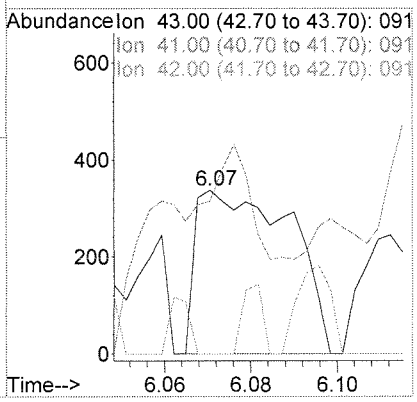


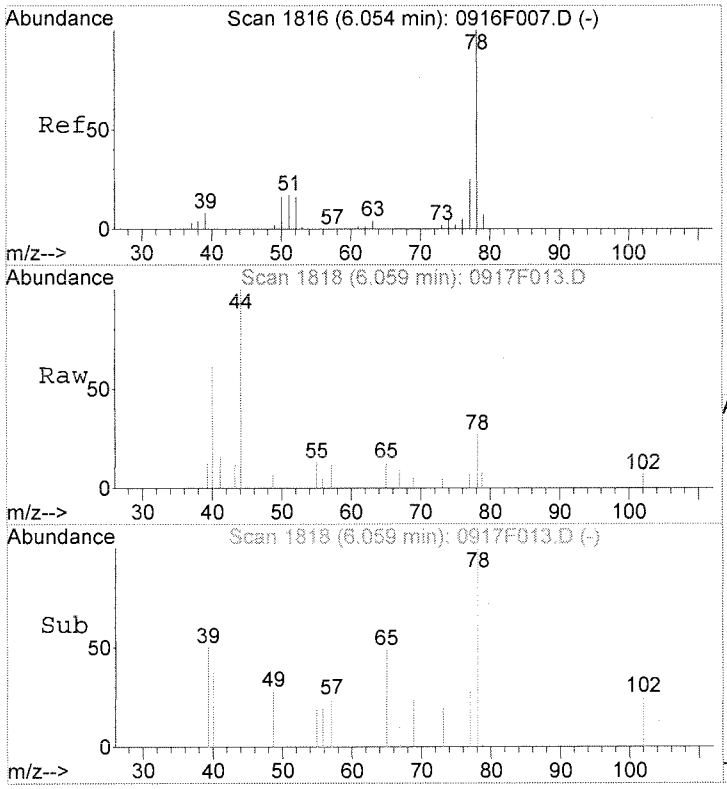


#46
Isobutyl Alcohol
Concen: 1.67 PPB
RT: 6.07 min Scan# 1822
Delta R.T. -0.07 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 43 Resp: 513

Ion	Ratio	Lower	Upper
43	100		
41	12.1	44.3	104.3#
42	0.0	28.1	88.1#

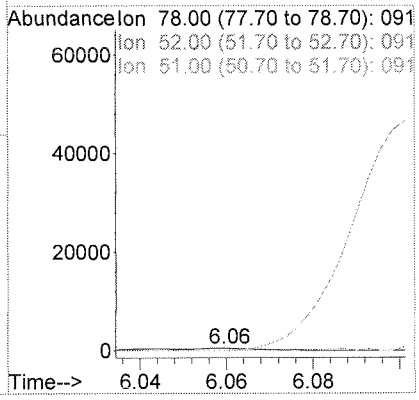


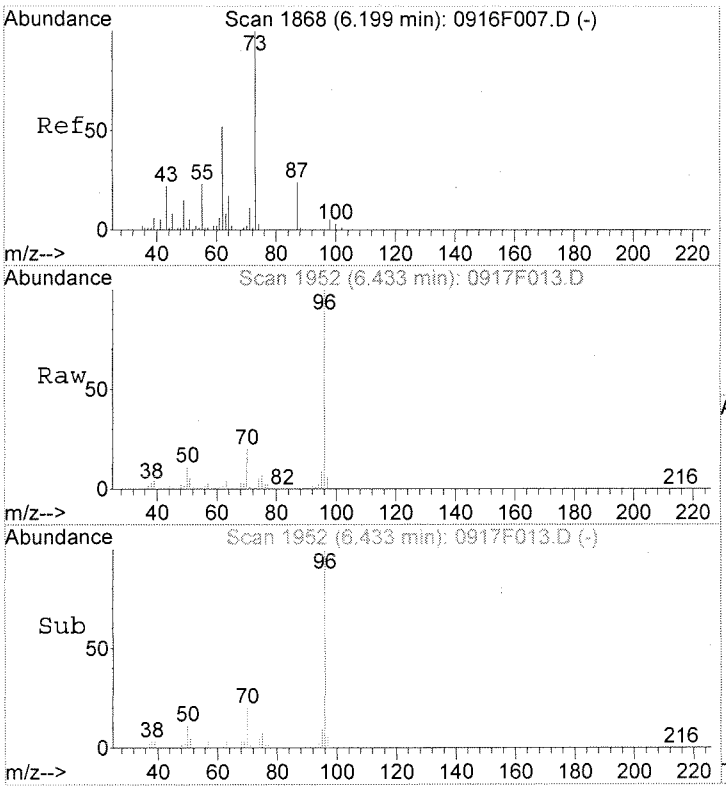


#48
Benzene
Concen: 0.01 PPB
RT: 6.06 min Scan# 1818
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 78 Resp: 517

Ion	Ratio	Lower	Upper
78	100		
52	0.0	0.0	46.3
51	0.0	0.0	46.6

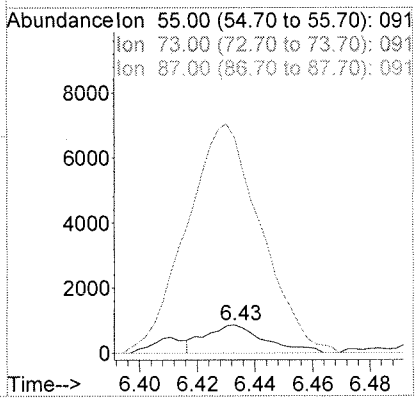


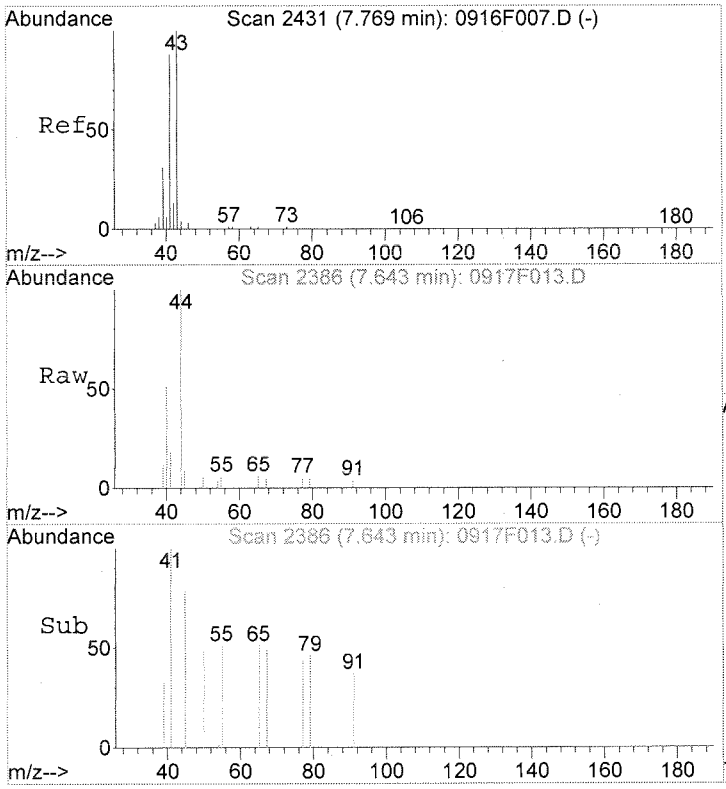


#50
tert-Amyl Methyl Ether
Concen: 0.10 PPB
RT: 6.43 min Scan# 1952
Delta R.T. 0.23 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 55 Resp: 1229

Ion	Ratio	Lower	Upper
55	100		
73	742.5	371.6	431.6#
87	0.0	64.2	124.2#

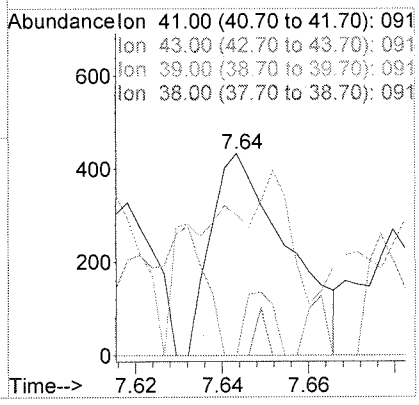


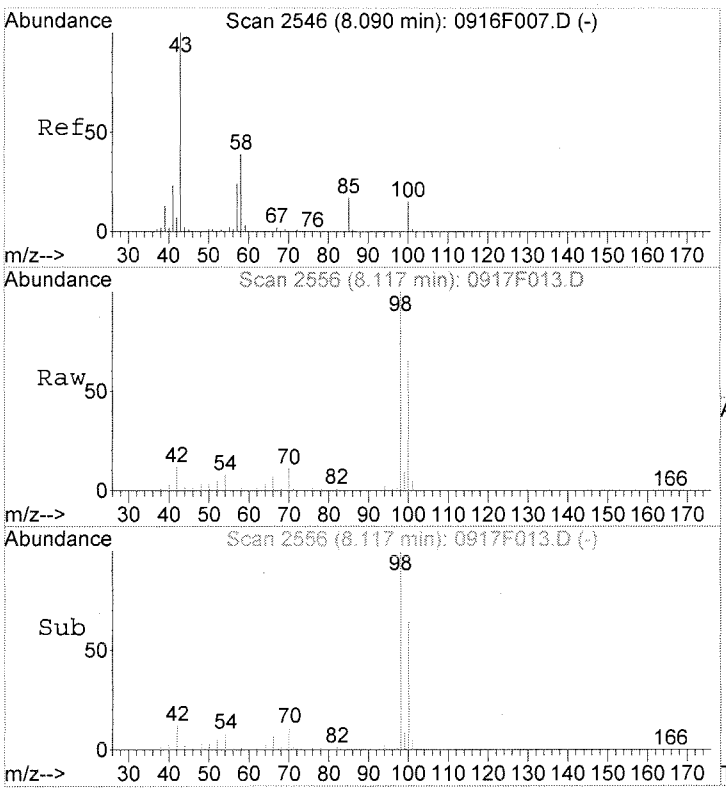


#58
2-Nitropropane
Concen: 0.13 PPB
RT: 7.64 min Scan# 2386
Delta R.T. -0.12 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 41 Resp: 532

Ion	Ratio	Lower	Upper
41	100		
43	0.0	88.4	148.4#
39	26.3	5.1	65.1
38	0.0	0.0	35.7

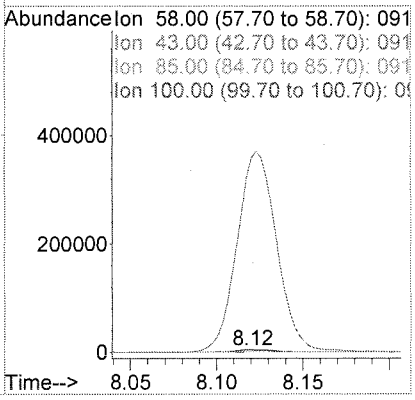


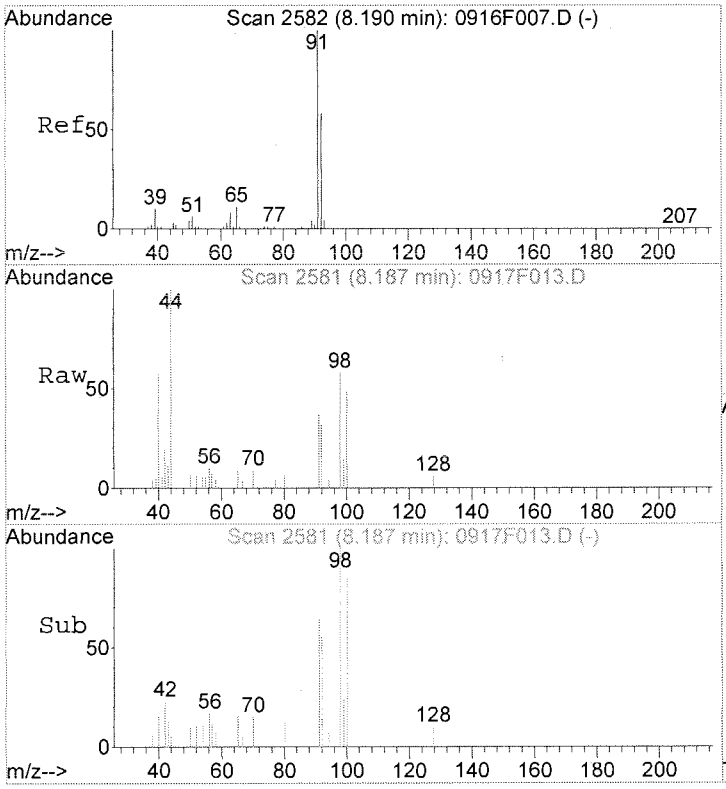


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.66 PPB
RT: 8.12 min Scan# 2556
Delta R.T. 0.03 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 58 Resp: 7462

Ion	Ratio	Lower	Upper
58	100		
43	42.8	232.7	292.7#
85	0.0	14.7	74.7#
100	7342.7	8.0	68.0#

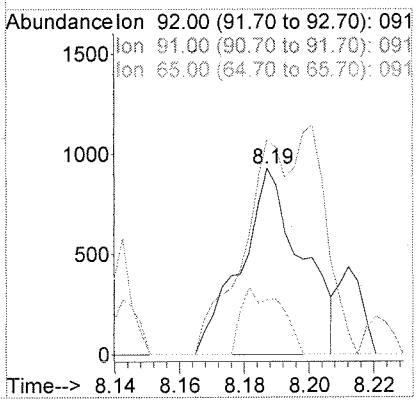


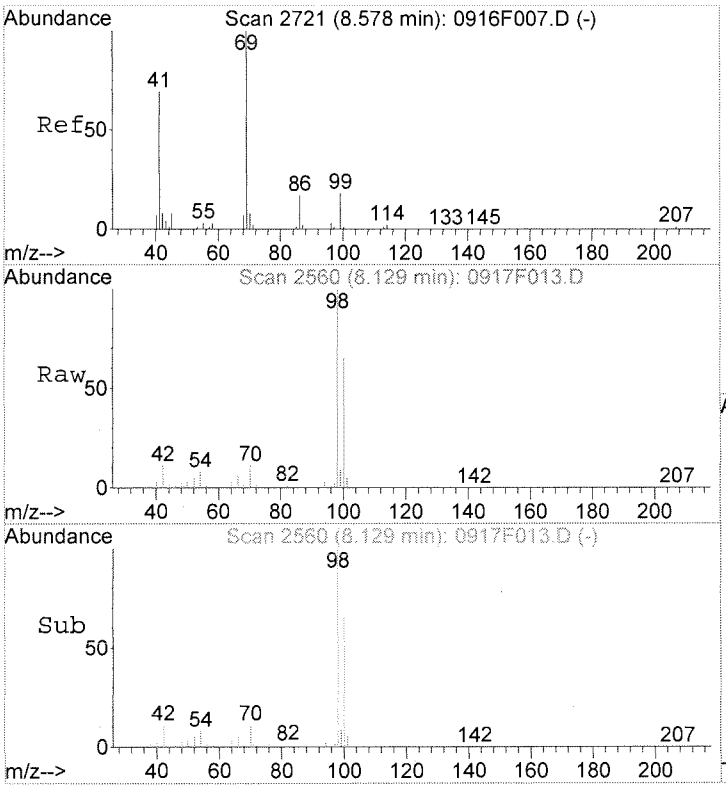


#63
Toluene
Concen: 0.02 PPB
RT: 8.19 min Scan# 2581
Delta R.T. -0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 92 Resp: 1208

Ion	Ratio	Lower	Upper
92	100		
91	115.3	144.2	204.2#
65	29.5	0.0	50.2

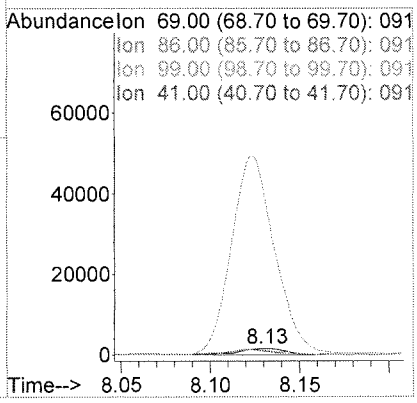


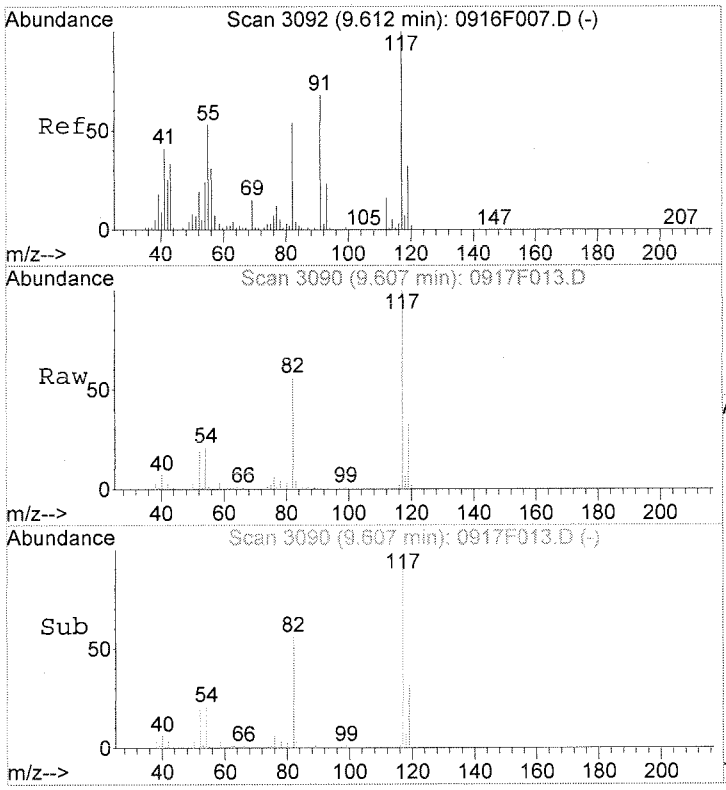


#67
Ethyl methacrylate *
Concen: 0.14 PPB
RT: 8.13 min Scan# 2560
Delta R.T. -0.45 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 69 Resp: 2975

Ion	Ratio	Lower	Upper
69	100		
86	58.6	0.0	46.7#
99	2733.5	0.0	47.9#
41	66.5	40.5	100.5

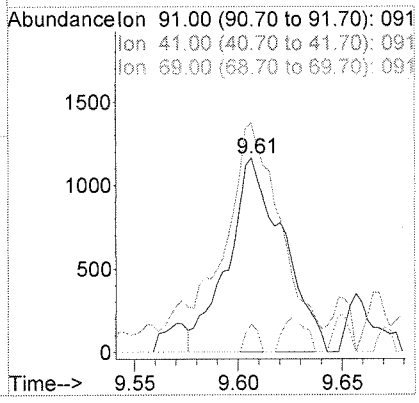


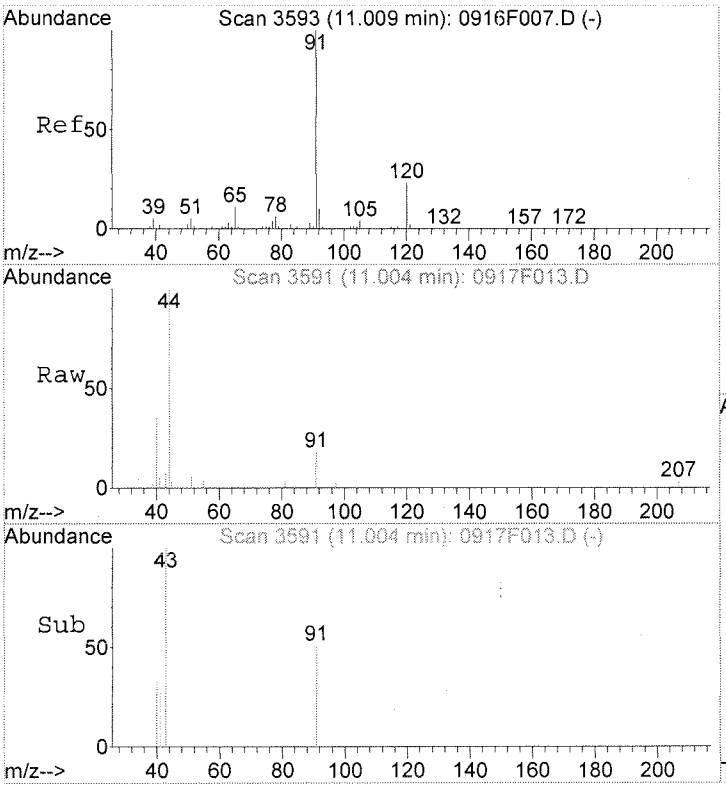


#74
1-Chlorohexane *
Concen: 0.06 PPB
RT: 9.61 min Scan# 3090
Delta R.T. -0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 91 Resp: 2146

Ion	Ratio	Lower	Upper
91	100		
41	100.1	29.5	89.5#
69	14.3	0.0	49.9

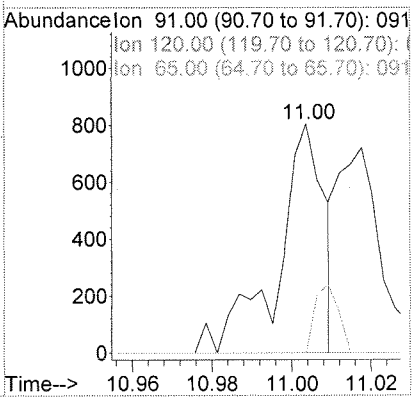


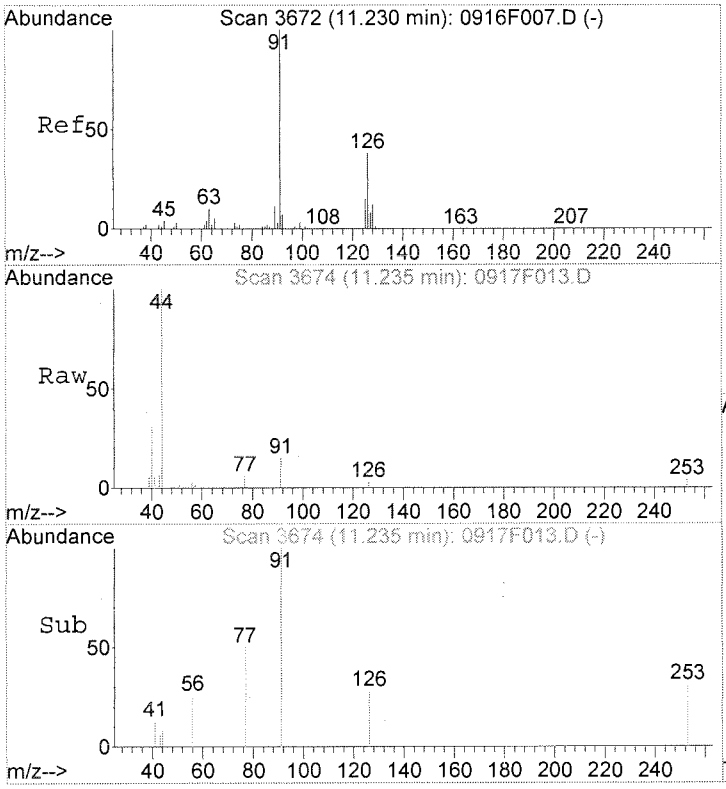


#89
n-Propylbenzene
Concen: 0.01 PPB
RT: 11.00 min Scan# 3591
Delta R.T. -0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 91 Resp: 657

Ion	Ratio	Lower	Upper
91	100		
120	0.0	0.0	52.7
65	0.0	0.0	40.0

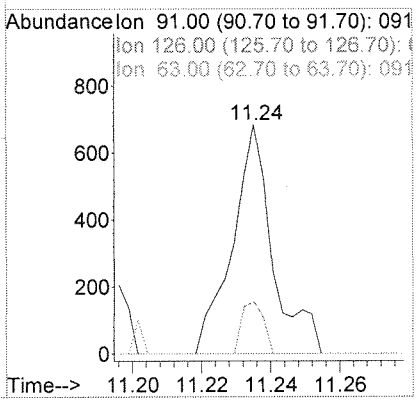


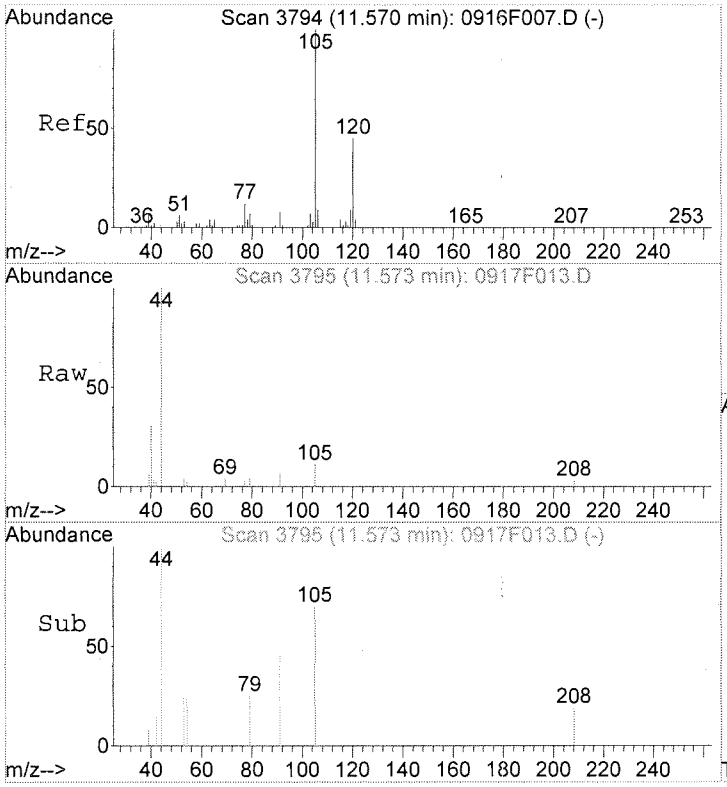


#93
4-Chlorotoluene
Concen: 0.01 PPB
RT: 11.24 min Scan# 3674
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 91 Resp: 554

Ion	Ratio	Lower	Upper
91	100		
126	22.7	4.1	64.1
63	0.0	0.0	42.6

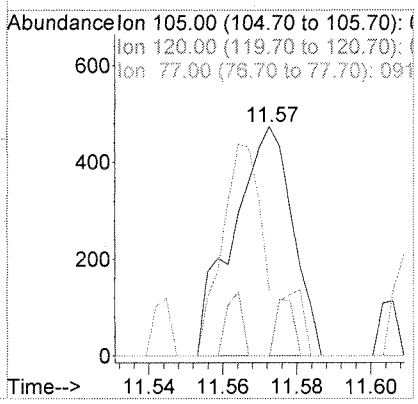


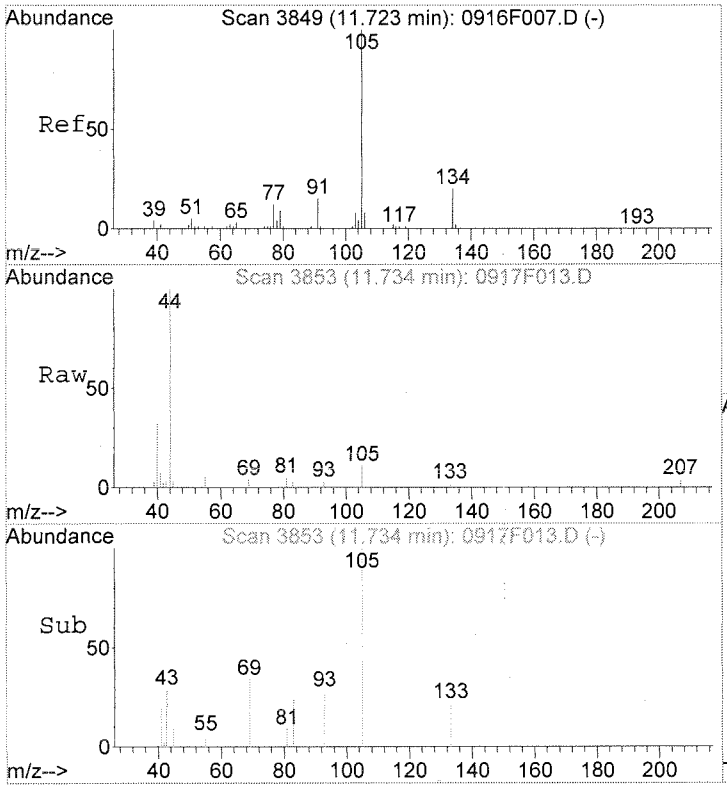


#95
1,2,4-Trimethylbenzene
Concen: 0.01 PPB
RT: 11.57 min Scan# 3795
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion:105 Resp: 528

Ion	Ratio	Lower	Upper
105	100		
120	0.0	14.4	74.4#
77	28.3	0.0	42.0

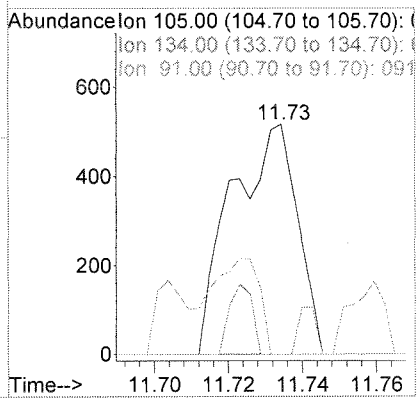


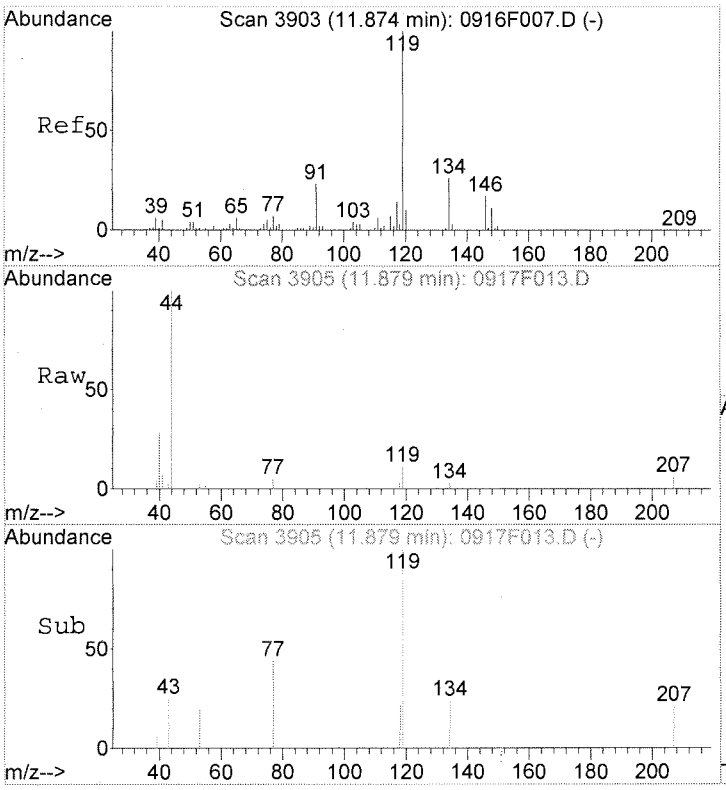


#96
sec-Butylbenzene
Concen: 0.01 PPB
RT: 11.73 min Scan# 3853
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion:105 Resp: 635

Ion	Ratio	Lower	Upper
105	100		
134	0.0	0.0	49.8
91	0.0	0.0	45.1

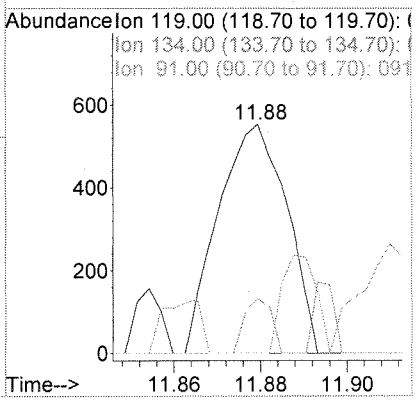


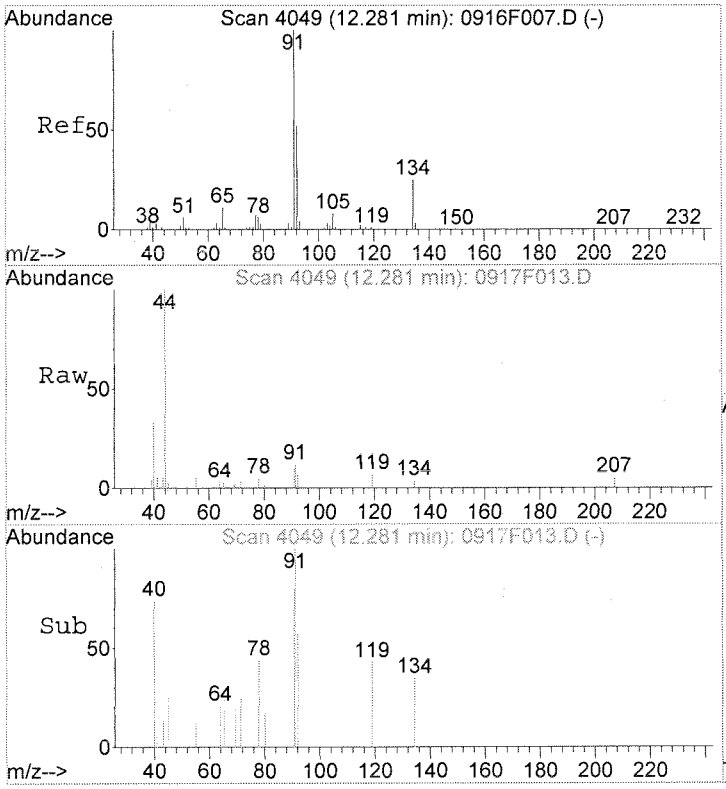


#97
p-Isopropyltoluene
Concen: 0.01 PPB
RT: 11.88 min Scan# 3905
Delta R.T. 0.01 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion:119 Resp: 610

Ion	Ratio	Lower	Upper
119	100		
134	23.8	0.0	56.4
91	0.0	0.0	52.4

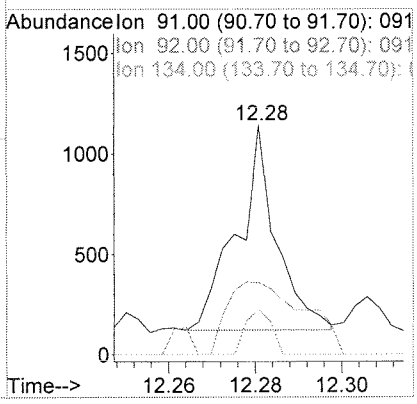




#100
n-Butylbenzene
Concen: 0.01 PPB
RT: 12.28 min Scan# 4049
Delta R.T. -0.00 min
Lab File: 0917F013.D
Acq: 17 Sep 2013 2:46 pm

Tgt Ion: 91 Resp: 644

Ion	Ratio	Lower	Upper
91	100		
92	21.9	22.9	82.9#
134	22.0	0.0	55.8



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-BW-1
Lab Code: K1309638-008

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**0.20**	J	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**0.12**	J	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.080**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F020.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 18:44
Date Quantitated: 09/18/2013 11:04
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F020.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 18:44	**Quant Date:**	09/18/2013 11:04	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-008			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282921	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	947480	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	374962	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	294692	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	236883	9.27	93	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	923394	9.89	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	312033	9.43	94	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride	5.76	0.01	0.00	117	6838	0.2000	0.20	J	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane	7.12	-0.01	0.00	63	3045m	0.1200	0.12	J	
1	Toluene	8.19		0.00	92	4819	0.0800	0.080	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F020.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 18:44	**Quant Date:**	09/18/2013 11:04	**Vial:**	19
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-008			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:57:46 2013 Quant Results File: 081213MS27_8260.RES

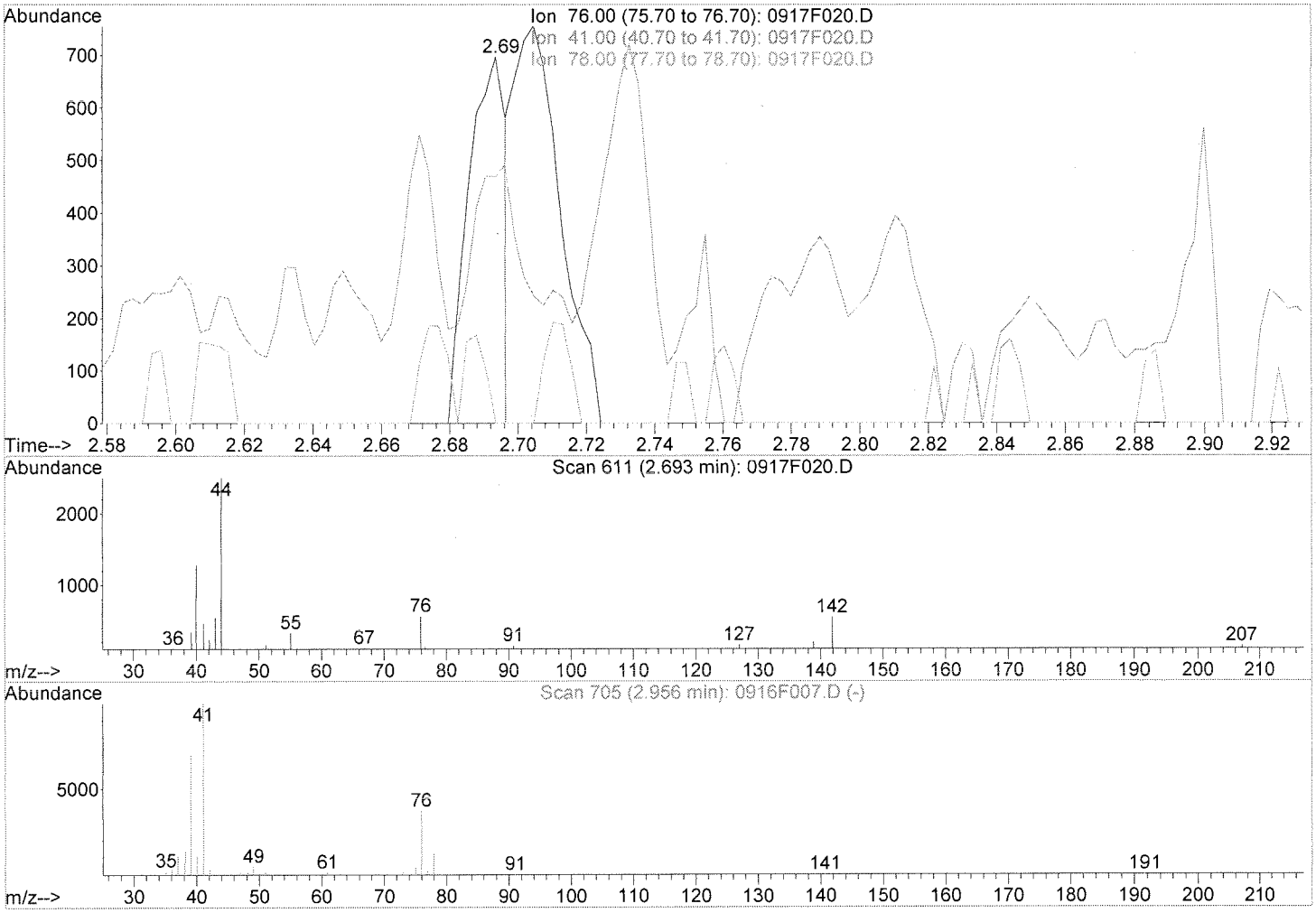
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	947480	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	374962	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	294692	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	236883	9.27	PPB		0.00
Spiked Amount 10.000			Recovery =	92.70%			
47) 1,2-Dichloroethane-d4	6.10	65	238509	9.72	PPB		0.00
Spiked Amount 10.000			Recovery =	97.20%			
62) Toluene-d8	8.12	98	923394	9.89	PPB		0.00
Spiked Amount 10.000			Recovery =	98.90%			
84) 4-Bromofluorobenzene	10.79	95	312033	9.43	PPB		0.00
Spiked Amount 10.000			Recovery =	94.30%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1794	0.06	PPB	#	52
14) Acetone	2.65	43	1102	0.37	PPB		64
15) Iodomethane	2.68	142	1823	0.16	PPB		66
18) 3-Chloro-1-propene	2.70	76	1248m	0.10	PPB		
26) Hexane	3.75	57	1439	0.05	PPB	#	72
40) Chloroform	5.47	83	5828	0.13	PPB		92
44) Carbon Tetrachloride	5.76	117	6838	0.20	PPB		91
53) 1,2-Dichloropropane	7.12	63	3045m	0.12	PPB		
57) Bromodichloromethane	7.43	83	1319	0.04	PPB		76
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7441	1.65	PPB	#	1
63) Toluene	8.19	92	4819	0.08	PPB		88
73) 1,2-Dibromoethane (EDB)	9.17	107	4023	0.23	PPB		89
74) 1-Chlorohexane	9.60	91	1874	0.06	PPB	#	48

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:02 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F020.D

(18) 3-Chloro-1-propene (T)

2.69min 0.04PPB

response 525

Ion	Exp%	Act%
76.00	100	100
41.00	278.60	23.53#
78.00	33.50	0.00
0.00	0.00	0.00

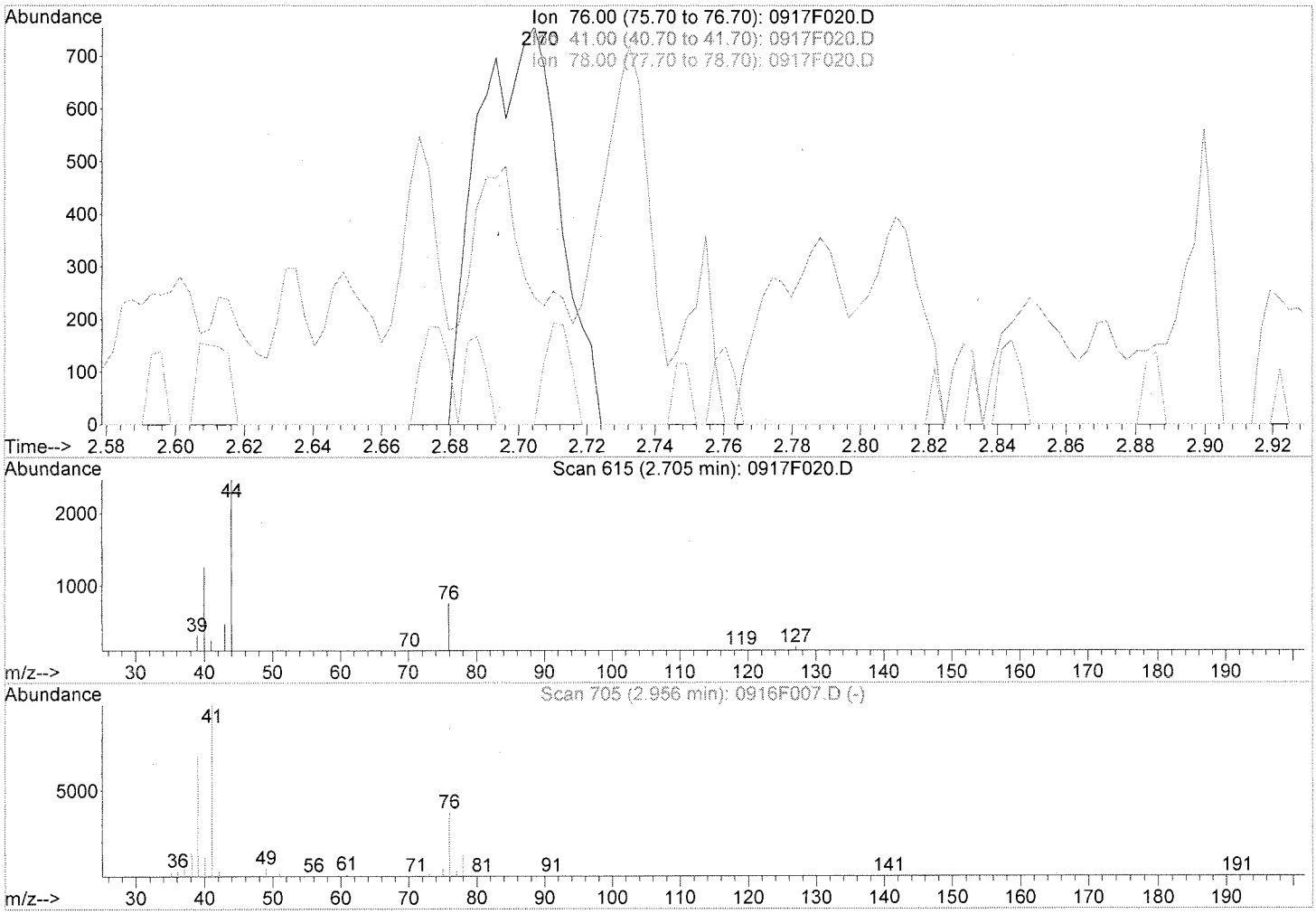
Manual Integration:

Before KS 9.18.13

9/17/13

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:02 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F020.D

(18) 3-Chloro-1-propene (T)

2.70min 0.10PPB m

response 1248

Ion	Exp%	Act%
76.00	100	100
41.00	278.60	32.06#
78.00	33.50	0.00
0.00	0.00	0.00

Manual Integration:

After

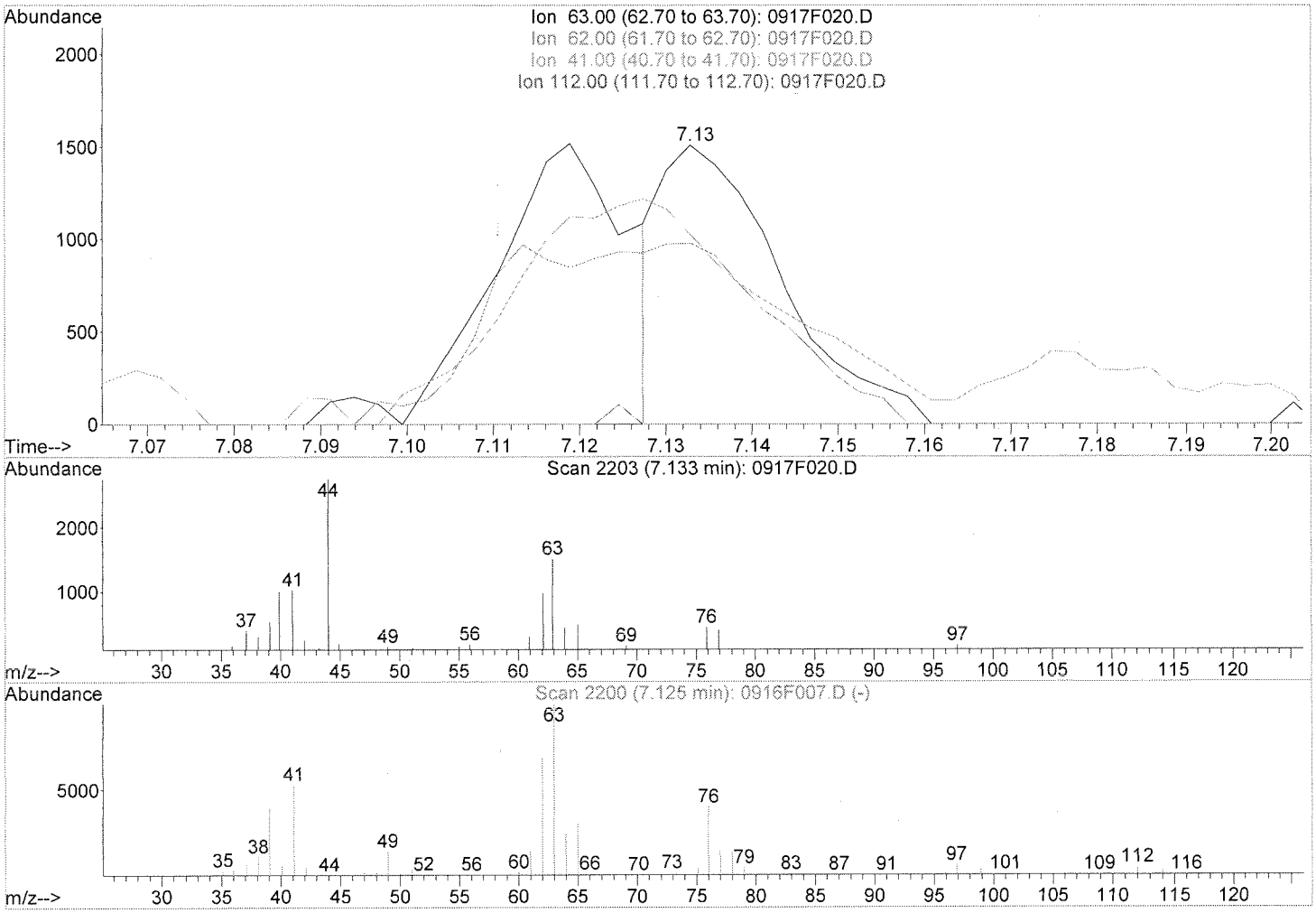
Split peak

09/18/13 KS

9/19/13

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:03 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F020.D

(53) 1,2-Dichloropropane (CT)

7.13min 0.06PPB

response 1456

Ion	Exp%	Act%
63.00	100	100
62.00	69.90	64.81
41.00	55.30	59.38
112.00	4.50	0.00

Manual Integration:

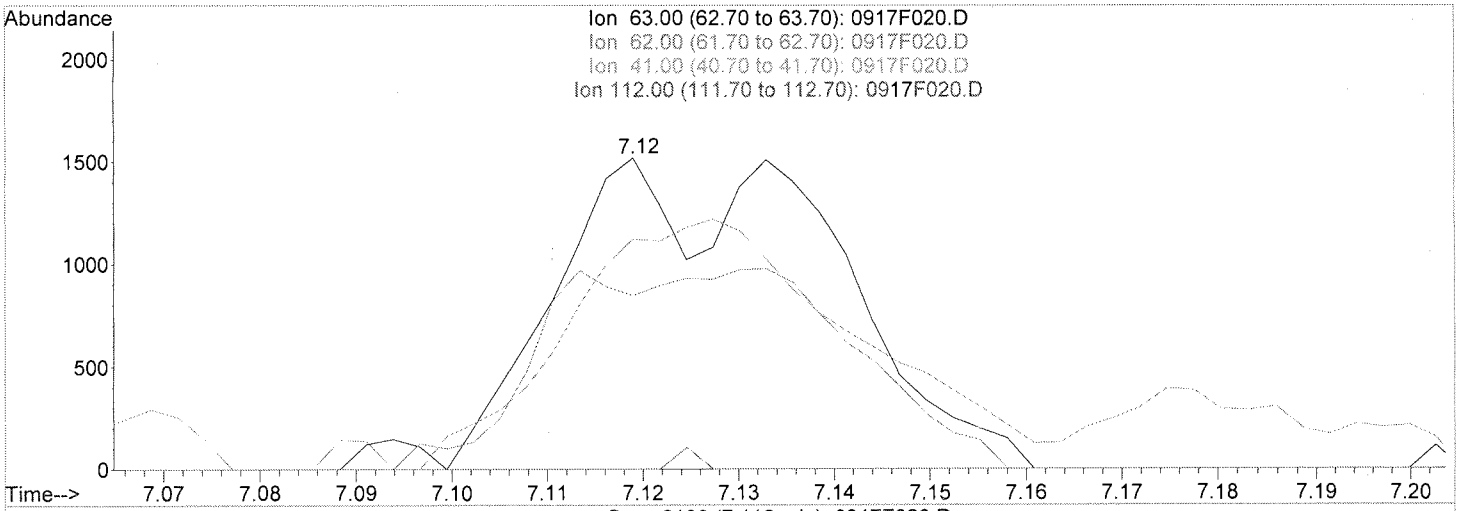
Before

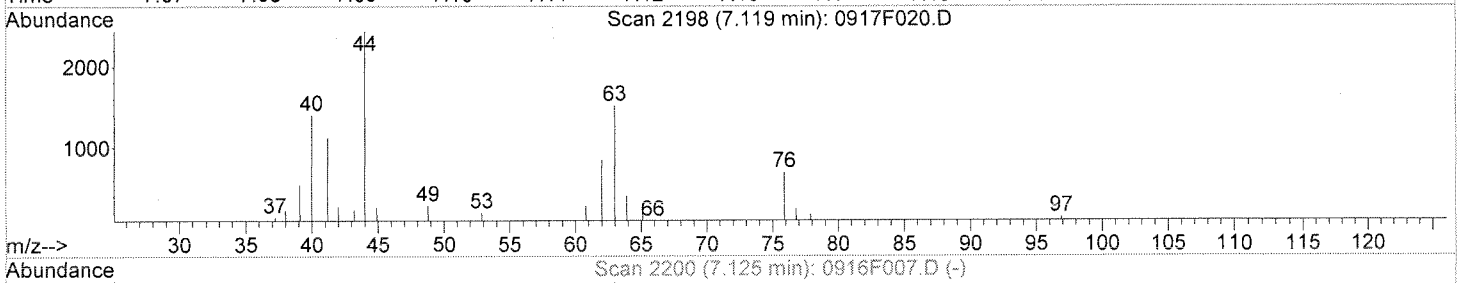
KS 9.18.13
EE

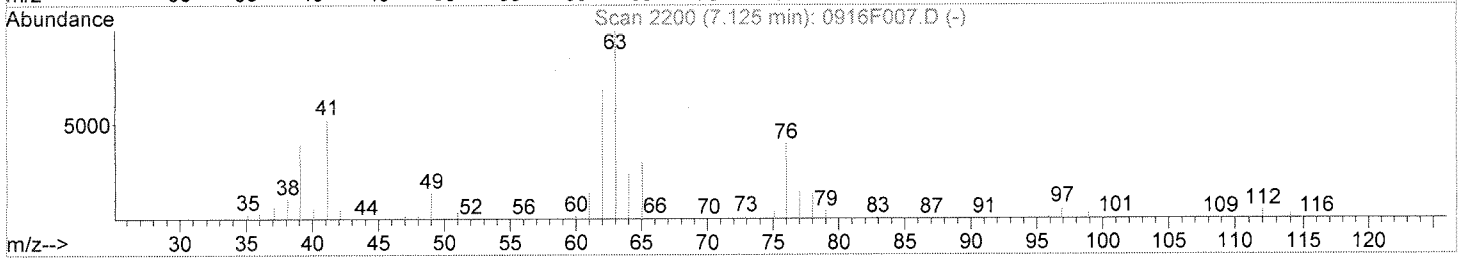
9/19/13

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:03 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F020.D

(53) 1,2-Dichloropropane (CT)

7.12min 0.12PPB m

response 3045

Ion	Exp%	Act%
63.00	100	100
62.00	69.90	55.69
41.00	55.30	73.86
112.00	4.50	0.00

Manual Integration:

After

Split peak

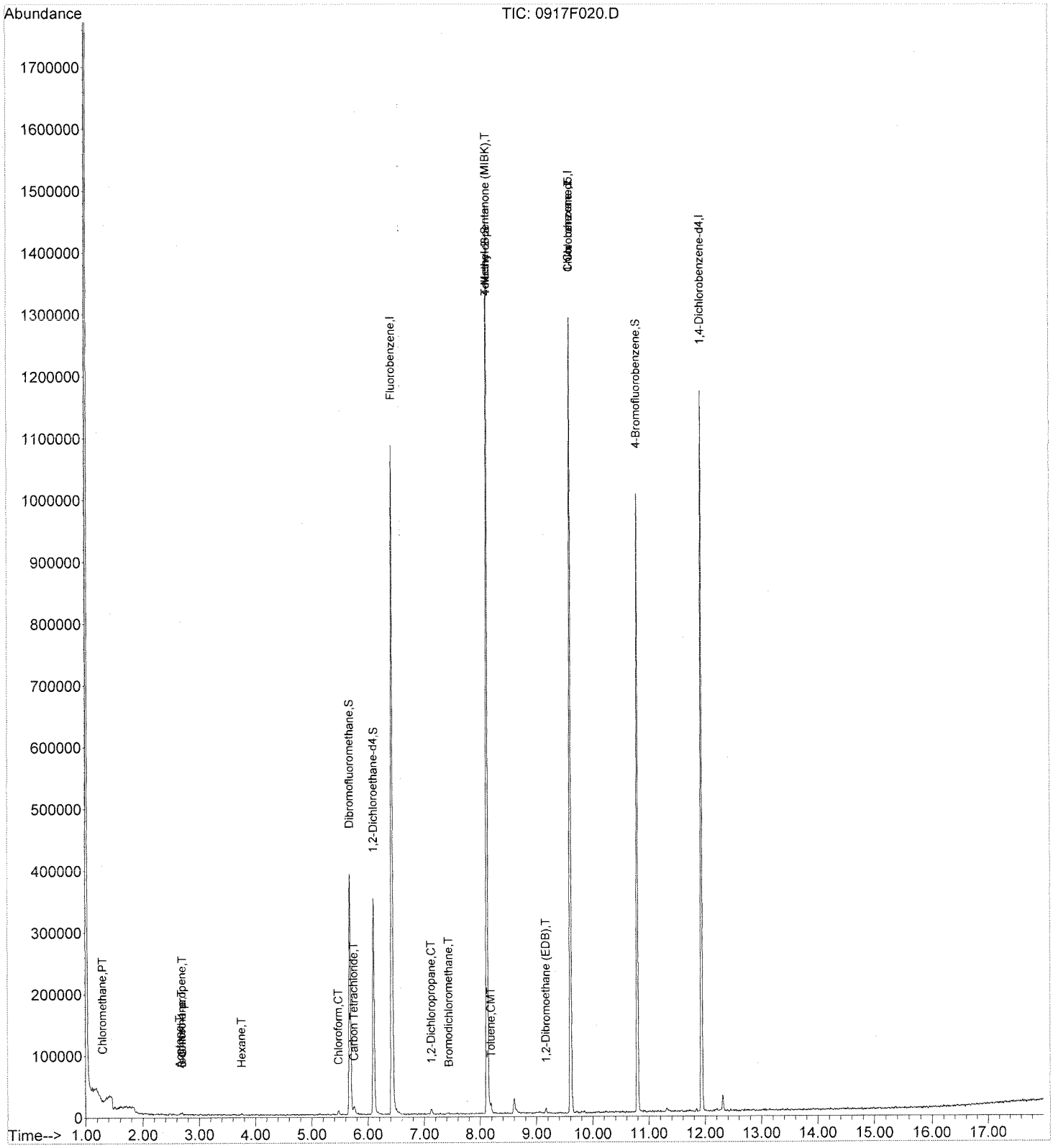
09/18/13 KS

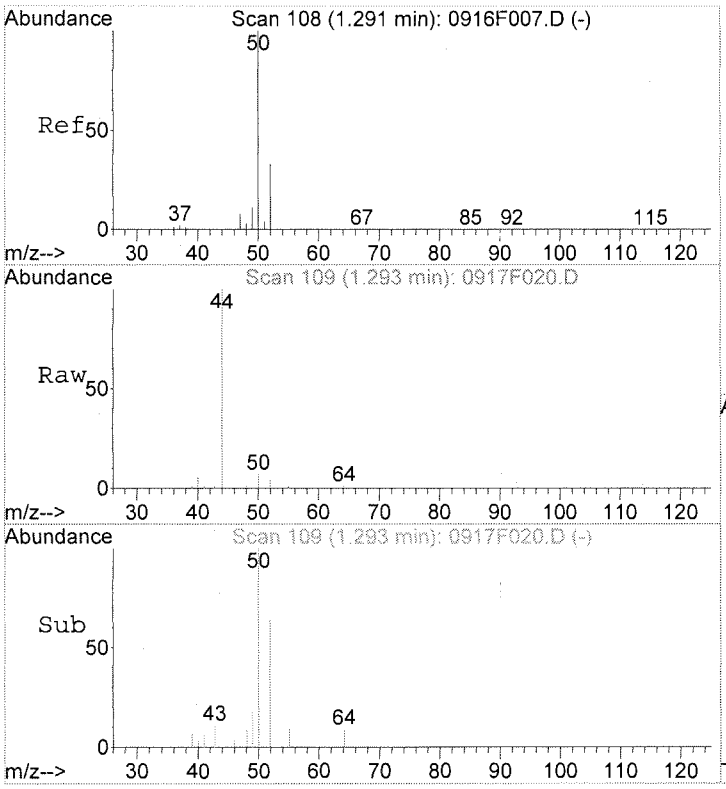
9/19/13

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F020.D Vial: 19
Acq On : 17 Sep 2013 6:44 pm Operator: KS
Sample : K1309638-008 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:04 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

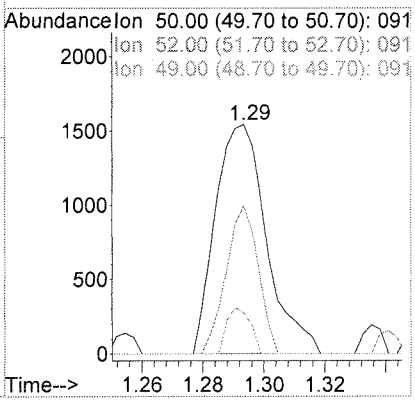


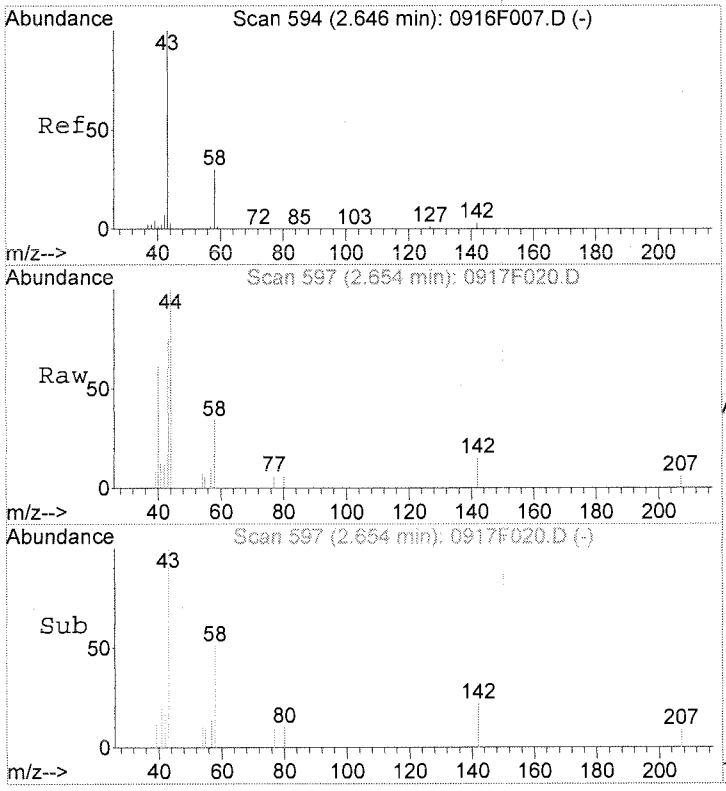


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 50 Resp: 1794

Ion	Ratio	Lower	Upper
50	100		
52	64.4	2.5	62.5#
49	17.7	0.0	40.3

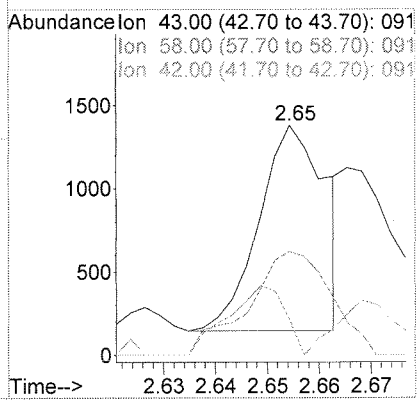


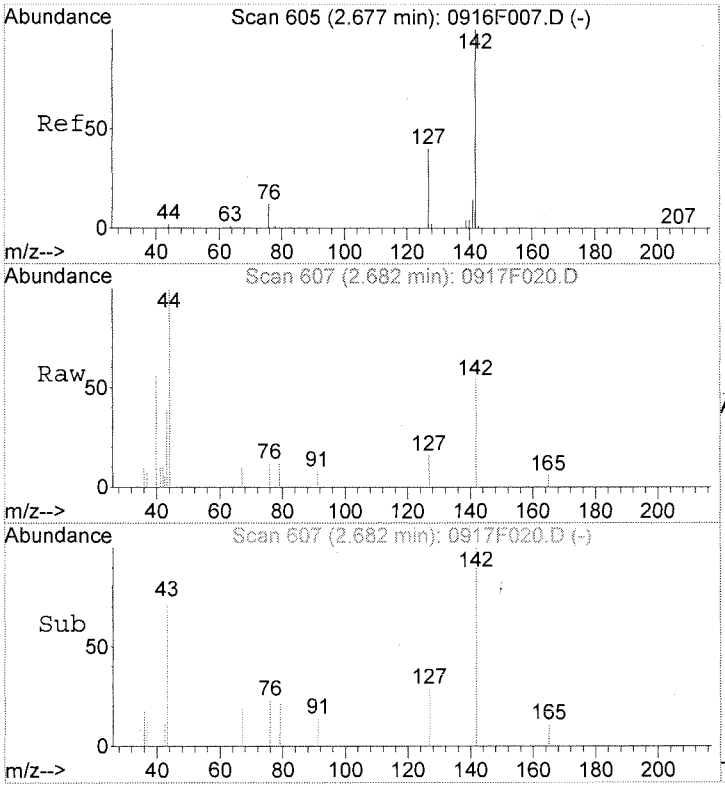


#14
Acetone
Concen: 0.37 PPB
RT: 2.65 min Scan# 597
Delta R.T. 0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 43 Resp: 1102

Ion	Ratio	Lower	Upper
43	100		
58	50.4	0.0	59.8
42	17.1	0.0	37.4

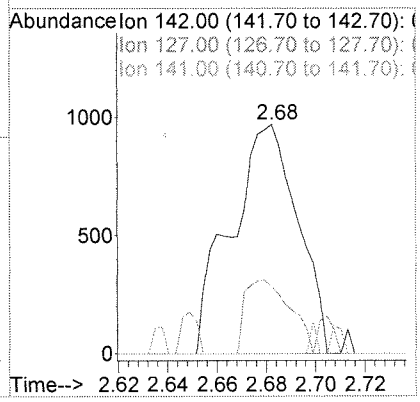


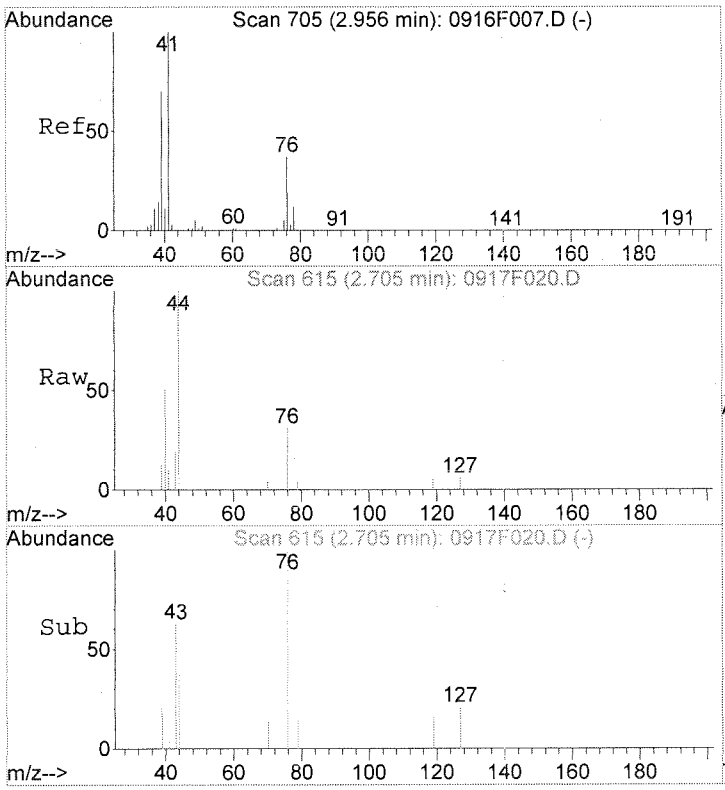


#15
Iodomethane
Concen: 0.16 PPB
RT: 2.68 min Scan# 607
Delta R.T. 0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion:142 Resp: 1823

Ion	Ratio	Lower	Upper
142	100		
127	18.8	9.8	69.8
141	0.0	0.0	44.5

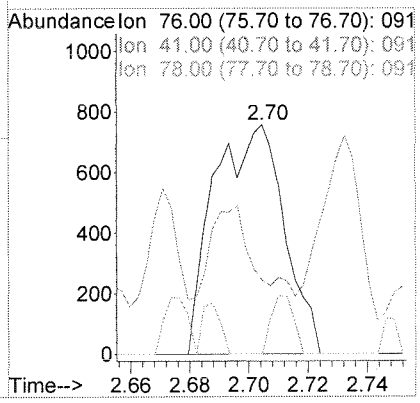


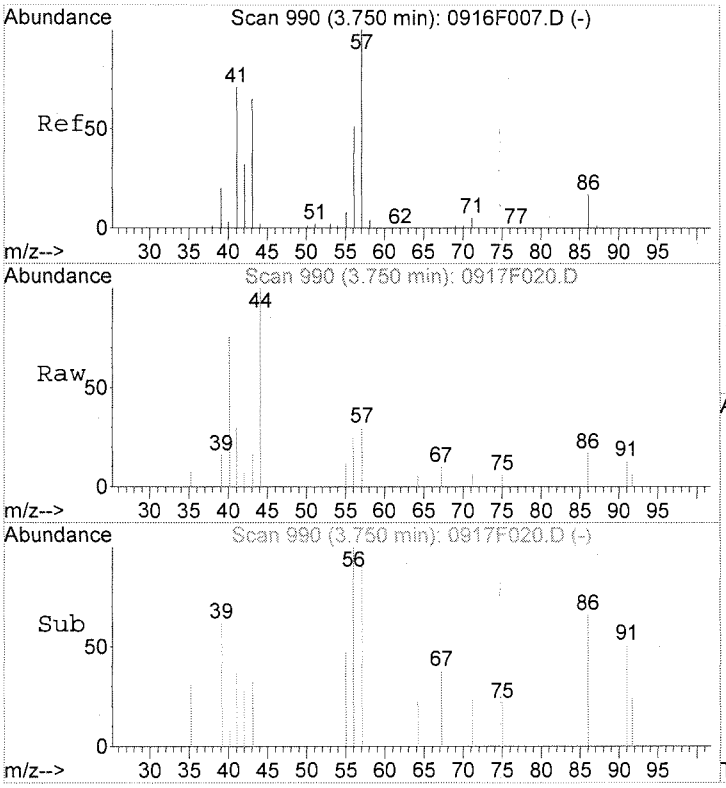


#18
3-Chloro-1-propene
Concen: 0.10 PPB m
RT: 2.70 min Scan# 615
Delta R.T. -0.25 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 76 Resp: 1248

Ion	Ratio	Lower	Upper
76	100		
41	32.1	248.6	308.6#
78	0.0	0.0	69.6

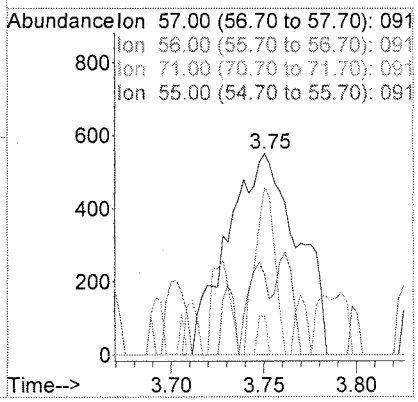


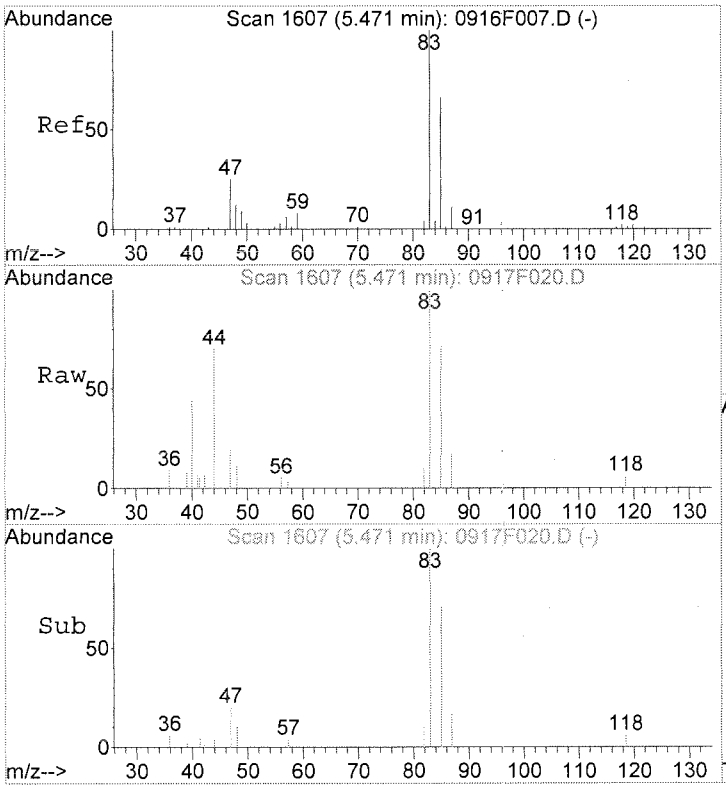


#26
Hexane
Concen: 0.05 PPB
RT: 3.75 min Scan# 990
Delta R.T. 0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 57 Resp: 1439

Ion	Ratio	Lower	Upper
57	100		
56	59.7	18.7	78.7
71	19.1	0.0	35.1
55	39.6	0.0	20.5#

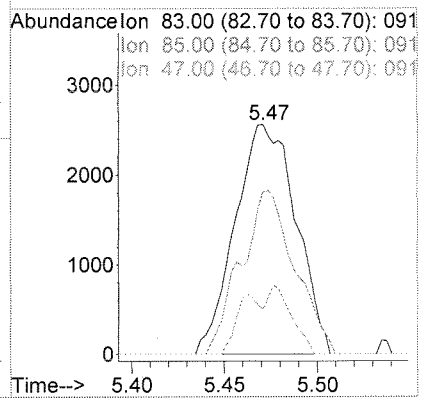


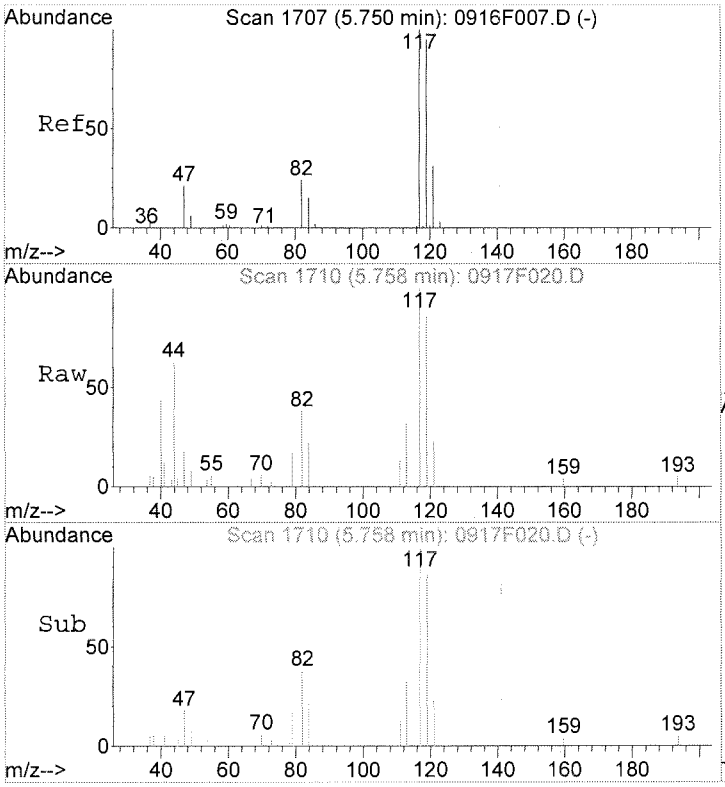


#40
Chloroform
Concen: 0.13 PPB
RT: 5.47 min Scan# 1607
Delta R.T. 0.00 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 83 Resp: 5828

Ion	Ratio	Lower	Upper
83	100		
85	70.8	35.4	95.4
47	19.7	0.0	55.1

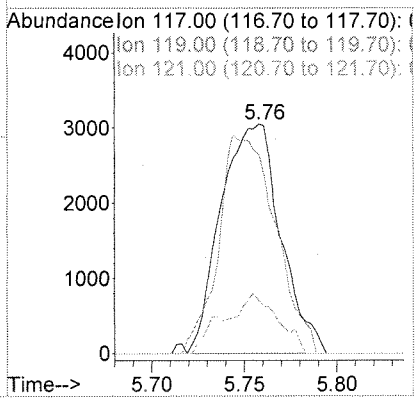


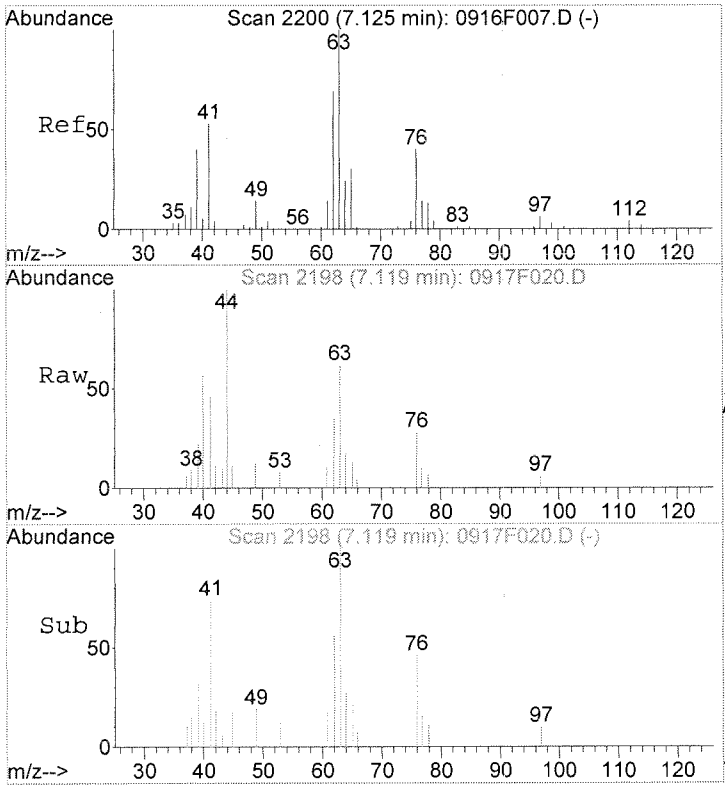


#44
Carbon Tetrachloride
Concen: 0.20 PPB
RT: 5.76 min Scan# 1710
Delta R.T. 0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion:117 Resp: 6838

Ion	Ratio	Lower	Upper
117	100		
119	86.4	63.8	123.8
121	22.9	0.6	60.6

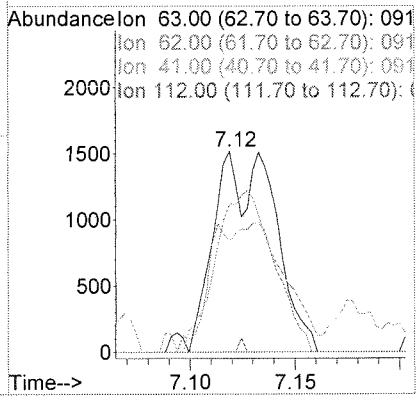


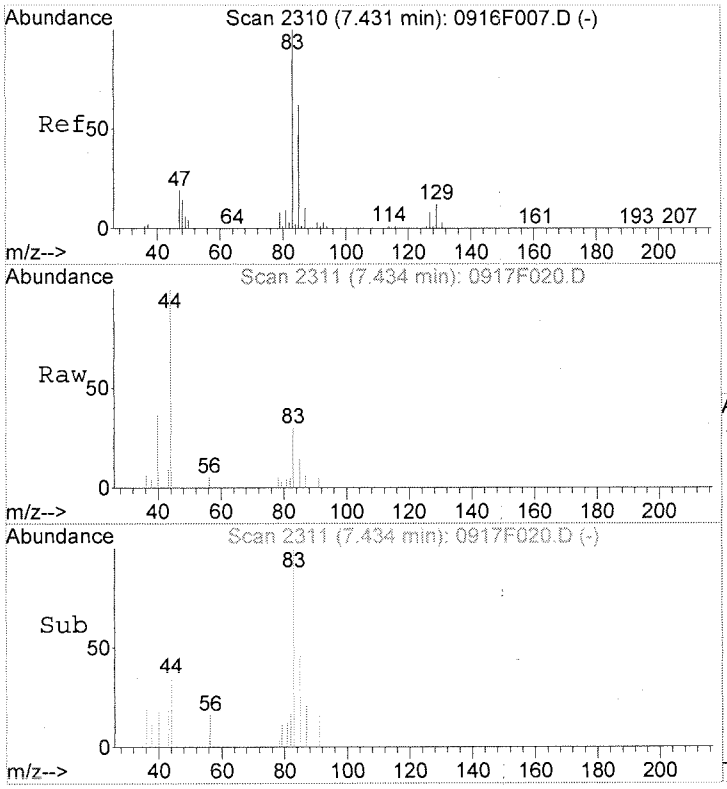


#53
1,2-Dichloropropane
Concen: 0.12 PPB m
RT: 7.12 min Scan# 2198
Delta R.T. -0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 63 Resp: 3045

Ion	Ratio	Lower	Upper
63	100		
62	55.7	39.9	99.9
41	73.9	25.3	85.3
112	0.0	0.0	24.5

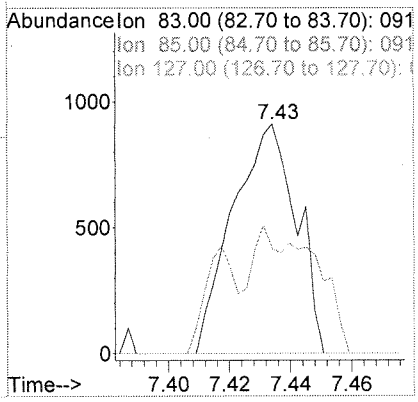


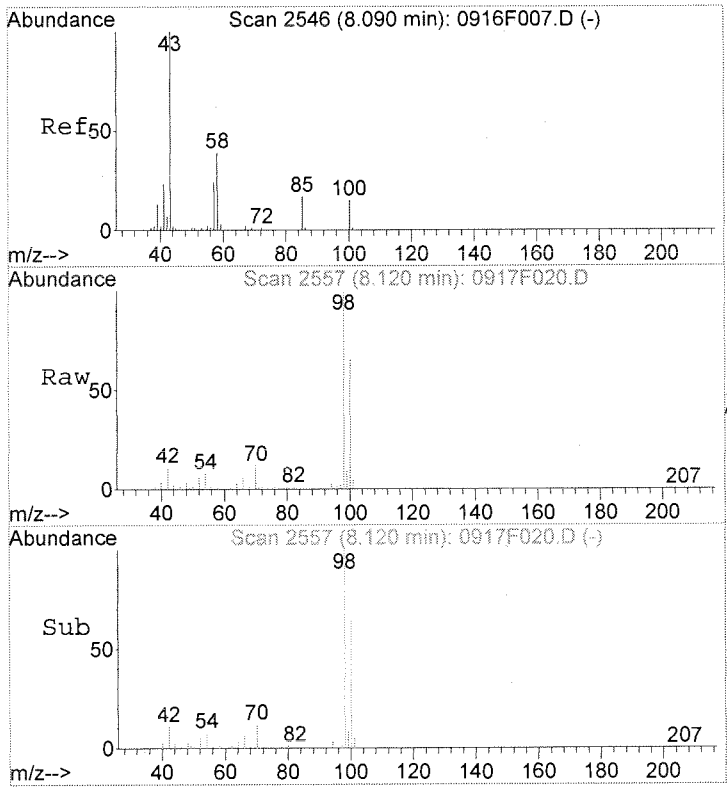


#57
Bromodichloromethane
Concen: 0.04 PPB
RT: 7.43 min Scan# 2311
Delta R.T. 0.00 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 83 Resp: 1319

Ion	Ratio	Lower	Upper
83	100		
85	45.6	34.1	94.1
127	0.0	0.0	38.6

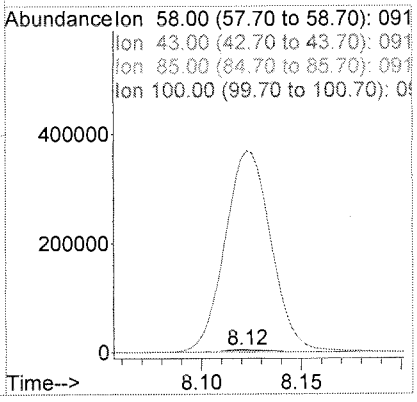


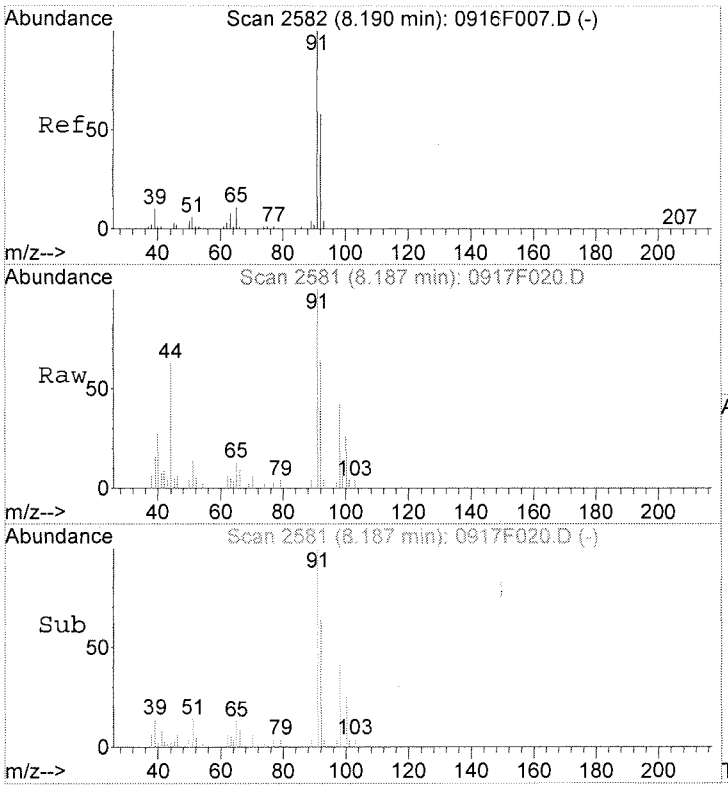


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.65 PPB
RT: 8.12 min Scan# 2557
Delta R.T. 0.03 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 58 Resp: 7441

Ion	Ratio	Lower	Upper
58	100		
43	49.6	232.7	292.7#
85	3.2	14.7	74.7#
100	7107.0	8.0	68.0#

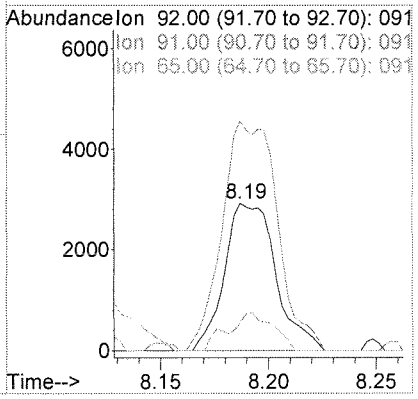


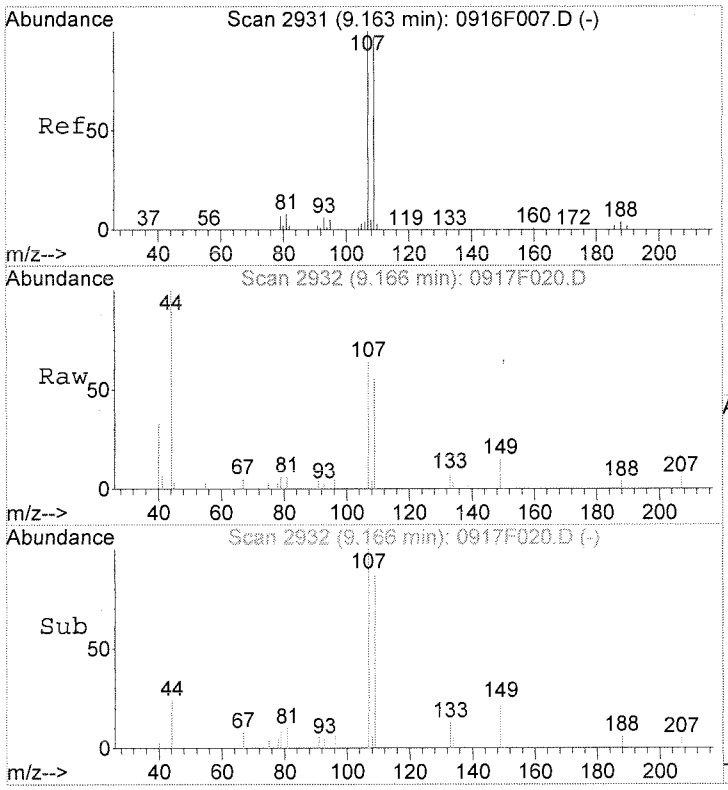


#63
Toluene
Concen: 0.08 PPB
RT: 8.19 min Scan# 2581
Delta R.T. -0.00 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 92 Resp: 4819

Ion	Ratio	Lower	Upper
92	100		
91	155.8	144.2	204.2
65	19.5	0.0	50.2

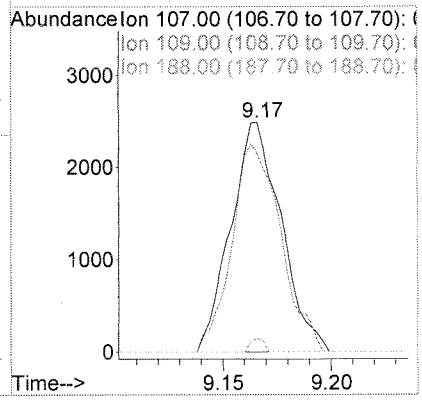


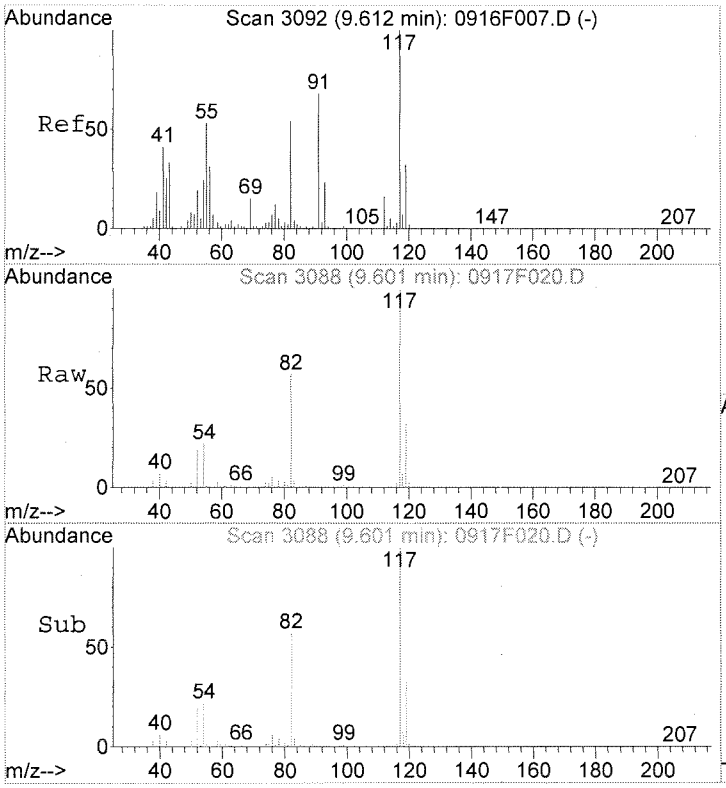


#73
1,2-Dibromoethane (EDB)
Concen: 0.23 PPB
RT: 9.17 min Scan# 2932
Delta R.T. 0.00 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion:107 Resp: 4023

Ion	Ratio	Lower	Upper
107	100		
109	86.6	67.5	127.5
188	5.8	0.0	34.0

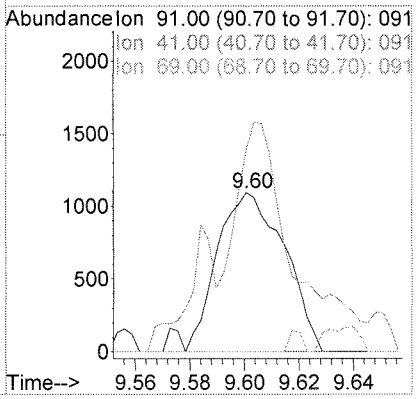




#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.60 min Scan# 3088
Delta R.T. -0.01 min
Lab File: 0917F020.D
Acq: 17 Sep 2013 6:44 pm

Tgt Ion: 91 Resp: 1874

Ion	Ratio	Lower	Upper
91	100		
41	100.8	29.5	89.5#
69	0.0	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 3
Lab Code: K1309638-009

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	100	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F016.D
Lab ID: K1309638-009
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 16:08
Date Quantitated: 09/18/2013 10:32
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F016.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 16:08	**Quant Date:**	09/18/2013 10:32	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-009			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282922	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Arca Criteria
1	Fluorobenzene	6.43	0.00	96	946548	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	382521	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	298727	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	237533	9.30	93	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	935260	10.02	100	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	323168	9.58	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride	3.15		0.00	84	1660	0.0700	0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene	8.19		0.00	92	1287	0.0200	0.054	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F016.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 16:08	**Quant Date:**	09/18/2013 10:32	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-009			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0d		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Metbod Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: cbeck for co-elution

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 09:29:05 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

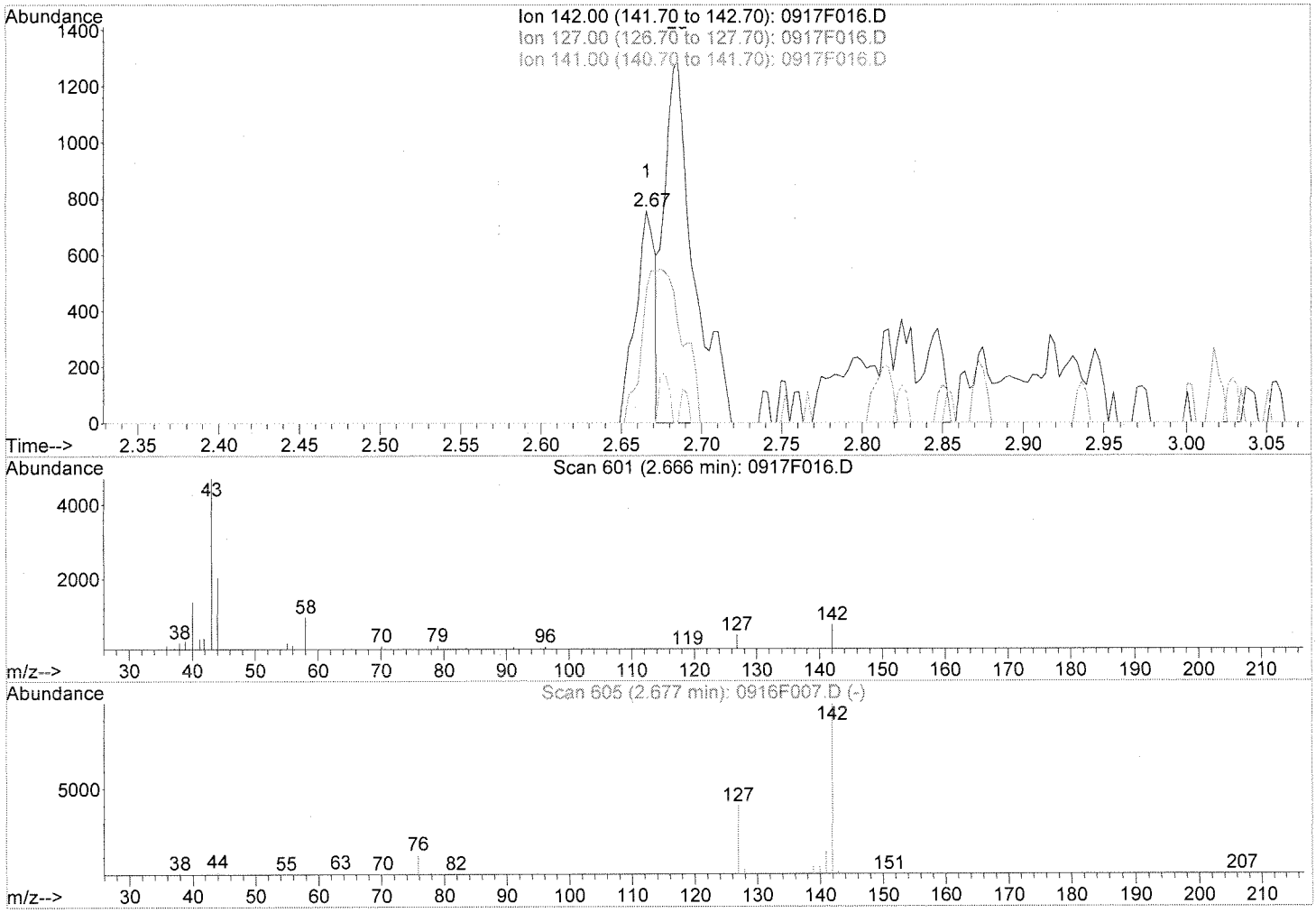
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	946548	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	382521	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	298727	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	237533	9.30	PPB		0.00
Spiked Amount 10.000			Recovery = 93.00%				
47) 1,2-Dichloroethane-d4	6.10	65	245185	10.00	PPB		0.00
Spiked Amount 10.000			Recovery = 100.00%				
62) Toluene-d8	8.12	98	935260	10.02	PPB		0.00
Spiked Amount 10.000			Recovery = 100.20%				
84) 4-Bromofluorobenzene	10.79	95	323168	9.58	PPB		0.00
Spiked Amount 10.000			Recovery = 95.80%				
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1887	0.06	PPB		84
6) Bromomethane	1.67	96	971	0.05	PPB	#	63
14) Acetone	2.65	43	10603	3.53	PPB		86
15) Iodomethane	2.69	142	2281m	0.20	PPB		
21) Methylene Chloride	3.15	84	1660	0.07	PPB	#	63
34) 2-Butanone	5.12	72	2317m	1.91	PPB		
39) Tetrahydrofuran	5.37	71	6494	5.05	PPB		81
40) Chloroform	5.47	83	4389	0.10	PPB		94
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7688	1.71	PPB	#	1
63) Toluene	8.19	92	1287	0.02	PPB		91
74) 1-Chlorohexane	9.60	91	2189	0.06	PPB		71

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:28 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Single Level Calibration



TIC: 0917F016.D

(15) Iodomethane (T)

2.67min 0.06PPB

response 638

Ion	Exp%	Act%
142.00	100	100
127.00	39.80	63.41
141.00	14.50	0.00
0.00	0.00	0.00

Manual Integration:

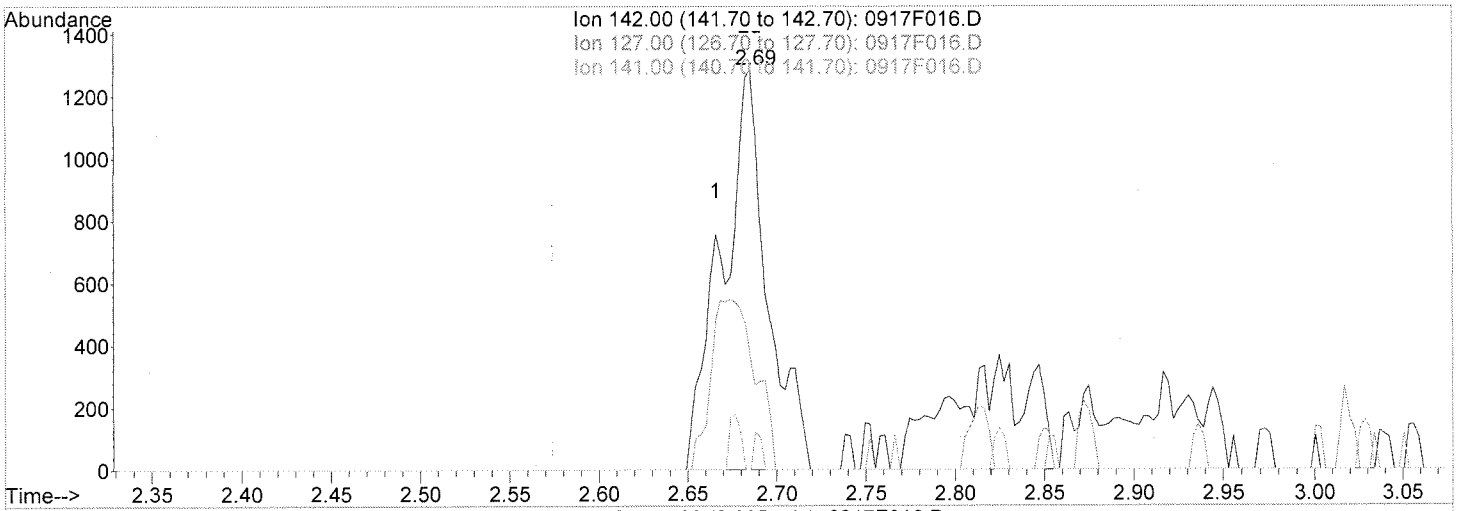
Before KS 9.18.13

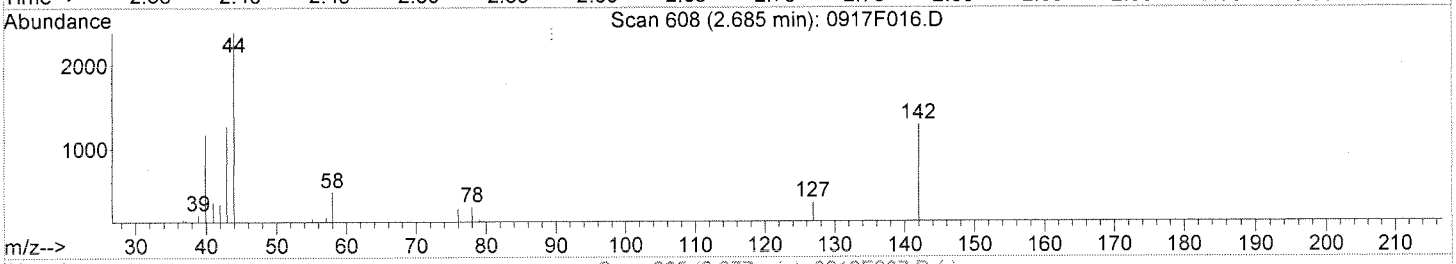
9/19/13

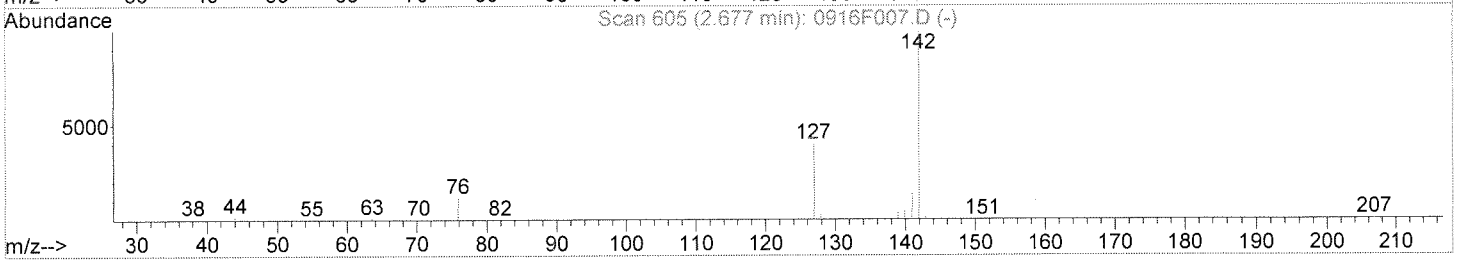
0917F016.D 081213MS27_8260.M Wed Sep 18 10:25:36 2013

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Single Level Calibration







TIC: 0917F016.D

(15) Iodomethane (T)

2.69min 0.20PPB m

response 2281

Ion	Exp%	Act%
142.00	100	100
127.00	39.80	27.58
141.00	14.50	0.00
0.00	0.00	0.00

Manual Integration:

After

Split peak

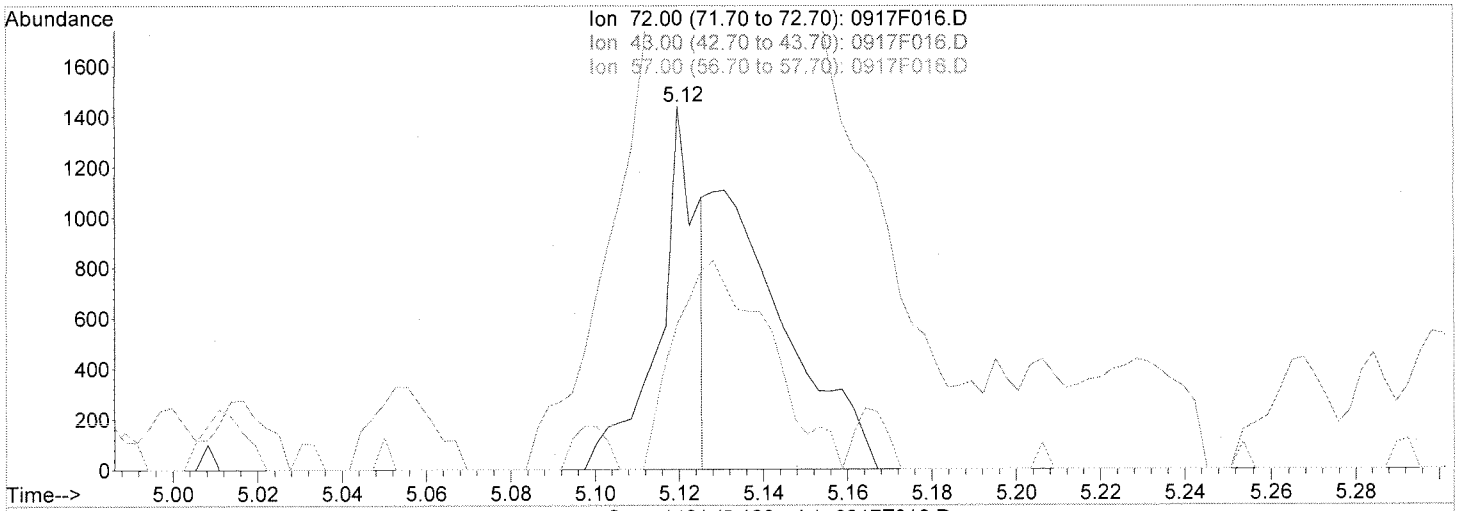
09/18/13

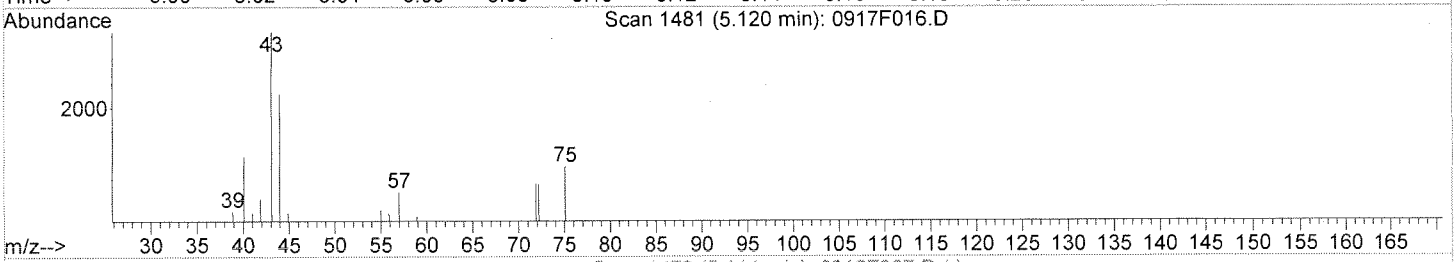
KS

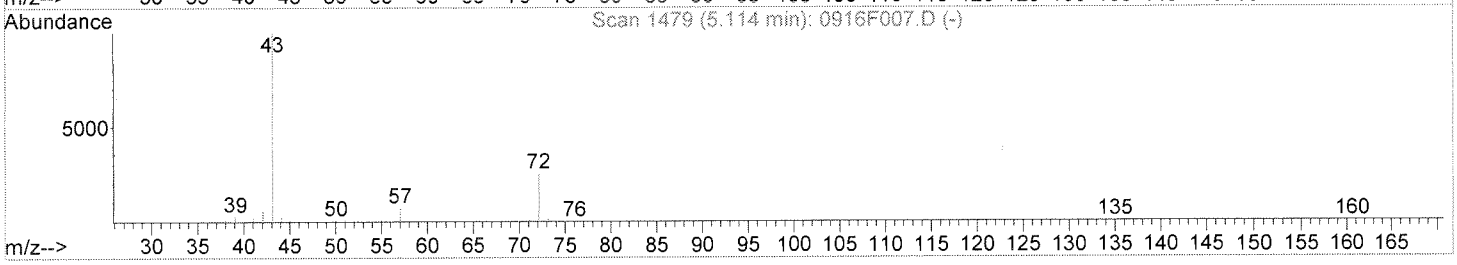
9/19/13

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F016.D

(34) 2-Butanone (T)

5.12min 0.76PPB

response 919

Ion	Exp%	Act%
72.00	100	100
43.00	393.30	206.25#
57.00	31.80	31.85
0.00	0.00	0.00

Manual Integration:

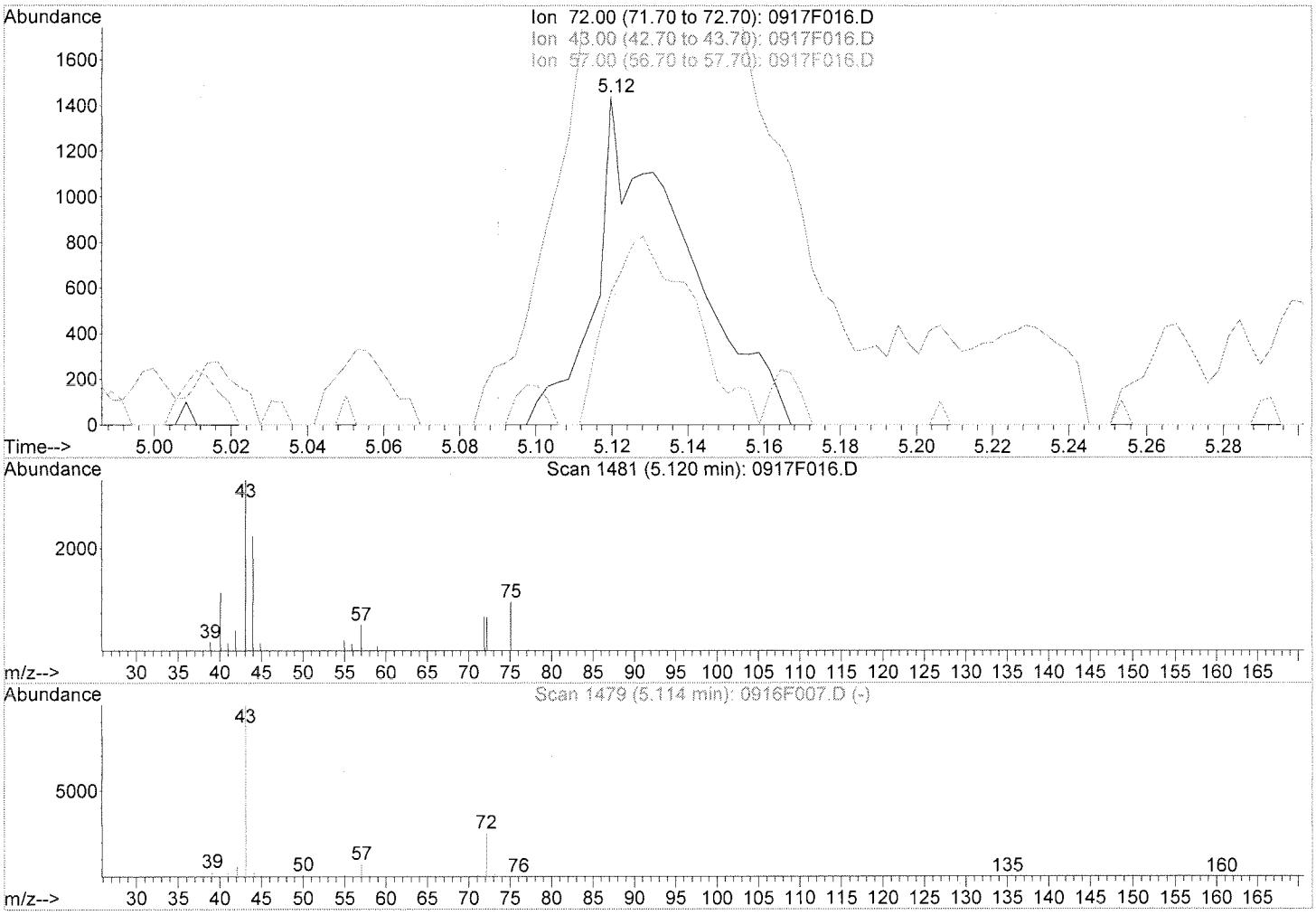
Before

KS
9.18.13

9/19/13

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:30 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F016.D

(34) 2-Butanone (T)

5.12min 1.91PPB m

response 2317

Ion	Exp%	Act%
72.00	100	100
43.00	393.30	452.84#
57.00	31.80	80.36#
0.00	0.00	0.00

Manual Integration:

After

Split peak

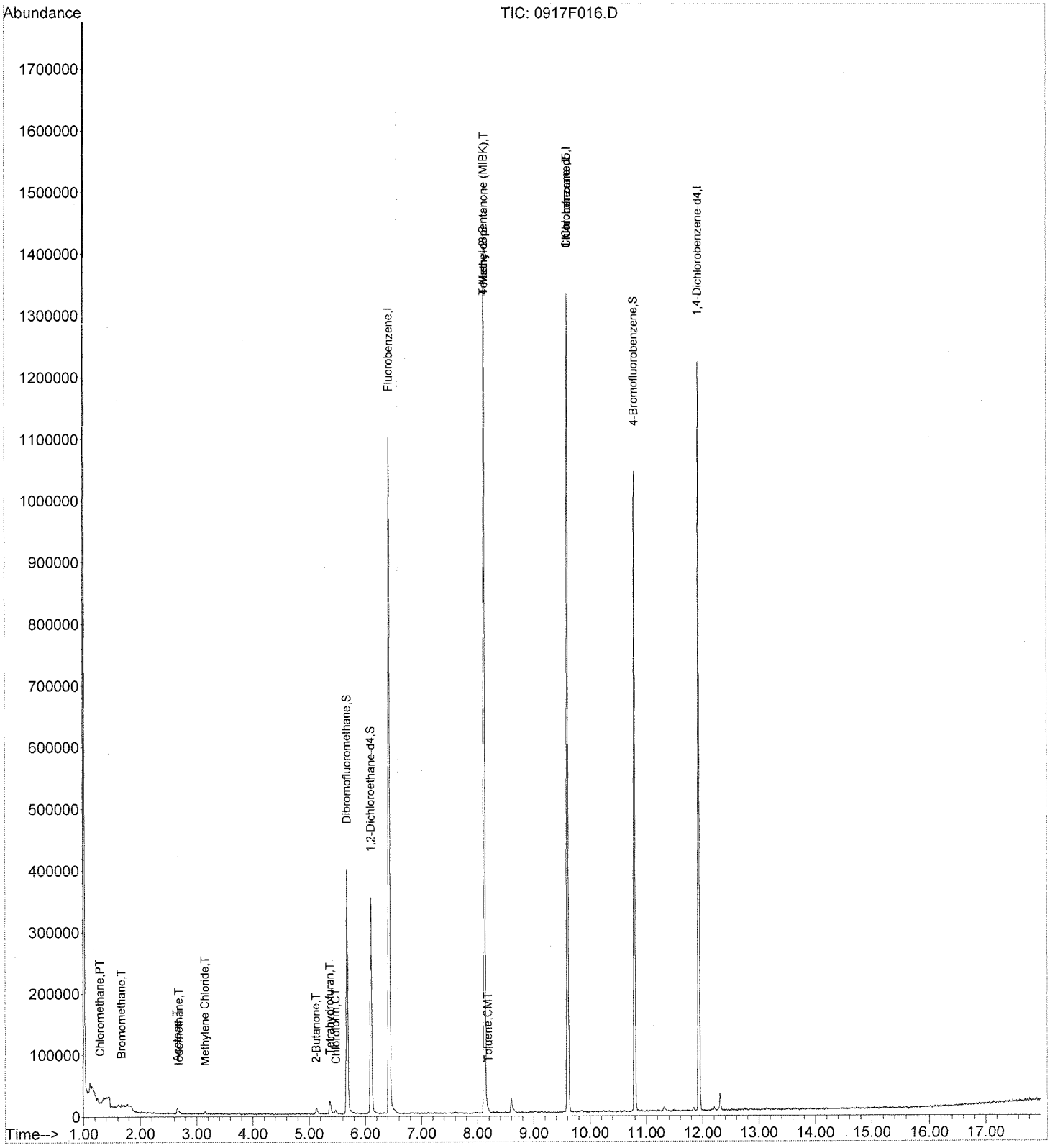
09/18/13

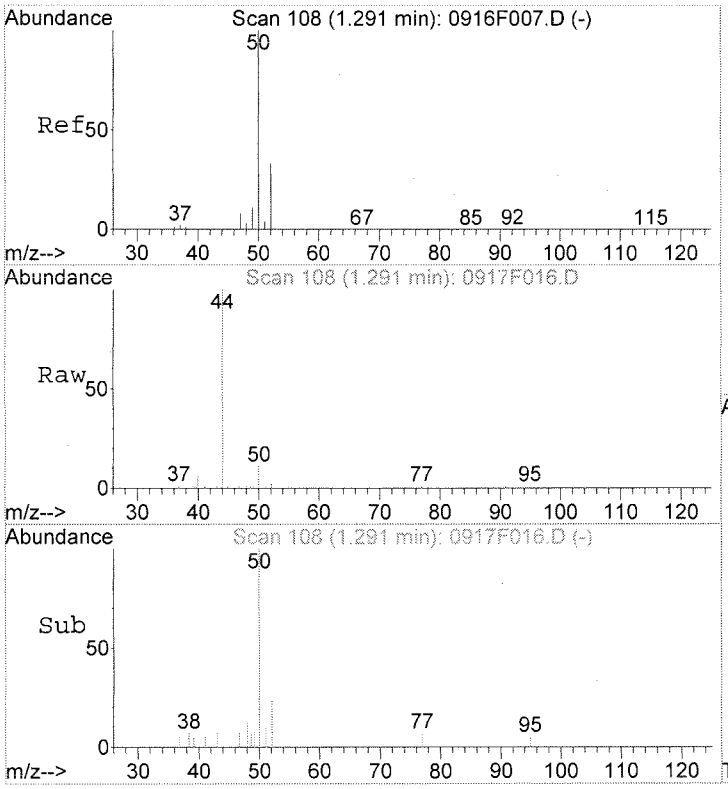
KS

9/19/13

Data File : J:\MS27\DATA\091713\0917F016.D Vial: 15
Acq On : 17 Sep 2013 4:08 pm Operator: KS
Sample : K1309638-009 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:32 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

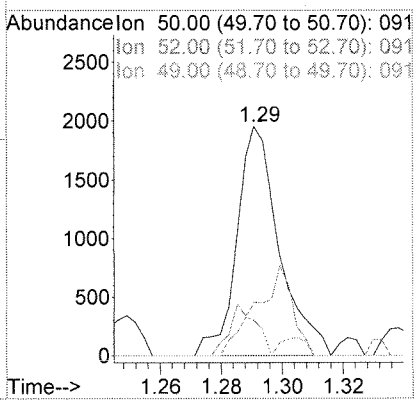


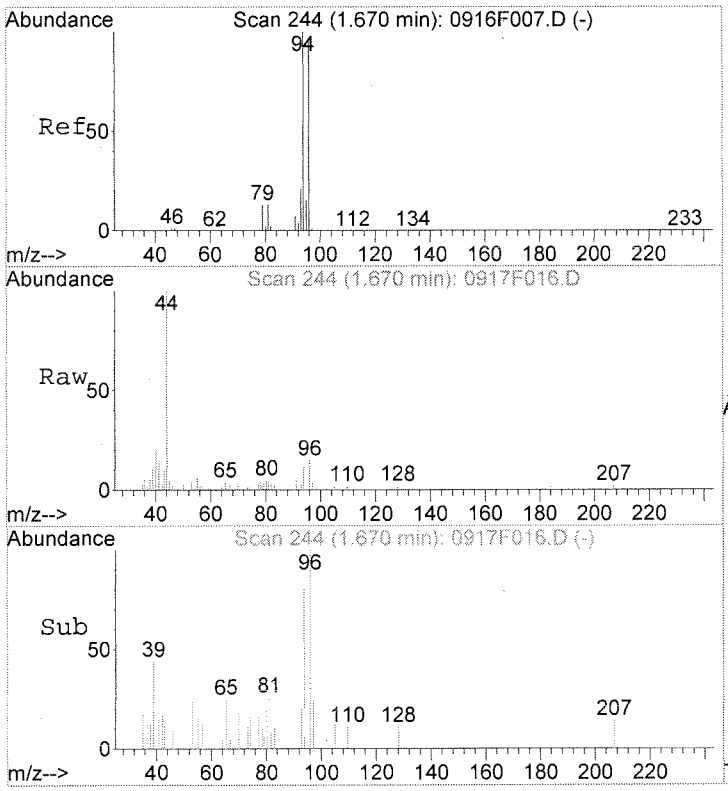


#3
Chloromethane
Concen: 0.06 PPB
RT: 1.29 min Scan# 108
Delta R.T. 0.00 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 50 Resp: 1887

Ion	Ratio	Lower	Upper
50	100		
52	23.2	2.5	62.5
49	15.3	0.0	40.3

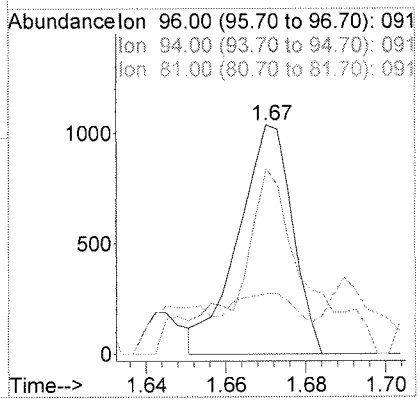


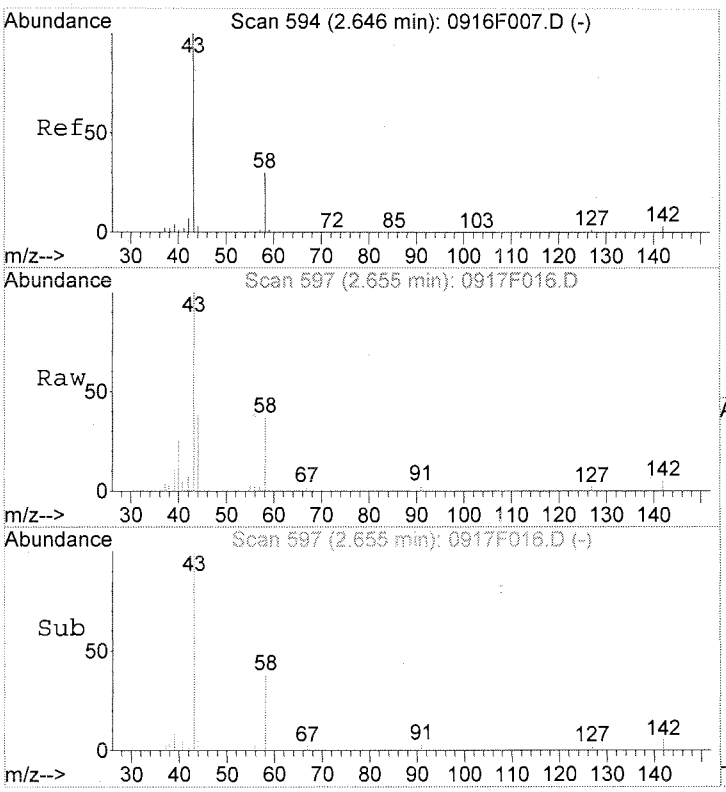


#6
Bromomethane
Concen: 0.05 PPB
RT: 1.67 min Scan# 244
Delta R.T. 0.00 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 96 Resp: 971

Ion	Ratio	Lower	Upper
96	100		
94	66.1	77.3	137.3#
81	5.8	0.0	43.8

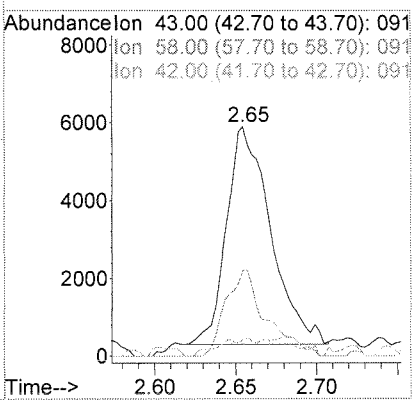


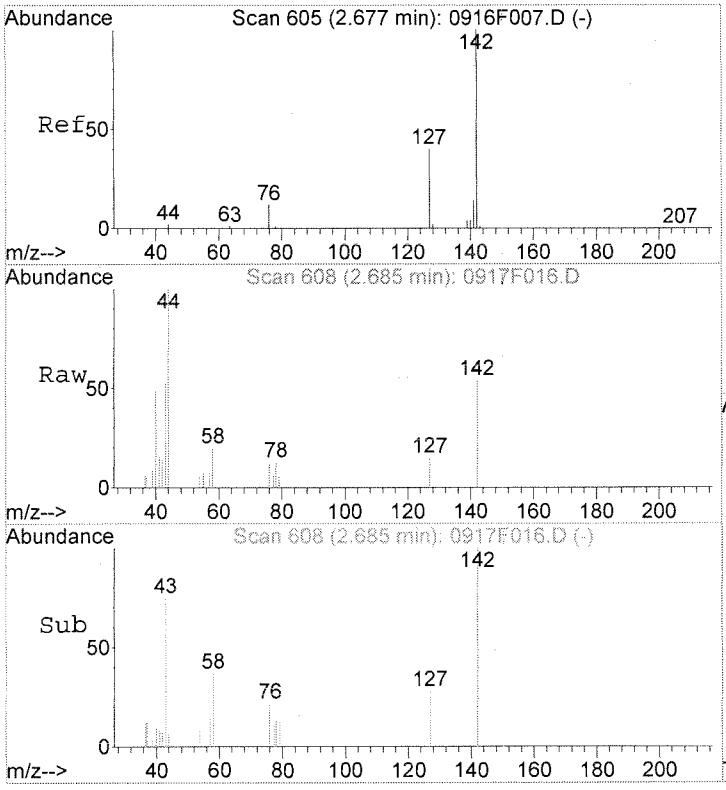


#14
Acetone
Concen: 3.53 PPB
RT: 2.65 min Scan# 597
Delta R.T. 0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 43 Resp: 10603

Ion	Ratio	Lower	Upper
43	100		
58	39.5	0.0	59.8
42	7.3	0.0	37.4

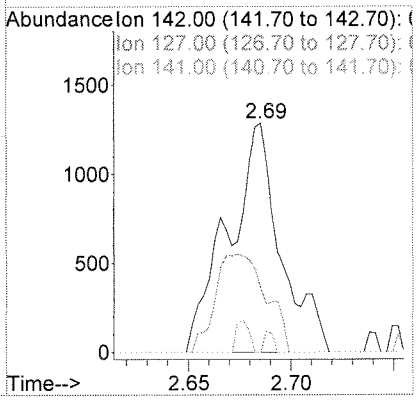


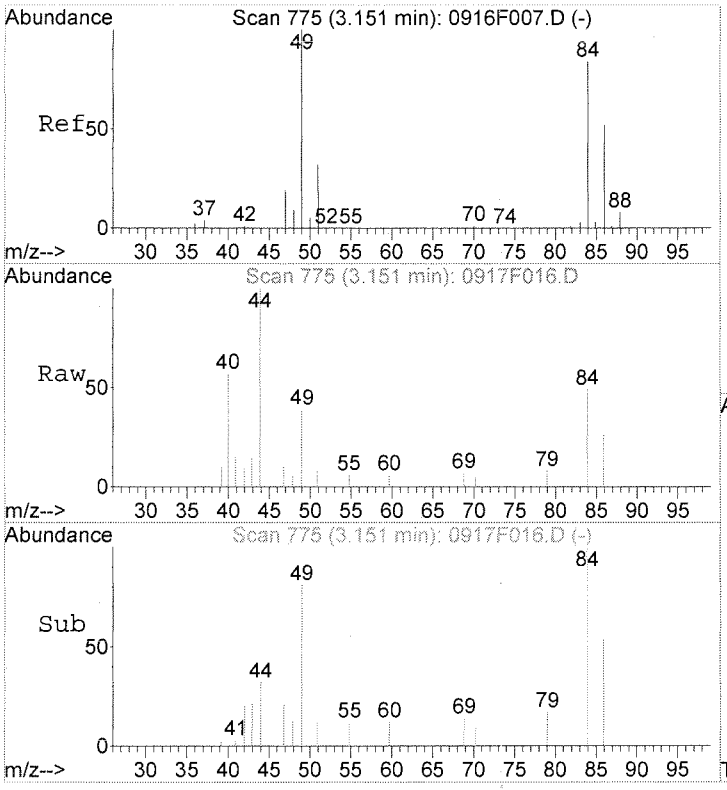


#15
Iodomethane
Concen: 0.20 PPB m
RT: 2.69 min Scan# 608
Delta R.T. 0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion:142 Resp: 2281

Ion	Ratio	Lower	Upper
142	100		
127	27.6	9.8	69.8
141	0.0	0.0	44.5

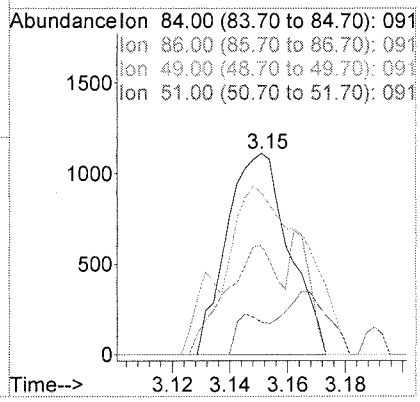


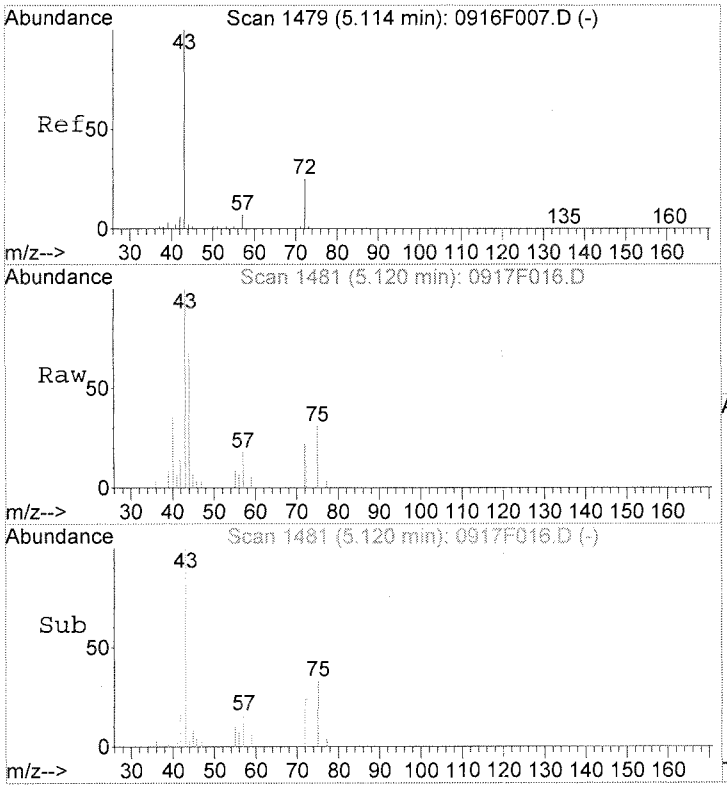


#21
Methylene Chloride
Concen: 0.07 PPB
RT: 3.15 min Scan# 775
Delta R.T. 0.00 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 84 Resp: 1660

Ion	Ratio	Lower	Upper
84	100		
86	54.3	35.0	95.0
49	68.5	93.9	153.9#
51	16.2	10.0	70.0

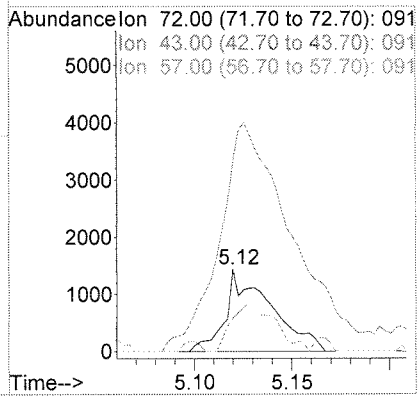


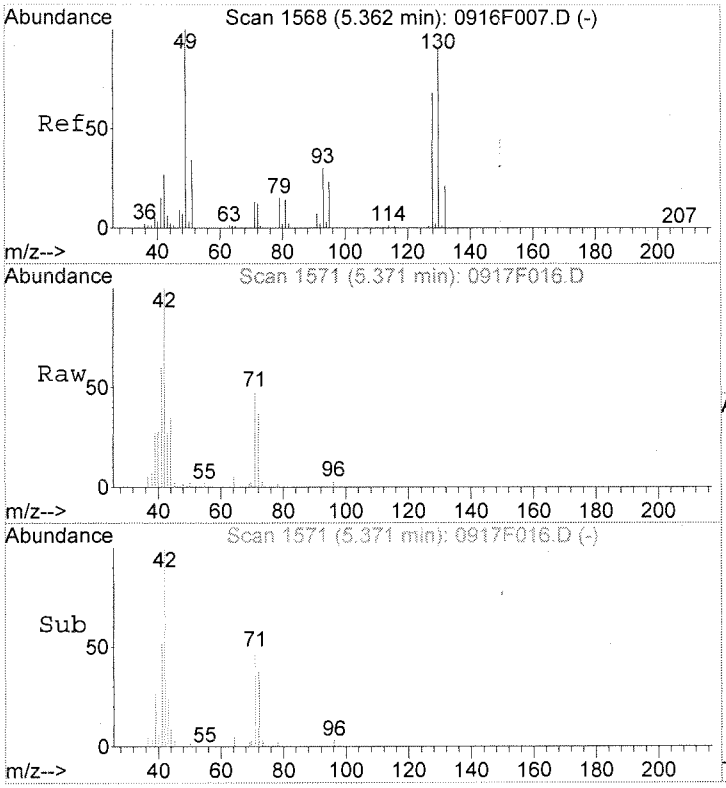


#34
2-Butanone
Concen: 1.91 PPB m
RT: 5.12 min Scan# 1481
Delta R.T. 0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 72 Resp: 2317

Ion	Ratio	Lower	Upper
72	100		
43	452.8	363.3	423.3#
57	80.4	1.8	61.8#

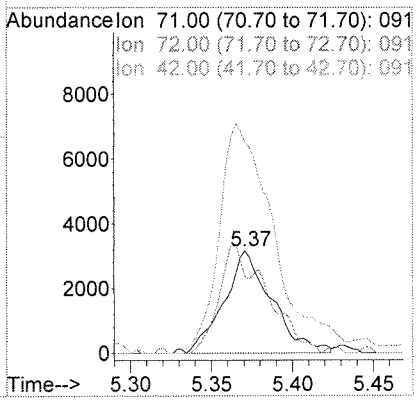


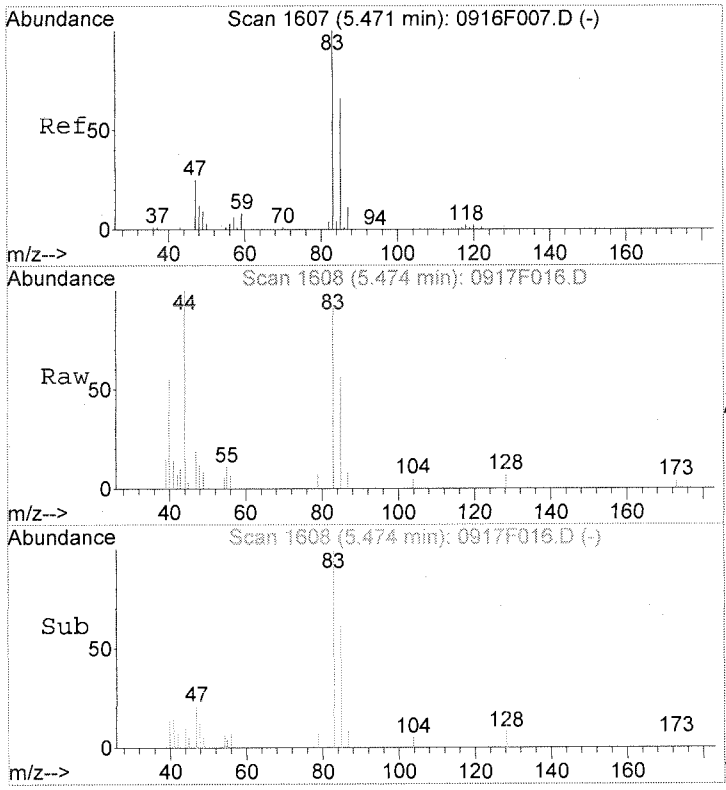


#39
Tetrahydrofuran
Concen: 5.05 PPB
RT: 5.37 min Scan# 1571
Delta R.T. 0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 71 Resp: 6494

Ion	Ratio	Lower	Upper
71	100		
72	75.5	69.2	129.2
42	202.0	201.1	261.1

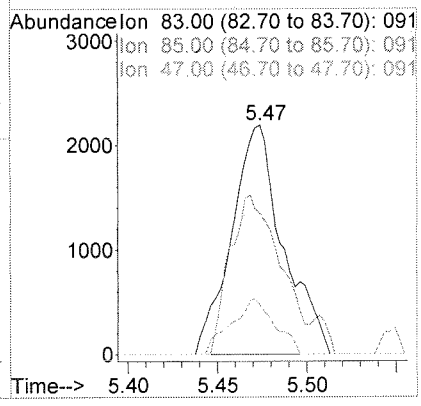


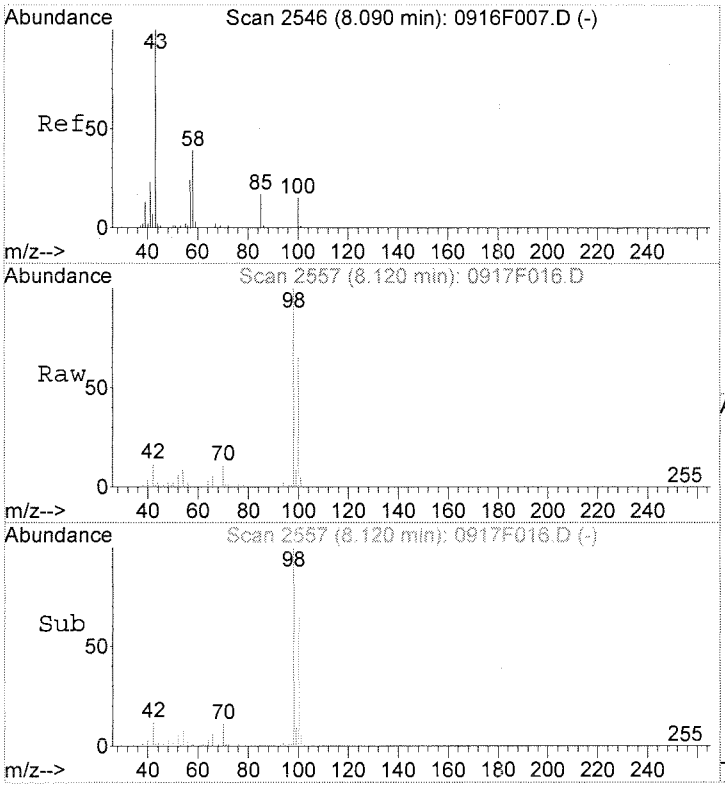


#40
Chloroform
Concen: 0.10 PPB
RT: 5.47 min Scan# 1608
Delta R.T. 0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 83 Resp: 4389

Ion	Ratio	Lower	Upper
83	100		
85	61.4	35.4	95.4
47	21.2	0.0	55.1

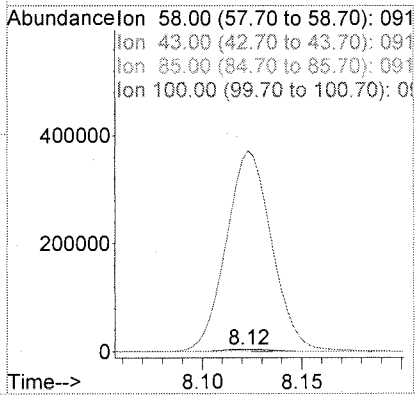


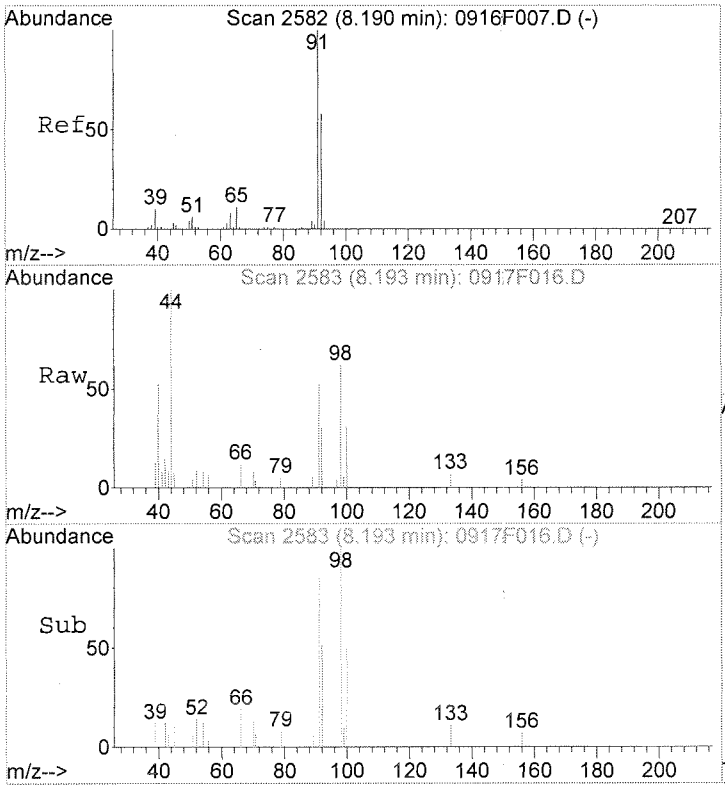


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.71 PPB
RT: 8.12 min Scan# 2557
Delta R.T. 0.03 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 58 Resp: 7688

Ion	Ratio	Lower	Upper
58	100		
43	59.8	232.7	292.7#
85	0.0	14.7	74.7#
100	8142.4	8.0	68.0#

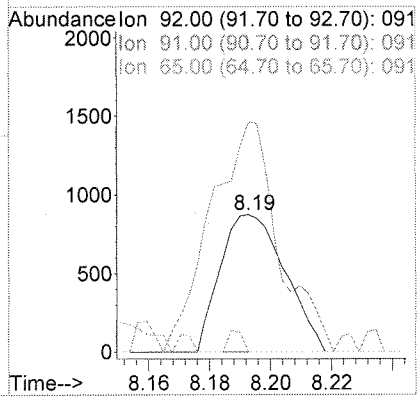


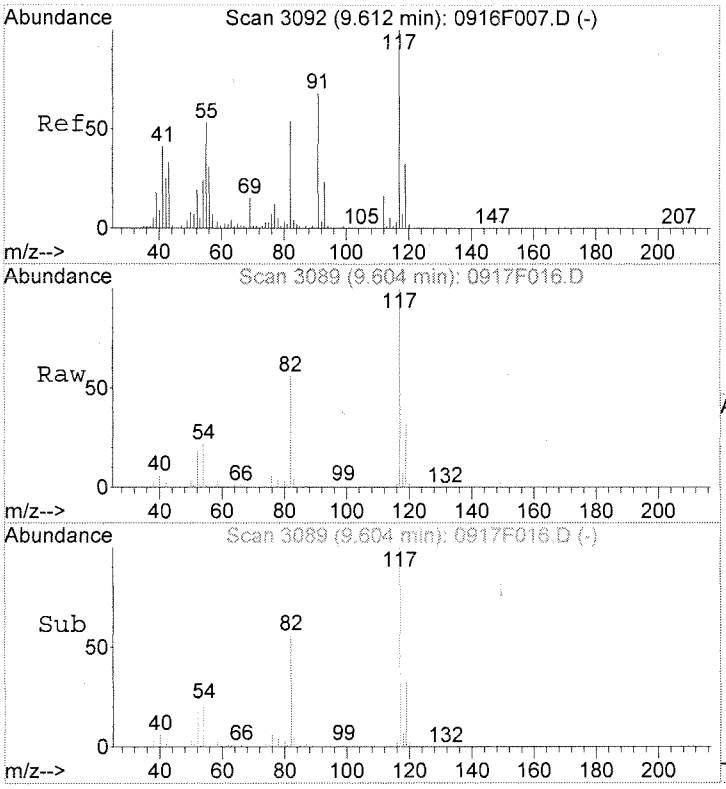


#63
Toluene
Concen: 0.02 PPB
RT: 8.19 min Scan# 2583
Delta R.T. 0.00 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 92 Resp: 1287

Ion	Ratio	Lower	Upper
92	100		
91	167.2	144.2	204.2
65	0.0	0.0	50.2

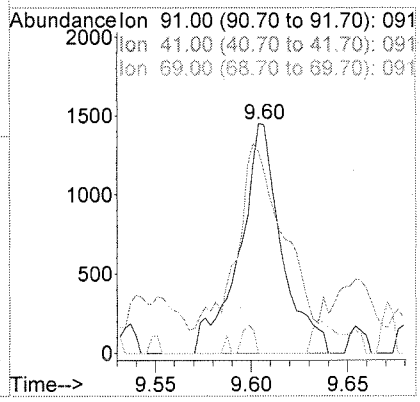




#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.60 min Scan# 3089
Delta R.T. -0.01 min
Lab File: 0917F016.D
Acq: 17 Sep 2013 4:08 pm

Tgt Ion: 91 Resp: 2189

Ion	Ratio	Lower	Upper
91	100		
41	78.0	29.5	89.5
69	0.0	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-DUP
Lab Code: K1309638-010

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**0.21**	J	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**0.11**	J	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**0.090**	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	68-117	09/17/13	Acceptable
Dibromofluoromethane	93	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F021.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 19:11
Date Quantitated: 09/18/2013 11:07
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F021.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 19:11	**Quant Date:**	09/18/2013 11:07	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-010			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282923	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solutiou Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	952501	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	379038	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	289795	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	239669	9.33	93	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	924848	9.85	99	65-144	OK	
2	4-Bromofluorobenzene	10.80	0.01	0.00	95	311496	9.32	93	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride	5.76	0.01	0.00	117	7193	0.2100	0.21	J	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane	7.13		0.00	63	2697	0.1100	0.11	J	
1	Toluene	8.19		0.00	92	5212	0.0900	0.090	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from tbis analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F021.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 19:11	**Quant Date:**	09/18/2013 11:07	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-010			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F021.D Vial: 20
Acq On : 17 Sep 2013 7:11 pm Operator: KS
Sample : K1309638-010 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:01:16 2013 Quant Results File: 081213MS27_8260.RES

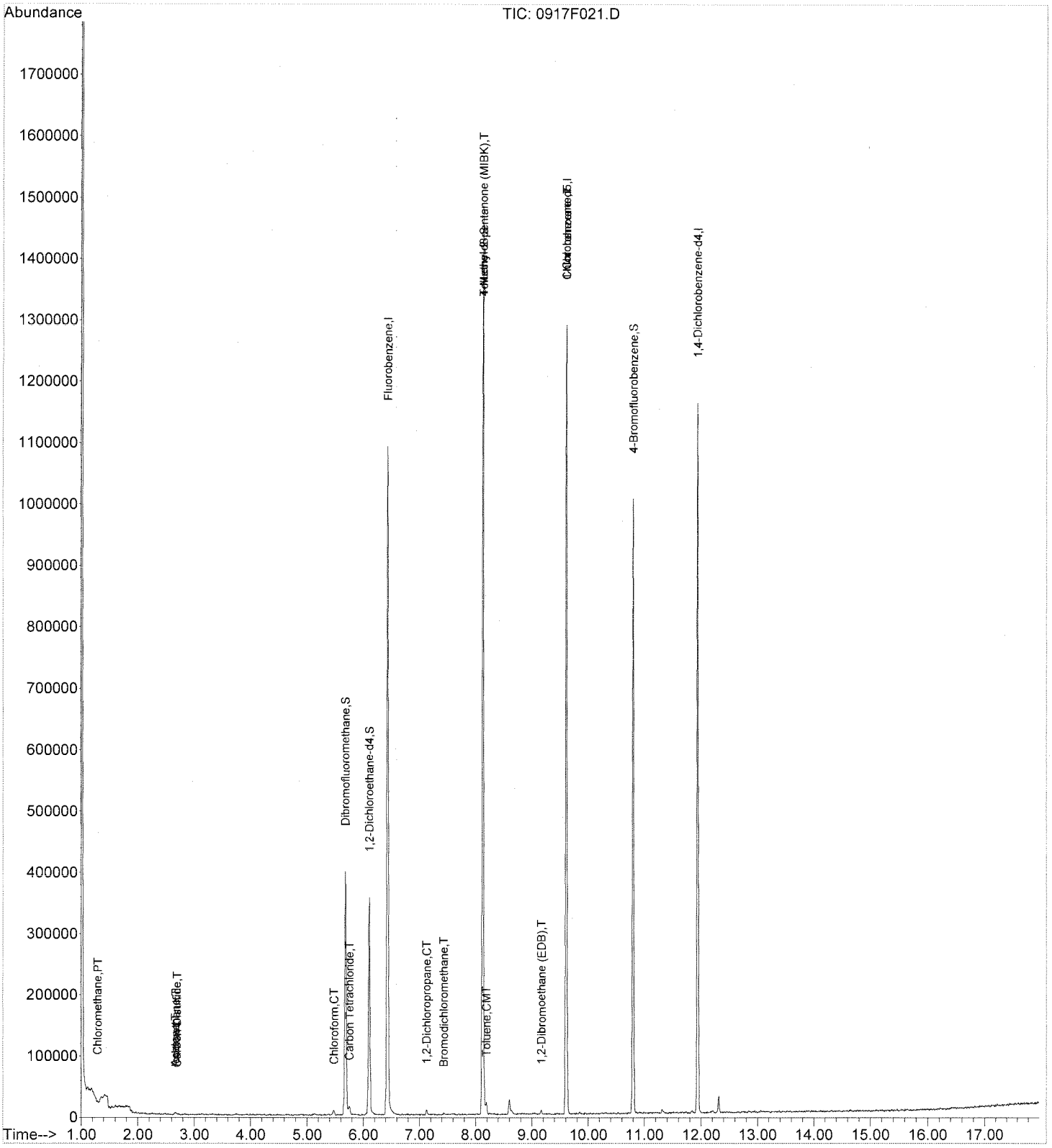
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

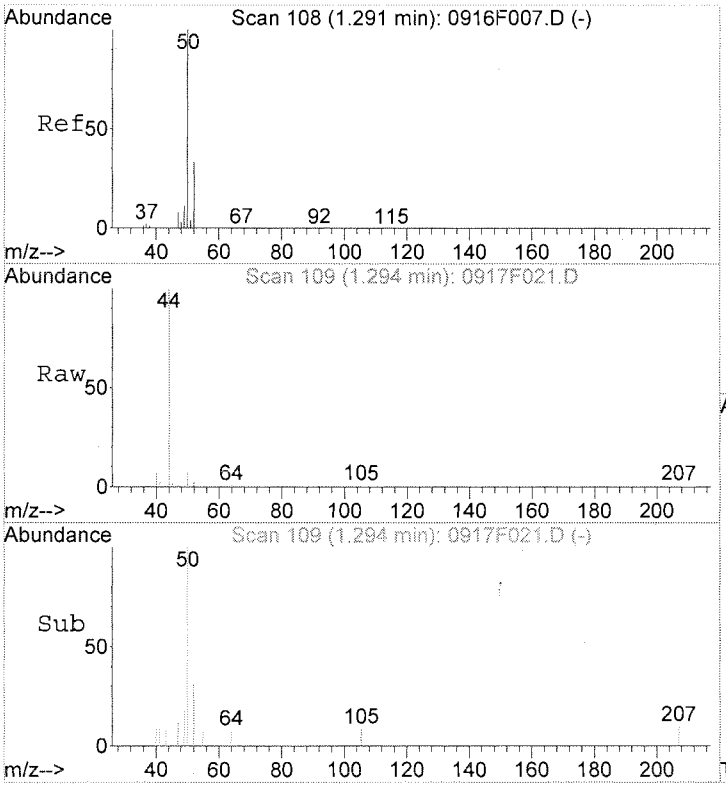
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	952501	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	379038	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	289795	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	239669	9.33	PPB		0.00
Spiked Amount 10.000			Recovery =	93.30%			
47) 1,2-Dichloroethane-d4	6.10	65	239405	9.70	PPB		0.00
Spiked Amount 10.000			Recovery =	97.00%			
62) Toluene-d8	8.12	98	924848	9.85	PPB		0.00
Spiked Amount 10.000			Recovery =	98.50%			
84) 4-Bromofluorobenzene	10.80	95	311496	9.32	PPB		0.00
Spiked Amount 10.000			Recovery =	93.20%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1659	0.05	PPB		91
14) Acetone	2.66	43	2954	0.98	PPB		83
15) Iodomethane	2.68	142	1557	0.14	PPB		79
16) Carbon Disulfide	2.69	76	831	0.01	PPB		53
40) Chloroform	5.48	83	6168	0.14	PPB		93
44) Carbon Tetrachloride	5.76	117	7193	0.21	PPB		85
53) 1,2-Dichloropropane	7.13	63	2697	0.11	PPB	#	70
57) Bromodichloromethane	7.43	83	1161	0.04	PPB		85
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7090	1.56	PPB	#	1
63) Toluene	8.19	92	5212	0.09	PPB		87
73) 1,2-Dibromoethane (EDB)	9.17	107	3609	0.21	PPB		72
74) 1-Chlorohexane	9.61	91	1557	0.05	PPB		84

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F021.D Vial: 20
Acq On : 17 Sep 2013 7:11 pm Operator: KS
Sample : K1309638-010 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:07 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

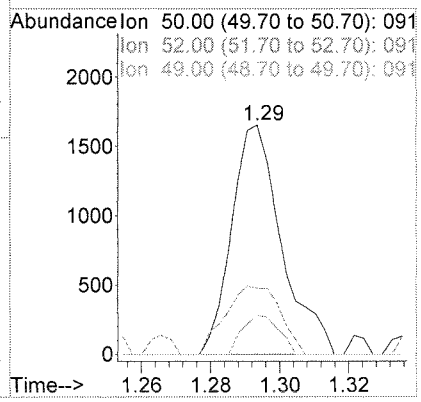


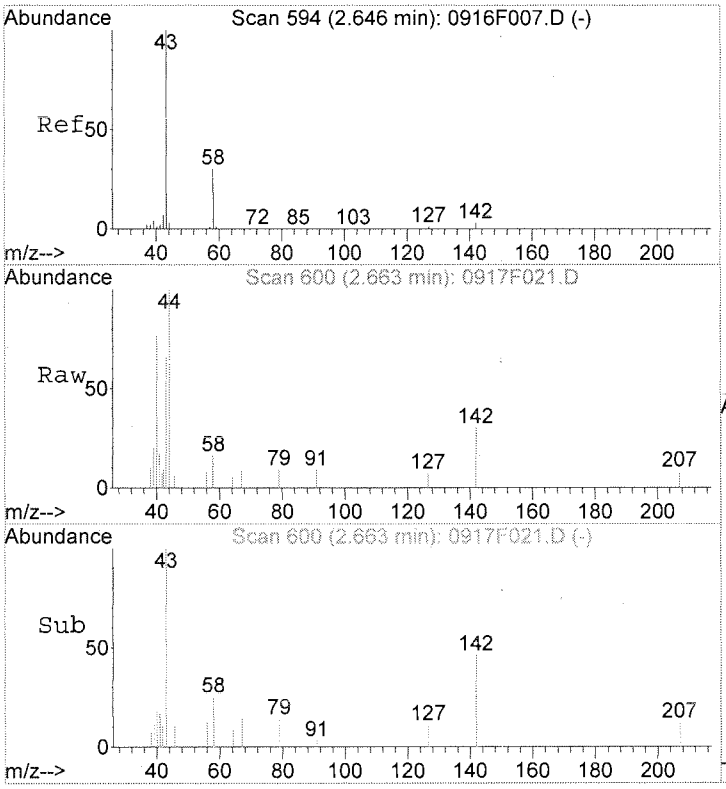


#3
Chloromethane
Concen: 0.05 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 50 Resp: 1659

Ion	Ratio	Lower	Upper
50	100		
52	28.9	2.5	62.5
49	17.0	0.0	40.3

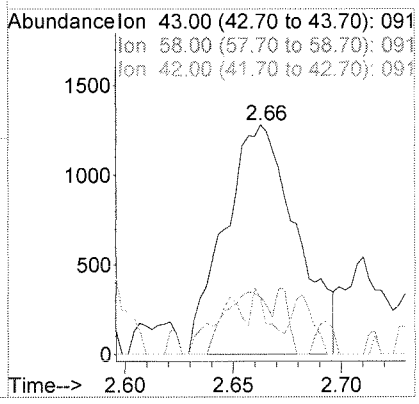


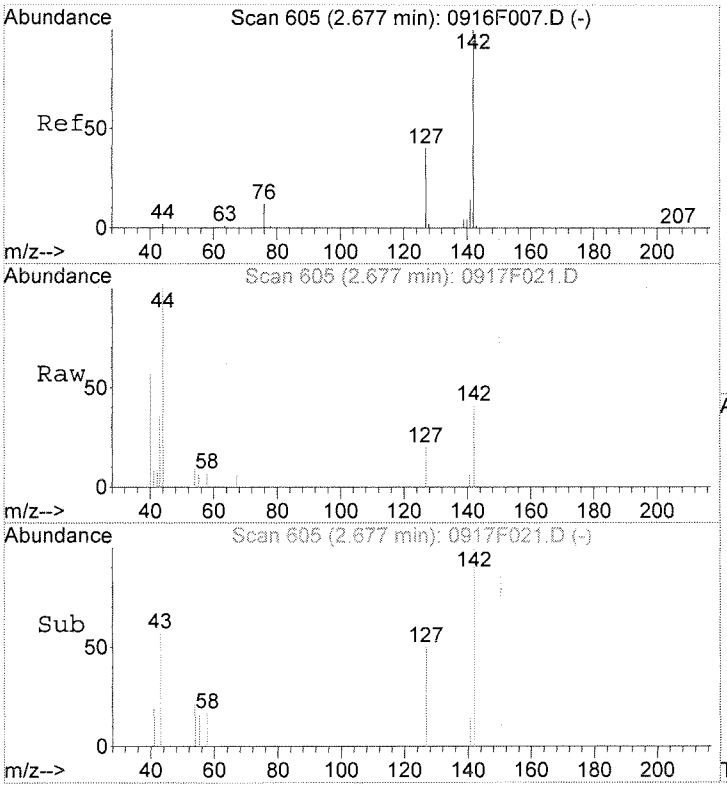


#14
Acetone
Concen: 0.98 PPB
RT: 2.66 min Scan# 600
Delta R.T. 0.02 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 43 Resp: 2954

Ion	Ratio	Lower	Upper
43	100		
58	24.9	0.0	59.8
42	24.2	0.0	37.4

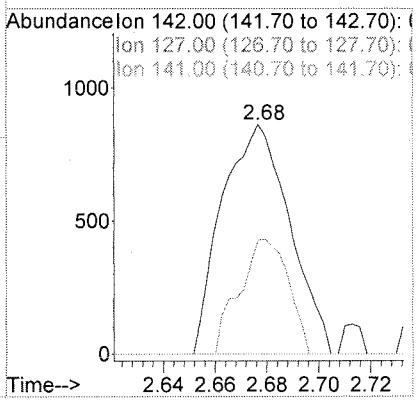


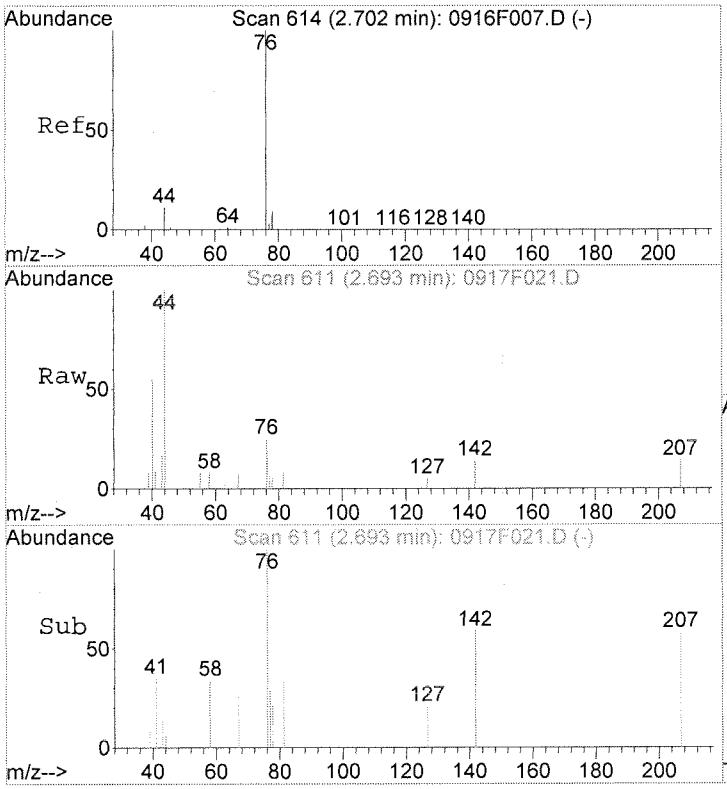


#15
Iodomethane
Concen: 0.14 PPB
RT: 2.68 min Scan# 605
Delta R.T. 0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion:142 Resp: 1557

Ion	Ratio	Lower	Upper
142	100		
127	49.7	9.8	69.8
141	0.0	0.0	44.5

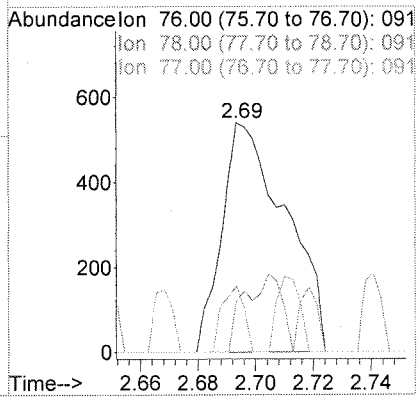


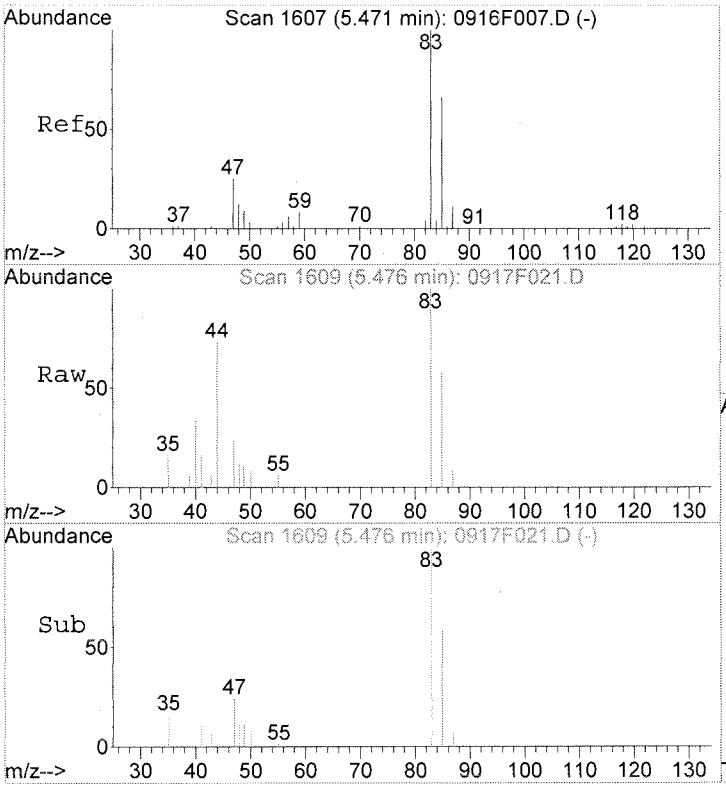


#16
Carbon Disulfide
Concen: 0.01 PPB
RT: 2.69 min Scan# 611
Delta R.T. -0.01 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 76 Resp: 831

Ion	Ratio	Lower	Upper
76	100		
78	22.2	0.0	38.8
77	29.1	0.0	32.7

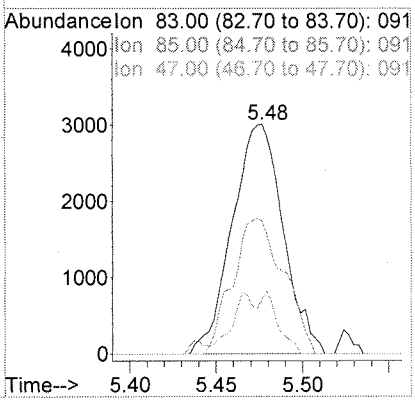


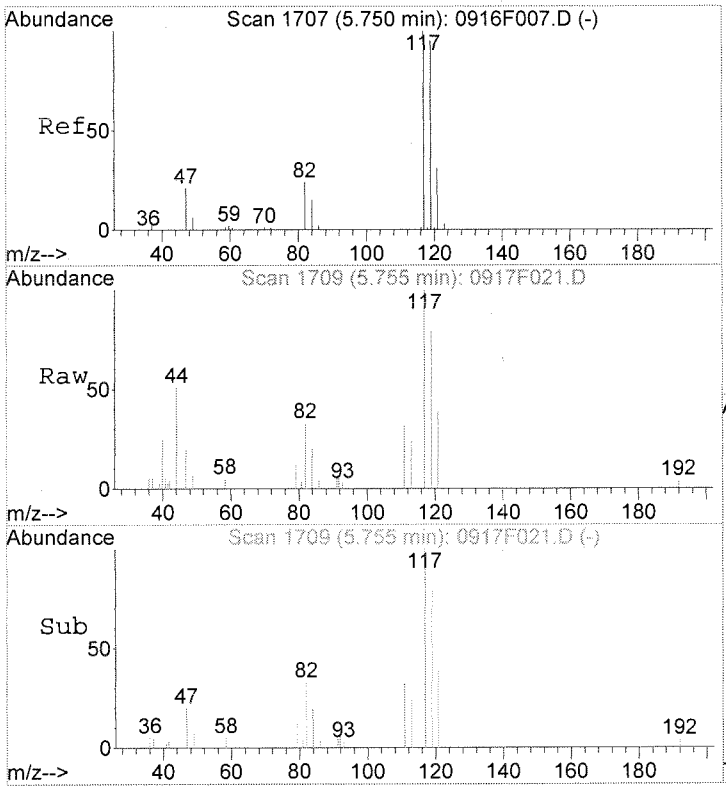


#40
Chloroform
Concen: 0.14 PPB
RT: 5.48 min Scan# 1609
Delta R.T. 0.01 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 83 Resp: 6168

Ion	Ratio	Lower	Upper
83	100		
85	58.1	35.4	95.4
47	23.9	0.0	55.1

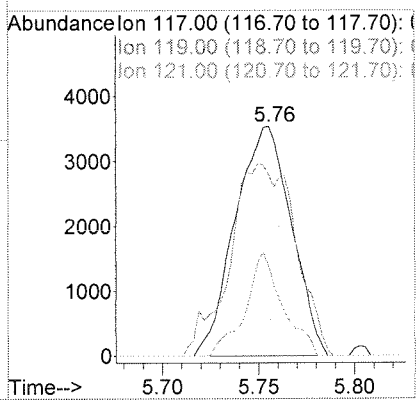


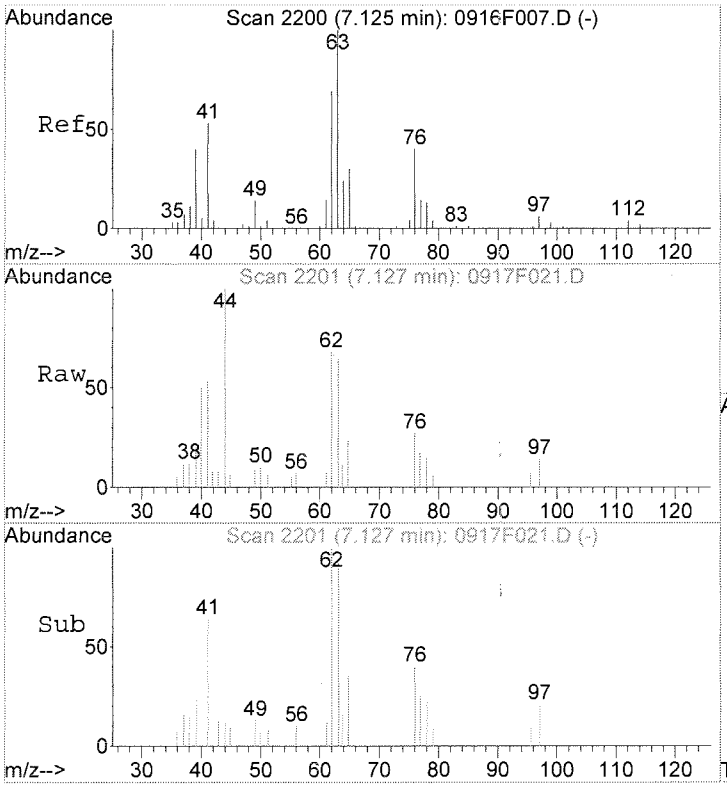


#44
Carbon Tetrachloride
Concen: 0.21 PPB
RT: 5.76 min Scan# 1709
Delta R.T. 0.01 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion:117 Resp: 7193

Ion	Ratio	Lower	Upper
117	100		
119	79.0	63.8	123.8
121	38.9	0.6	60.6

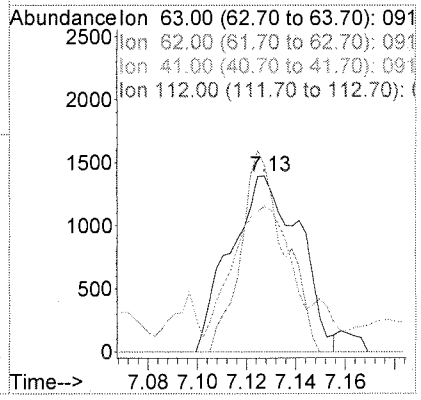


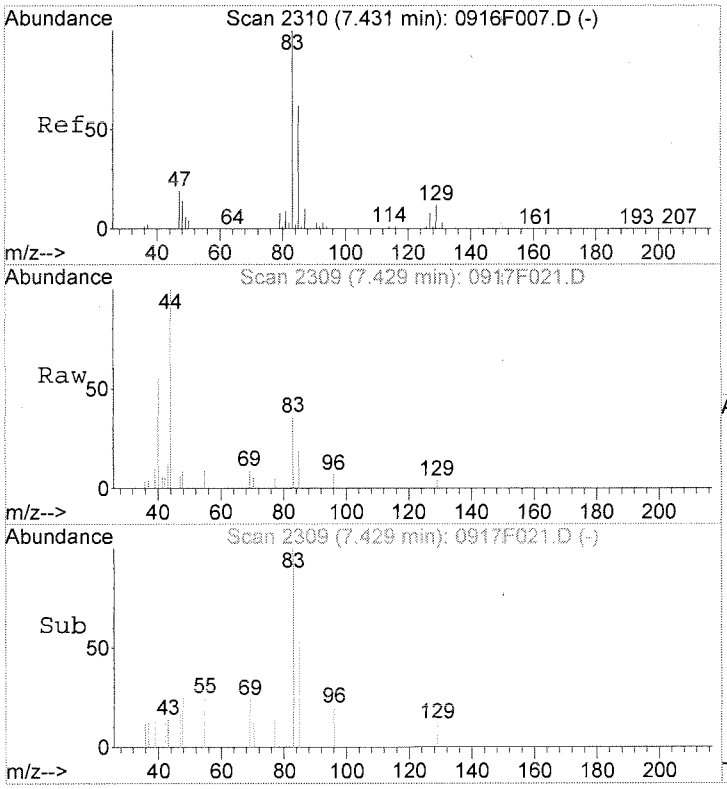


#53
1,2-Dichloropropane
Concen: 0.11 PPB
RT: 7.13 min Scan# 2201
Delta R.T. 0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 63 Resp: 2697

Ion	Ratio	Lower	Upper
63	100		
62	106.1	39.9	99.9#
41	65.8	25.3	85.3
112	0.0	0.0	24.5

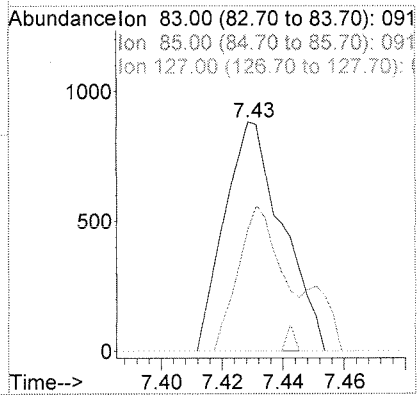


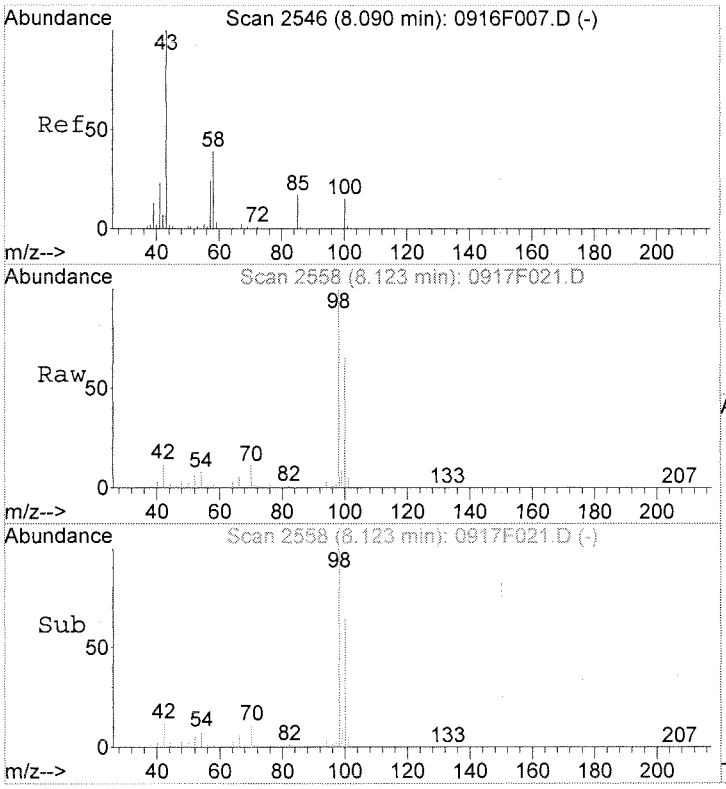


#57
Bromodichloromethane
Concen: 0.04 PPB
RT: 7.43 min Scan# 2309
Delta R.T. -0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 83 Resp: 1161

Ion	Ratio	Lower	Upper
83	100		
85	53.3	34.1	94.1
127	0.0	0.0	38.6

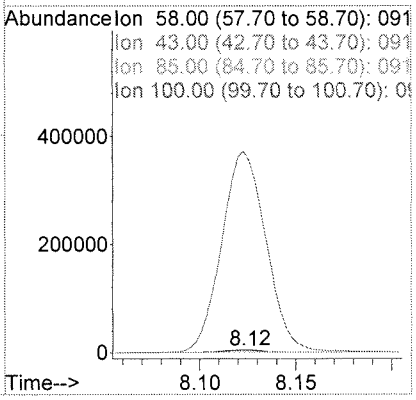


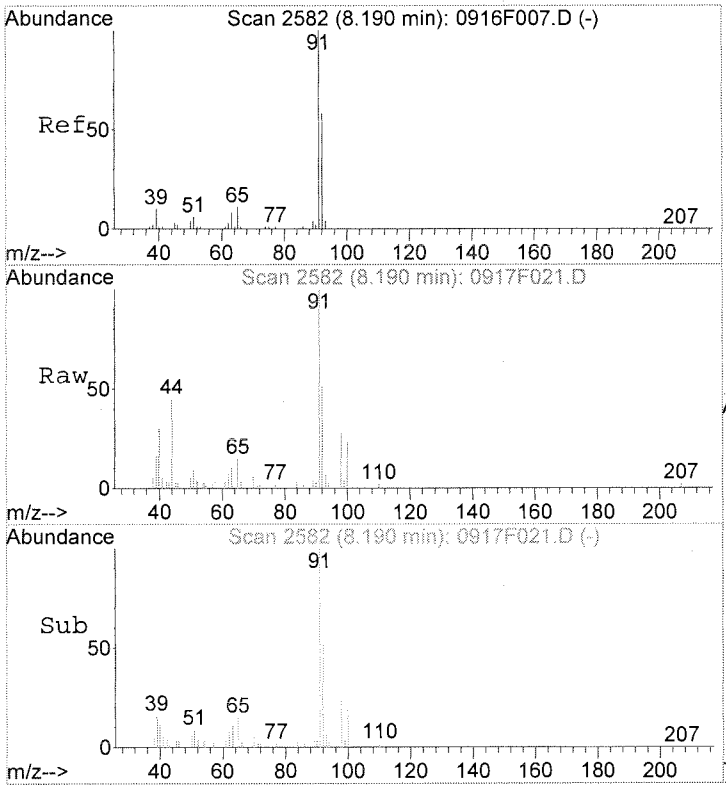


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.56 PPB
RT: 8.12 min Scan# 2558
Delta R.T. 0.04 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 58 Resp: 7090

Ion	Ratio	Lower	Upper
58	100		
43	49.7	232.7	292.7#
85	0.0	14.7	74.7#
100	8277.1	8.0	68.0#

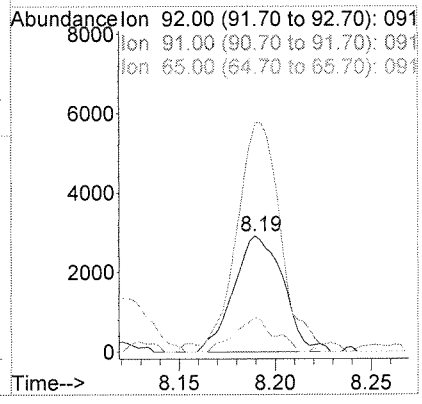


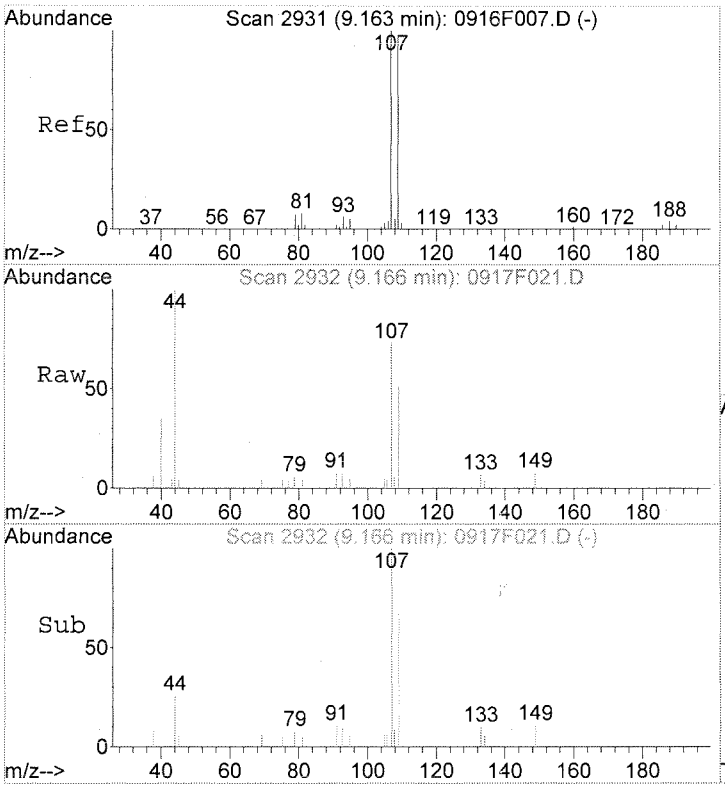


#63
Toluene
Concen: 0.09 PPB
RT: 8.19 min Scan# 2582
Delta R.T. -0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 92 Resp: 5212

Ion	Ratio	Lower	Upper
92	100		
91	190.5	144.2	204.2
65	29.4	0.0	50.2

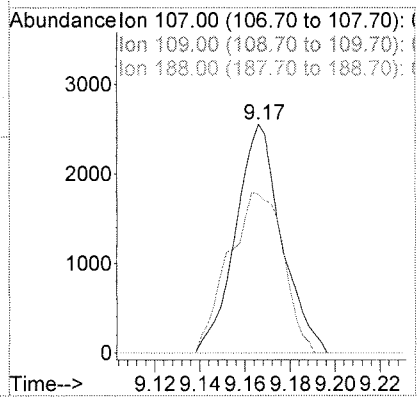


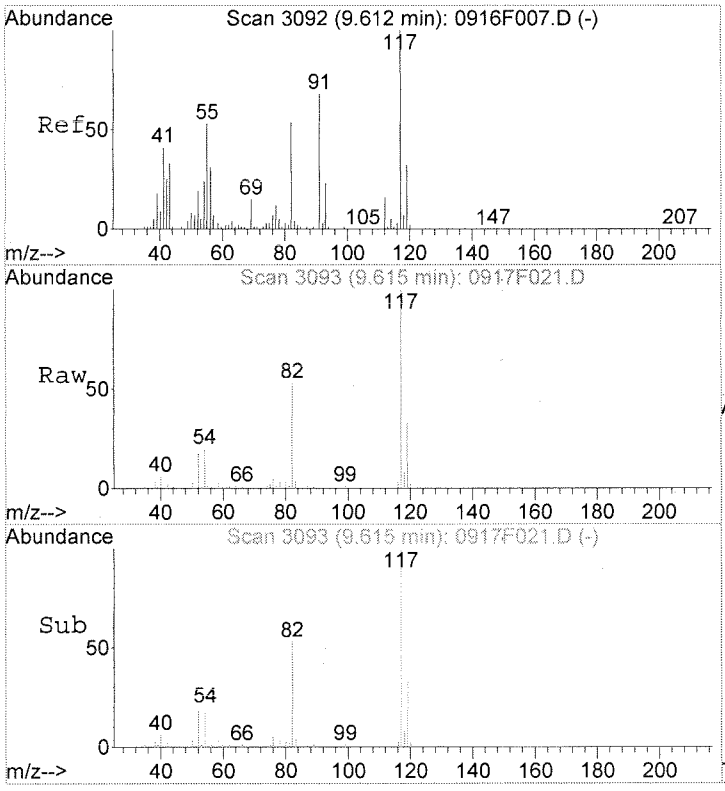


#73
1,2-Dibromoethane (EDB)
Concen: 0.21 PPB
RT: 9.17 min Scan# 2932
Delta R.T. 0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion:107 Resp: 3609

Ion	Ratio	Lower	Upper
107	100		
109	69.3	67.5	127.5
188	0.0	0.0	34.0

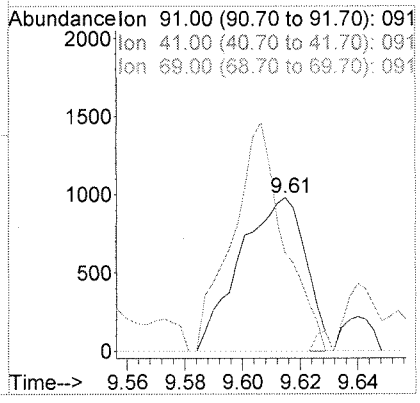




#74
1-Chlorohexane
Concen: 0.05 PPB
RT: 9.61 min Scan# 3093
Delta R.T. 0.00 min
Lab File: 0917F021.D
Acq: 17 Sep 2013 7:11 pm

Tgt Ion: 91 Resp: 1557

Ion	Ratio	Lower	Upper
91	100		
41	64.2	29.5	89.5
69	0.0	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: 13255-Rinse
Lab Code: K1309638-011

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	0.29	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	95	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F022.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 19:38
Date Quantitated: 09/18/2013 11:12
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F022.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 19:38	**Quant Date:**	09/18/2013 11:12	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-011			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282924	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	941827	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	379110	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	295408	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	241446	9.50	95	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	919602	9.91	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	322219	9.64	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride				84	0		0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene	6.06	0.01	0.00	78	6166	0.0600	0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene	8.19		0.00	92	17670	0.2900	0.29	J	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F022.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 19:38	**Quant Date:**	09/18/2013 11:12	**Vial:**	21
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-011			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0d		0.050	U	
2	m,p-Xylenes	9.85		0.00	106	3002	0.0700	0.11	U	
2	o-Xylene				106	0d		0.074	U	
2	Styrene				103	0d		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F022.D Vial: 21
Acq On : 17 Sep 2013 7:38 pm Operator: KS
Sample : K1309638-011 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:04:32 2013 Quant Results File: 081213MS27_8260.RES

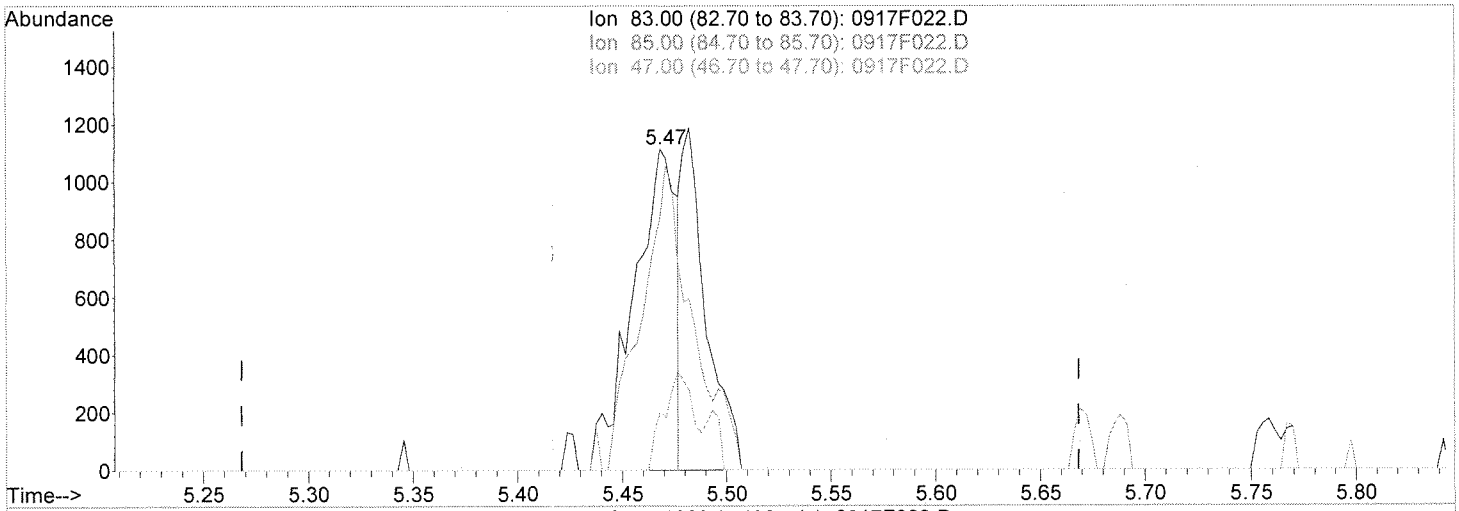
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

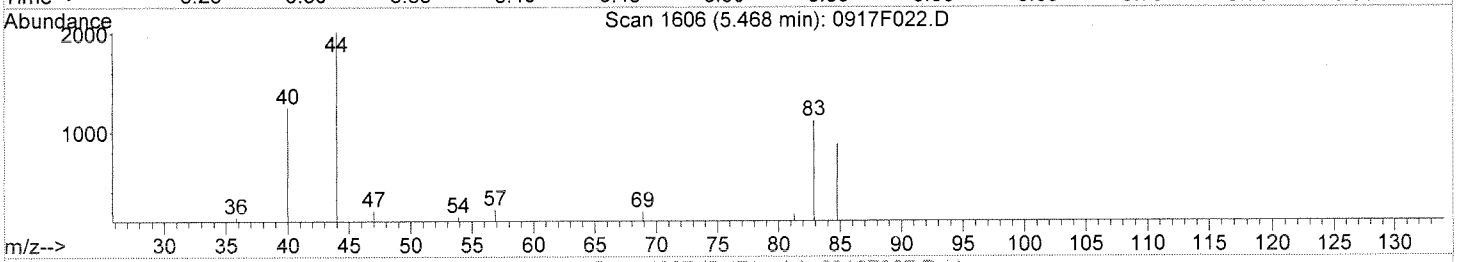
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	941827	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	379110	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	295408	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	241446	9.50	PPB		0.00
Spiked Amount 10.000			Recovery	=	95.00%		
47) 1,2-Dichloroethane-d4	6.10	65	239288	9.81	PPB		0.00
Spiked Amount 10.000			Recovery	=	98.10%		
62) Toluene-d8	8.12	98	919602	9.91	PPB		0.00
Spiked Amount 10.000			Recovery	=	99.10%		
84) 4-Bromofluorobenzene	10.79	95	322219	9.64	PPB		0.00
Spiked Amount 10.000			Recovery	=	96.40%		
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1628	0.05	PPB		97
14) Acetone	2.65	43	14041	4.69	PPB		94
15) Iodomethane	2.68	142	1748	0.16	PPB		93
16) Carbon Disulfide	2.70	76	1073	0.02	PPB		57
22) tert-Butyl Alcohol	3.35	59	1317	1.75	PPB		74
40) Chloroform	5.48	83	2550m	0.06	PPB		
48) Benzene	6.06	78	6166	0.06	PPB		93
57) Bromodichloromethane	7.43	83	2014	0.06	PPB		91
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7512	1.68	PPB	#	1
63) Toluene	8.19	92	17670	0.29	PPB		93
72) Dibromochloromethane	9.05	129	1485	0.06	PPB		84
74) 1-Chlorohexane	9.60	91	1648	0.05	PPB	#	24
78) m,p-Xylenes	9.85	106	3002	0.07	PPB		90

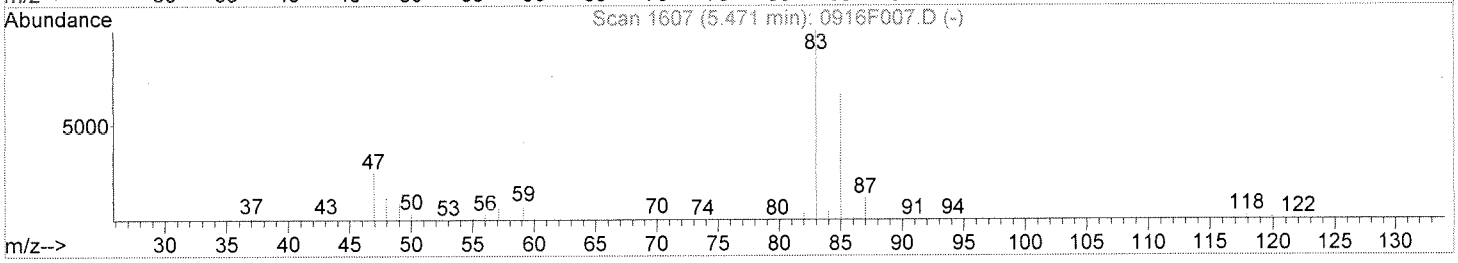
(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F022.D Vial: 21
Acq On : 17 Sep 2013 7:38 pm Operator: KS
Sample : K1309638-011 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:09 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F022.D

(40) Chloroform (CT)

5.47min 0.04PPB

response 1579

Ion	Exp%	Act%
83.00	100	100
85.00	65.40	78.94
47.00	25.10	18.55
0.00	0.00	0.00

Manual Integration:

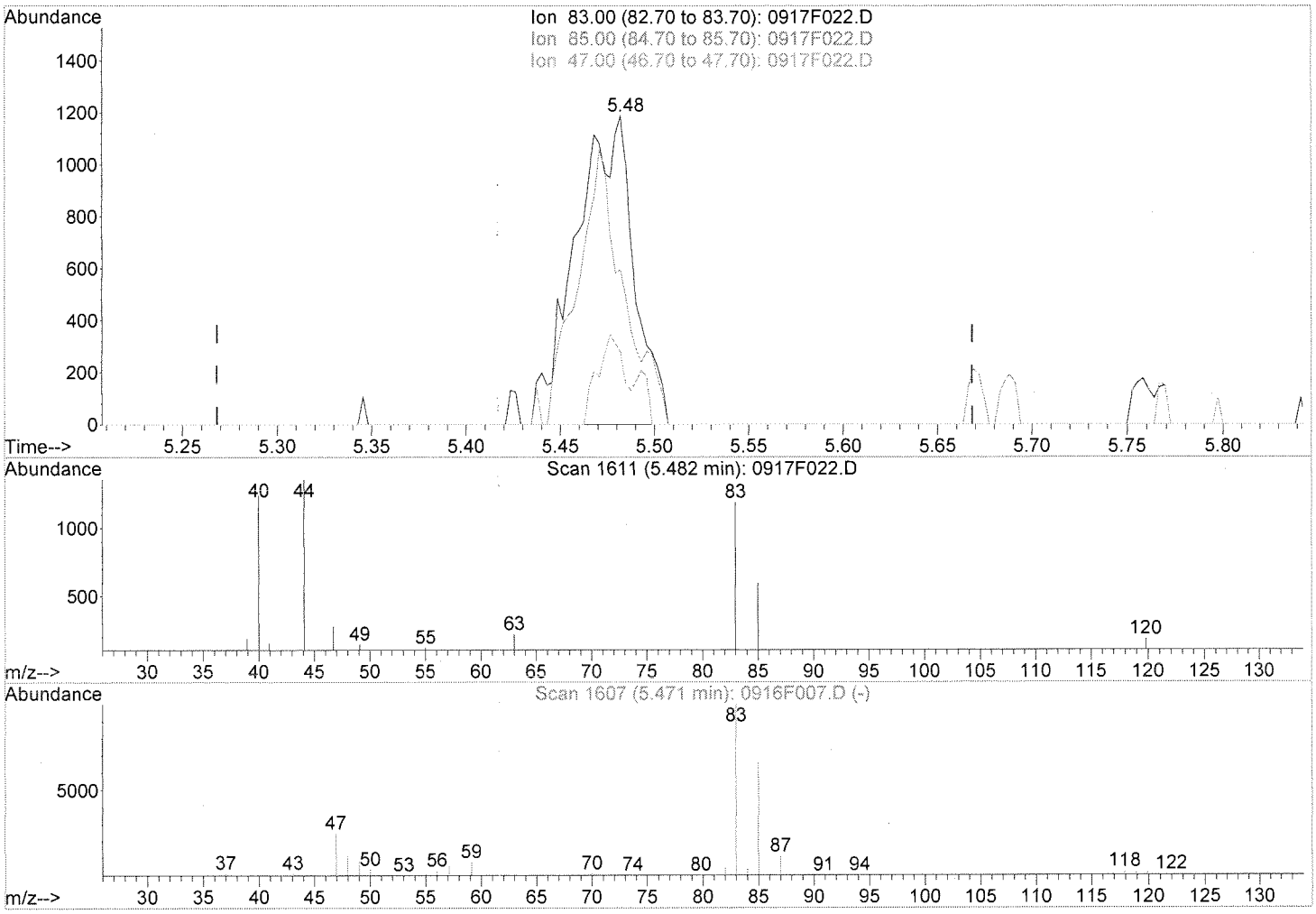
Before

KS
9.18.13

9/18/13

Data File : J:\MS27\DATA\091713\0917F022.D Vial: 21
Acq On : 17 Sep 2013 7:38 pm Operator: KS
Sample : K1309638-011 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:09 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F022.D

(40) Chloroform (CT)

5.48min 0.06PPB m

response 2550

Ion	Exp%	Act%
83.00	100	100
85.00	65.40	50.04
47.00	25.10	23.38
0.00	0.00	0.00

Manual Integration:

After

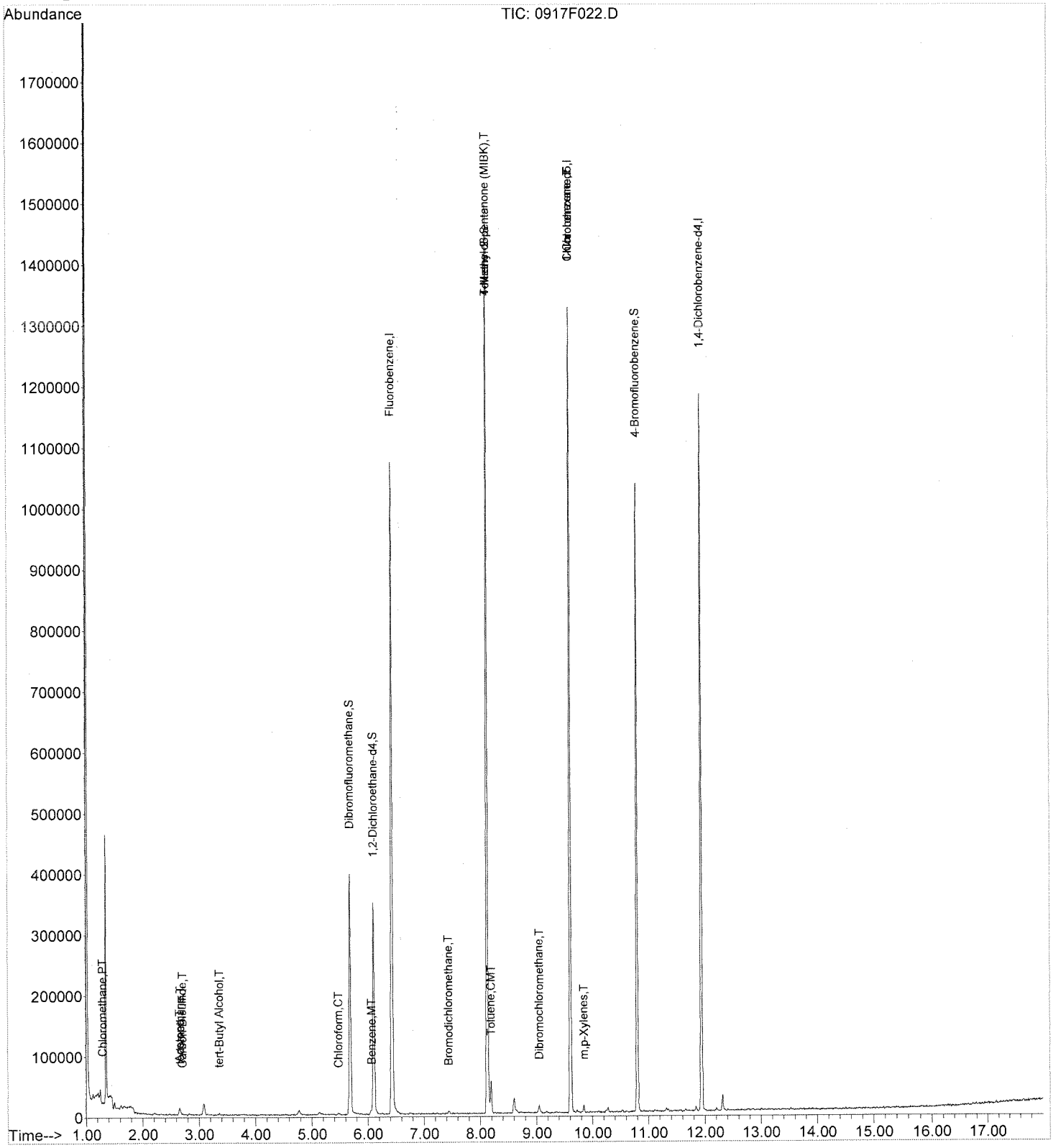
Split peak

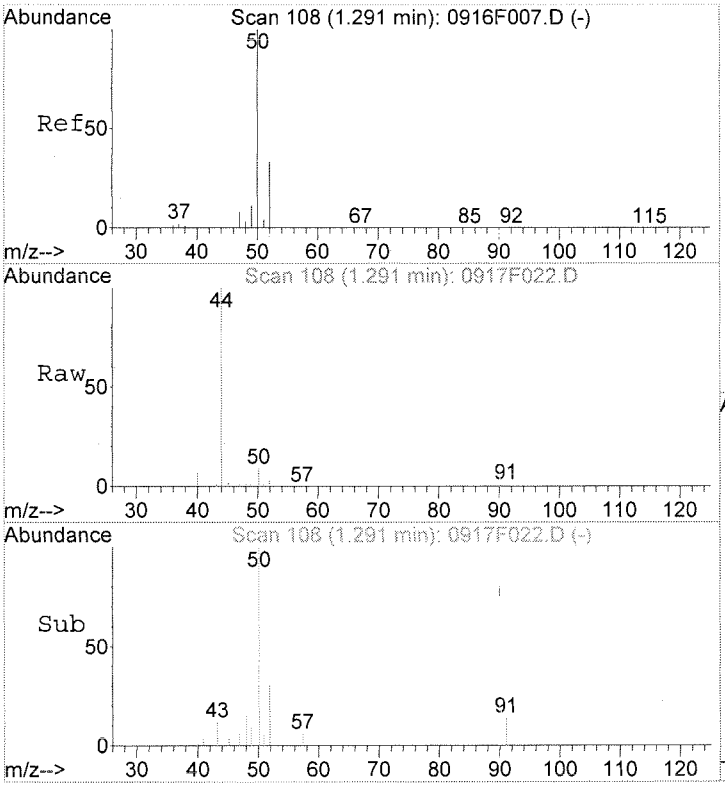
09/18/13 KS

9/19/13

Data File : J:\MS27\DATA\091713\0917F022.D Vial: 21
Acq On : 17 Sep 2013 7:38 pm Operator: KS
Sample : K1309638-011 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 11:12 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

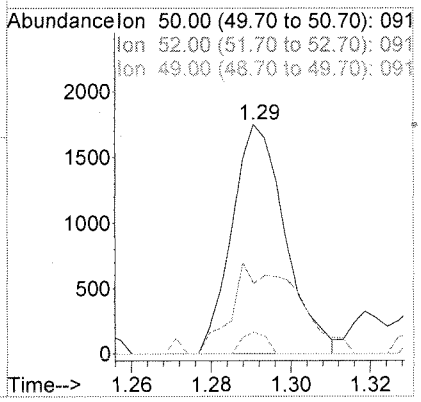


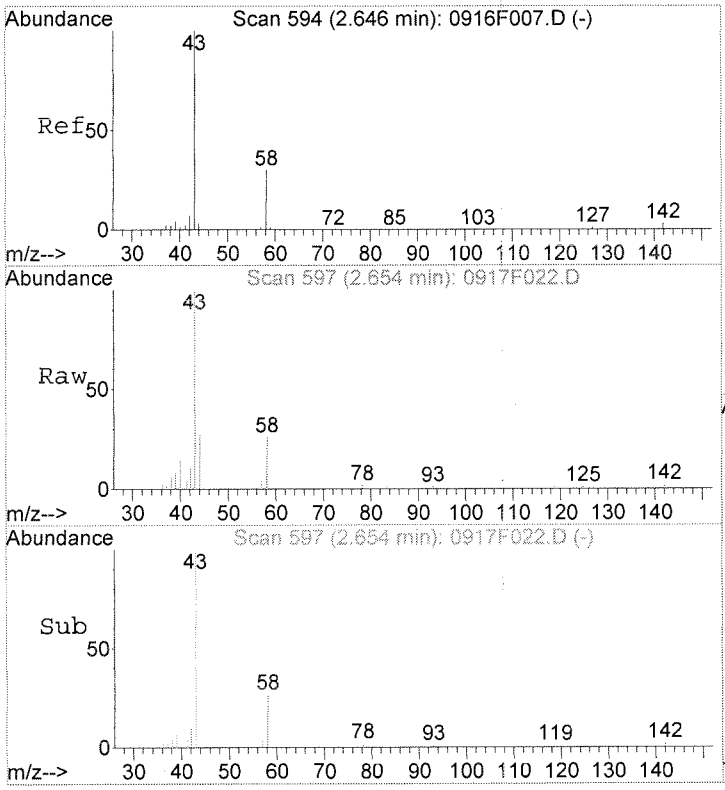


#3
Chloromethane
Concen: 0.05 PPB
RT: 1.29 min Scan# 108
Delta R.T. -0.00 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 50 Resp: 1628

Ion	Ratio	Lower	Upper
50	100		
52	30.7	2.5	62.5
49	9.4	0.0	40.3

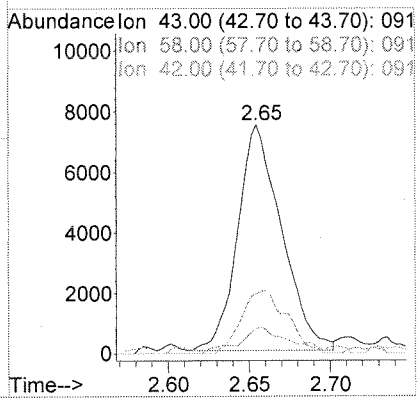


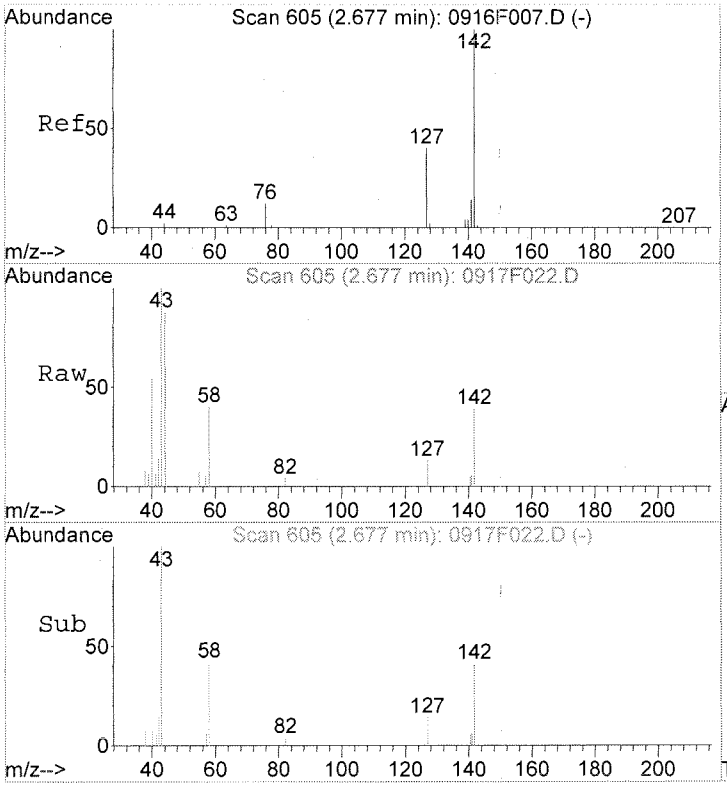


#14
Acetone
Concen: 4.69 PPB
RT: 2.65 min Scan# 597
Delta R.T. 0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 43 Resp: 14041

Ion	Ratio	Lower	Upper
43	100		
58	26.7	0.0	59.8
42	9.0	0.0	37.4

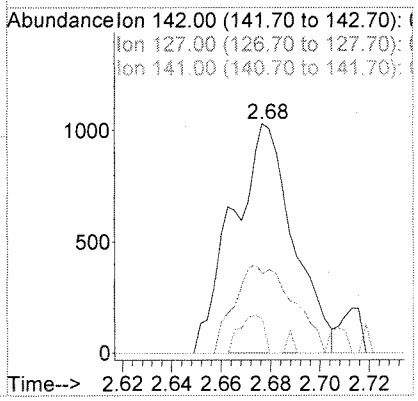


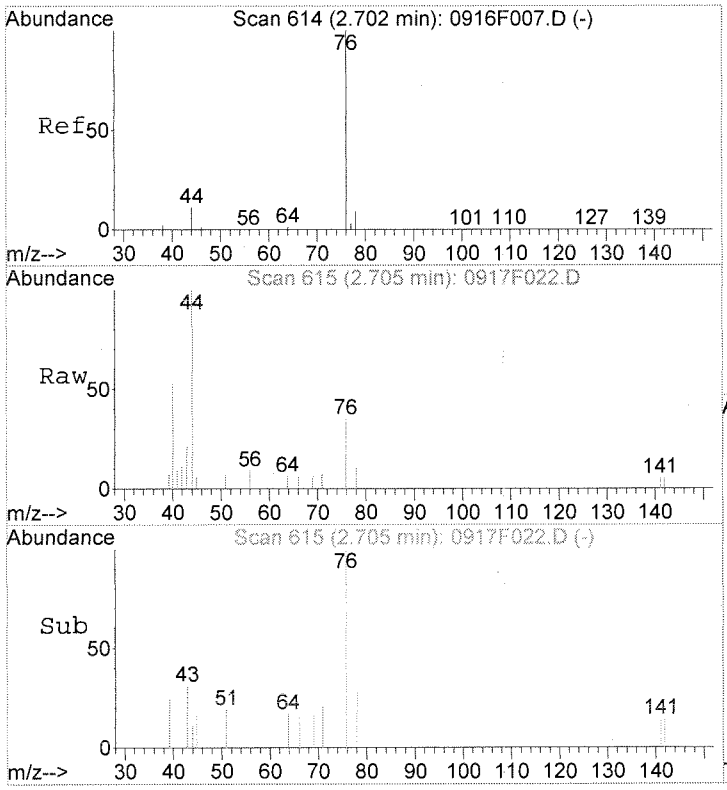


#15
Iodomethane
Concen: 0.16 PPB
RT: 2.68 min Scan# 605
Delta R.T. 0.00 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion:142 Resp: 1748

Ion	Ratio	Lower	Upper
142	100		
127	34.4	9.8	69.8
141	15.0	0.0	44.5

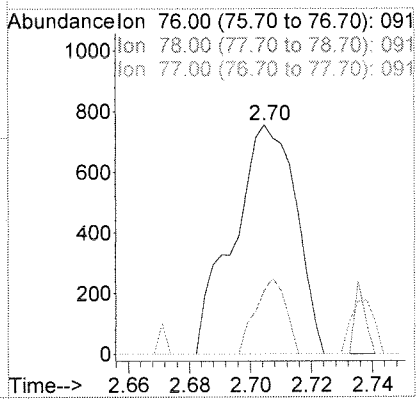


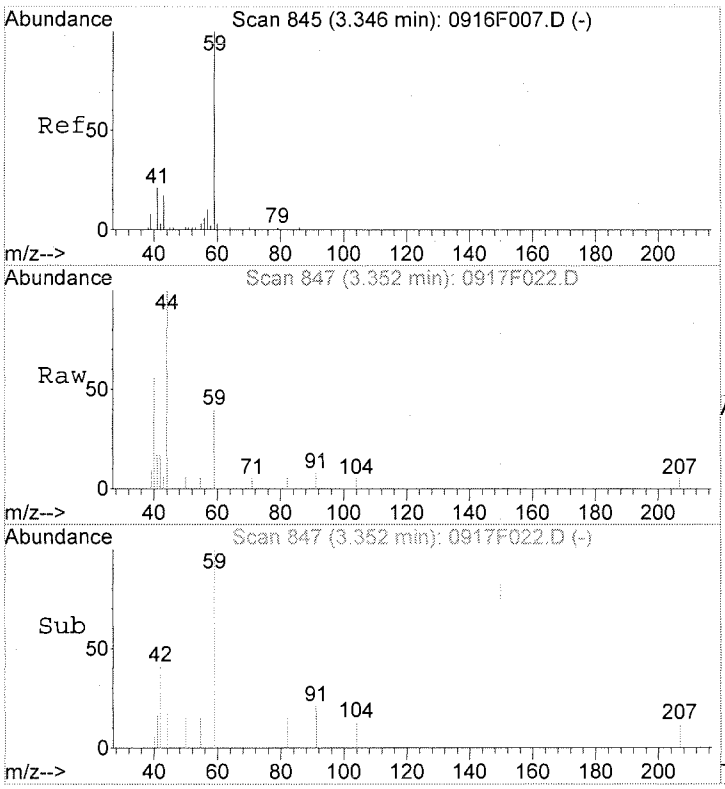


#16
Carbon Disulfide
Concen: 0.02 PPB
RT: 2.70 min Scan# 615
Delta R.T. 0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 76 Resp: 1073

Ion	Ratio	Lower	Upper
76	100		
78	27.9	0.0	38.8
77	0.0	0.0	32.7

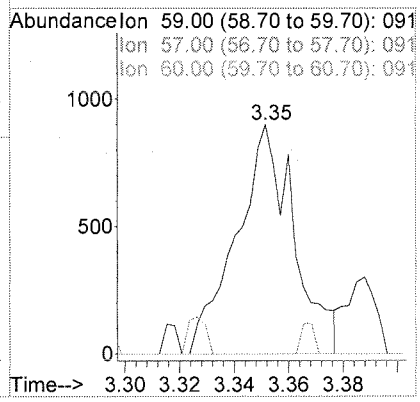


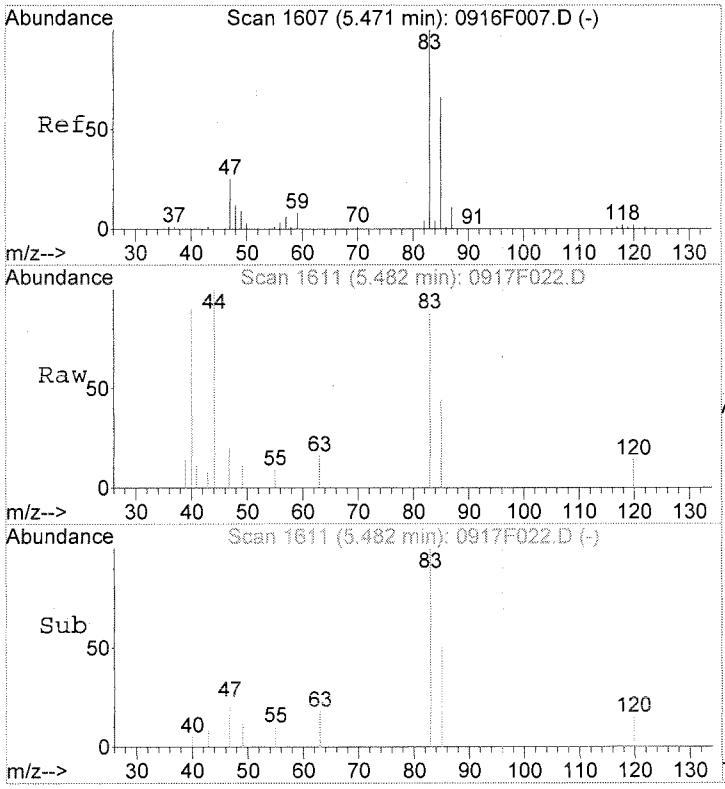


#22
tert-Butyl Alcohol
Concen: 1.75 PPB
RT: 3.35 min Scan# 847
Delta R.T. 0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 59 Resp: 1317

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	42.0
60	0.0	0.0	34.7

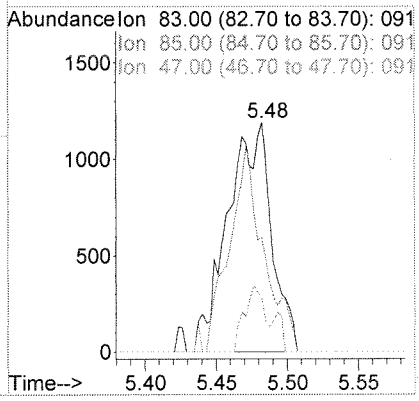


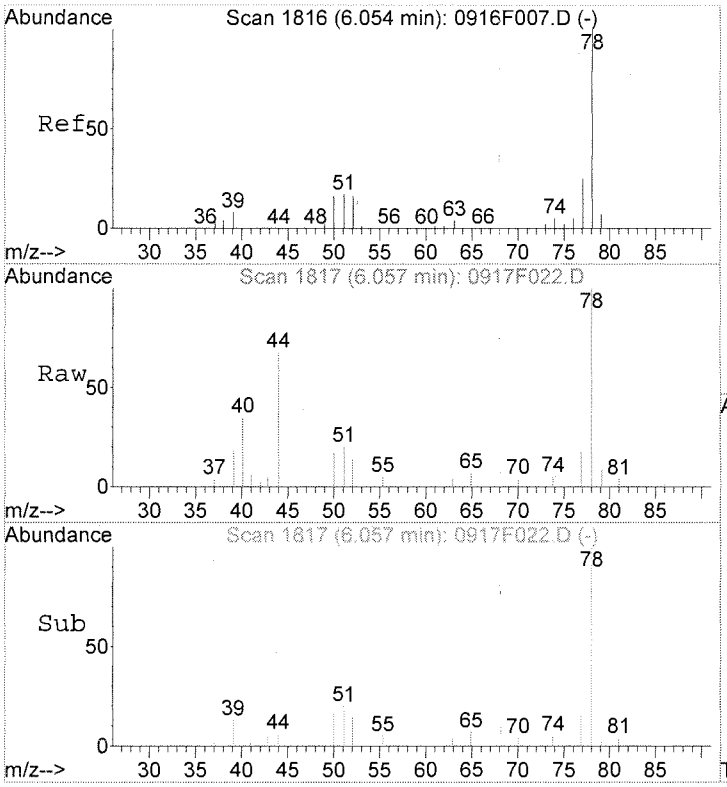


#40
Chloroform
Concen: 0.06 PPB m
RT: 5.48 min Scan# 1611
Delta R.T. 0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 83 Resp: 2550

Ion	Ratio	Lower	Upper
83	100		
85	50.0	35.4	95.4
47	23.4	0.0	55.1

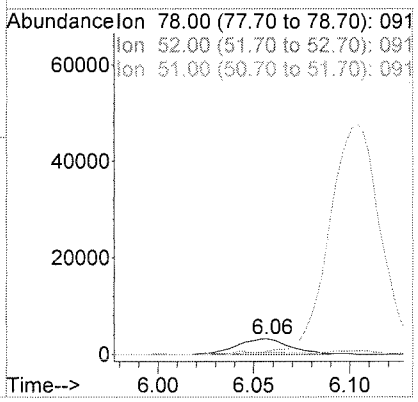


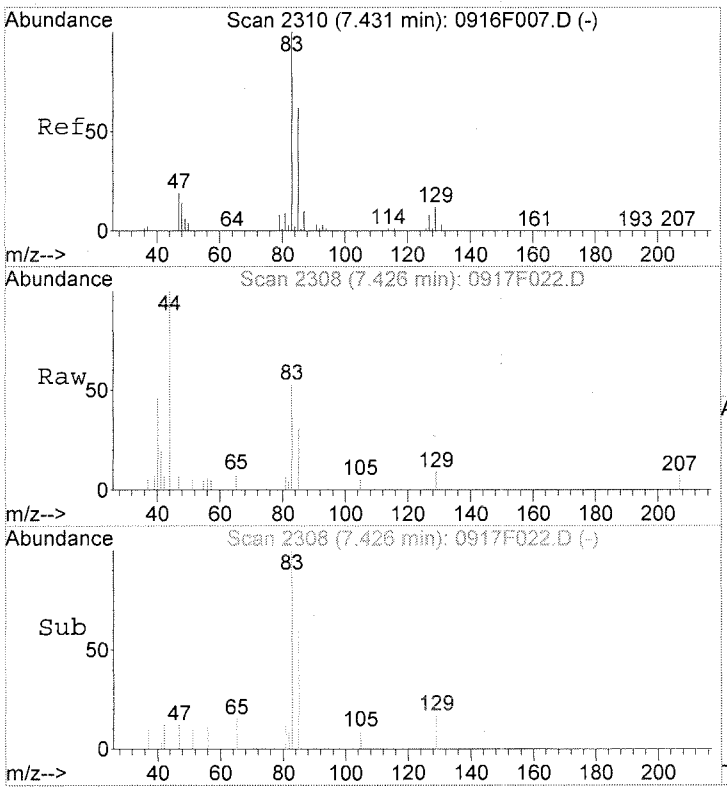


#48
Benzene
Concen: 0.06 PPB
RT: 6.06 min Scan# 1817
Delta R.T. 0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 78 Resp: 6166

Ion	Ratio	Lower	Upper
78	100		
52	14.0	0.0	46.3
51	20.0	0.0	46.6

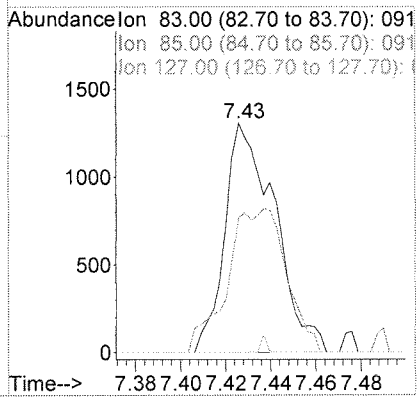


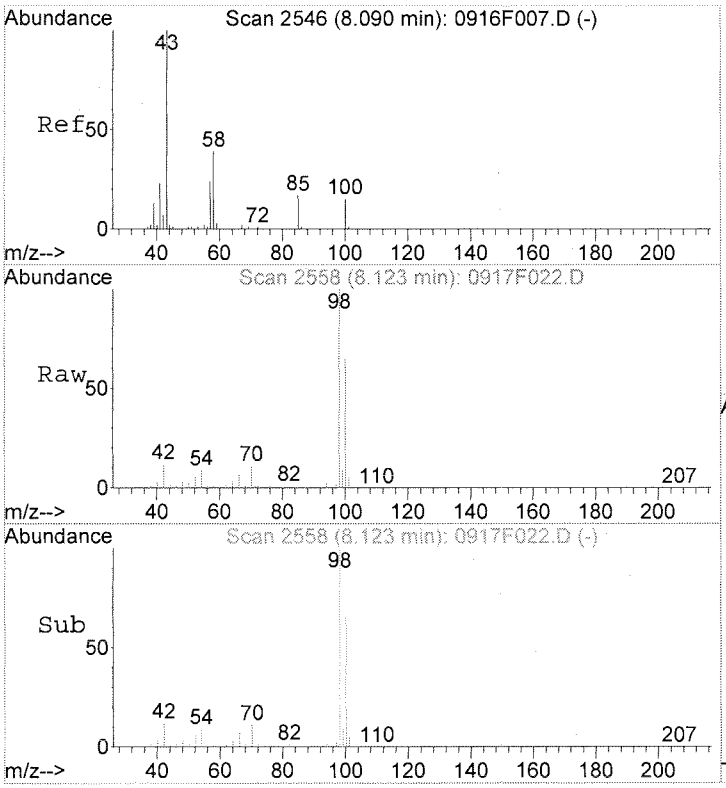


#57
Bromodichloromethane
Concen: 0.06 PPB
RT: 7.43 min Scan# 2308
Delta R.T. -0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 83 Resp: 2014

Ion	Ratio	Lower	Upper
83	100		
85	58.8	34.1	94.1
127	0.0	0.0	38.6

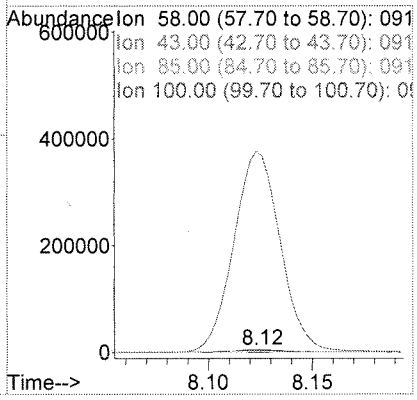


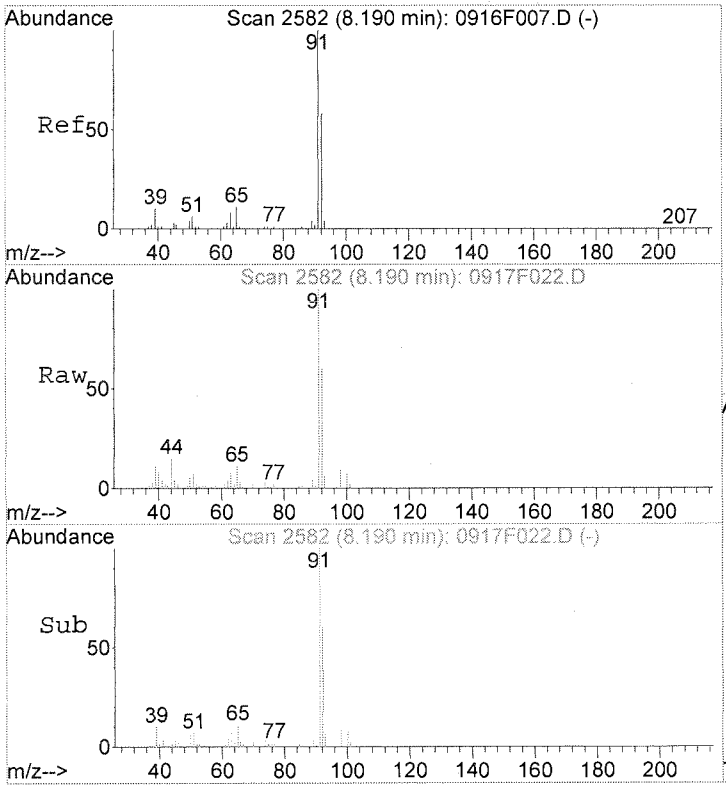


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.68 PPB
RT: 8.12 min Scan# 2558
Delta R.T. 0.04 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 58 Resp: 7512

Ion	Ratio	Lower	Upper
58	100		
43	50.9	232.7	292.7#
85	5.0	14.7	74.7#
100	7751.0	8.0	68.0#

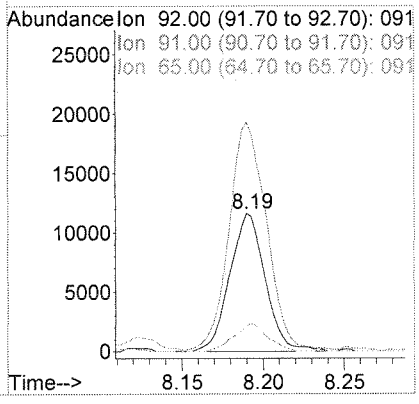


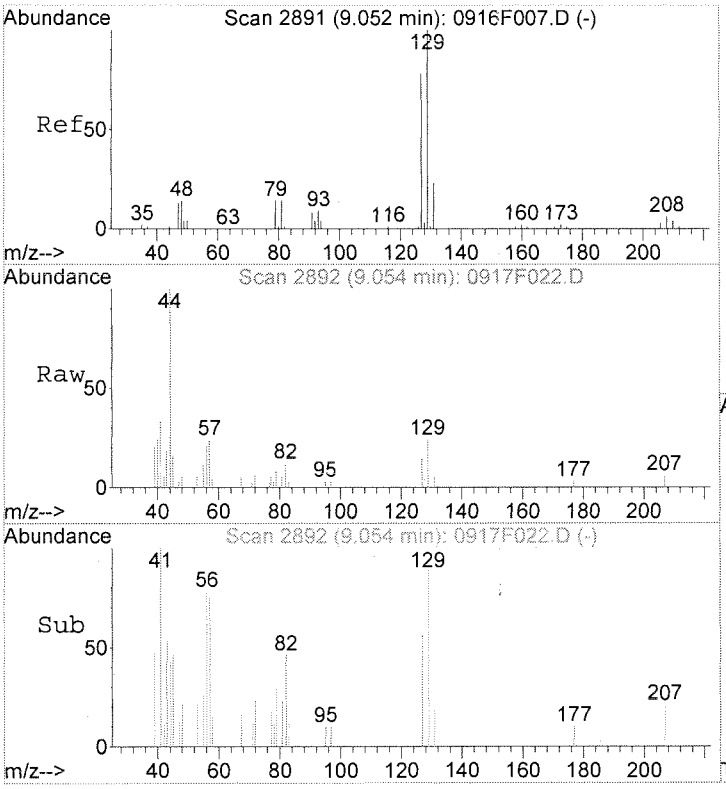


#63
Toluene
Concen: 0.29 PPB
RT: 8.19 min Scan# 2582
Delta R.T. -0.00 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 92 Resp: 17670

Ion	Ratio	Lower	Upper
92	100		
91	164.6	144.2	204.2
65	18.8	0.0	50.2

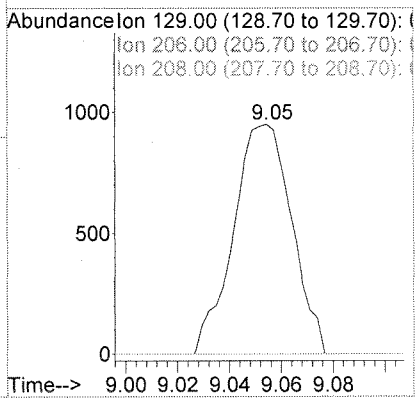


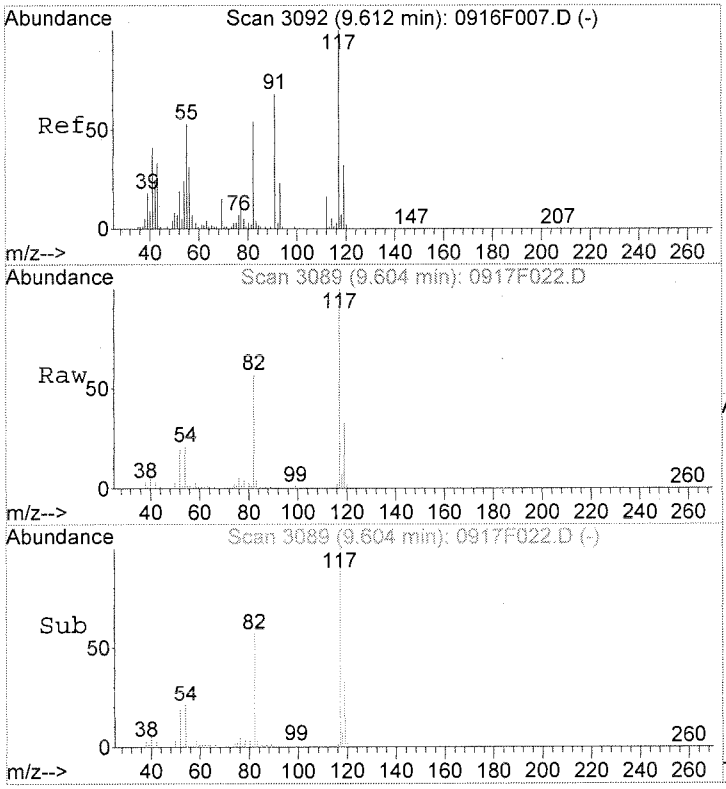


#72
Dibromochloromethane
Concen: 0.06 PPB
RT: 9.05 min Scan# 2892
Delta R.T. 0.00 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion:129 Resp: 1485

Ion	Ratio	Lower	Upper
129	100		
206	0.0	0.0	32.8
208	0.0	0.0	36.7

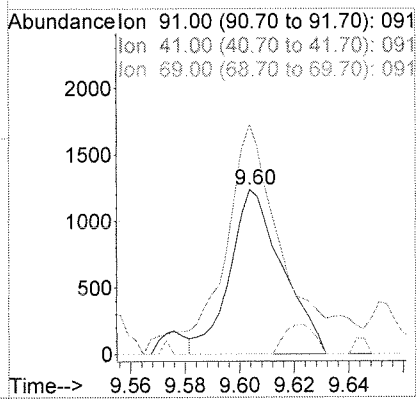


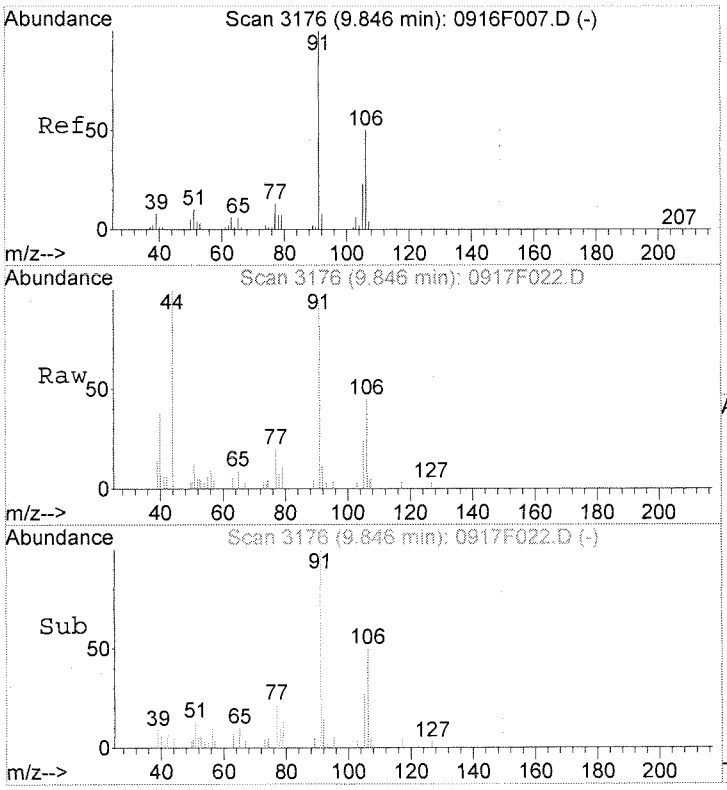


#74
1-Chlorohexane
Concen: 0.05 PPB
RT: 9.60 min Scan# 3089
Delta R.T. -0.01 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion: 91 Resp: 1648

Ion	Ratio	Lower	Upper
91	100		
41	124.9	29.5	89.5#
69	0.0	0.0	49.9

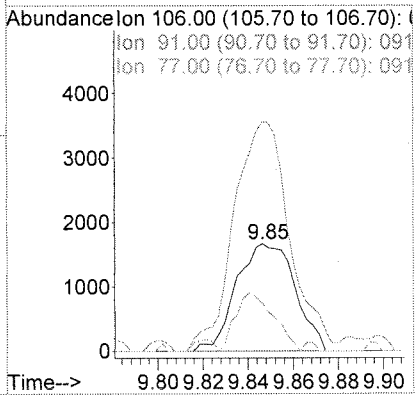




#78
m,p-Xylenes
Concen: 0.07 PPB
RT: 9.85 min Scan# 3176
Delta R.T. -0.00 min
Lab File: 0917F022.D
Acq: 17 Sep 2013 7:38 pm

Tgt Ion:106 Resp: 3002

Ion	Ratio	Lower	Upper
106	100		
91	213.2	173.6	233.6
77	44.1	0.0	55.7



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: 09/12/2013
Date Received: 09/14/2013

Volatile Organic Compounds

Sample Name: Trip Blank 4
Lab Code: K1309638-012

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	91	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F017.D
Lab ID: K1309638-012
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 16:35
Date Quantitated: 09/18/2013 10:39
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14701

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KS 9-18-13

Secondary Review: 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F017.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 16:35	**Quant Date:**	09/18/2013 10:39	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-012			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC Unp	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309638
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282914	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14701
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	964476	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	382324	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	295496	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	237341	9.12	91	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	932063	9.80	98	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	322701	9.57	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Vinyl Chloride				62	0		0.075	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Methylene Chloride	3.15		0.00	84	1523	0.0600	0.10	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Toluene				92	0d		0.054	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F017.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 16:35	**Quant Date:**	09/18/2013 10:39	**Vial:**	16
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-012			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	m,p-Xylenes				106	0		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
3	1,4-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F017.D Vial: 16
Acq On : 17 Sep 2013 4:35 pm Operator: KS
Sample : K1309638-012 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:29:20 2013 Quant Results File: 081213MS27_8260.RES

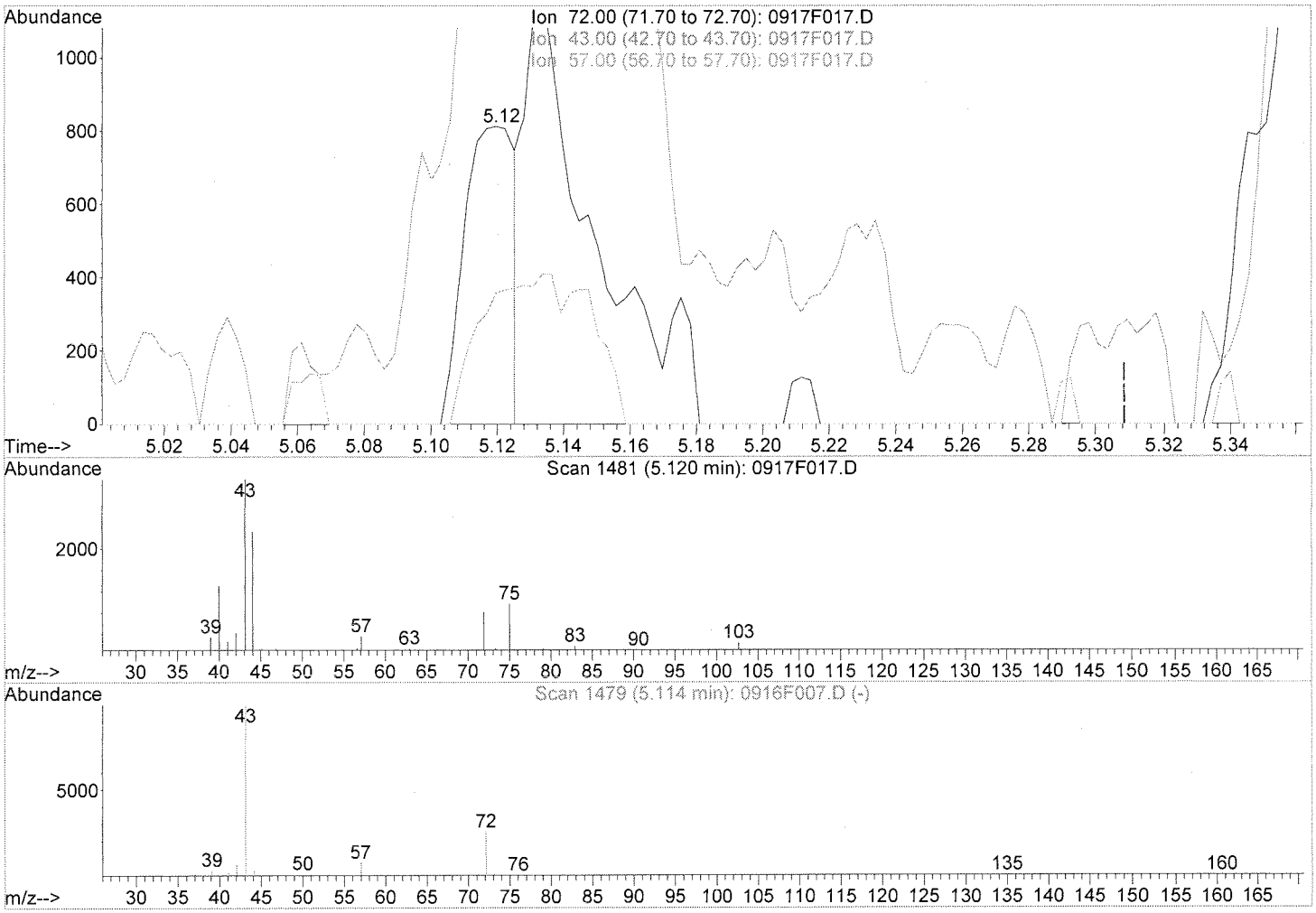
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	964476	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	382324	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	295496	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	237341	9.12	PPB		0.00
Spiked Amount 10.000			Recovery =	91.20%			
47) 1,2-Dichloroethane-d4	6.10	65	242686	9.71	PPB		0.00
Spiked Amount 10.000			Recovery =	97.10%			
62) Toluene-d8	8.12	98	932063	9.80	PPB		0.00
Spiked Amount 10.000			Recovery =	98.00%			
84) 4-Bromofluorobenzene	10.79	95	322701	9.57	PPB		0.00
Spiked Amount 10.000			Recovery =	95.70%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	1594	0.05	PPB		91
14) Acetone	2.65	43	10940	3.57	PPB		97
15) Iodomethane	2.68	142	1786	0.16	PPB		94
16) Carbon Disulfide	2.70	76	1151	0.02	PPB		79
21) Methylene Chloride	3.15	84	1523	0.06	PPB		93
34) 2-Butanone	5.13	72	2559m	2.07	PPB		
39) Tetrahydrofuran	5.37	71	7041	5.37	PPB	#	84
40) Chloroform	5.47	83	4837	0.11	PPB	#	65
61) 4-Methyl-2-pentanone (MIBK	8.12	58	7706	1.68	PPB	#	1
74) 1-Chlorohexane	9.61	91	1727	0.05	PPB	#	54

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F017.D Vial: 16
Acq On : 17 Sep 2013 4:35 pm Operator: KS
Sample : K1309638-012 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:36 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration



TIC: 0917F017.D

(34) 2-Butanone (T)

5.12min 0.69PPB

response 856

Ion	Exp%	Act%
72.00	100	100
43.00	393.30	324.85#
57.00	31.80	43.91
0.00	0.00	0.00

Manual Integration:

Before

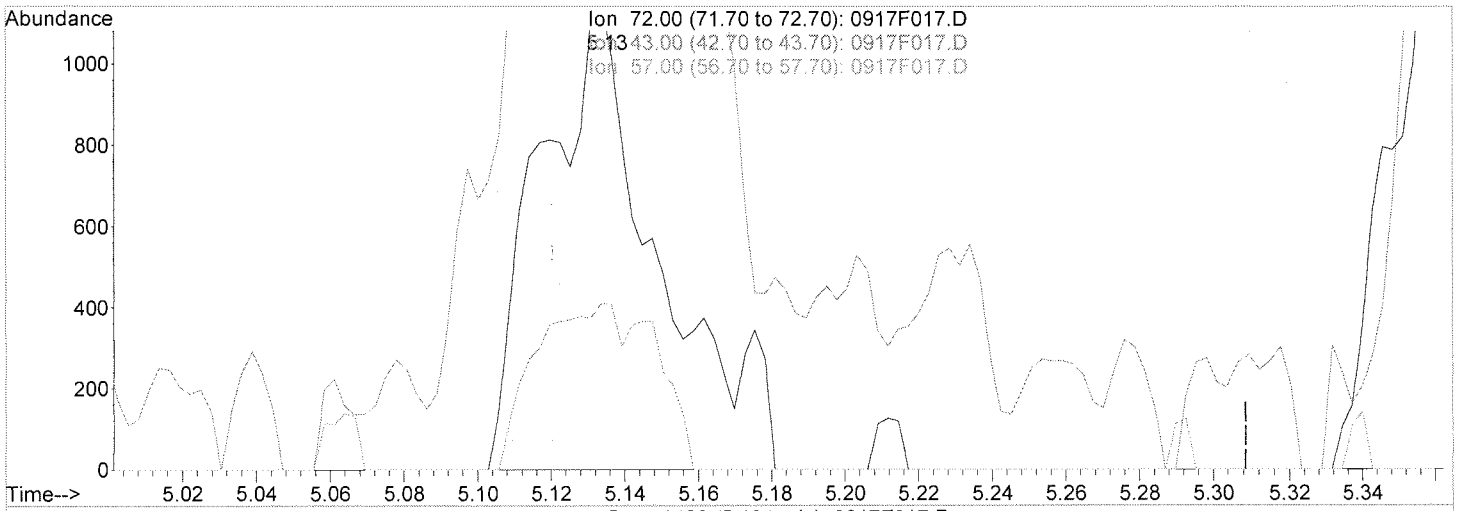
KS
9-18-13

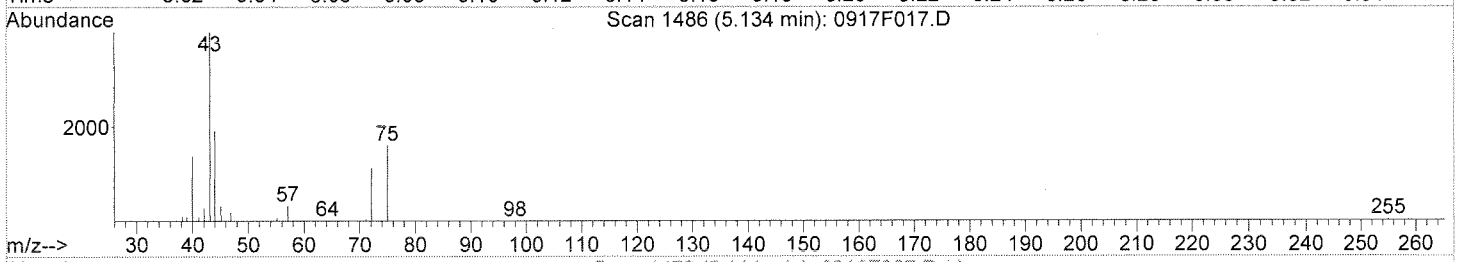
9/19/13

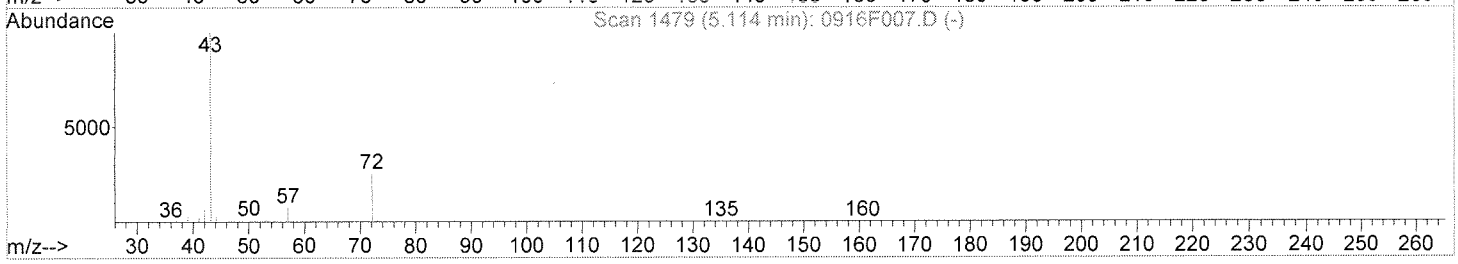
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F017.D Vial: 16
Acq On : 17 Sep 2013 4:35 pm Operator: KS
Sample : K1309638-012 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:37 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F017.D

(34) 2-Butanone (T)

5.13min 2.07PPB m

response 2559

Ion	Exp%	Act%
72.00	100	100
43.00	393.30	334.84#
57.00	31.80	35.01
0.00	0.00	0.00

Manual Integration:

After

Split peak

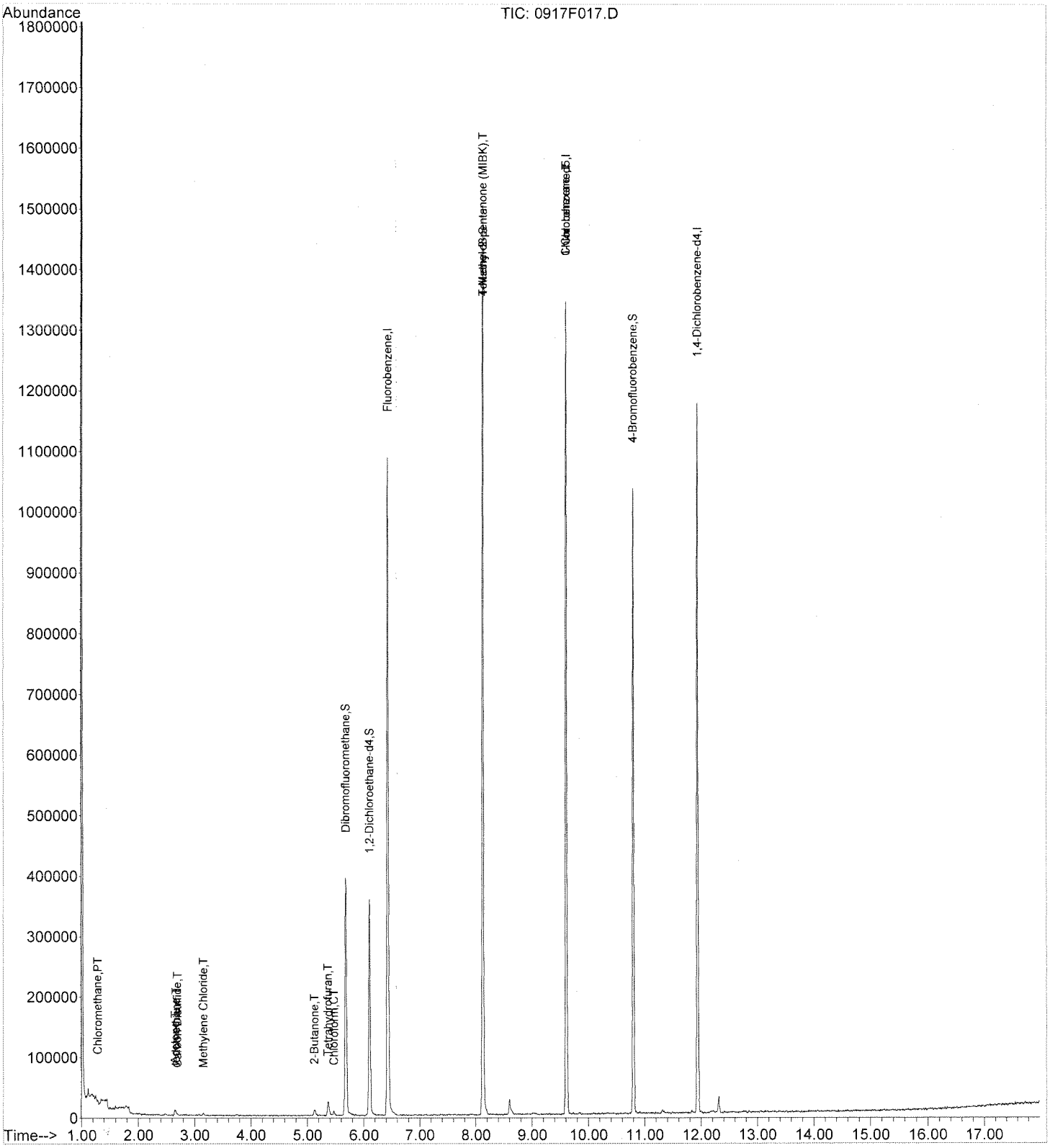
09/18/13

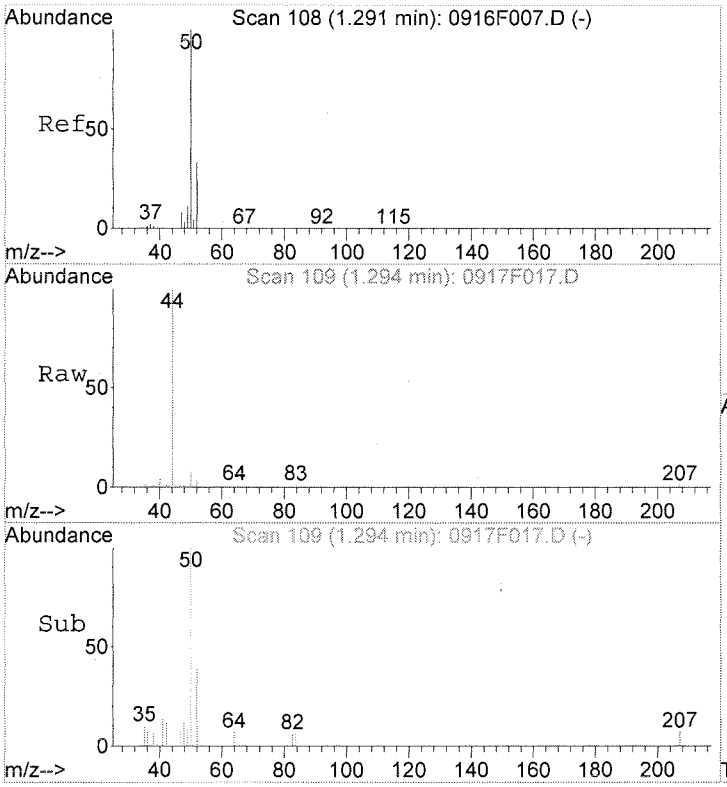
KS

9/19/13

Data File : J:\MS27\DATA\091713\0917F017.D Vial: 16
Acq On : 17 Sep 2013 4:35 pm Operator: KS
Sample : K1309638-012 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 18 10:39 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

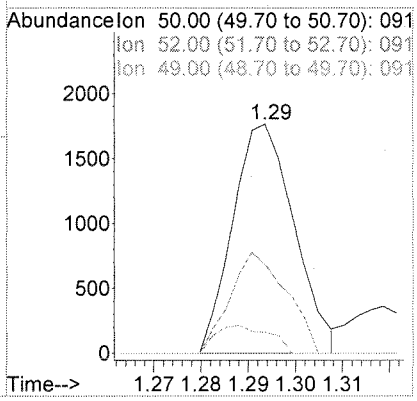


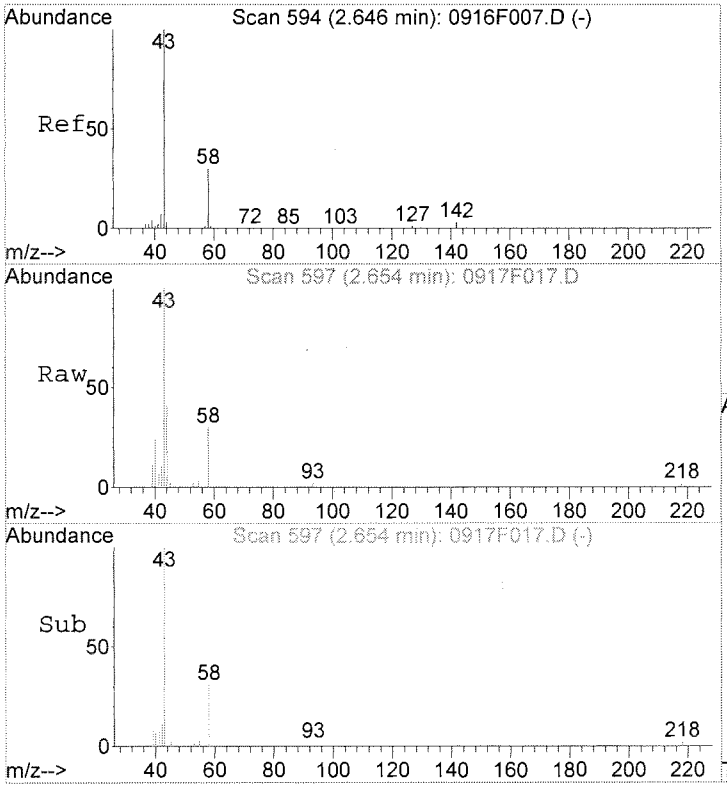


#3
Chloromethane
Concen: 0.05 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 50 Resp: 1594

Ion	Ratio	Lower	Upper
50	100		
52	38.6	2.5	62.5
49	9.1	0.0	40.3

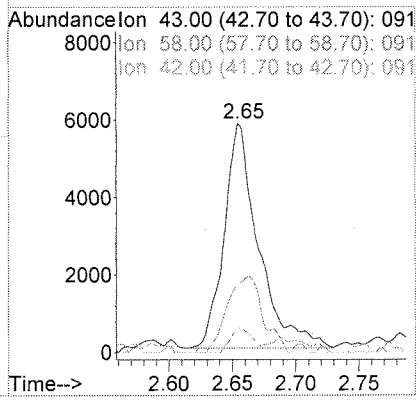


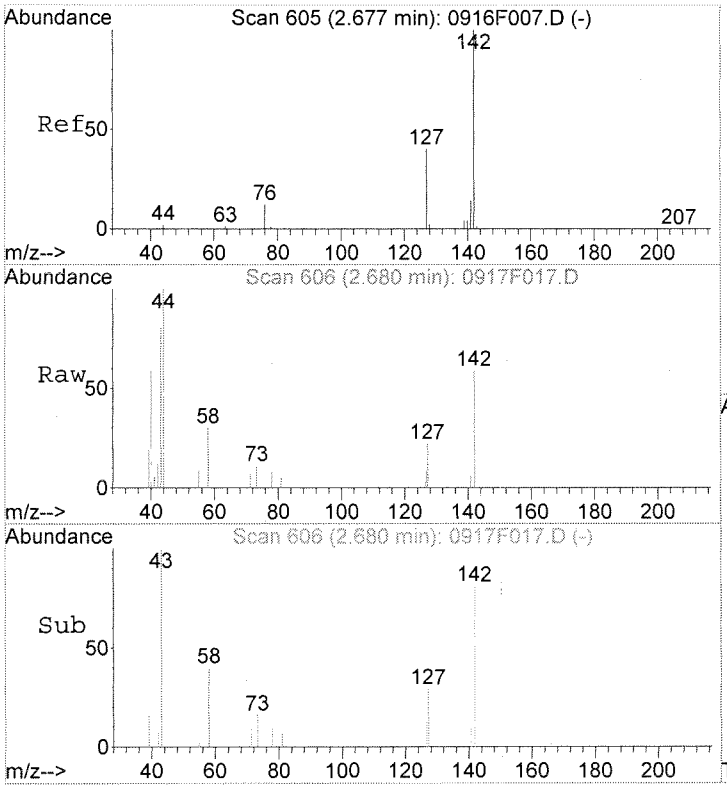


#14
Acetone
Concen: 3.57 PPB
RT: 2.65 min Scan# 597
Delta R.T. 0.01 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 43 Resp: 10940

Ion	Ratio	Lower	Upper
43	100		
58	30.3	0.0	59.8
42	11.0	0.0	37.4

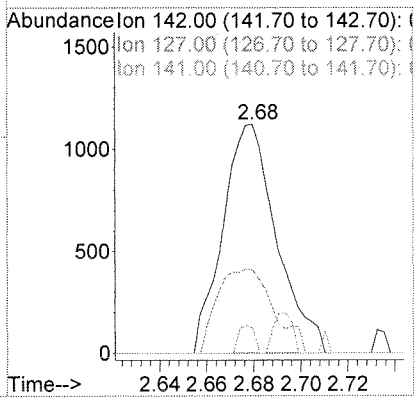


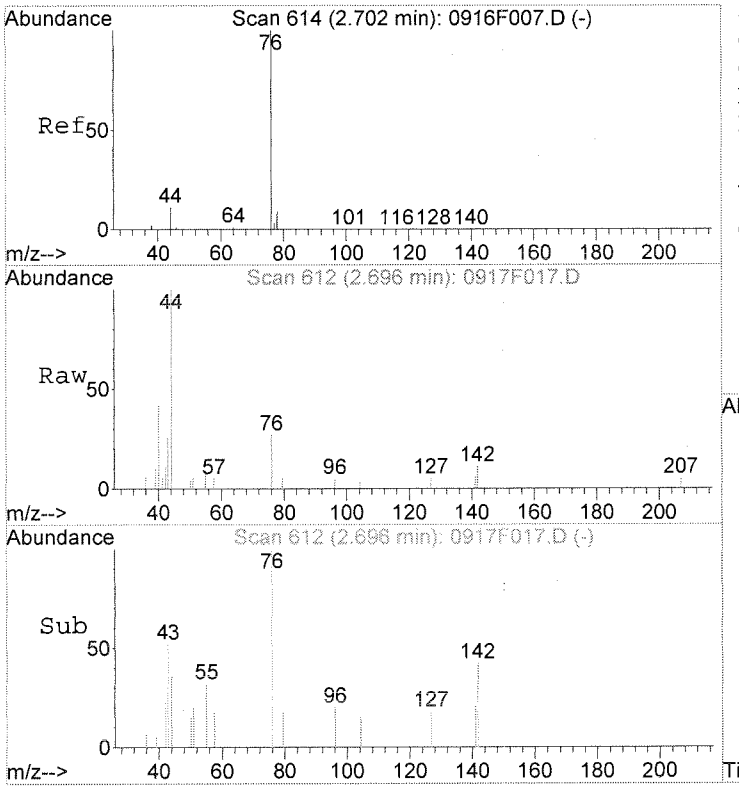


#15
Iodomethane
Concen: 0.16 PPB
RT: 2.68 min Scan# 606
Delta R.T. 0.01 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion:142 Resp: 1786

Ion	Ratio	Lower	Upper
142	100		
127	36.3	9.8	69.8
141	11.0	0.0	44.5

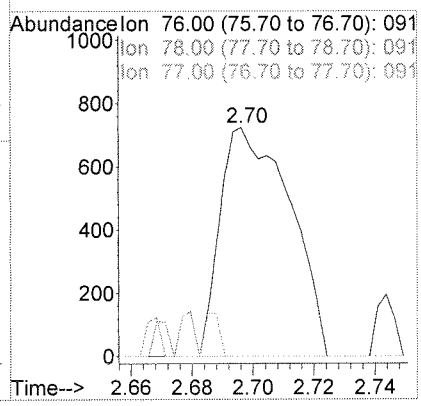


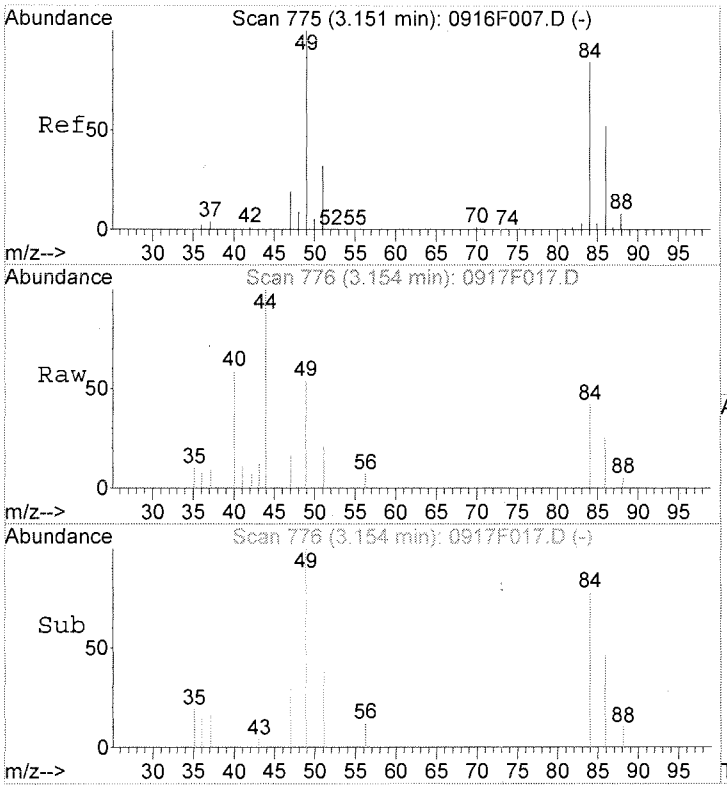


#16
Carbon Disulfide
Concen: 0.02 PPB
RT: 2.70 min Scan# 612
Delta R.T. -0.00 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 76 Resp: 1151

Ion	Ratio	Lower	Upper
76	100		
78	0.0	0.0	38.8
77	0.0	0.0	32.7

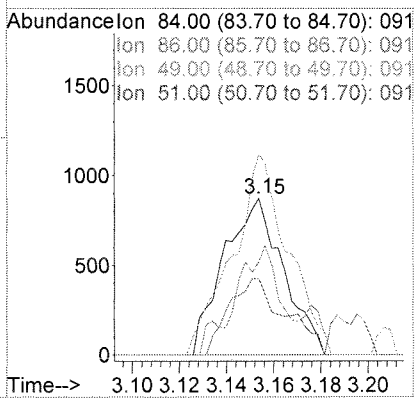


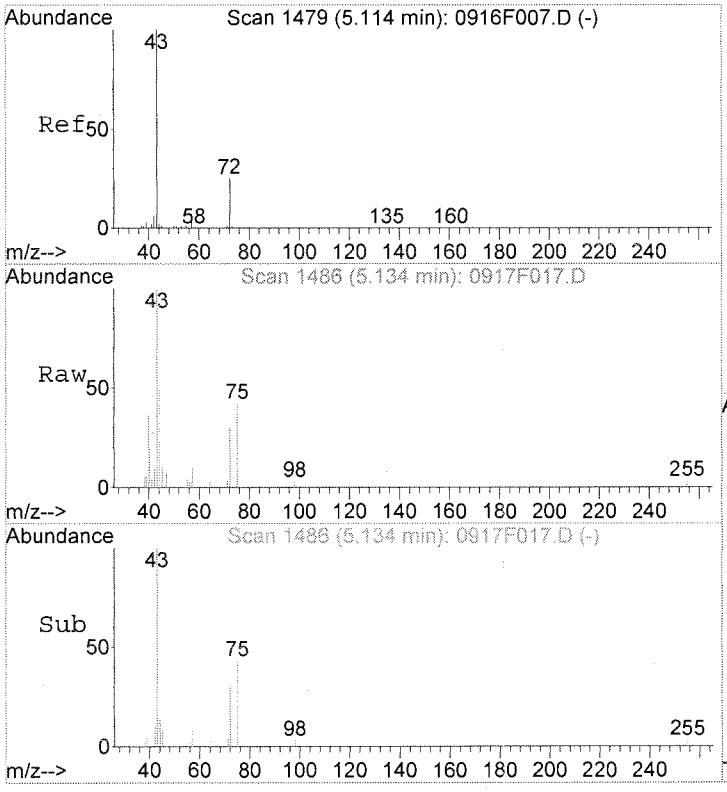


#21
Methylene Chloride
Concen: 0.06 PPB
RT: 3.15 min Scan# 776
Delta R.T. 0.01 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 84 Resp: 1523

Ion	Ratio	Lower	Upper
84	100		
86	59.4	35.0	95.0
49	128.3	93.9	153.9
51	48.5	10.0	70.0

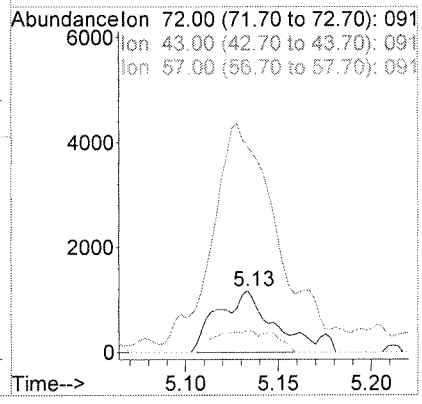


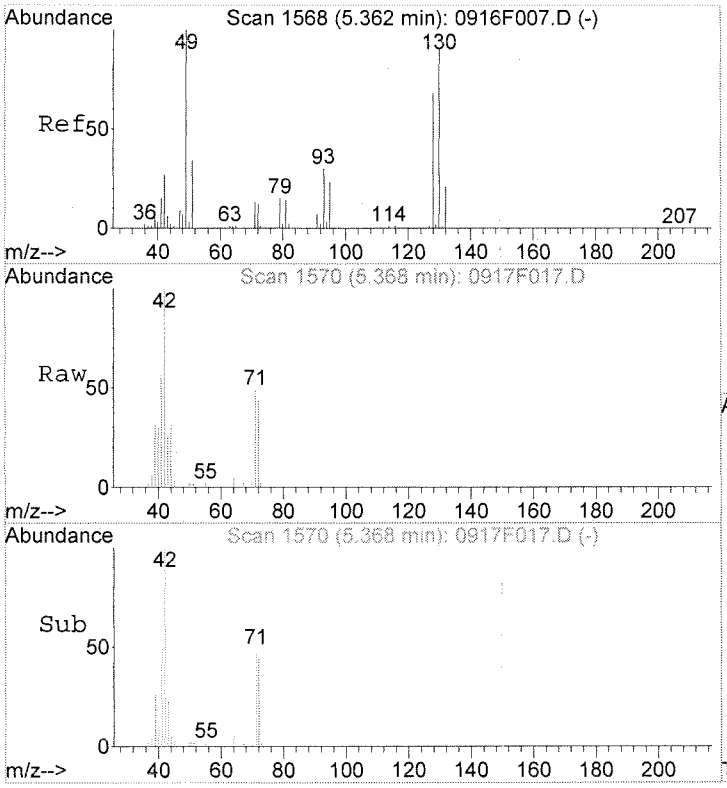


#34
2-Butanone
Concen: 2.07 PPB m
RT: 5.13 min Scan# 1486
Delta R.T. 0.03 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 72 Resp: 2559

Ion	Ratio	Lower	Upper
72	100		
43	334.8	363.3	423.3#
57	35.0	1.8	61.8

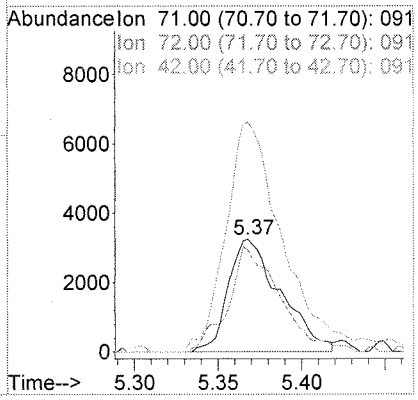


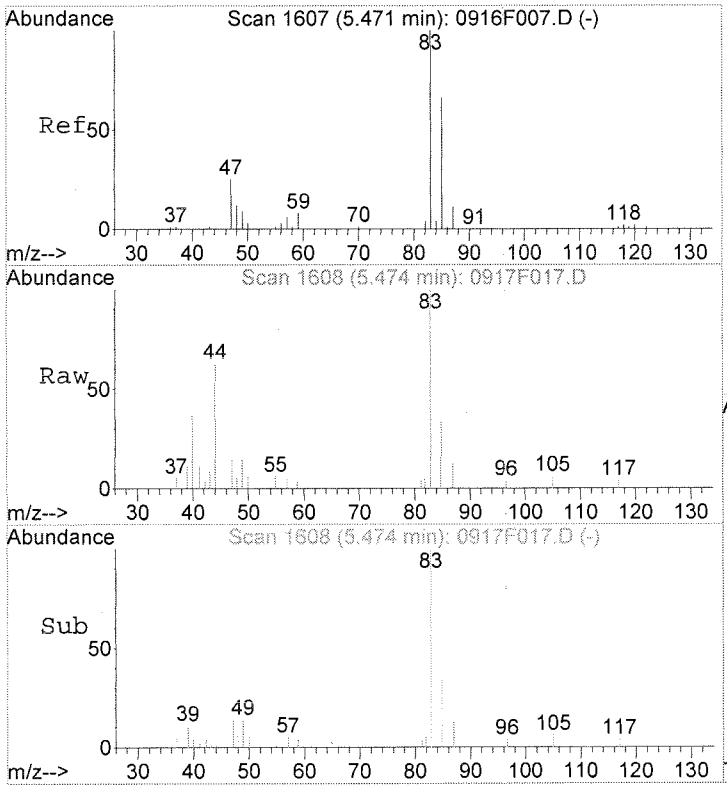


#39
Tetrahydrofuran
Concen: 5.37 PPB
RT: 5.37 min Scan# 1570
Delta R.T. 0.01 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 71 Resp: 7041

Ion	Ratio	Lower	Upper
71	100		
72	90.4	69.2	129.2
42	199.5	201.1	261.1#

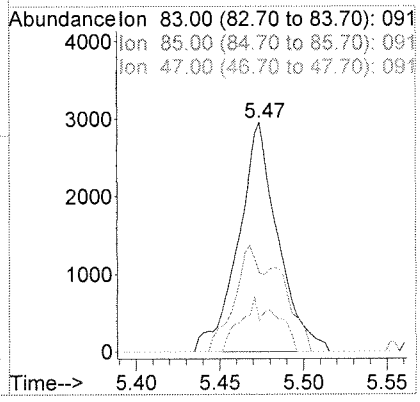


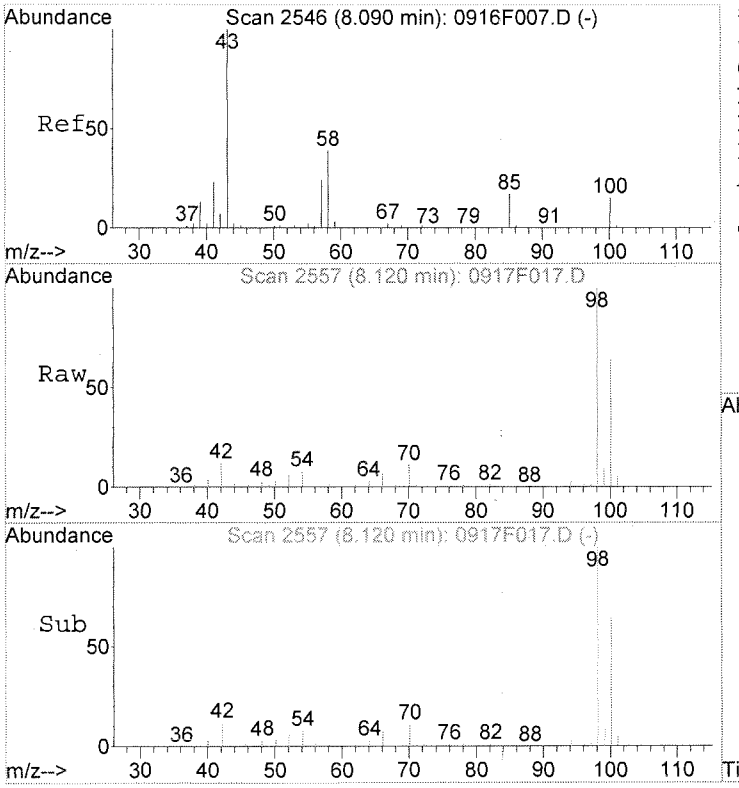


#40
Chloroform
Concen: 0.11 PPB
RT: 5.47 min Scan# 1608
Delta R.T. 0.01 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 83 Resp: 4837

Ion	Ratio	Lower	Upper
83	100		
85	34.5	35.4	95.4#
47	13.6	0.0	55.1

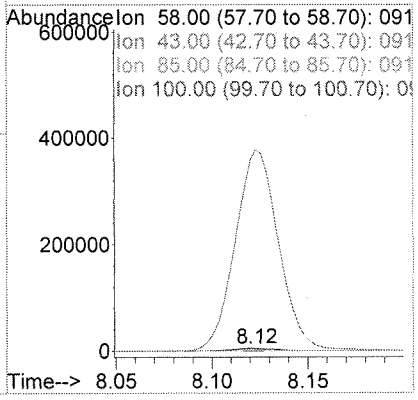


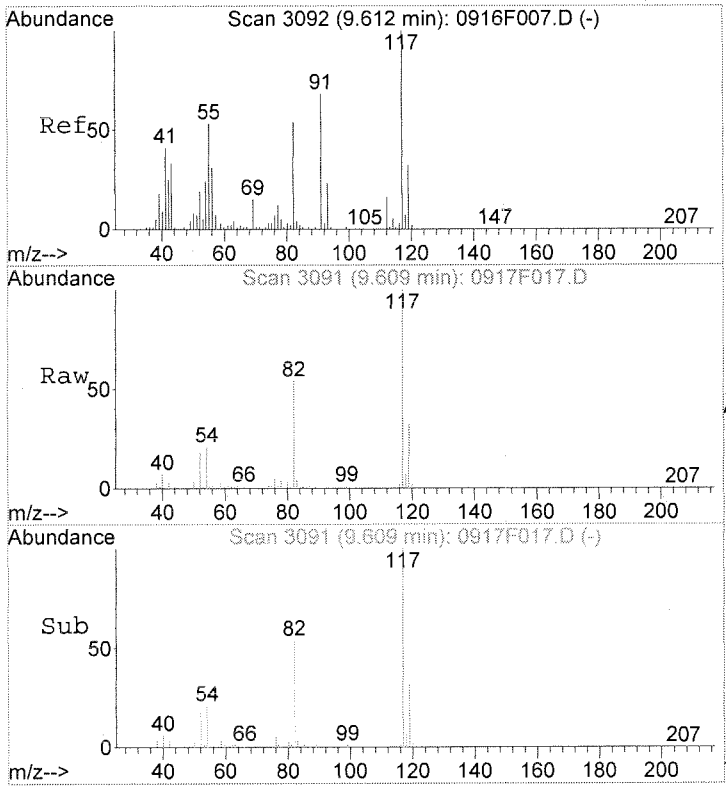


#61
4-Methyl-2-pentanone (MIBK)
Concen: 1.68 PPB
RT: 8.12 min Scan# 2557
Delta R.T. 0.03 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 58 Resp: 7706

Ion	Ratio	Lower	Upper
58	100		
43	47.7	232.7	292.7#
85	3.4	14.7	74.7#
100	7329.5	8.0	68.0#

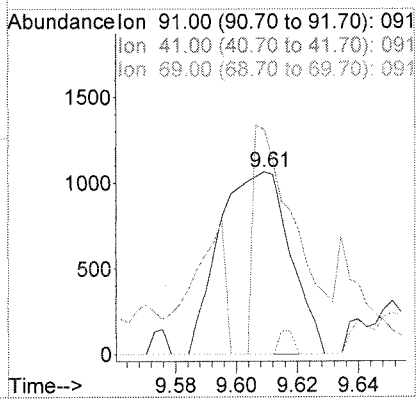




#74
1-Chlorohexane
Concen: 0.05 PPB
RT: 9.61 min Scan# 3091
Delta R.T. -0.00 min
Lab File: 0917F017.D
Acq: 17 Sep 2013 4:35 pm

Tgt Ion: 91 Resp: 1727

Ion	Ratio	Lower	Upper
91	100		
41	94.4	29.5	89.5#
69	0.0	0.0	49.9



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1310087-4

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	ND	U	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	98	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F009.D
Lab ID: KWG1310087-4
RunType: MB
Matrix: WATER

Date Acquired: 09/17/2013 12:57
Date Quantitated: 09/17/2013 14:01
Batch ID: KWG1310078
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0073	0.01	NA	LOT
	tert-Butyl Alcohol	0.0080	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0008	0.01	NA	
Second Source ICAL Verification	Acrolein	39.8	NA	30	
	Iodomethane	99.5	NA	30	
Continuing Calibration Recovery	Iodomethane	26.3	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0085	0.01	NA	
	Isobutyl Alcohol	0.0044	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	

Primary Review: 9.18.13

Secondary Review: 9/18/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282677	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:			
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ1093
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	965738	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	384125	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	302091	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	240174	9.22	92	85-115	OK	
1	1,2-Dichloroethane-d4	6.10	0.00	0.00	65	239451	9.57	96	70-120	OK	
1	Toluene-d8	8.12	0.00	0.00	98	929662	9.77	98	85-120	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	319788	9.44	94	75-120	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane	1.29		0.00	50	2155	0.0700	0.0700	J	
1	Vinyl Chloride				62	0		0.075	U	
1	Bromomethane	1.67		0.00	96	782	0.0400	0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Acrolein	2.48		0.00	56	746	0.5500	1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.66	0.01	0.00	43	7269	2.37	3.3	U	
1	Iodomethane	2.68		0.00	142	2462	0.2200	0.220	J	
1	Carbon Disulfide	2.70		0.00	76	3157	0.0500	0.069	U	
1	3-Chloro-1-propene				76	0d		0.094	U	
1	Acetonitrile				40	0d		4.5	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.15		0.00	84	725	0.0300	0.10	U	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)	5.13	0.02	0.00	72	1163	0.9400	1.9	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Propionitrile				54	0		1.1	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Chloroform				83	0d		0.072	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Isobutyl Alcohol				43	0d		6.9	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				41	0d		0.96	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	8.19		0.00	92	820	0.0100	0.054	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0d		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane	9.60	-0.01	0.00	91	1956	0.0600	0.0600	J	
2	Chlorobenzene				112	0		0.11	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene	10.60		0.00	105	995	0.0100	0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0d		0.10	U	
3	1,3,5-Trimethylbenzene				105	0d		0.089	U	
3	4-Chlorotoluene				91	0d		0.13	U	
3	tert-Butylbenzene				119	0d		0.059	U	
3	1,2,4-Trimethylbenzene				105	0d		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene				146	0d		0.12	U	
3	n-Butylbenzene				91	0d		0.054	U	
3	1,2-Dichlorobenzene				146	0d		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene				180	0d		0.10	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	
3	Hexachlorobutadiene				225	0		0.11	U	
3	Naphthalene				128	0		0.088	U	
3	1,2,3-Trichlorobenzene				180	0		0.11	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282677	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8			**Calibration ID:**	CAL12690
Title:					
Tune Ref:	J:\MS27\DATA\091713\0917F002.D			**Method ID:**	MJ119
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	965738	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	384125	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	302091	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	240174	9.22	92	73-122	OK	
1	1,2-Dichloroethane-d4	6.10	0.00	0.00	65	239451	9.57	96	59-127	OK	
1	Toluene-d8	8.12	0.00	0.00	98	929662	9.77	98	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	319788	9.44	94	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane	1.29		0.00	50	2155	0.0700	0.0700	J	
1	Vinyl Chloride				62	0		0.075	U	
1	1,3-Butadiene				54	0				
1	Bromomethane	1.67		0.00	96	782	0.0400	0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Dichlorofluoromethane (CFC 21)				67	0d		0.065	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Ethyl Ether				59	0		0.075	U	
1	Acrolein	2.48		0.00	56	746	0.5500	1.2	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.66	0.01	0.00	43	7269	2.37	3.3	U	
1	Iodomethane	2.68		0.00	142	2462	0.2200	0.220	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
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?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
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Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.70		0.00	76	3157	0.0500	0.069	U	
1	2-Propanol				45	0d		17	U	
1	3-Chloro-1-propene				76	0d		0.094	U	
1	Methyl Acetate				43	0d		0.38	U	
1	Acetonitrile				40	0d		4.5	U	
1	Methylene Chloride	3.15		0.00	84	725	0.0300	0.10	U	
1	tert-Butyl Alcohol				59	0		4.4	U	
1	Acrylonitrile				53	0		0.28	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	n-Hexane	3.75		0.00	57	2442	0.0800	0.090	U	
1	Diisopropyl Ether				45	0		0.048	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	
1	Chloroprene				53	0		3.6	U	
1	tert-Butyl Ethyl Ether				59	0		0.048	U	
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)	5.13	0.02	0.00	72	1163	0.9400	1.9	U	
1	Ethyl Acetate				61	0		0.57	U	
1	Propionitrile				54	0		1.1	U	
1	Methacrylonitrile				67	0		0.32	U	
1	Bromochloromethane				128	0		0.16	U	
1	Tetrahydrofuran	5.37	0.01	0.00	71	1617	1.23	1.23	J	
1	Chloroform				83	0d		0.072	U	
1	Cyclohexane				56	0		0.36	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Isobutyl Alcohol				43	0d		6.9	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	tert-Amyl Methyl Ether				55	0d		0.098	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	Methylcyclohexane				83	0		0.33	U	
1	1,2-Dichloropropane				63	0		0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Methyl Methacrylate				69	0		0.13	U	
1	1,4-Dioxane				88	0		11	U	
1	Bromodichloromethane				83	0		0.091	U	
1	2-Nitropropane				41	0d		0.96	U	
1	2-Chloroethyl Vinyl Ether				63	0		0.16	U	
1	cis-1,3-Dichloropropene				75	0		0.18	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	8.19		0.00	92	820	0.0100	0.054	U	
2	n-Octane				85	0		0.16	U	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	Ethyl Methacrylate				69	0d		0.15	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	1-Chlorohexane	9.60	-0.01	0.00	91	1956	0.0600	0.0600	J	
2	Chlorobenzene				112	0		0.11	U	
2	Ethylbenzene				106	0		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes				106	0d		0.11	U	
2	o-Xylene				106	0		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene	10.60		0.00	105	995	0.0100	0.051	U	
2	cis-1,4-Dichloro-2-butene				89	0		1.4	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	trans-1,4-Dichloro-2-butene				53	0		0.35	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0d		0.10	U	
3	1,3,5-Trimethylbenzene				105	0d		0.089	U	
3	4-Chlorotoluene				91	0d		0.13	U	
3	tert-Butylbenzene				119	0d		0.059	U	
3	1,2,4-Trimethylbenzene				105	0d		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene				146	0d		0.12	U	
3	n-Butylbenzene				91	0d		0.054	U	
3	1,2-Dichlorobenzene				146	0d		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,3,5-Trichlorobenzene				180	0d		0.10	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	
3	Hexachlorobutadiene				225	0		0.11	U	
3	Naphthalene				128	0		0.088	U	

U: Undetected at or above MDL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F009.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 12:57	**Quant Date:**	09/17/2013 14:01	**Vial:**	8
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310087-4			**Soln Conc. Units:**	PPB

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	1,2,3-Trichlorobenzene				180	0		0.11	U	
	Benzyl Chloride				0	0		1.0	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	1,2,3-Trimethylbenzene				0	0		2.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F009.D Vial: 8
Acq On : 17 Sep 2013 12:57 pm Operator: KS
Sample : MB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 13:52:56 2013 Quant Results File: 081213MS27_8260.RES

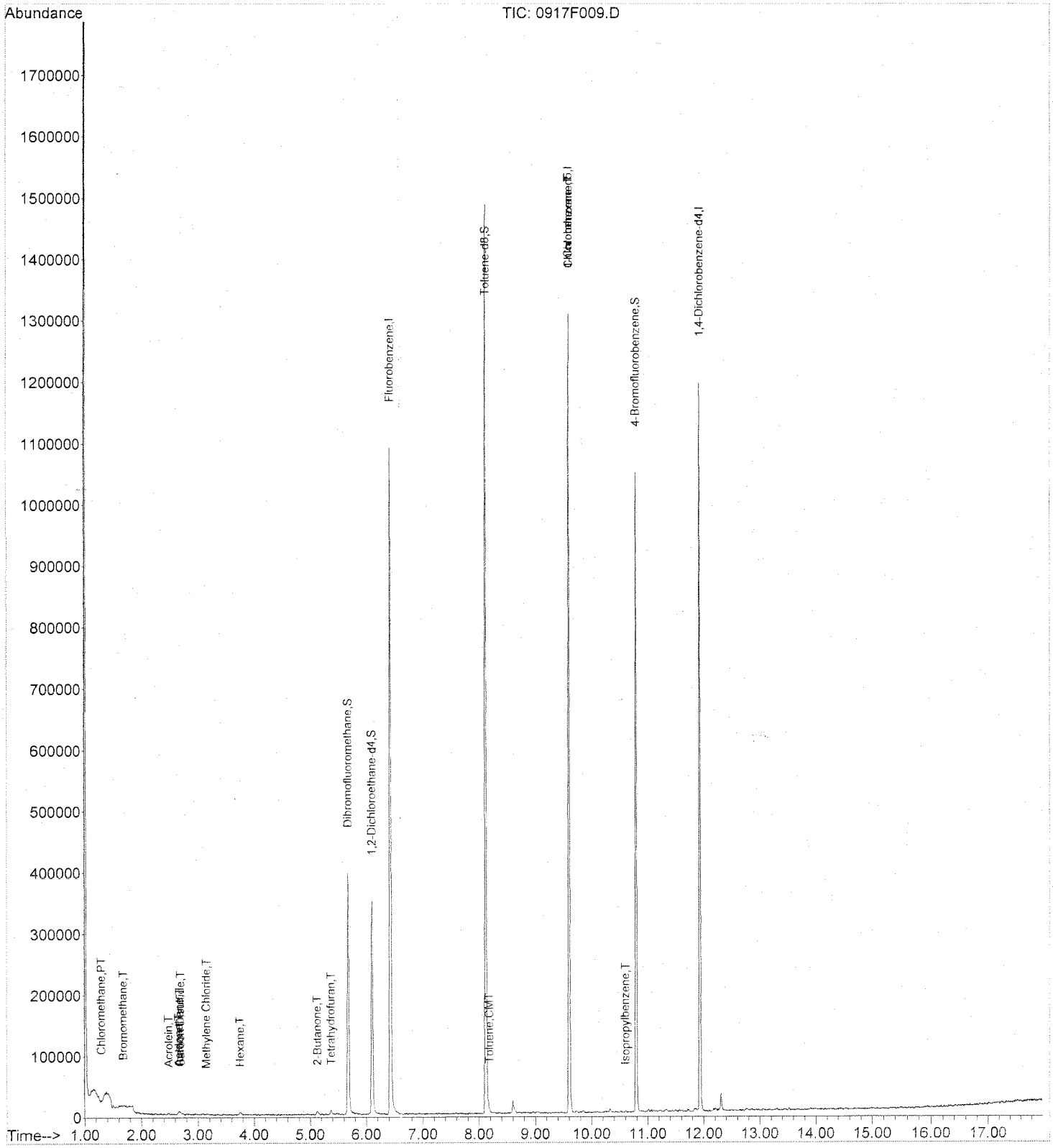
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

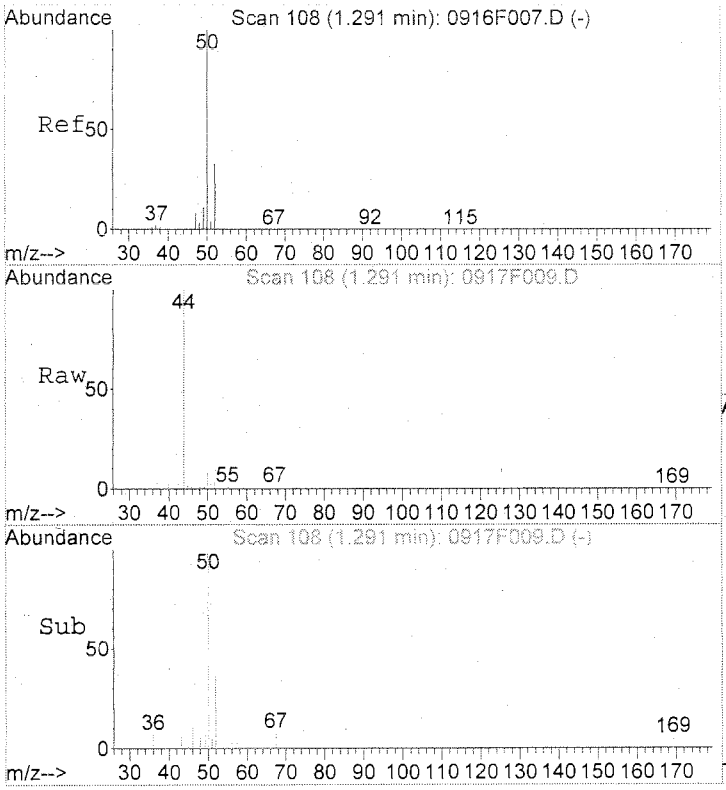
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	965738	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	384125	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	302091	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	240174	9.22	PPB		0.00
Spiked Amount 10.000			Recovery =	92.20%			
47) 1,2-Dichloroethane-d4	6.10	65	239451	9.57	PPB		0.00
Spiked Amount 10.000			Recovery =	95.70%			
62) Toluene-d8	8.12	98	929662	9.77	PPB		0.00
Spiked Amount 10.000			Recovery =	97.70%			
84) 4-Bromofluorobenzene	10.79	95	319788	9.44	PPB		0.00
Spiked Amount 10.000			Recovery =	94.40%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	2155	0.07	PPB		94
6) Bromomethane	1.67	96	782	0.04	PPB		76
11) Acrolein	2.48	56	746	0.55	PPB		84
14) Acetone	2.66	43	7269	2.37	PPB		89
15) Iodomethane	2.68	142	2462	0.22	PPB		77
16) Carbon Disulfide	2.70	76	3157	0.05	PPB		51
21) Methylene Chloride	3.15	84	725	0.03	PPB	#	68
26) Hexane	3.75	57	2442	0.08	PPB		93
34) 2-Butanone	5.13	72	1163	0.94	PPB	#	36
39) Tetrahydrofuran	5.37	71	1617	1.23	PPB	#	66
63) Toluene	8.19	92	820	0.01	PPB		80
74) 1-Chlorohexane	9.60	91	1956	0.06	PPB	#	58
82) Isopropylbenzene	10.60	105	995	0.01	PPB	#	58

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F009.D Vial: 8
Acq On : 17 Sep 2013 12:57 pm Operator: KS
Sample : MB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 14:01 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

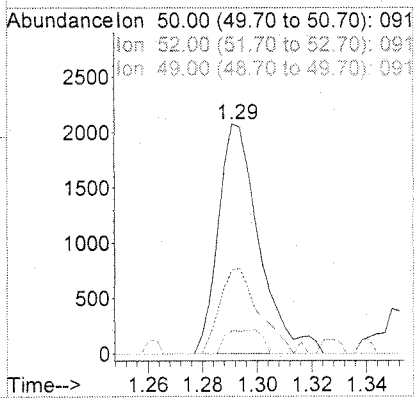


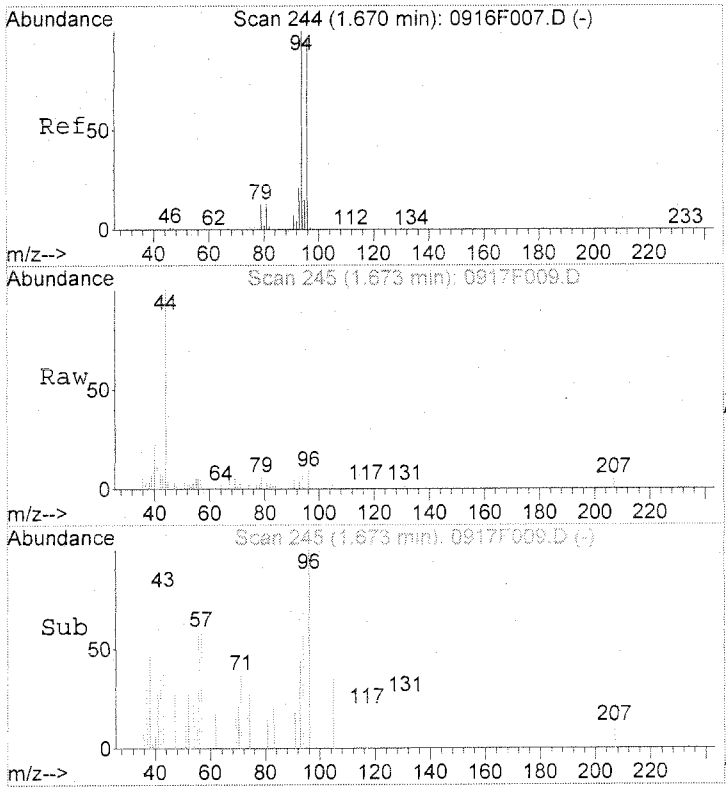


#3
Chloromethane
Concen: 0.07 PPB
RT: 1.29 min Scan# 108
Delta R.T. -0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 50 Resp: 2155

Ion	Ratio	Lower	Upper
50	100		
52	36.9	2.5	62.5
49	10.2	0.0	40.3

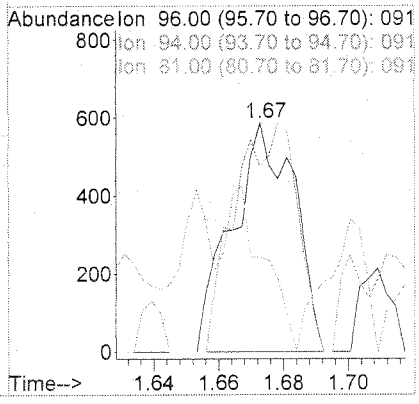


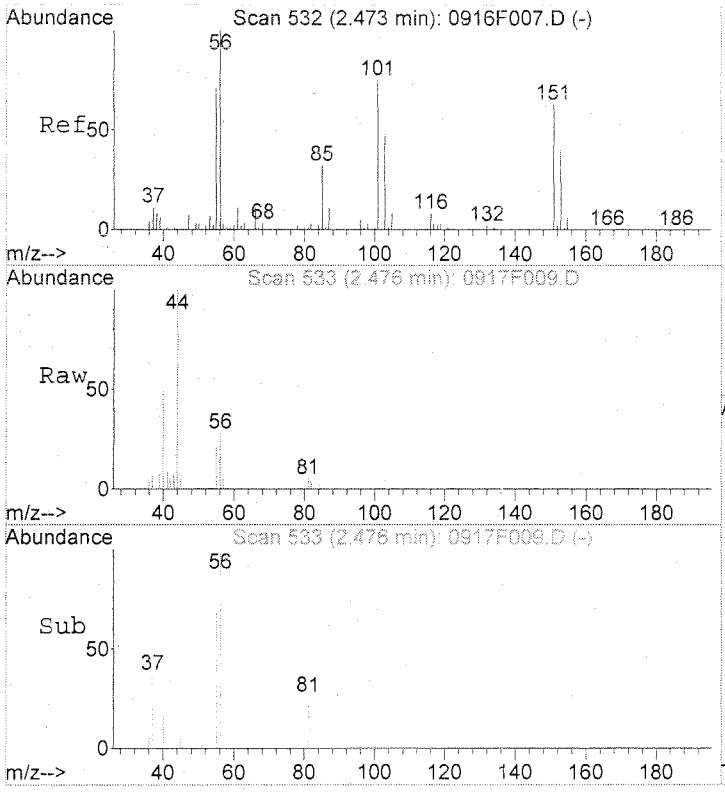


#6
Bromomethane
Concen: 0.04 PPB
RT: 1.67 min Scan# 245
Delta R.T. 0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 96 Resp: 782

Ion	Ratio	Lower	Upper
96	100		
94	80.8	77.3	137.3
81	8.8	0.0	43.8

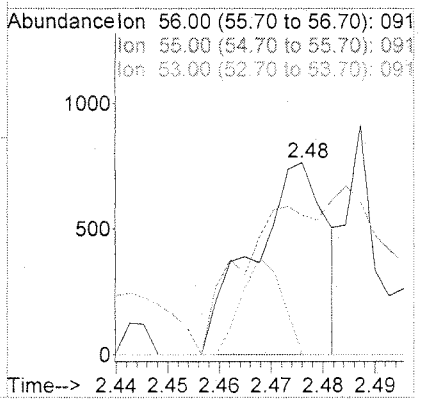


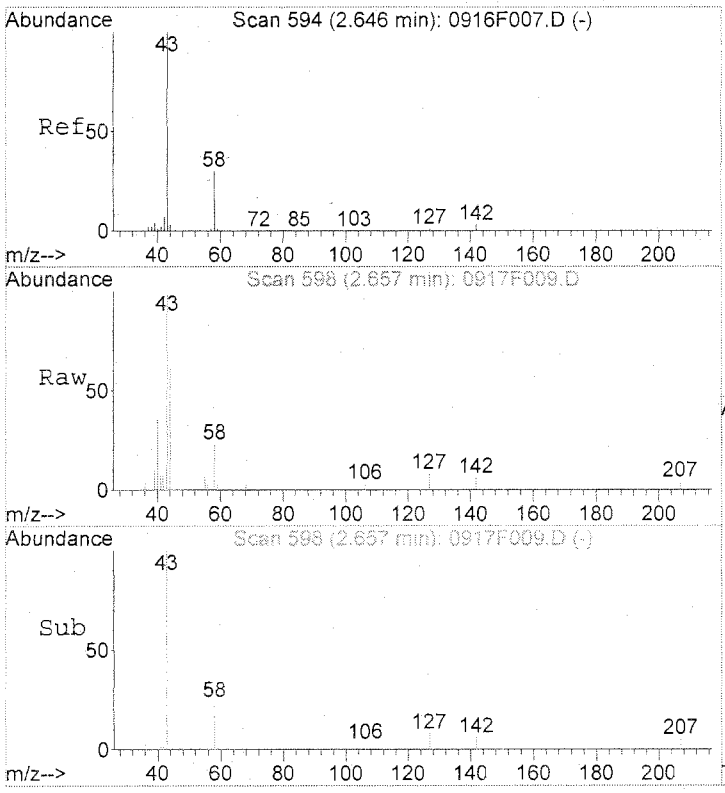


#11
Acrolein
Concen: 0.55 PPB
RT: 2.48 min Scan# 533
Delta R.T. 0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 56 Resp: 746

Ion	Ratio	Lower	Upper
56	100		
55	58.2	40.9	100.9
53	0.0	0.0	37.6

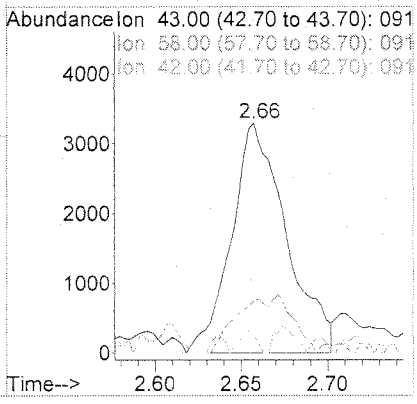


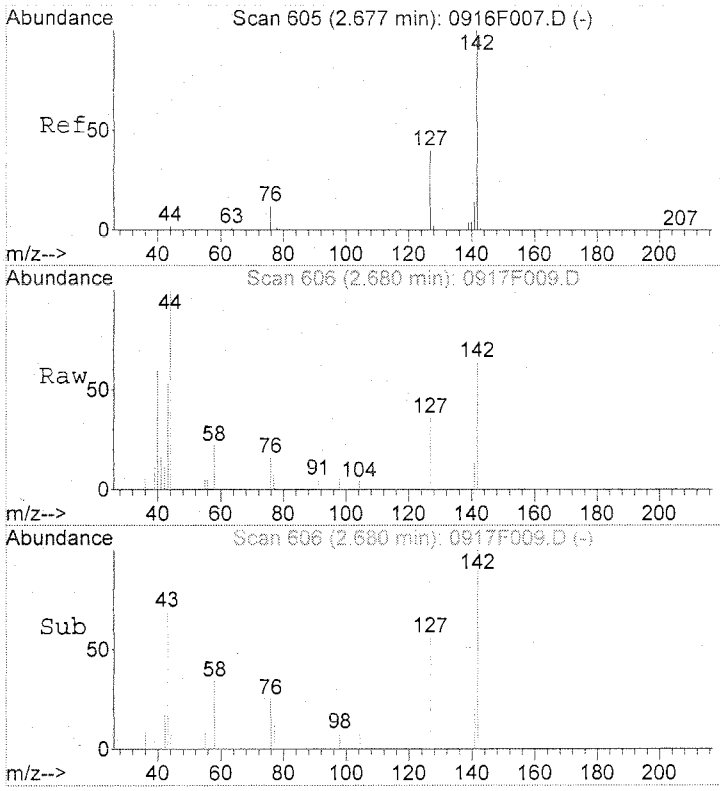


#14
Acetone
Concen: 2.37 PPB
RT: 2.66 min Scan# 598
Delta R.T. 0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 43 Resp: 7269

Ion	Ratio	Lower	Upper
43	100		
58	22.6	0.0	59.8
42	7.7	0.0	37.4

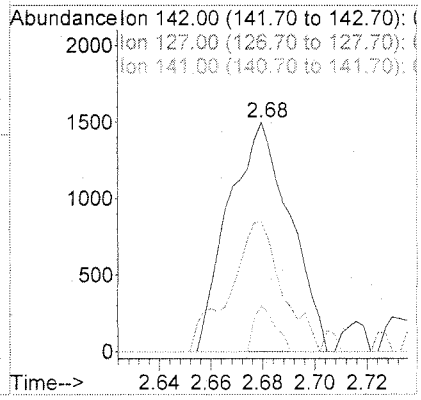


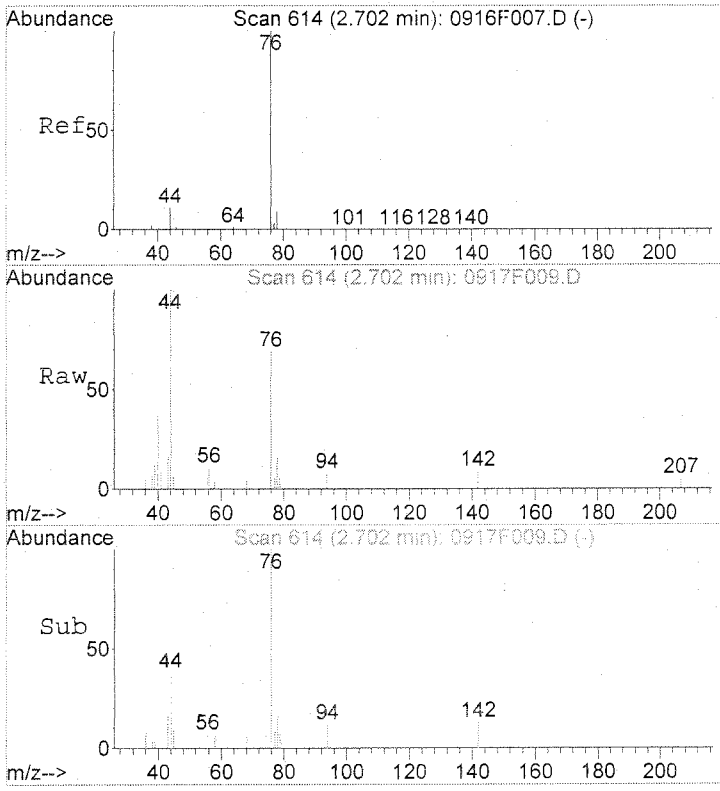


#15
Iodomethane
Concen: 0.22 PPB
RT: 2.68 min Scan# 606
Delta R.T. 0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion:142 Resp: 2462

Ion	Ratio	Lower	Upper
142	100		
127	56.4	9.8	69.8
141	19.8	0.0	44.5

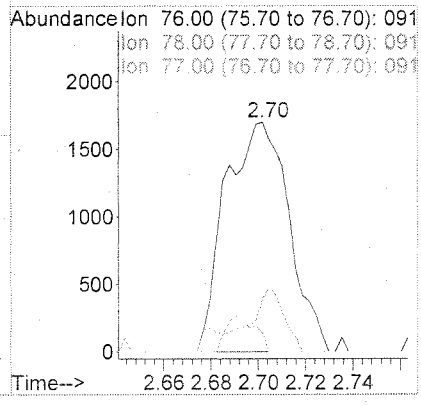


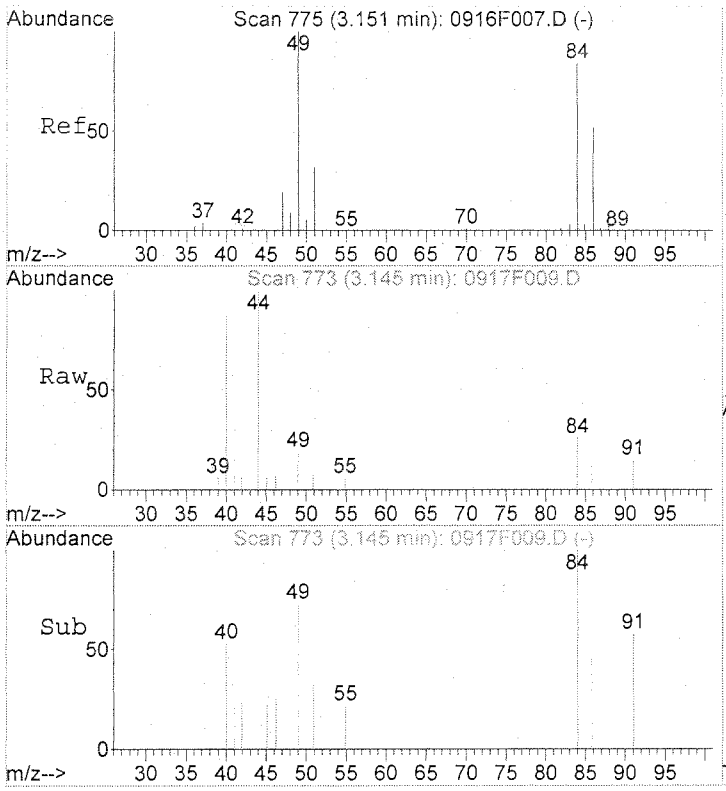


#16
Carbon Disulfide
Concen: 0.05 PPB
RT: 2.70 min Scan# 614
Delta R.T. 0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 76 Resp: 3157

Ion	Ratio	Lower	Upper
76	100		
78	30.0	0.0	38.8
77	7.9	0.0	32.7

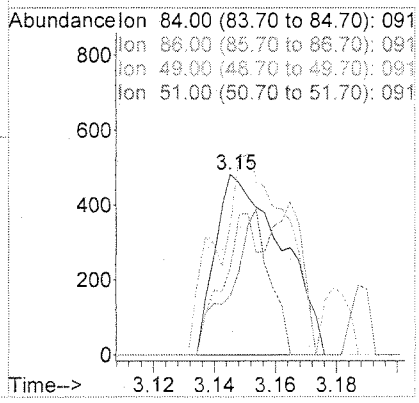


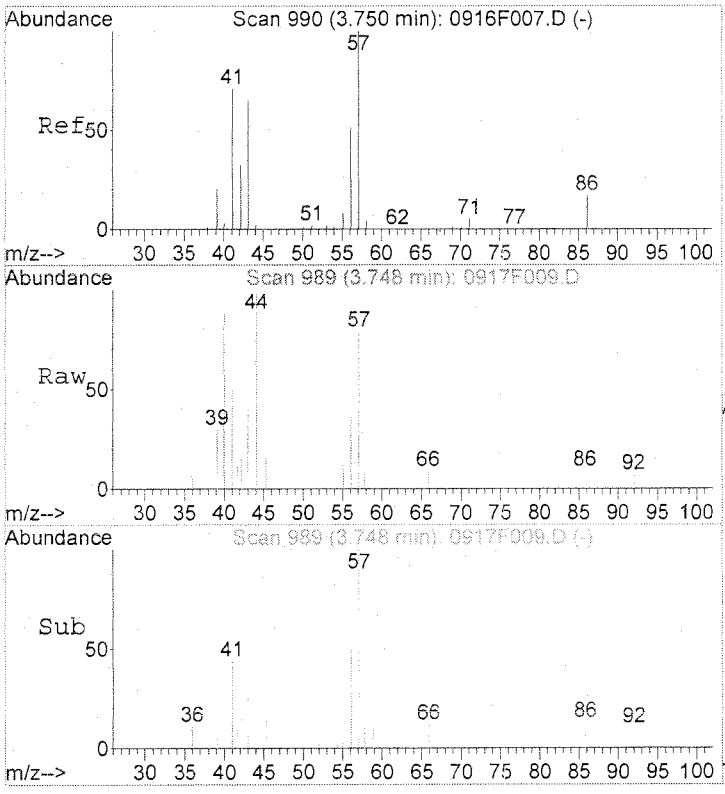


#21
Methylene Chloride
Concen: 0.03 PPB
RT: 3.15 min Scan# 773
Delta R.T. -0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 84 Resp: 725

Ion	Ratio	Lower	Upper
84	100		
86	48.0	35.0	95.0
49	73.1	93.9	153.9#
51	32.7	10.0	70.0

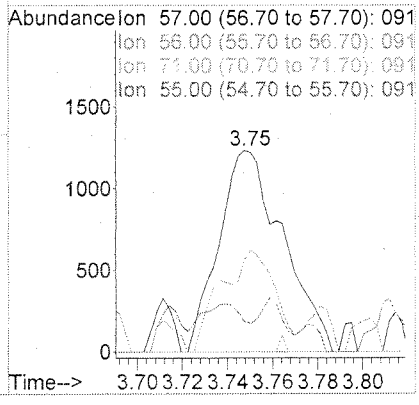


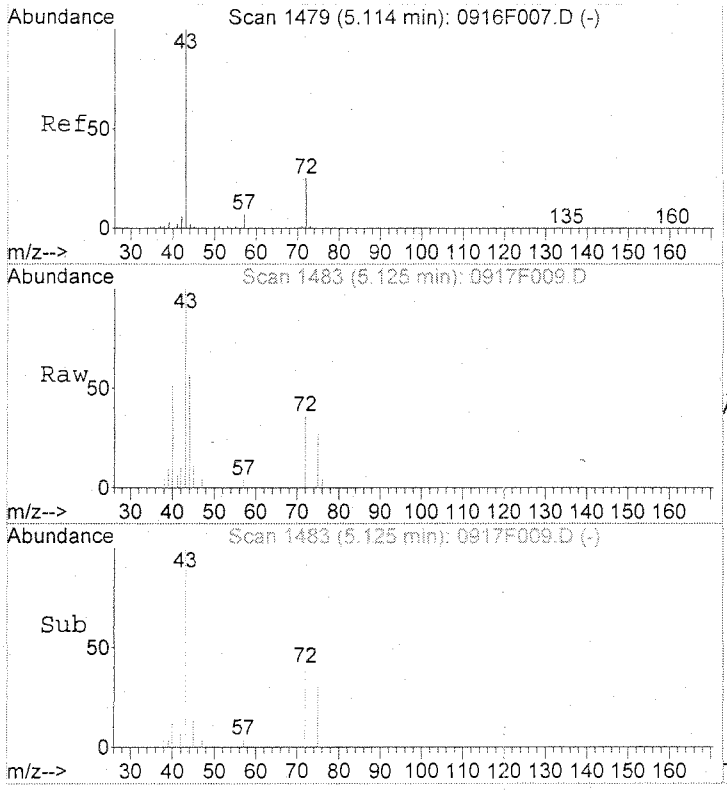


#26
Hexane
Concen: 0.08 PPB
RT: 3.75 min Scan# 989
Delta R.T. 0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 57 Resp: 2442

Ion	Ratio	Lower	Upper
57	100		
56	45.6	18.7	78.7
71	0.0	0.0	35.1
55	14.9	0.0	20.5

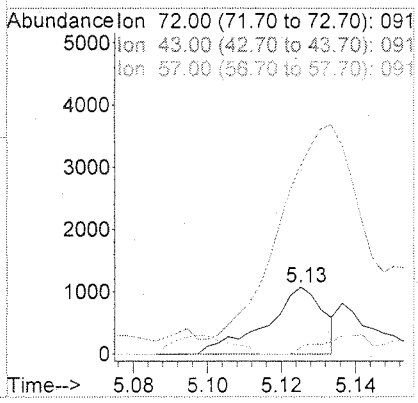


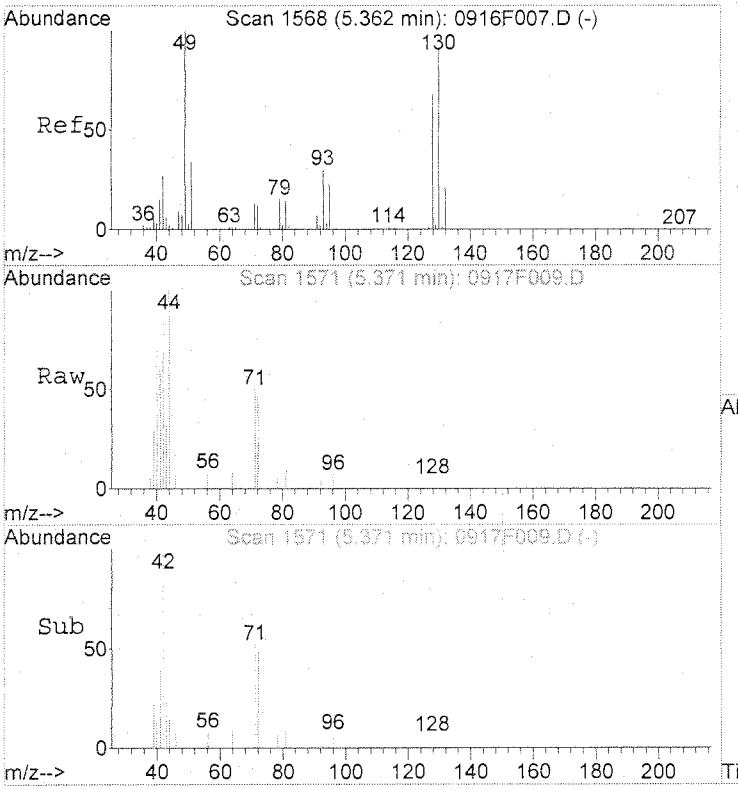


#34
2-Butanone
Concen: 0.94 PPB
RT: 5.13 min Scan# 1483
Delta R.T. 0.02 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 72 Resp: 1163

Ion	Ratio	Lower	Upper
72	100		
43	242.6	363.3	423.3#
57	0.0	1.8	61.8#

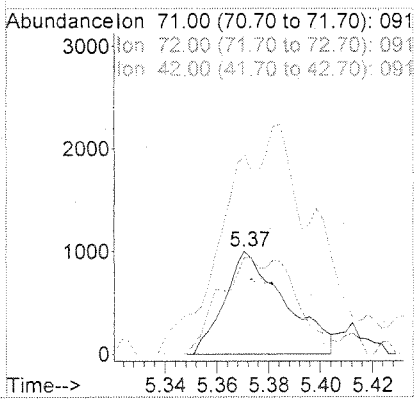


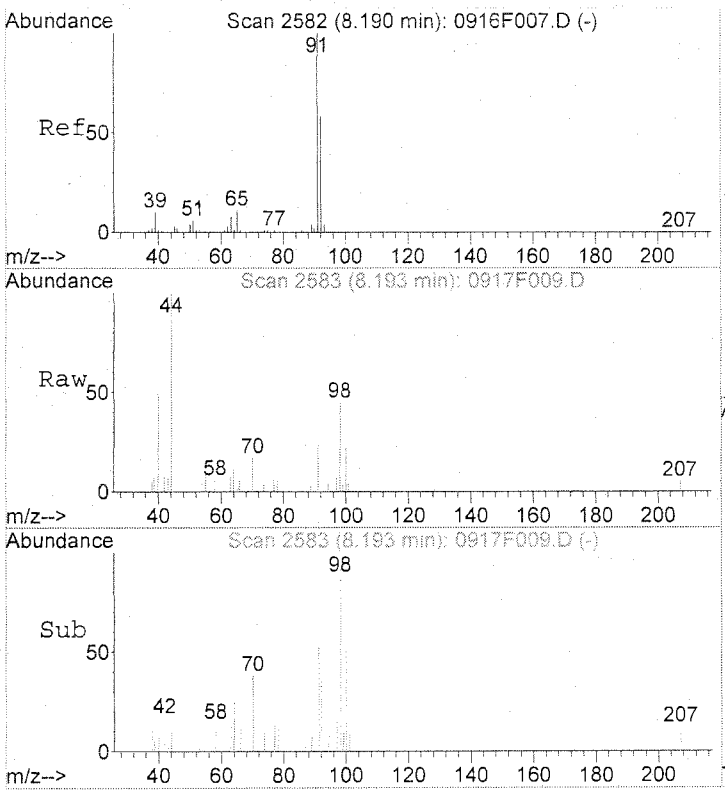


#39
Tetrahydrofuran
Concen: 1.23 PPB
RT: 5.37 min Scan# 1571
Delta R.T. 0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 71 Resp: 1617

Ion	Ratio	Lower	Upper
71	100		
72	93.5	69.2	129.2
42	155.5	201.1	261.1#

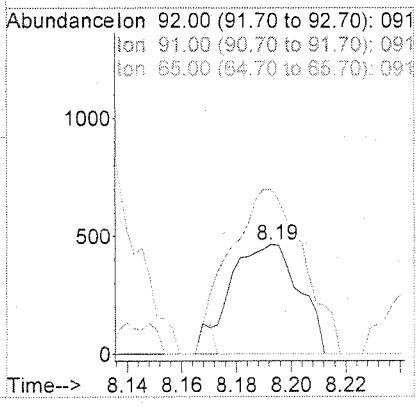


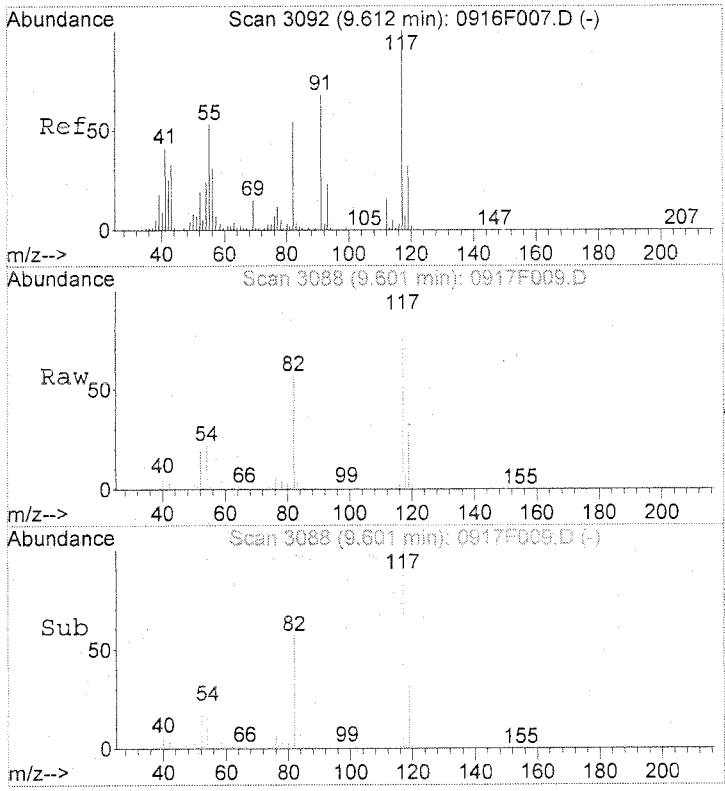


#63
Toluene
Concen: 0.01 PPB
RT: 8.19 min Scan# 2583
Delta R.T. 0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 92 Resp: 820

Ion	Ratio	Lower	Upper
92	100		
91	150.3	144.2	204.2
65	0.0	0.0	50.2

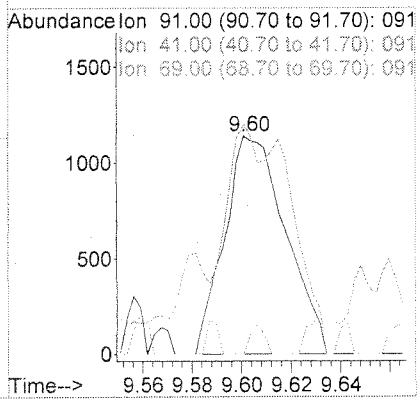


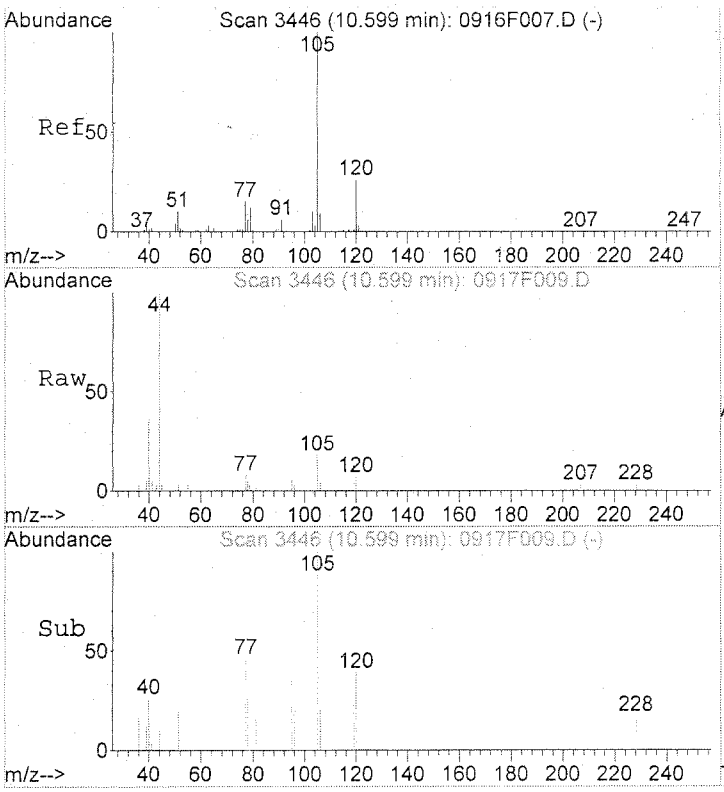


#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.60 min Scan# 3088
Delta R.T. -0.01 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion: 91 Resp: 1956

Ion	Ratio	Lower	Upper
91	100		
41	90.4	29.5	89.5#
69	0.0	0.0	49.9

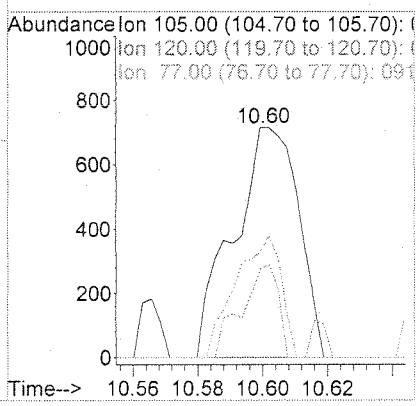




#82
Isopropylbenzene
Concen: 0.01 PPB
RT: 10.60 min Scan# 3446
Delta R.T. -0.00 min
Lab File: 0917F009.D
Acq: 17 Sep 2013 12:57 pm

Tgt Ion:105 Resp: 995

Ion	Ratio	Lower	Upper
105	100		
120	38.7	0.0	56.8
77	46.2	0.0	45.3#



Analytical Results

Client: Environmental Planning Specialists
Project: Drexel
Sample Matrix: Water

Service Request: K1309638
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Batch QC
Lab Code: K1309439-003

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	ND	U	2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	ND	U	0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	ND	U	0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	ND	U	0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	0.10	J	0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	ND	U	0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	ND	U	0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	ND	U	0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	ND	U	0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	68-117	09/17/13	Acceptable
Dibromofluoromethane	94	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F010.D
Lab ID: K1309439-003
RunType: SMPL
Matrix: WATER

Date Acquired: 09/17/2013 13:24
Date Quantitated: 09/17/2013 14:07
Batch ID: KWG1310078
Analysis Method: 8260C
ListJoinID: LJ14698

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	Bromomethane	115	35	113	Within ME acc limits

Primary Review: KS 9.18.13

Secondary Review: SD 9.19.13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F010.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 13:24	**Quant Date:**	09/17/2013 14:07	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309439-003			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**	09/06/2013	**Receive Date:**	09/11/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	K1309439
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282673	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	Volatile Organic Compounds	**Report List ID:**	LJ14698
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	956578	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	381430	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	307804	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	243412	9.43	94	73-122	OK	
1	Toluene-d8	8.12	0.00	0.00	98	937516	9.94	99	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	324328	9.64	96	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane				85	0		0.13	U	
1	Chloromethane	1.29		0.00	50	3133	0.1000	0.10	J	
1	Vinyl Chloride				62	0		0.075	U	
1	Bromomethane	1.67		0.00	96	1421	0.0800	0.10	U	
1	Chloroethane				64	0		0.16	U	
1	Trichlorofluoromethane				101	0		0.12	U	
1	Trichlorotrifluoroethane				151	0		0.13	U	
1	1,1-Dichloroethene				96	0		0.080	U	
1	Acetone	2.66	0.01	0.00	43	5770	1.90	3.3	U	
1	Carbon Disulfide	2.71	0.01	0.00	76	2811	0.0400	0.069	U	
1	Methylene Chloride	3.16	0.01	0.00	84	1101	0.0500	0.10	U	
1	Methyl tert-Butyl Ether				73	0		0.11	U	
1	trans-1,2-Dichloroethene				96	0		0.072	U	
1	1,1-Dichloroethane				63	0		0.077	U	
1	Vinyl Acetate				86	0		0.43	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F010.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 13:24	**Quant Date:**	09/17/2013 14:07	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309439-003			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	2,2-Dichloropropane				77	0		0.060	U	
1	cis-1,2-Dichloroethene				96	0		0.067	U	
1	2-Butanone (MEK)				72	0		1.9	U	
1	Bromochloromethane				128	0		0.16	U	
1	Chloroform				83	0		0.072	U	
1	1,1,1-Trichloroethane (TCA)				97	0		0.075	U	
1	Carbon Tetrachloride				117	0		0.096	U	
1	1,1-Dichloropropene				75	0		0.089	U	
1	Benzene				78	0d		0.062	U	
1	1,2-Dichloroethane (EDC)				62	0		0.080	U	
1	Trichloroethene (TCE)				95	0		0.10	U	
1	1,2-Dichloropropane	7.12	-0.01	0.00	63	880	0.0400	0.095	U	
1	Dibromomethane				93	0		0.15	U	
1	Bromodichloromethane				83	0		0.091	U	
1	cis-1,3-Dichloropropene				75	0		0.18	U	
1	4-Methyl-2-pentanone (MIBK)				58	0d		2.6	U	
1	Toluene	8.19		0.00	92	6214	0.1000	0.10	J	
2	trans-1,3-Dichloropropene				75	0		0.068	U	
2	1,1,2-Trichloroethane				83	0		0.14	U	
2	Tetrachloroethene (PCE)				164	0		0.099	U	
2	2-Hexanone				57	0		2.7	U	
2	1,3-Dichloropropane				76	0		0.14	U	
2	Dibromochloromethane				129	0		0.14	U	
2	1,2-Dibromoethane (EDB)				107	0		0.10	U	
2	Chlorobenzene				112	0d		0.11	U	
2	Ethylbenzene				106	0d		0.050	U	
2	1,1,1,2-Tetrachloroethane				131	0		0.11	U	
2	m,p-Xylenes	9.85		0.00	106	3055	0.0700	0.11	U	
2	o-Xylene				106	0d		0.074	U	
2	Styrene				103	0		0.089	U	
2	Bromoform				173	0		0.16	U	
2	Isopropylbenzene	10.60		0.00	105	756	0.0100	0.051	U	
3	1,1,2,2-Tetrachloroethane				83	0		0.16	U	
3	Bromobenzene				156	0		0.12	U	
3	n-Propylbenzene				91	0d		0.054	U	
3	1,2,3-Trichloropropane				110	0		0.20	U	
3	2-Chlorotoluene				91	0		0.10	U	
3	1,3,5-Trimethylbenzene				105	0d		0.089	U	
3	4-Chlorotoluene				91	0d		0.13	U	
3	tert-Butylbenzene				119	0d		0.059	U	
3	1,2,4-Trimethylbenzene				105	0d		0.069	U	
3	sec-Butylbenzene				105	0d		0.062	U	
3	4-Isopropyltoluene				119	0d		0.060	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F010.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 13:24	**Quant Date:**	09/17/2013 14:07	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309439-003			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	1,3-Dichlorobenzene				146	0d		0.10	U	
3	1,4-Dichlorobenzene				146	0d		0.12	U	
3	n-Butylbenzene				91	0d		0.054	U	
3	1,2-Dichlorobenzene				146	0		0.12	U	
3	1,2-Dibromo-3-chloropropane				155	0		0.20	U	
3	1,2,4-Trichlorobenzene				180	0		0.096	U	
3	Naphthalene				128	0		0.088	U	
3	1,2,3-Trichlorobenzene				180	0		0.11	U	

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F010.D Vial: 9
Acq On : 17 Sep 2013 1:24 pm Operator: KS
Sample : K1309439-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 13:59:27 2013 Quant Results File: 081213MS27_8260.RES

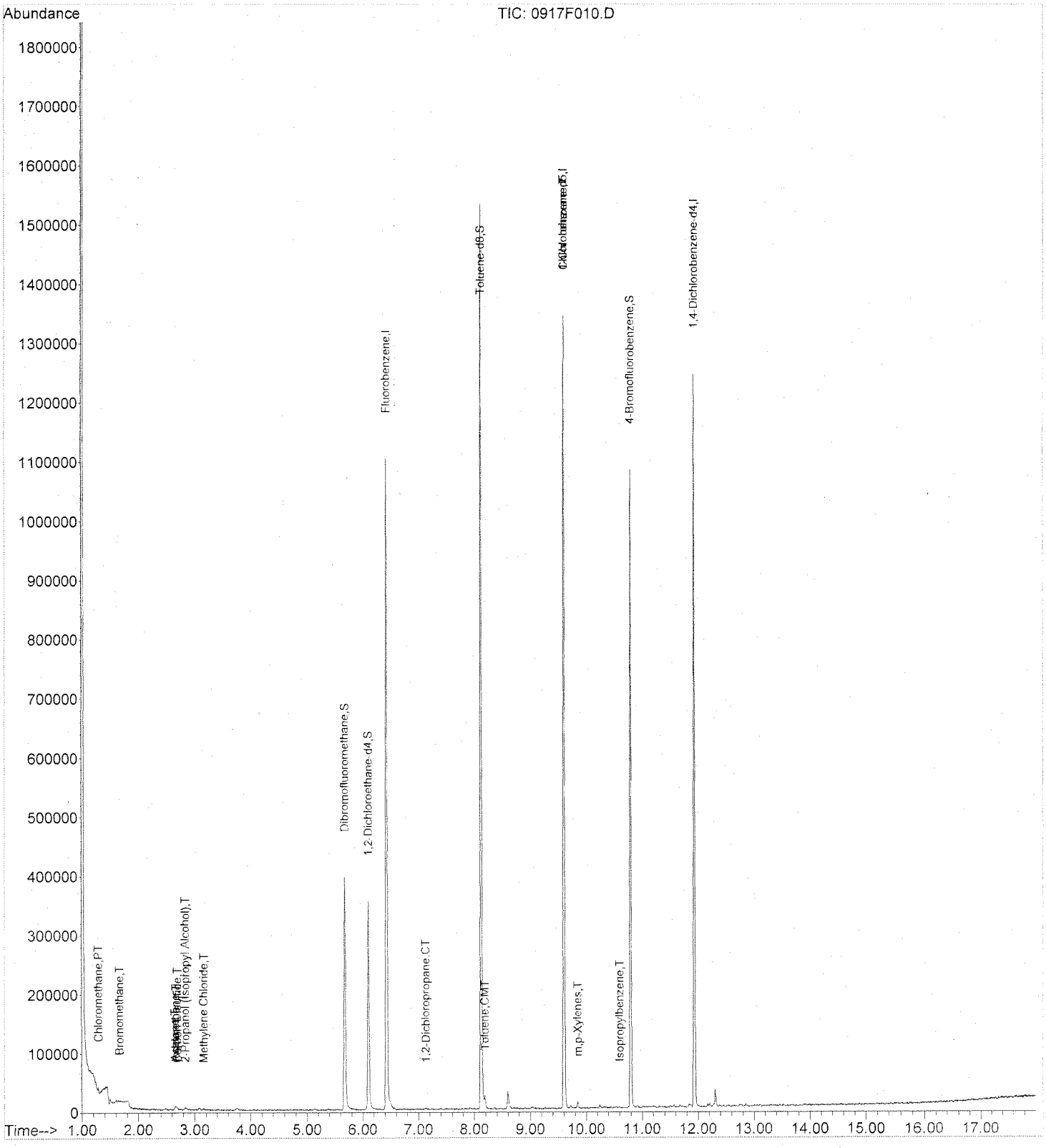
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

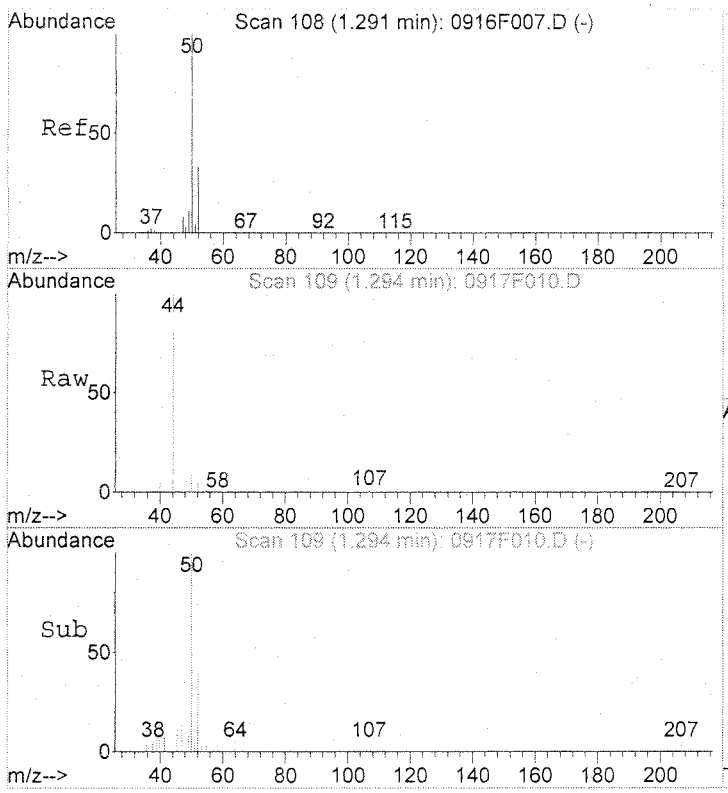
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	956578	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	381430	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	307804	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	243412	9.43	PPB		0.00
Spiked Amount 10.000			Recovery =	94.30%			
47) 1,2-Dichloroethane-d4	6.10	65	242363	9.78	PPB		0.00
Spiked Amount 10.000			Recovery =	97.80%			
62) Toluene-d8	8.12	98	937516	9.94	PPB		0.00
Spiked Amount 10.000			Recovery =	99.40%			
84) 4-Bromofluorobenzene	10.79	95	324328	9.64	PPB		0.00
Spiked Amount 10.000			Recovery =	96.40%			
Target Compounds							Qvalue
3) Chloromethane	1.29	50	3133	0.10	PPB		90
6) Bromomethane	1.67	96	1421	0.08	PPB		91
14) Acetone	2.66	43	5770	1.90	PPB		98
15) Iodomethane	2.67	142	3679	0.33	PPB		79
16) Carbon Disulfide	2.71	76	2811	0.04	PPB		91
17) 2-Propanol (Isopropyl Alco	2.83	45	5465	14.12	PPB		90
21) Methylene Chloride	3.16	84	1101	0.05	PPB	#	71
53) 1,2-Dichloropropane	7.12	63	880	0.04	PPB	#	78
63) Toluene	8.19	92	6214	0.10	PPB		92
74) 1-Chlorohexane	9.61	91	2174	0.06	PPB		79
78) m,p-Xylenes	9.85	106	3055	0.07	PPB		99
82) Isopropylbenzene	10.60	105	756	0.01	PPB		53

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F010.D Vial: 9
Acq On : 17 Sep 2013 1:24 pm Operator: KS
Sample : K1309439-003 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 14:07 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration

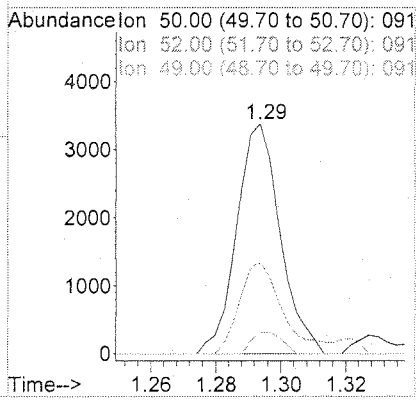


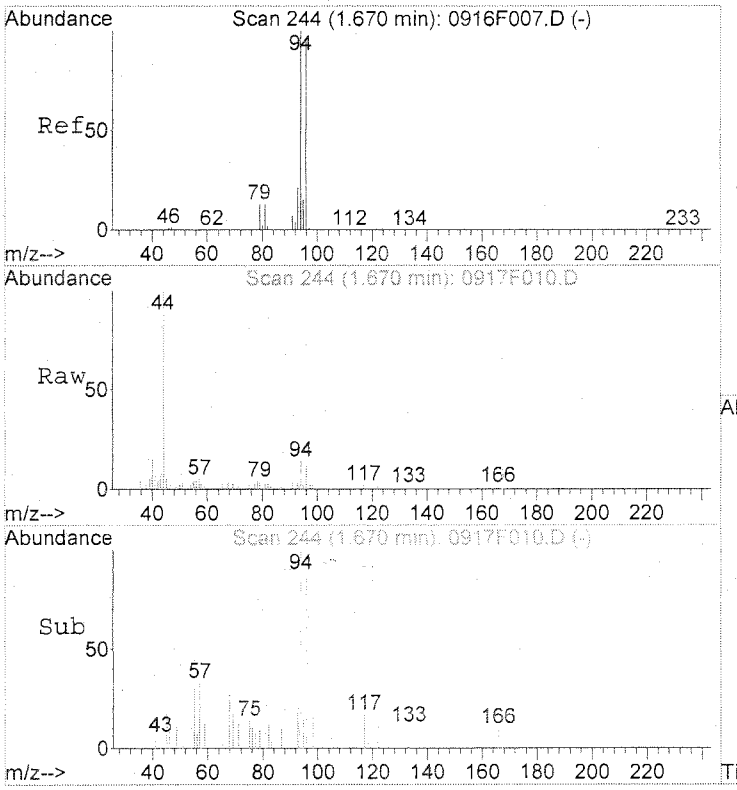


#3
Chloromethane
Concen: 0.10 PPB
RT: 1.29 min Scan# 109
Delta R.T. 0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 50 Resp: 3133

Ion	Ratio	Lower	Upper
50	100		
52	39.7	2.5	62.5
49	9.2	0.0	40.3

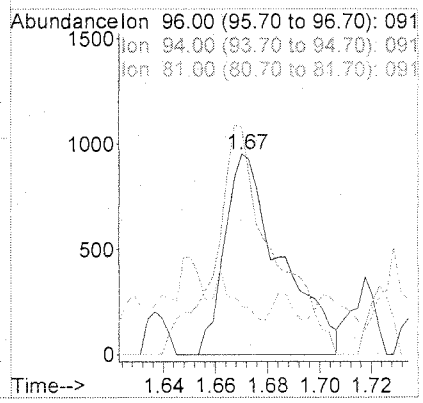


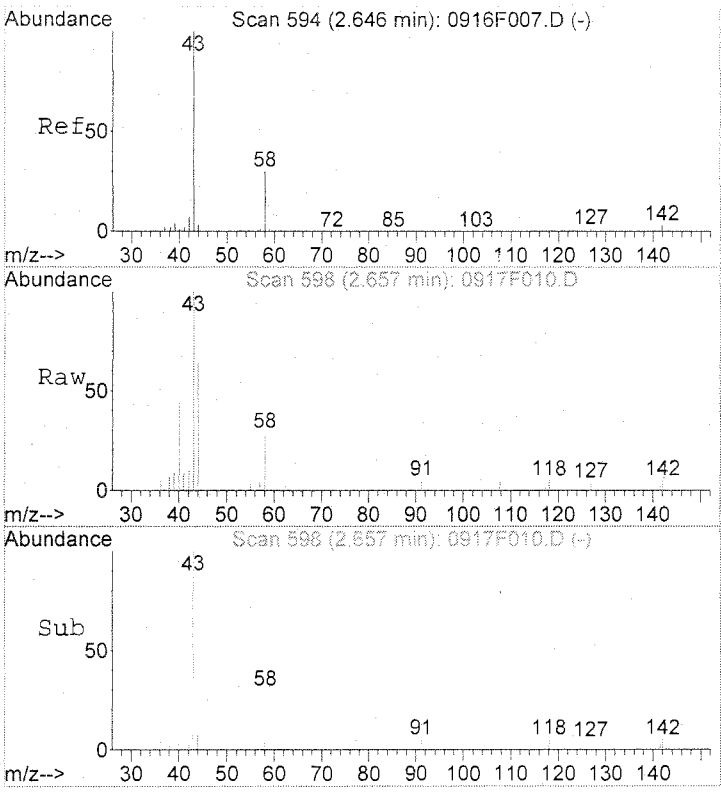


#6
Bromomethane
Concen: 0.08 PPB
RT: 1.67 min Scan# 244
Delta R.T. 0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 96 Resp: 1421

Ion	Ratio	Lower	Upper
96	100		
94	113.5	77.3	137.3
81	0.0	0.0	43.8

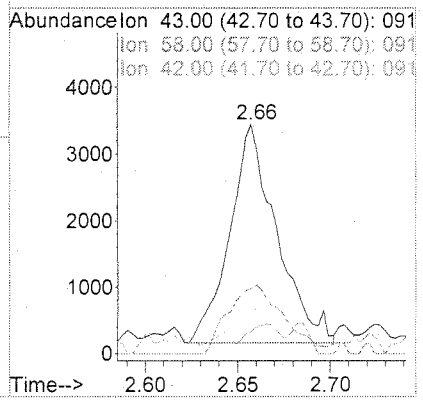


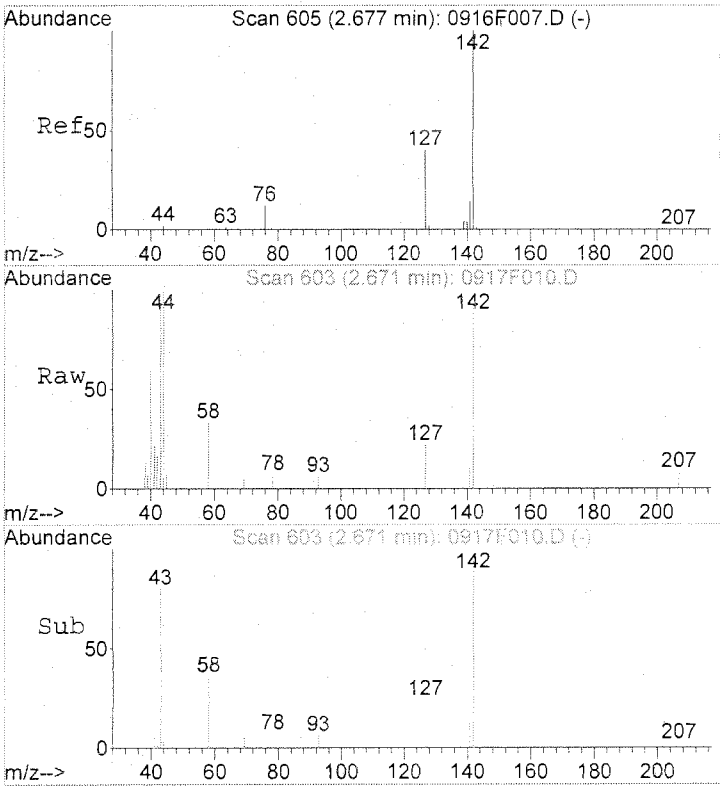


#14
Acetone
Concen: 1.90 PPB
RT: 2.66 min Scan# 598
Delta R.T. 0.01 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 43 Resp: 5770

Ion	Ratio	Lower	Upper
43	100		
58	30.0	0.0	59.8
42	10.2	0.0	37.4

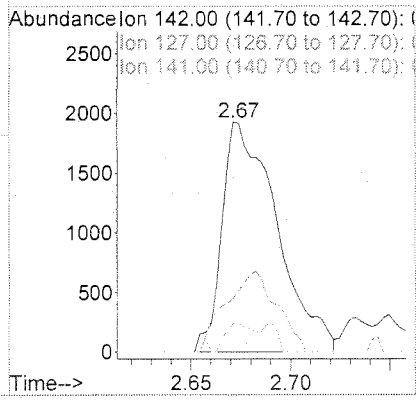


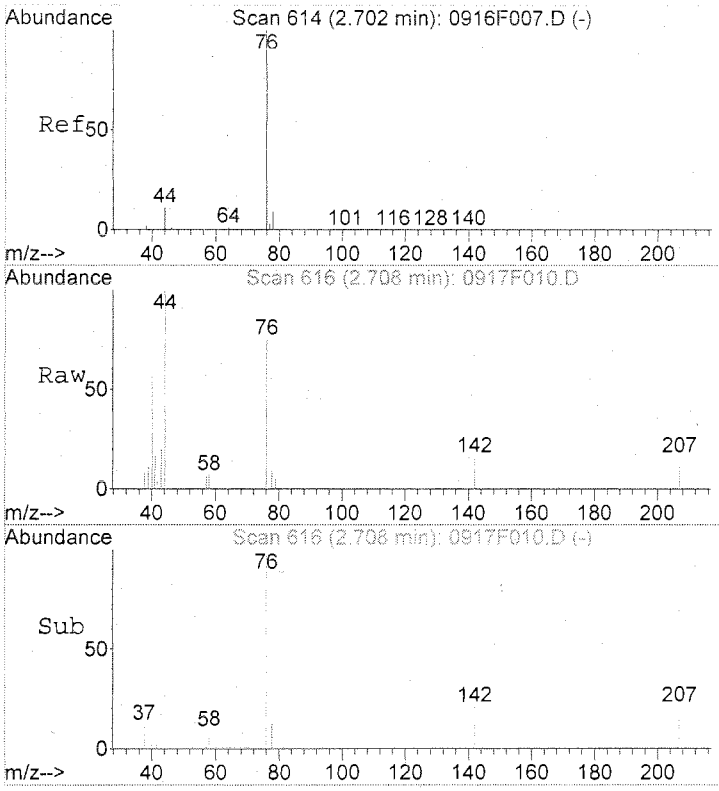


#15
Iodomethane
Concen: 0.33 PPB
RT: 2.67 min Scan# 603
Delta R.T. -0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion:142 Resp: 3679

Ion	Ratio	Lower	Upper
142	100		
127	23.7	9.8	69.8
141	12.3	0.0	44.5

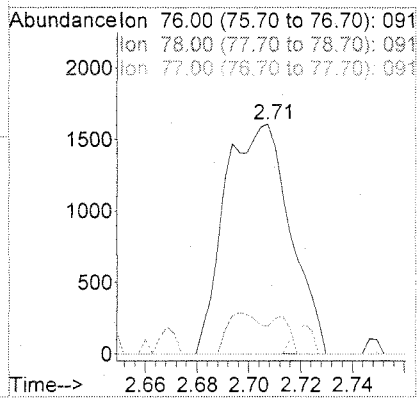


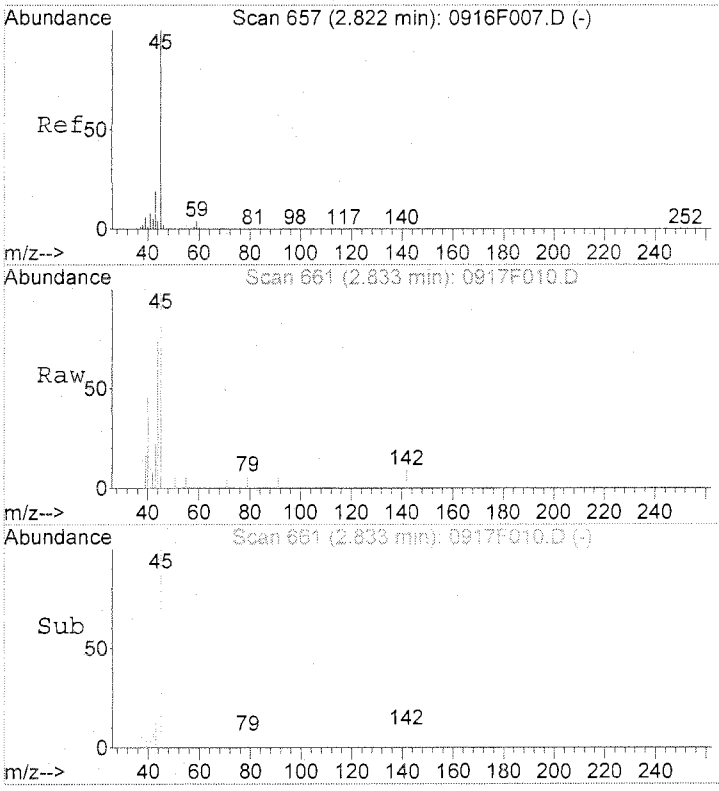


#16
Carbon Disulfide
Concen: 0.04 PPB
RT: 2.71 min Scan# 616
Delta R.T. 0.01 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 76 Resp: 2811

Ion	Ratio	Lower	Upper
76	100		
78	11.9	0.0	38.8
77	0.0	0.0	32.7

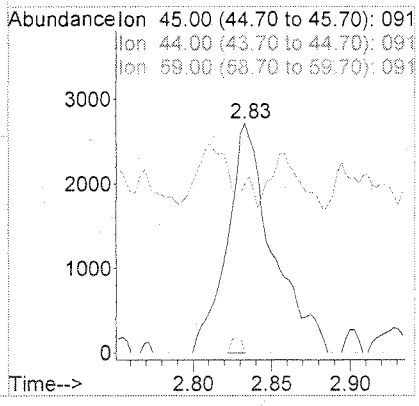


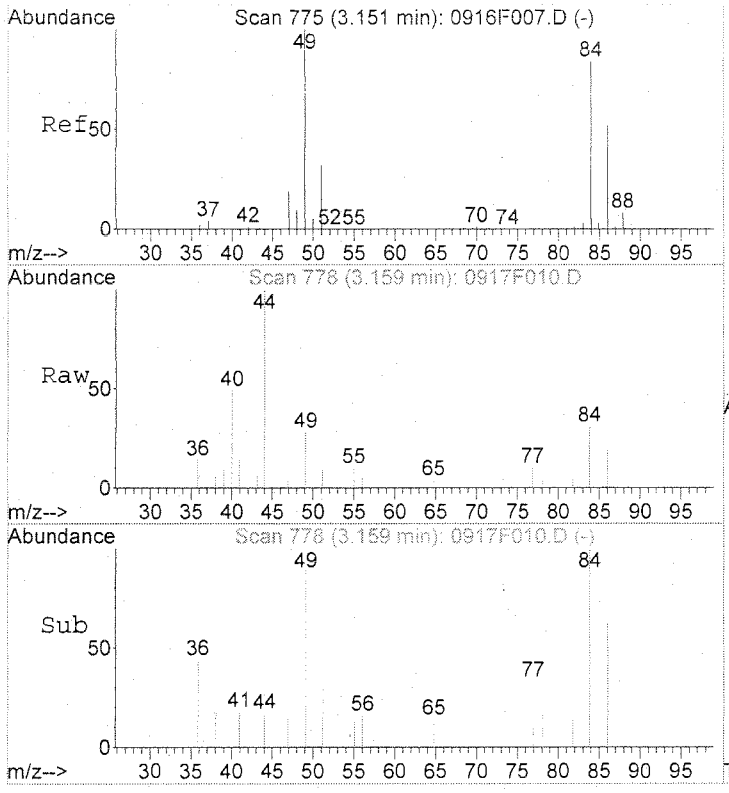


#17
2-Propanol (Isopropyl Alcohol)
Concen: 14.12 PPB
RT: 2.83 min Scan# 661
Delta R.T. 0.01 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 45 Resp: 5465

Ion	Ratio	Lower	Upper
45	100		
44	5.5	0.0	33.5
59	0.0	0.0	34.3

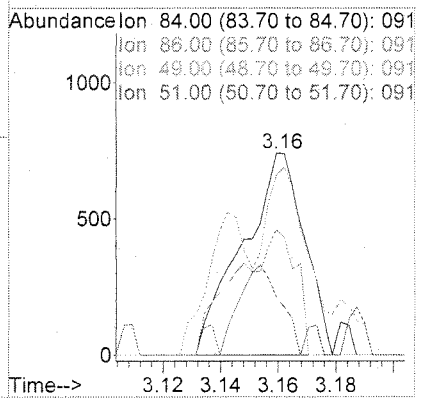


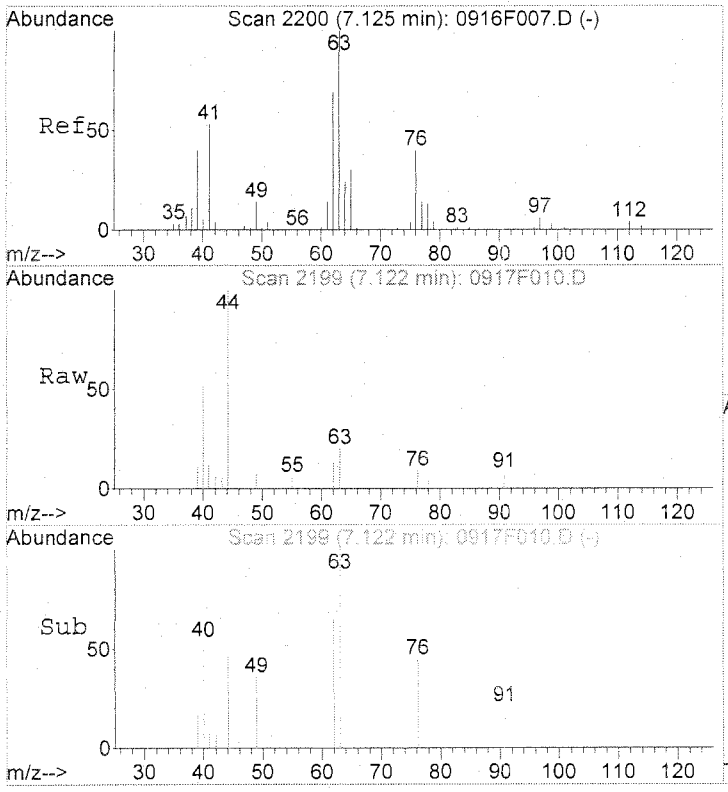


#21
Methylene Chloride
Concen: 0.05 PPB
RT: 3.16 min Scan# 778
Delta R.T. 0.01 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 84 Resp: 1101

Ion	Ratio	Lower	Upper
84	100		
86	62.2	35.0	95.0
49	72.7	93.9	153.9#
51	28.8	10.0	70.0

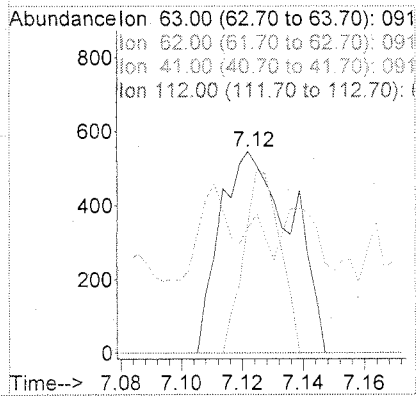


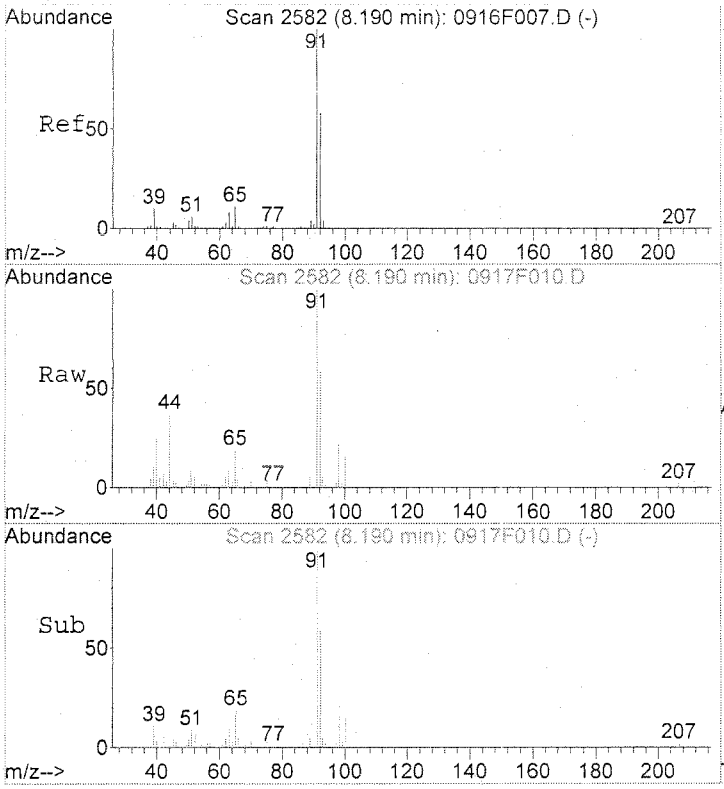


#53
1,2-Dichloropropane
Concen: 0.04 PPB
RT: 7.12 min Scan# 2199
Delta R.T. -0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 63 Resp: 880

Ion	Ratio	Lower	Upper
63	100		
62	66.5	39.9	99.9
41	22.2	25.3	85.3#
112	0.0	0.0	24.5

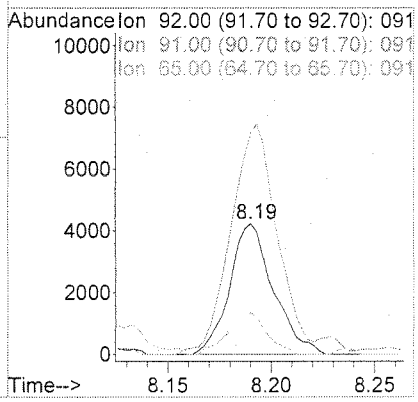


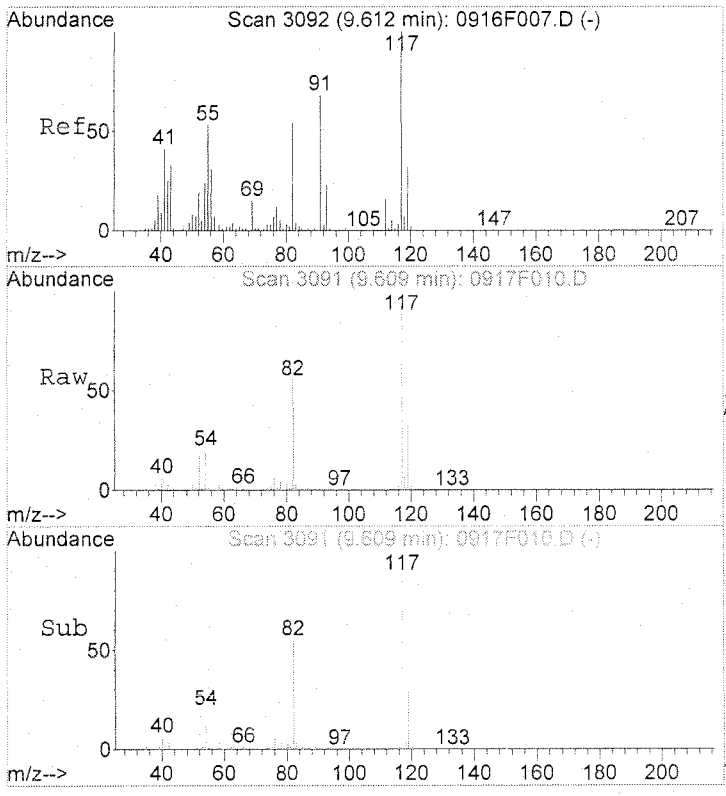


#63
Toluene
Concen: 0.10 PPB
RT: 8.19 min Scan# 2582
Delta R.T. 0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 92 Resp: 6214

Ion	Ratio	Lower	Upper
92	100		
91	165.6	144.2	204.2
65	31.8	0.0	50.2

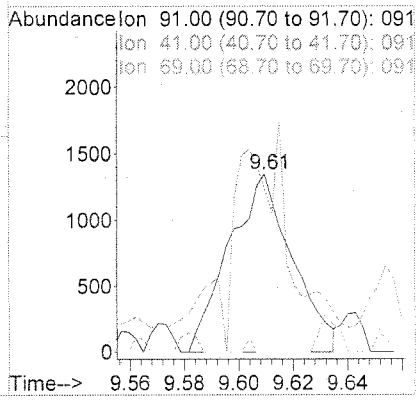


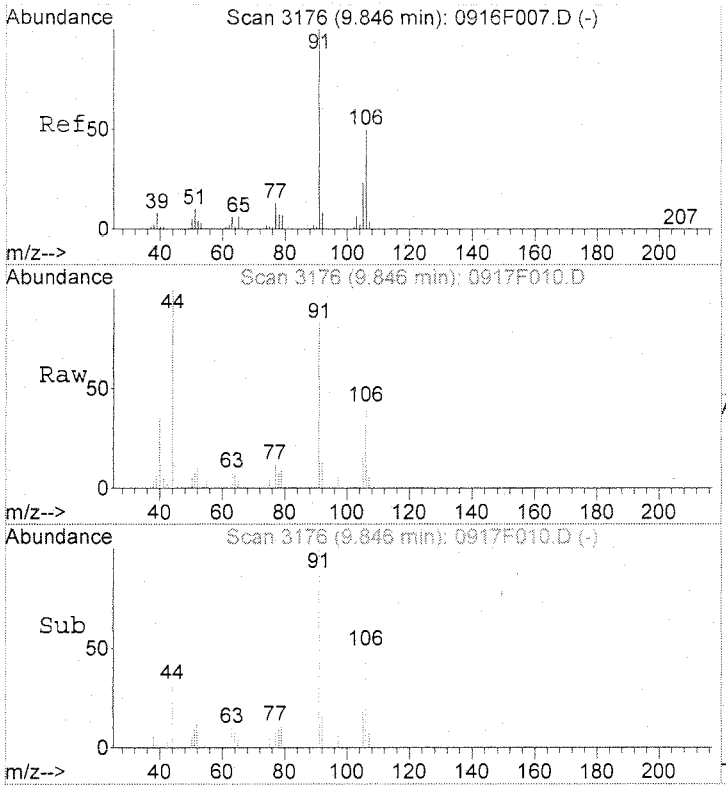


#74
1-Chlorohexane
Concen: 0.06 PPB
RT: 9.61 min Scan# 3091
Delta R.T. -0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion: 91 Resp: 2174

Ion	Ratio	Lower	Upper
91	100		
41	69.8	29.5	89.5
69	0.0	0.0	49.9

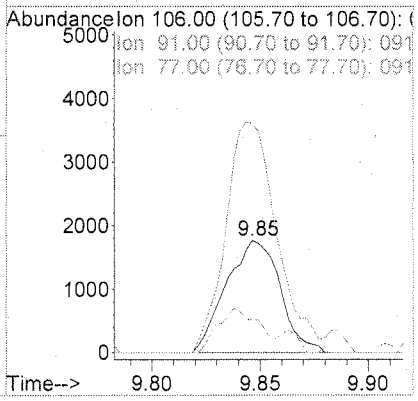


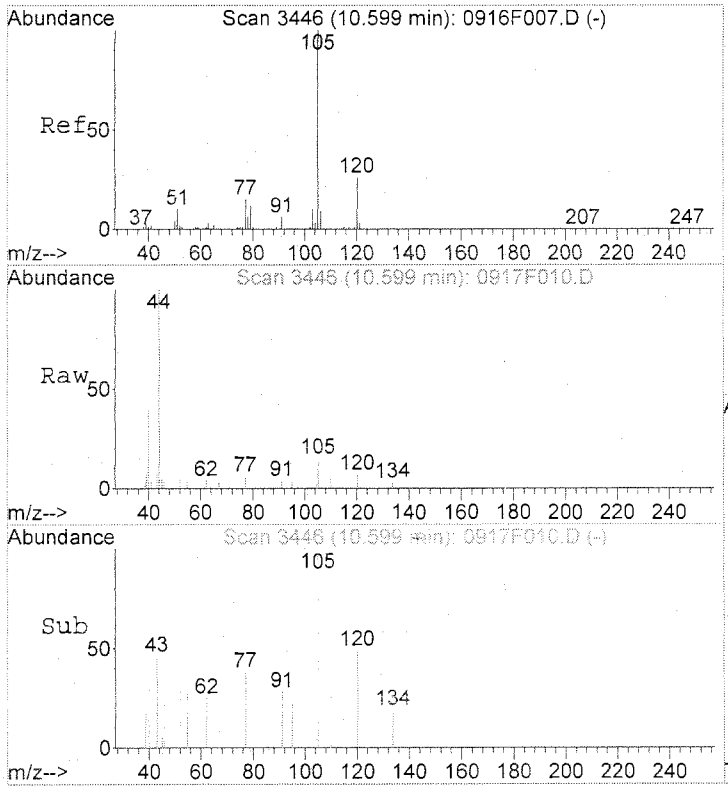


#78
m,p-Xylenes
Concen: 0.07 PPB
RT: 9.85 min Scan# 3176
Delta R.T. 0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion:106 Resp: 3055

Ion	Ratio	Lower	Upper
106	100		
91	204.8	173.6	233.6
77	28.8	0.0	55.7

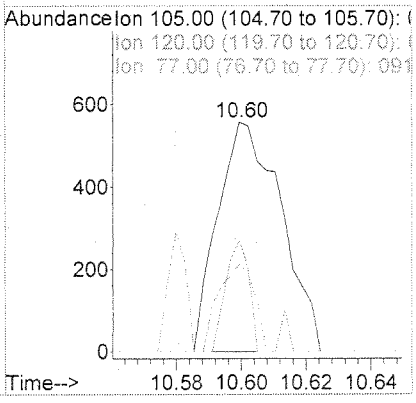




#82
Isopropylbenzene
Concen: 0.01 PPB
RT: 10.60 min Scan# 3446
Delta R.T. 0.00 min
Lab File: 0917F010.D
Acq: 17 Sep 2013 1:24 pm

Tgt Ion:105 Resp: 756

Ion	Ratio	Lower	Upper
105	100		
120	48.8	0.0	56.8
77	37.9	0.0	45.3



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Batch QCMS	**Units:**	ug/L
Lab Code:	KWG1310087-1	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	**10.4**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	**10.7**		2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	**10.3**		0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	**11.8**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	**9.84**		0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**9.41**		0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	**10.2**		0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	**9.92**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	**10.1**		0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**10.7**		0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**10.5**		0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	**9.23**		0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	**10.2**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	**10.2**		0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	**11.4**		0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	**20.7**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	**10.1**		0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	**9.30**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	**9.80**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	**10.3**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	**9.82**		2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	**10.2**		0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	68-117	09/17/13	Acceptable
Dibromofluoromethane	92	73-122	09/17/13	Acceptable
Toluene-d8	100	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F005.D
Lab ID: KWG1310087-1 -- K1309439-003MS
RunType: MS
Matrix: WATER

Date Acquired: 09/17/2013 11:08
Date Quantitated: 09/17/2013 12:59
Batch ID: KWG1310078
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0073	0.01	NA	NJT
	tert-Butyl Alcohol	0.0080	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0008	0.01	NA	
Second Source ICAL Verification	Acrolein	39.8	NA	30	
	Iodomethane	99.5	NA	30	
Continuing Calibration Recovery	Bromomethane	32.2	NA	20	W/ME Limits
	Iodomethane	26.3	NA	20	NJT
	tert-Butyl Alcohol	26.3	NA	20	
	Isobutyl Alcohol	36.9	NA	20	
	1,4-Dioxane	49.0	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0085	0.01	NA	
	Isobutyl Alcohol	0.0044	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	

Primary Review: KS 9.18.13

Secondary Review: [illegible]

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F005.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:08	**Quant Date:**	09/17/2013 12:59	**Vial:**	5
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1310087-1 -- K1309439-003MS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282674	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8			**Calibration ID:**	CAL12690
Title:					
Tune Ref:	J:\MS27\DATA\091713\0917F002.D			**Method ID:**	MJ1093
MB Ref:	J:\MS27\DATA\091713\0917F009.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	998870	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	401105	10.00	OK
3	1,4-Dichlorobenzene-d4	11.93	-0.01	152	344722	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	249034	9.24	92	85-115	OK	
1	1,2-Dichloroethane-d4	6.10	0.00	0.00	65	240380	9.29	93	70-120	OK	
1	Toluene-d8	8.12	0.00	0.00	98	983023	9.98	100	85-120	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	348415	9.85	99	75-120	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.14		0.00	85	235056	7.91	7.91		
1	Chloromethane	1.29		0.00	50	399053	12.20	12.2		
1	Vinyl Chloride	1.38		0.00	62	320170	10.42	10.4		
1	Bromomethane	1.67		0.00	96	236739	12.07	12.1		
1	Chloroethane	1.76		0.00	64	194767	11.45	11.5		
1	Trichlorofluoromethane	1.96		0.00	101	367066	8.74	8.74		
1	Acrolein	2.48		0.00	56	1705	1.21	1.21	J	
1	Trichlorotrifluoroethane	2.47		0.00	151	178739	9.21	9.21		
1	1,1-Dichloroethene	2.50		0.00	96	225696	11.82	11.8		
1	Acetone	2.65		0.00	43	183673	57.87	57.9		
1	Iodomethane	2.68		0.00	142	832471	66.40	66.4		
1	Carbon Disulfide	2.70		0.00	76	1642132	23.02	23.0		
1	3-Chloro-1-propene	2.96		0.00	76	487423	36.52	36.5		
1	Acetonitrile	3.07		0.00	40	270438	370.33	370		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F005.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:08	**Quant Date:**	09/17/2013 12:59	**Vial:**	5
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1310087-1 -- K1309439-003MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.15		0.00	84	261172	10.70	10.7		
1	tert-Butyl Alcohol	3.35	0.01	0.00	59	113183	141.50	142		
1	Acrylonitrile	3.61		0.00	53	213137	47.66	47.7		
1	Methyl tert-Butyl Ether	3.44	0.01	0.00	73	528483	10.30	10.3		
1	trans-1,2-Dichloroethene	3.45		0.00	96	259742	10.32	10.3		
1	1,1-Dichloroethane	4.17		0.00	63	478365	10.34	10.3		
1	Vinyl Acetate	4.28	-0.01	0.00	86	160803	47.69	47.7		
1	Chloroprene	4.24		0.00	53	1409546	40.25	40.3		
1	2,2-Dichloropropane	4.97		0.00	77	394905	10.33	10.3		
1	cis-1,2-Dichloroethene	5.03		0.00	96	279975	9.84	9.84		
1	2-Butanone (MEK)	5.11		0.00	72	79090	61.90	61.9		
1	Ethyl Acetate	5.17		0.00	61	54898	30.02	30.0		
1	Propionitrile	5.29	-0.01	0.00	54	60123	37.51	37.5		
1	Methacrylonitrile	5.43		0.00	67	207819	34.86	34.9		
1	Bromochloromethane	5.35		0.00	128	127516	9.80	9.80		
1	Chloroform	5.47		0.00	83	467823	10.08	10.1		
1	1,1,1-Trichloroethane (TCA)	5.60		0.00	97	392574	9.30	9.30		
1	Carbon Tetrachloride	5.75		0.00	117	333572	9.41	9.41		
1	1,1-Dichloropropene	5.82		0.00	75	367180	11.58	11.6		
1	Isobutyl Alcohol	6.14		0.00	43	134089	413.74	414		
1	Benzene	6.05		0.00	78	1053098	10.17	10.2		
1	1,2-Dichloroethane (EDC)	6.19		0.00	62	308614	9.92	9.92		
1	Trichloroethene (TCE)	6.82		0.00	95	282911	10.14	10.1		
1	1,2-Dichloropropane	7.12	-0.01	0.00	63	277240	10.72	10.7		
1	Dibromomethane	7.25	-0.01	0.00	93	131878	9.79	9.79		
1	Methyl Methacrylate	7.28		0.00	69	372768	33.99	34.0		
1	1,4-Dioxane	7.27		0.00	88	38604	509.41	509		
1	Bromodichloromethane	7.43		0.00	83	334796	9.73	9.73		
1	2-Nitropropane	7.77		0.00	41	114220	27.15	27.2		
1	2-Chloroethyl Vinyl Ether	7.76	-0.04	-0.01	63	612	0.0500	0.16	U	
1	cis-1,3-Dichloropropene	7.91	-0.01	0.00	75	382879	9.66	9.66		
1	4-Methyl-2-pentanone (MIBK)	8.09		0.00	58	284617	59.85	59.9		
1	Toluene	8.19		0.00	92	671478	10.45	10.5		
2	trans-1,3-Dichloropropene	8.52	-0.01	0.00	75	316220	9.65	9.65		
2	Ethyl Methacrylate	8.58		0.00	69	762447	34.50	34.5		
2	1,1,2-Trichloroethane	8.70		0.00	83	167617	10.18	10.2		
2	Tetrachloroethene (PCE)	8.71		0.00	164	225354	9.23	9.23		
2	2-Hexanone	8.95		0.00	57	87955	57.68	57.7		
2	1,3-Dichloropropane	8.87		0.00	76	327596	10.26	10.3		
2	Dibromochloromethane	9.05		0.00	129	224197	9.12	9.12		
2	1,2-Dibromoethane (EDB)	9.16		0.00	107	184182	9.96	9.96		
2	1-Chlorohexane	9.61		0.00	91	334020	9.20	9.20		
2	Chlorobenzene	9.63		0.00	112	734449	10.17	10.2		

U: Undetected at or above MDL
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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F005.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:08	**Quant Date:**	09/17/2013 12:59	**Vial:**	5
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG1310087-1 -- K1309439-003MS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene	9.72		0.00	106	396168	10.18	10.2		
2	1,1,1,2-Tetrachloroethane	9.73		0.00	131	249888	8.99	8.99		
2	m,p-Xylenes	9.85		0.00	106	952357	20.69	20.7		
2	o-Xylene	10.24		0.00	106	467876	10.13	10.1		
2	Styrene	10.27		0.00	103	414031	11.44	11.4		
2	Bromoform	10.47		0.00	173	129578	8.56	8.56		
2	Isopropylbenzene	10.60		0.00	105	1139107	9.60	9.60		
2	cis-1,4-Dichloro-2-butene	10.76		0.00	89	86093	33.75	33.8		
3	1,1,2,2-Tetrachloroethane	10.99		0.00	83	193859	10.39	10.4		
3	trans-1,4-Dichloro-2-butene	11.06		0.00	53	170118	34.85	34.9		
3	Bromobenzene	10.92		0.00	156	298209	9.57	9.57		
3	n-Propylbenzene	11.01		0.00	91	1438766	10.29	10.3		
3	1,2,3-Trichloropropane	11.03		0.00	110	57401	9.76	9.76		
3	2-Chlorotoluene	11.11		0.00	91	867260	10.32	10.3		
3	1,3,5-Trimethylbenzene	11.20		0.00	105	990575	10.07	10.1		
3	4-Chlorotoluene	11.23		0.00	91	970026	11.06	11.1		
3	tert-Butylbenzene	11.50		0.00	119	855697	10.17	10.2		
3	1,2,4-Trimethylbenzene	11.57		0.00	105	964109	9.86	9.86		
3	sec-Butylbenzene	11.72		0.00	105	1206653	9.85	9.85		
3	4-Isopropyltoluene	11.87		0.00	119	1027694	10.31	10.3		
3	1,3-Dichlorobenzene	11.86		0.00	146	548240	9.86	9.86		
3	1,4-Dichlorobenzene	11.96		0.00	146	549561	9.80	9.80		
3	n-Butylbenzene	12.28		0.00	91	920799	11.05	11.1		
3	1,2-Dichlorobenzene	12.33		0.00	146	497023	10.32	10.3		
3	1,2-Dibromo-3-chloropropane	13.14		0.00	155	24608	9.03	9.03		
3	1,3,5-Trichlorobenzene	13.28		0.00	180	406763	10.47	10.5		
3	1,2,4-Trichlorobenzene	13.92		0.00	180	280819	9.82	9.82		
3	Hexachlorobutadiene	14.05		0.00	225	148124	9.07	9.07		
3	Naphthalene	14.17		0.00	128	371371	10.37	10.4		
3	1,2,3-Trichlorobenzene	14.42		0.00	180	225069	9.89	9.89		

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
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*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F005.D Vial: 5
Acq On : 17 Sep 2013 11:08 am Operator: KS
Sample : K1309439-003MS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:20 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	998870	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	401105	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.93	152	344722	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	249034	9.24	PPB		0.00
Spiked Amount 10.000			Recovery =	92.40%			
47) 1,2-Dichloroethane-d4	6.10	65	240380	9.29	PPB		0.00
Spiked Amount 10.000			Recovery =	92.90%			
62) Toluene-d8	8.12	98	983023	9.98	PPB		0.00
Spiked Amount 10.000			Recovery =	99.80%			
84) 4-Bromofluorobenzene	10.79	95	348415	9.85	PPB		0.00
Spiked Amount 10.000			Recovery =	98.50%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	235056	7.91	PPB		98
3) Chloromethane	1.29	50	399053	12.20	PPB		99
4) Vinyl Chloride	1.38	62	320170	10.42	PPB		100
6) Bromomethane	1.67	96	236739	12.07	PPB		100
7) Chloroethane	1.76	64	194767	11.45	PPB		98
8) Dichlorofluoromethane	1.97	67	521858	11.49	PPB		97
9) Trichlorofluoromethane	1.96	101	367066	8.74	PPB		99
10) Ethyl Ether	2.27	59	169519	11.48	PPB		99
11) Acrolein	2.48	56	1705	1.21	PPB	#	47
12) Trichlorotrifluoroethane	2.47	151	178739	9.21	PPB		92
13) 1,1-Dichloroethene	2.50	96	225696	11.82	PPB		98
14) Acetone	2.65	43	183673	57.87	PPB		96
15) Iodomethane	2.68	142	832471	66.40	PPB		99
16) Carbon Disulfide	2.70	76	1642132	23.02	PPB		99
17) 2-Propanol (Isopropyl Alco	2.83	45	6771	16.75	PPB		94
18) 3-Chloro-1-propene	2.96	76	487423	36.52	PPB		96
19) Methyl Acetate	3.02	43	118139	10.56	PPB		95
20) Acetonitrile	3.07	40	270438	370.33	PPB		98
21) Methylene Chloride	3.15	84	261172	10.70	PPB		97
22) tert-Butyl Alcohol	3.35	59	113183	141.50	PPB		93
23) Acrylonitrile	3.61	53	213137	47.66	PPB		96
24) Methyl tert-Butyl Ether	3.44	73	528483	10.30	PPB		99
25) trans-1,2-Dichloroethene	3.45	96	259742	10.32	PPB		97
26) Hexane	3.75	57	1123373	34.54	PPB		97
27) Diisopropyl Ether	4.20	45	1602501	21.74	PPB		99
28) 1,1-Dichloroethane	4.17	63	478365	10.34	PPB		99
29) Vinyl Acetate	4.28	86	160803	47.69	PPB		96
30) Chloroprene	4.24	53	1409546	40.25	PPB		99
31) tert-Butyl Ethyl Ether	4.74	59	1393791	21.05	PPB		99
32) 2,2-Dichloropropane	4.97	77	394905	10.33	PPB		100
33) cis-1,2-Dichloroethene	5.03	96	279975	9.84	PPB		97
34) 2-Butanone	5.11	72	79090	61.90	PPB		99
35) Ethyl Acetate	5.17	61	54898	30.02	PPB		96
36) Propionitrile	5.29	54	60123	37.51	PPB		95
37) Methacrylonitrile	5.43	67	207819	34.86	PPB		97
38) Bromochloromethane	5.35	128	127516	9.80	PPB		98
39) Tetrahydrofuran	5.18	71	2054	1.51	PPB	#	1

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F005.D Vial: 5
Acq On : 17 Sep 2013 11:08 am Operator: KS
Sample : K1309439-003MS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:20 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	Chloroform	5.47	83	467823	10.08	PPB		99
41)	Cyclohexane	5.56	56	770	0.02	PPB		86
42)	1,1,1-Trichloroethane	5.60	97	392574	9.30	PPB		98
44)	Carbon Tetrachloride	5.75	117	333572	9.41	PPB		99
45)	1,1-Dichloropropene	5.82	75	367180	11.58	PPB		99
46)	Isobutyl Alcohol	6.14	43	134089	413.74	PPB		98
48)	Benzene	6.05	78	1053098	10.17	PPB		100
49)	1,2-Dichloroethane	6.19	62	308614	9.92	PPB		97
50)	tert-Amyl Methyl Ether	6.20	55	282867	20.77	PPB		99
51)	Trichloroethene	6.82	95	282911	10.14	PPB		97
52)	Methylcyclohexane	6.93	83	794	0.02	PPB	#	75
53)	1,2-Dichloropropane	7.12	63	277240	10.72	PPB		99
54)	Dibromomethane	7.25	93	131878	9.79	PPB		96
55)	Methyl methacrylate	7.28	69	372768	33.99	PPB		99
56)	1,4-Dioxane	7.27	88	38604	509.41	PPB		94
57)	Bromodichloromethane	7.43	83	334796	9.73	PPB		99
58)	2-Nitropropane	7.77	41	114220	27.15	PPB		99
59)	2-Chloroethyl Vinyl Ether	7.76	63	612	0.05	PPB		73
60)	cis-1,3-Dichloropropene	7.91	75	382879	9.66	PPB		97
61)	4-Methyl-2-pentanone (MIBK	8.09	58	284617	59.85	PPB		99
63)	Toluene	8.19	92	671478	10.45	PPB		100
65)	n-Octane	8.19	85	6263	0.44	PPB	#	12
66)	trans-1,3-Dichloropropene	8.52	75	316220	9.65	PPB		99
67)	Ethyl methacrylate	8.58	69	762447	34.50	PPB		99
68)	1,1,2-Trichloroethane	8.70	83	167617	10.18	PPB		98
69)	Tetrachloroethene	8.71	164	225354	9.23	PPB		98
70)	2-Hexanone	8.95	57	87955	57.68	PPB		100
71)	1,3-Dichloropropane	8.87	76	327596	10.26	PPB		99
72)	Dibromochloromethane	9.05	129	224197	9.12	PPB		99
73)	1,2-Dibromoethane (EDB)	9.16	107	184182	9.96	PPB		97
74)	1-Chlorohexane	9.61	91	334020	9.20	PPB		97
75)	Chlorobenzene	9.63	112	734449	10.17	PPB		98
76)	Ethylbenzene	9.72	106	396168	10.18	PPB		98
77)	1,1,1,2-Tetrachloroethane	9.73	131	249888	8.99	PPB		98
78)	m,p-Xylenes	9.85	106	952357	20.69	PPB		100
79)	o-Xylene	10.24	106	467876	10.13	PPB		98
80)	Styrene	10.27	103	414031	11.44	PPB		99
81)	Bromoform	10.47	173	129578	8.56	PPB		98
82)	Isopropylbenzene	10.60	105	1139107	9.60	PPB		100
83)	cis-1,4-Dichloro-2-butene	10.76	89	86093	33.75	PPB		92
86)	1,1,2,2-Tetrachloroethane	10.99	83	193859	10.39	PPB		97
87)	trans-1,4-Dichloro-2-buten	11.06	53	170118	34.85	PPB		93
88)	Bromobenzene	10.92	156	298209	9.57	PPB		97
89)	n-Propylbenzene	11.01	91	1438766	10.29	PPB		99
90)	1,2,3-Trichloropropane	11.03	110	57401	9.76	PPB		91
91)	2-Chlorotoluene	11.11	91	867260	10.32	PPB		98
92)	1,3,5-Trimethylbenzene	11.20	105	990575	10.07	PPB		99
93)	4-Chlorotoluene	11.23	91	970026	11.06	PPB		99
94)	tert-Butylbenzene	11.50	119	855697	10.17	PPB		98
95)	1,2,4-Trimethylbenzene	11.57	105	964109	9.86	PPB		97
96)	sec-Butylbenzene	11.72	105	1206653	9.85	PPB		100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F005.D Vial: 5
Acq On : 17 Sep 2013 11:08 am Operator: KS
Sample : K1309439-003MS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:20 2013 Quant Results File: 081213MS27_8260.RES

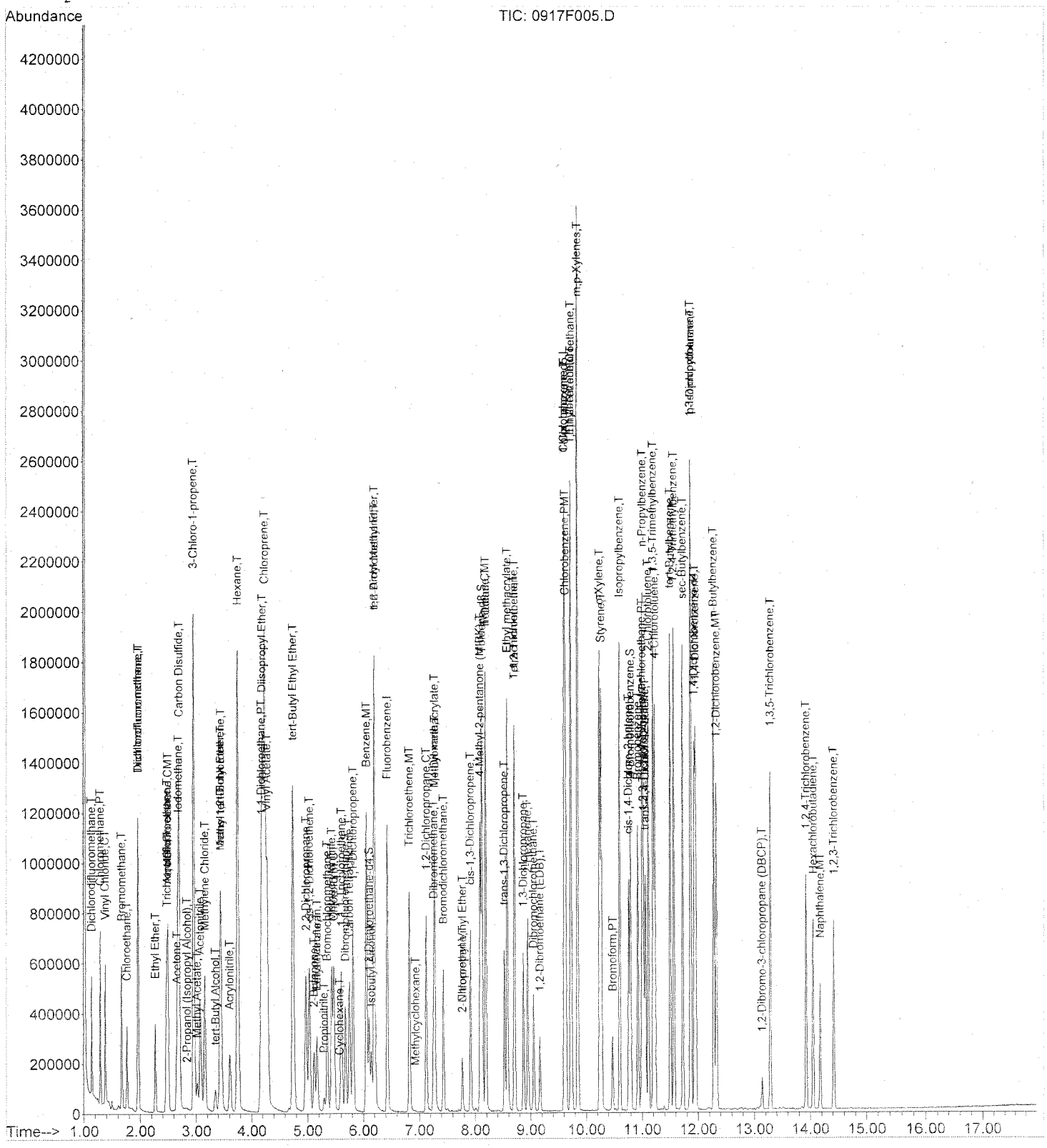
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	p-Isopropyltoluene	11.87	119	1027694	10.31	PPB	100
98)	1,3-Dichlorobenzene	11.86	146	548240	9.86	PPB	98
99)	1,4-Dichlorobenzene	11.96	146	549561	9.80	PPB	99
100)	n-Butylbenzene	12.28	91	920799	11.05	PPB	100
101)	1,2-Dichlorobenzene	12.33	146	497023	10.32	PPB	98
102)	1,2-Dibromo-3-chloropropan	13.14	155	24608	9.03	PPB	86
103)	1,3,5-Trichlorobenzene	13.28	180	406763	10.47	PPB	98
104)	1,2,4-Trichlorobenzene	13.92	180	280819	9.82	PPB	97
105)	Hexachlorobutadiene	14.05	225	148124	9.07	PPB	98
106)	Naphthalene	14.17	128	371371	10.37	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	225069	9.89	PPB	96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F005.D Vial: 5
Acq On : 17 Sep 2013 11:08 am Operator: KS
Sample : K1309439-003MS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:59 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Batch QCDMS	**Units:**	ug/L
Lab Code:	KWG1310087-2	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	**9.80**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	**10.1**		2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	**9.98**		0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	**11.1**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	**9.33**		0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**9.08**		0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	**9.72**		0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	**9.48**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	**9.41**		0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**10.4**		0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**9.93**		0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	**8.90**		0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	**9.74**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	**9.63**		0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	**11.1**		0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	**20.1**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	**9.54**		0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	**8.87**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	**9.44**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	**9.89**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	**9.72**		2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	**10.0**		0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	68-117	09/17/13	Acceptable
Dibromofluoromethane	94	73-122	09/17/13	Acceptable
Toluene-d8	99	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F006.D
Lab ID: KWG1310087-2 -- K1309439-003DMS
RunType: DMS
Matrix: WATER

Date Acquired: 09/17/2013 11:35
Date Quantitated: 09/17/2013 13:00
Batch ID: KWG1310078
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0073	0.01	NA	NT
	tert-Butyl Alcohol	0.0080	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0008	0.01	NA	
Second Source ICAL Verification	Acrolein	39.8	NA	30	
	Iodomethane	99.5	NA	30	adv'd w/in ME Limits
Continuing Calibration Recovery	Bromomethane	32.2	NA	20	
	Iodomethane	26.3	NA	20	NT
	tert-Butyl Alcohol	26.3	NA	20	
	Isobutyl Alcohol	36.9	NA	20	
	1,4-Dioxane	49.0	NA	20	
Continuing Calibration Minimum RF	Acetonitrile	0.0085	0.01	NA	
	Isobutyl Alcohol	0.0044	0.01	NA	
	1,4-Dioxane	0.0011	0.01	NA	

Primary Review: KS 9.18.13

Secondary Review: JPS 9/17/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F006.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:35	**Quant Date:**	09/17/2013 13:00	**Vial:**	5
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1310087-2 -- K1309439-003DMS			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
		Prep Date:	09/17/2013		
Prep Ref:	1282675				

Quant Method:	J:\MS27\METHODS\081213MS27_8			**Calibration ID:**	CAL12690
Title:					
Tune Ref:	J:\MS27\DATA\091713\0917F002.D			**Method ID:**	MJ1093
MB Ref:	J:\MS27\DATA\091713\0917F009.D			**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	1018995	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	409462	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	352669	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	258705	9.41	94	85-115	OK	
1	1,2-Dichloroethane-d4	6.10	0.00	0.00	65	253037	9.58	96	70-120	OK	
1	Toluene-d8	8.12	0.00	0.00	98	990304	9.86	99	85-120	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	357023	9.88	99	75-120	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.14		0.00	85	227194	7.49	7.49		
1	Chloromethane	1.29		0.00	50	380197	11.40	11.4		
1	Vinyl Chloride	1.38		0.00	62	306992	9.80	9.80		
1	Bromomethane	1.67		0.00	96	227748	11.38	11.4		
1	Chloroethane	1.76		0.00	64	185153	10.67	10.7		
1	Trichlorofluoromethane	1.96		0.00	101	355406	8.30	8.30		
1	Acrolein	2.48		0.00	56	1173	0.8200	1.2	U	
1	Trichlorotrifluoroethane	2.47		0.00	151	176337	8.91	8.91		
1	1,1-Dichloroethene	2.50		0.00	96	215494	11.06	11.1		
1	Acetone	2.65		0.00	43	187992	58.06	58.1		
1	Iodomethane	2.68		0.00	142	831022	65.05	65.1		
1	Carbon Disulfide	2.70		0.00	76	1593333	21.90	21.9		
1	3-Chloro-1-propene	2.96		0.00	76	474227	34.83	34.8		
1	Acetonitrile	3.07		0.00	40	267911	359.63	360		

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N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F006.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:35	**Quant Date:**	09/17/2013 13:00	**Vial:**	5
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1310087-2 -- K1309439-003DMS			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.16	0.01	0.00	84	251957	10.12	10.1		
1	tert-Butyl Alcohol	3.35	0.01	0.00	59	112789	138.22	138		
1	Acrylonitrile	3.61		0.00	53	216455	47.45	47.5		
1	Methyl tert-Butyl Ether	3.44	0.01	0.00	73	542294	10.36	10.4		
1	trans-1,2-Dichloroethene	3.45		0.00	96	256196	9.98	9.98		
1	1,1-Dichloroethane	4.17		0.00	63	456559	9.67	9.67		
1	Vinyl Acetate	4.28	-0.01	0.00	86	170045	49.44	49.4		
1	Chloroprene	4.24		0.00	53	1364857	38.21	38.2		
1	2,2-Dichloropropane	4.97		0.00	77	385832	9.89	9.89		
1	cis-1,2-Dichloroethene	5.04	0.01	0.00	96	270740	9.33	9.33		
1	2-Butanone (MEK)	5.12	0.01	0.00	72	76943	59.03	59.0		
1	Ethyl Acetate	5.17		0.00	61	55628	29.82	29.8		
1	Propionitrile	5.29	-0.01	0.00	54	59822	36.58	36.6		
1	Methacrylonitrile	5.43		0.00	67	208450	34.28	34.3		
1	Bromochloromethane	5.35		0.00	128	126208	9.51	9.51		
1	Chloroform	5.47		0.00	83	453442	9.58	9.58		
1	1,1,1-Trichloroethane (TCA)	5.60		0.00	97	382165	8.87	8.87		
1	Carbon Tetrachloride	5.75		0.00	117	328451	9.08	9.08		
1	1,1-Dichloropropene	5.82		0.00	75	349507	10.81	10.8		
1	Isobutyl Alcohol	6.14		0.00	43	130575	394.94	395		
1	Benzene	6.05		0.00	78	1026702	9.72	9.72		
1	1,2-Dichloroethane (EDC)	6.19		0.00	62	300740	9.48	9.48		
1	Trichloroethene (TCE)	6.82		0.00	95	267985	9.41	9.41		
1	1,2-Dichloropropane	7.12	-0.01	0.00	63	275168	10.43	10.4		
1	Dibromomethane	7.25	-0.01	0.00	93	135132	9.83	9.83		
1	Methyl Methacrylate	7.28		0.00	69	378728	33.85	33.9		
1	1,4-Dioxane	7.27		0.00	88	37427	484.12	484		
1	Bromodichloromethane	7.43		0.00	83	331038	9.43	9.43		
1	2-Nitropropane	7.77		0.00	41	121415	28.29	28.3		
1	2-Chloroethyl Vinyl Ether	7.92	0.12	0.02	63	2094	0.1800	0.180	J	
1	cis-1,3-Dichloropropene	7.92		0.00	75	372976	9.23	9.23		
1	4-Methyl-2-pentanone (MIBK)	8.09		0.00	58	289881	59.75	59.8		
1	Toluene	8.19		0.00	92	651176	9.93	9.93		
2	trans-1,3-Dichloropropene	8.52	-0.01	0.00	75	315232	9.42	9.42		
2	Ethyl Methacrylate	8.58		0.00	69	780466	34.59	34.6		
2	1,1,2-Trichloroethane	8.70		0.00	83	168697	10.04	10.0		
2	Tetrachloroethene (PCE)	8.71		0.00	164	221880	8.90	8.90		
2	2-Hexanone	8.95		0.00	57	88534	56.87	56.9		
2	1,3-Dichloropropane	8.87		0.00	76	325852	9.99	9.99		
2	Dibromochloromethane	9.05		0.00	129	219717	8.75	8.75		
2	1,2-Dibromoethane (EDB)	9.16		0.00	107	179992	9.53	9.53		
2	1-Chlorohexane	9.61		0.00	91	324343	8.75	8.75		
2	Chlorobenzene	9.63		0.00	112	718031	9.74	9.74		

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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F006.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 11:35	**Quant Date:**	09/17/2013 13:00	**Vial:**	5
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG1310087-2 -- K1309439-003DMS			**Soln Conc. Units:**	PPB

Target Compounds **Final Conc. Units:** ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene	9.72		0.00	106	382701	9.63	9.63		
2	1,1,1,2-Tetrachloroethane	9.73		0.00	131	242682	8.56	8.56		
2	m,p-Xylenes	9.85		0.00	106	944205	20.10	20.1		
2	o-Xylene	10.24		0.00	106	450041	9.54	9.54		
2	Styrene	10.27		0.00	103	410247	11.10	11.1		
2	Bromoform	10.47		0.00	173	128235	8.30	8.30		
2	Isopropylbenzene	10.60		0.00	105	1089444	9.00	9.00		
2	cis-1,4-Dichloro-2-butene	10.76		0.00	89	88340	33.93	33.9		
3	1,1,2,2-Tetrachloroethane	10.99		0.00	83	198602	10.40	10.4		
3	trans-1,4-Dichloro-2-butene	11.06		0.00	53	175699	35.18	35.2		
3	Bromobenzene	10.92		0.00	156	291916	9.16	9.16		
3	n-Propylbenzene	11.01		0.00	91	1401185	9.79	9.79		
3	1,2,3-Trichloropropane	11.03		0.00	110	56096	9.32	9.32		
3	2-Chlorotoluene	11.11		0.00	91	833440	9.69	9.69		
3	1,3,5-Trimethylbenzene	11.20		0.00	105	965156	9.59	9.59		
3	4-Chlorotoluene	11.23		0.00	91	943651	10.52	10.5		
3	tert-Butylbenzene	11.50		0.00	119	831359	9.66	9.66		
3	1,2,4-Trimethylbenzene	11.57		0.00	105	956813	9.56	9.56		
3	sec-Butylbenzene	11.72		0.00	105	1187000	9.48	9.48		
3	4-Isopropyltoluene	11.87		0.00	119	990058	9.70	9.70		
3	1,3-Dichlorobenzene	11.86		0.00	146	550215	9.67	9.67		
3	1,4-Dichlorobenzene	11.96		0.00	146	541646	9.44	9.44		
3	n-Butylbenzene	12.28		0.00	91	896347	10.51	10.5		
3	1,2-Dichlorobenzene	12.33		0.00	146	487381	9.89	9.89		
3	1,2-Dibromo-3-chloropropane	13.14		0.00	155	24517	8.79	8.79		
3	1,3,5-Trichlorobenzene	13.28		0.00	180	404778	10.19	10.2		
3	1,2,4-Trichlorobenzene	13.92		0.00	180	284090	9.72	9.72		
3	Hexachlorobutadiene	14.05		0.00	225	146236	8.75	8.75		
3	Naphthalene	14.17		0.00	128	390381	10.60	10.6		
3	1,2,3-Trichlorobenzene	14.42		0.00	180	231218	9.92	9.92		

Prep Amount: 10 ml **Dilution:** 1.0
Prep Final Vol: 10 ml **Unit Factor:** 1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

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c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F006.D Vial: 5
Acq On : 17 Sep 2013 11:35 am Operator: KS
Sample : K1309439-003DMS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:50 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	1018995	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	409462	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	352669	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	258705	9.41	PPB		0.00
Spiked Amount 10.000			Recovery =	94.10%			
47) 1,2-Dichloroethane-d4	6.10	65	253037	9.58	PPB		0.00
Spiked Amount 10.000			Recovery =	95.80%			
62) Toluene-d8	8.12	98	990304	9.86	PPB		0.00
Spiked Amount 10.000			Recovery =	98.60%			
84) 4-Bromofluorobenzene	10.79	95	357023	9.88	PPB		0.00
Spiked Amount 10.000			Recovery =	98.80%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	227194	7.49	PPB		99
3) Chloromethane	1.29	50	380197	11.40	PPB		100
4) Vinyl Chloride	1.38	62	306992	9.80	PPB		100
6) Bromomethane	1.67	96	227748	11.38	PPB		98
7) Chloroethane	1.76	64	185153	10.67	PPB		97
8) Dichlorofluoromethane	1.97	67	506954	10.94	PPB		97
9) Trichlorofluoromethane	1.96	101	355406	8.30	PPB		97
10) Ethyl Ether	2.27	59	170707	11.33	PPB		98
11) Acrolein	2.48	56	1173	0.82	PPB		76
12) Trichlorotrifluoroethane	2.47	151	176337	8.91	PPB		96
13) 1,1-Dichloroethene	2.50	96	215494	11.06	PPB		95
14) Acetone	2.65	43	187992	58.06	PPB		97
15) Iodomethane	2.68	142	831022	65.05	PPB		99
16) Carbon Disulfide	2.70	76	1593333	21.90	PPB		100
17) 2-Propanol (Isopropyl Alco	2.83	45	7001	16.98	PPB		92
18) 3-Chloro-1-propene	2.96	76	474227	34.83	PPB		96
19) Methyl Acetate	3.02	43	119297	10.45	PPB		96
20) Acetonitrile	3.07	40	267911	359.63	PPB		96
21) Methylene Chloride	3.16	84	251957	10.12	PPB		99
22) tert-Butyl Alcohol	3.35	59	112789	138.22	PPB		94
23) Acrylonitrile	3.61	53	216455	47.45	PPB		95
24) Methyl tert-Butyl Ether	3.44	73	542294	10.36	PPB		99
25) trans-1,2-Dichloroethene	3.45	96	256196	9.98	PPB		99
26) Hexane	3.75	57	1096506	33.05	PPB		99
27) Diisopropyl Ether	4.20	45	1583853	21.06	PPB		99
28) 1,1-Dichloroethane	4.17	63	456559	9.67	PPB		99
29) Vinyl Acetate	4.28	86	170045	49.44	PPB	#	91
30) Chloroprene	4.24	53	1364857	38.21	PPB		99
31) tert-Butyl Ethyl Ether	4.74	59	1396171	20.67	PPB		100
32) 2,2-Dichloropropane	4.97	77	385832	9.89	PPB		98
33) cis-1,2-Dichloroethene	5.04	96	270740	9.33	PPB		99
34) 2-Butanone	5.12	72	76943	59.03	PPB		99
35) Ethyl Acetate	5.17	61	55628	29.82	PPB		97
36) Propionitrile	5.29	54	59822	36.58	PPB		92
37) Methacrylonitrile	5.43	67	208450	34.28	PPB		92
38) Bromochloromethane	5.35	128	126208	9.51	PPB		99
39) Tetrahydrofuran	5.18	71	1259	0.91	PPB	#	1

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F006.D Vial: 5
Acq On : 17 Sep 2013 11:35 am Operator: KS
Sample : K1309439-003DMS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:50 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	Chloroform	5.47	83	453442	9.58	PPB		99
41)	Cyclohexane	5.77	56	1936	0.05	PPB	#	1
42)	1,1,1-Trichloroethane	5.60	97	382165	8.87	PPB		98
44)	Carbon Tetrachloride	5.75	117	328451	9.08	PPB		97
45)	1,1-Dichloropropene	5.82	75	349507	10.81	PPB		97
46)	Isobutyl Alcohol	6.14	43	130575	394.94	PPB		100
48)	Benzene	6.05	78	1026702	9.72	PPB		100
49)	1,2-Dichloroethane	6.19	62	300740	9.48	PPB		98
50)	tert-Amyl Methyl Ether	6.20	55	284811	20.50	PPB		92
51)	Trichloroethene	6.82	95	267985	9.41	PPB		98
52)	Methylcyclohexane	6.93	83	1109	0.03	PPB	#	30
53)	1,2-Dichloropropane	7.12	63	275168	10.43	PPB		99
54)	Dibromomethane	7.25	93	135132	9.83	PPB		93
55)	Methyl methacrylate	7.28	69	378728	33.85	PPB		98
56)	1,4-Dioxane	7.27	88	37427	484.12	PPB		85
57)	Bromodichloromethane	7.43	83	331038	9.43	PPB		99
58)	2-Nitropropane	7.77	41	121415	28.29	PPB		96
59)	2-Chloroethyl Vinyl Ether	7.92	63	2094	0.18	PPB	#	46
60)	cis-1,3-Dichloropropene	7.92	75	372976	9.23	PPB		98
61)	4-Methyl-2-pentanone (MIBK	8.09	58	289881	59.75	PPB		98
63)	Toluene	8.19	92	651176	9.93	PPB		100
65)	n-Octane	8.19	85	6696	0.47	PPB	#	11
66)	trans-1,3-Dichloropropene	8.52	75	315232	9.42	PPB		98
67)	Ethyl methacrylate	8.58	69	780466	34.59	PPB		99
68)	1,1,2-Trichloroethane	8.70	83	168697	10.04	PPB		95
69)	Tetrachloroethene	8.71	164	221880	8.90	PPB		98
70)	2-Hexanone	8.95	57	88534	56.87	PPB		94
71)	1,3-Dichloropropane	8.87	76	325852	9.99	PPB		99
72)	Dibromochloromethane	9.05	129	219717	8.75	PPB		100
73)	1,2-Dibromoethane (EDB)	9.16	107	179992	9.53	PPB		94
74)	1-Chlorohexane	9.61	91	324343	8.75	PPB		96
75)	Chlorobenzene	9.63	112	718031	9.74	PPB		99
76)	Ethylbenzene	9.72	106	382701	9.63	PPB		99
77)	1,1,1,2-Tetrachloroethane	9.73	131	242682	8.56	PPB		96
78)	m,p-Xylenes	9.85	106	944205	20.10	PPB		97
79)	o-Xylene	10.24	106	450041	9.54	PPB		99
80)	Styrene	10.27	103	410247	11.10	PPB		97
81)	Bromoform	10.47	173	128235	8.30	PPB		98
82)	Isopropylbenzene	10.60	105	1089444	9.00	PPB		99
83)	cis-1,4-Dichloro-2-butene	10.76	89	88340	33.93	PPB		92
86)	1,1,2,2-Tetrachloroethane	10.99	83	198602	10.40	PPB		98
87)	trans-1,4-Dichloro-2-buten	11.06	53	175699	35.18	PPB		92
88)	Bromobenzene	10.92	156	291916	9.16	PPB		98
89)	n-Propylbenzene	11.01	91	1401185	9.79	PPB		99
90)	1,2,3-Trichloropropane	11.03	110	56096	9.32	PPB		92
91)	2-Chlorotoluene	11.11	91	833440	9.69	PPB		100
92)	1,3,5-Trimethylbenzene	11.20	105	965156	9.59	PPB		100
93)	4-Chlorotoluene	11.23	91	943651	10.52	PPB		99
94)	tert-Butylbenzene	11.50	119	831359	9.66	PPB		97
95)	1,2,4-Trimethylbenzene	11.57	105	956813	9.56	PPB		99
96)	sec-Butylbenzene	11.72	105	1187000	9.48	PPB		99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F006.D Vial: 5
Acq On : 17 Sep 2013 11:35 am Operator: KS
Sample : K1309439-003DMS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 12:56:50 2013 Quant Results File: 081213MS27_8260.RES

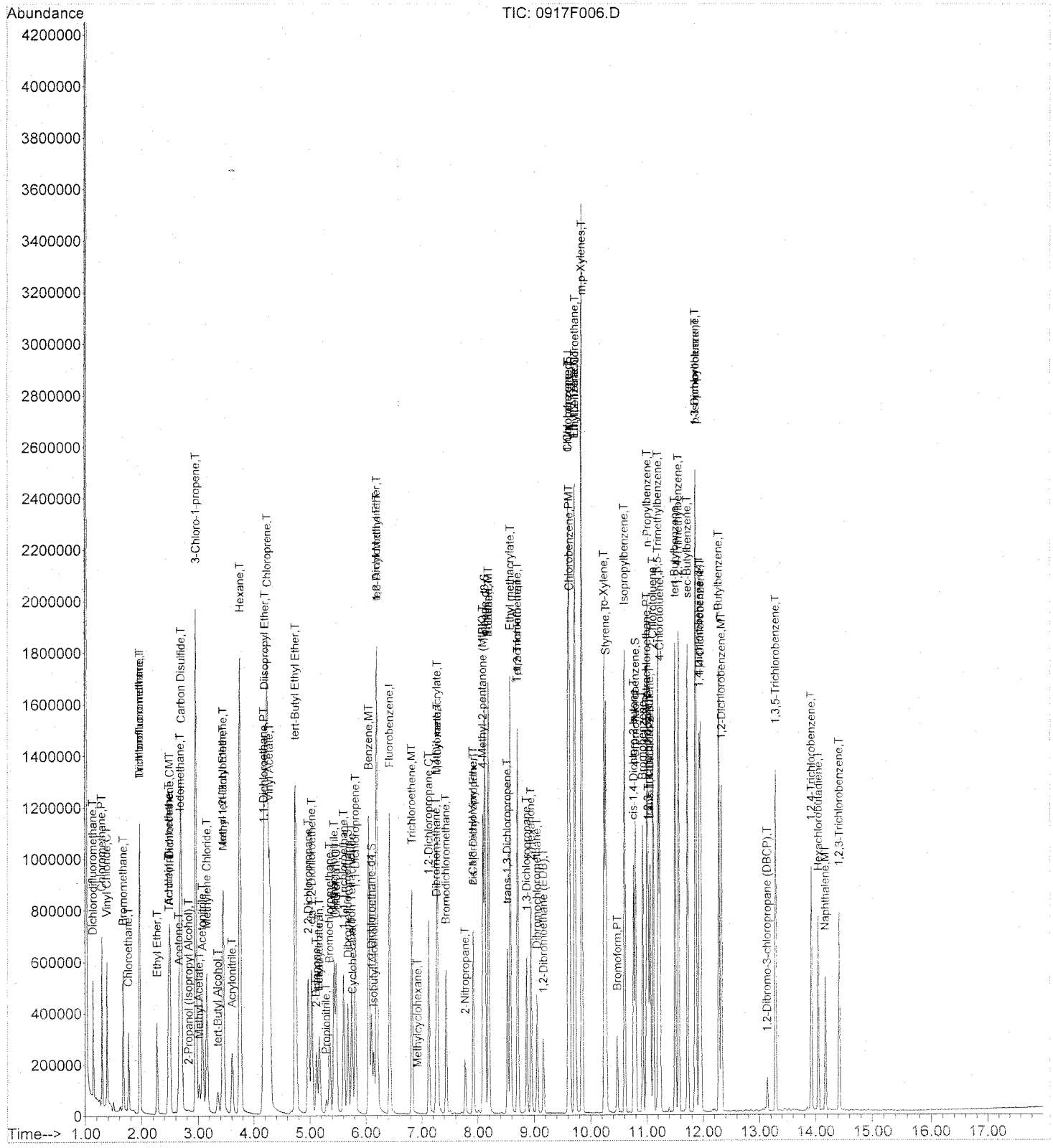
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
97)	p-Isopropyltoluene	11.87	119	990058	9.70	PPB	99
98)	1,3-Dichlorobenzene	11.86	146	550215	9.67	PPB	99
99)	1,4-Dichlorobenzene	11.96	146	541646	9.44	PPB	99
100)	n-Butylbenzene	12.28	91	896347	10.51	PPB	100
101)	1,2-Dichlorobenzene	12.33	146	487381	9.89	PPB	99
102)	1,2-Dibromo-3-chloropropan	13.14	155	24517	8.79	PPB	89
103)	1,3,5-Trichlorobenzene	13.28	180	404778	10.19	PPB	100
104)	1,2,4-Trichlorobenzene	13.92	180	284090	9.72	PPB	99
105)	Hexachlorobutadiene	14.05	225	146236	8.75	PPB	99
106)	Naphthalene	14.17	128	390381	10.60	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	231218	9.92	PPB	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F006.D Vial: 5
Acq On : 17 Sep 2013 11:35 am Operator: KS
Sample : K1309439-003DMS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 13:00 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration



ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Units:**	ug/L
Lab Code:	KWG1310087-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Vinyl Chloride	**8.04**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
Methylene Chloride	**9.33**		2.0	0.10	1	09/17/13	09/17/13	KWG1310087	
trans-1,2-Dichloroethene	**8.47**		0.50	0.072	1	09/17/13	09/17/13	KWG1310087	
1,1-Dichloroethene	**9.47**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
cis-1,2-Dichloroethene	**8.53**		0.50	0.067	1	09/17/13	09/17/13	KWG1310087	
Carbon Tetrachloride	**7.51**		0.50	0.096	1	09/17/13	09/17/13	KWG1310087	
Benzene	**8.52**		0.50	0.062	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloroethane (EDC)	**8.59**		0.50	0.080	1	09/17/13	09/17/13	KWG1310087	
Trichloroethene (TCE)	**8.44**		0.50	0.10	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichloropropane	**9.42**		0.50	0.095	1	09/17/13	09/17/13	KWG1310087	
Toluene	**8.73**		0.50	0.054	1	09/17/13	09/17/13	KWG1310087	
Tetrachloroethene (PCE)	**7.39**		0.50	0.099	1	09/17/13	09/17/13	KWG1310087	
Chlorobenzene	**8.59**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
Ethylbenzene	**8.30**		0.50	0.050	1	09/17/13	09/17/13	KWG1310087	
Styrene	**8.53**		0.50	0.089	1	09/17/13	09/17/13	KWG1310087	
m,p-Xylenes	**17.2**		0.50	0.11	1	09/17/13	09/17/13	KWG1310087	
o-Xylene	**8.41**		0.50	0.074	1	09/17/13	09/17/13	KWG1310087	
1,1,1-Trichloroethane (TCA)	**7.47**		0.50	0.075	1	09/17/13	09/17/13	KWG1310087	
1,4-Dichlorobenzene	**8.67**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2-Dichlorobenzene	**9.02**		0.50	0.12	1	09/17/13	09/17/13	KWG1310087	
1,2,4-Trichlorobenzene	**8.53**		2.0	0.096	1	09/17/13	09/17/13	KWG1310087	
1,1,2-Trichloroethane	**8.33**		0.50	0.14	1	09/17/13	09/17/13	KWG1310087	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	68-117	09/17/13	Acceptable
Dibromofluoromethane	94	73-122	09/17/13	Acceptable
Toluene-d8	102	65-144	09/17/13	Acceptable

Comments:

Exception Report

Data File: J:\MS27\DATA\091713\0917F004.D
Lab ID: KWG1310087-3
RunType: LCS
Matrix: WATER

Date Acquired: 09/17/2013 10:41
Date Quantitated: 09/17/2013 11:34
Batch ID: KWG1310078
Analysis Method: 8260C
MethodJoinID: MJ119

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA		x
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	2-Propanol	0.0040	0.01	NA	NT
	Acetonitrile	0.0073	0.01	NA	
	tert-Butyl Alcohol	0.0080	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0008	0.01	NA	
Second Source ICAL Verification	Acrolein	39.8	NA	30	
	Iodomethane	99.5	NA	30	
	n-Hexane	66.8	NA	30	
Continuing Calibration Recovery	Bromomethane (ccv ok)	32.2	NA	20	w/in ME limits
	Iodomethane	26.3	NA	20	NT
	tert-Butyl Alcohol	26.3	NA	20	
	Isobutyl Alcohol	36.9	NA	20	
	1,4-Dioxane	49.0	NA	20	

Primary Review: KS 9-18-13

Secondary Review: 9/19/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Minimum RF	Acetonitrile	0.0085	0.01	NA	NT
	Isobutyl Alcohol	0.0044	0.01	NA	"
	1,4-Dioxane	0.0011	0.01	NA	"

Primary Review: KS 9-18-13

Secondary Review: [illegible] 9/17/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F004.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 10:41	**Quant Date:**	09/17/2013 11:34	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310087-3			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	KWG1310087	**Report Group:**	
Analysis Method:	8260C	**Prep Method:**	EPA 5030B		
Prep Ref:	1282676	**Prep Date:**	09/17/2013		

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:			
Tune Ref:	J:\MS27\DATA\091713\0917F002.D	**Method ID:**	MJ119
MB Ref:	J:\MS27\DATA\091713\0917F009.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.42	-0.01	96	1019868	10.00	OK
2	Chlorobenzene-d5	9.60	-0.01	82	421891	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	349368	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68	0.00	0.00	113	257393	9.36	94	73-122	OK	
1	1,2-Dichloroethane-d4	6.10	0.00	0.00	65	243088	9.20	92	59-127	OK	
1	Toluene-d8	8.12	0.00	0.00	98	1023912	10.18	102	65-144	OK	
2	4-Bromofluorobenzene	10.79	0.00	0.00	95	360786	9.69	97	68-117	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.14		0.00	85	186120	6.13	6.13		
1	Chloromethane	1.29		0.00	50	352214	10.55	10.6		
1	Vinyl Chloride	1.38		0.00	62	252219	8.04	8.04		
1	1,3-Butadiene				54	0d				
1	Bromomethane	1.67		0.00	96	229660	11.47	11.5		
1	Chloroethane	1.76		0.00	64	158597	9.13	9.13		
1	Dichlorofluoromethane (CFC 21	1.97		0.00	67	438893	9.46	9.46		
1	Trichlorofluoromethane	1.96		0.00	101	290001	6.76	6.76		
1	Ethyl Ether	2.27		0.00	59	147551	9.78	9.78		
1	Acrolein	2.46	-0.02	0.00	56	930	0.6500	1.2	U	
1	Trichlorotrifluoroethane	2.47		0.00	151	146001	7.37	7.37		
1	1,1-Dichloroethene	2.50		0.00	96	184691	9.47	9.47		
1	Acetone	2.65		0.00	43	158352	48.86	48.9		
1	Iodomethane	2.67	-0.01	0.00	142	660875	52.27	52.3		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F004.D			Instrument:	MS27
Acqu Date:	09/17/2013 10:41	Quant Date:	09/17/2013 11:34	Vial:	4
Run Type:	LCS			Dilution:	1.0
Lab ID:	KWG1310087-3			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Carbon Disulfide	2.70		0.00	76	1320235	18.13	18.1		
1	2-Propanol				45	0d		17	U	
1	3-Chloro-1-propene	2.95	-0.01	0.00	76	437913	32.14	32.1		
1	Methyl Acetate	3.01	-0.01	0.00	43	99812	8.74	8.74		
1	Acetonitrile	3.07		0.00	40	235196	315.44	315		
1	Methylene Chloride	3.15		0.00	84	232570	9.33	9.33		
1	tert-Butyl Alcohol	3.35	0.01	0.00	59	94071	115.18	115		
1	Acrylonitrile	3.61		0.00	53	177399	38.85	38.9		
1	Methyl tert-Butyl Ether	3.43		0.00	73	456909	8.72	8.72		
1	trans-1,2-Dichloroethene	3.45		0.00	96	217536	8.47	8.47		
1	n-Hexane	3.74	-0.01	0.00	57	1094235	32.95	33.0		
1	Diisopropyl Ether	4.19	-0.01	0.00	45	1518609	20.18	20.2		
1	1,1-Dichloroethane	4.16	-0.01	0.00	63	405793	8.59	8.59		
1	Vinyl Acetate	4.28	-0.01	0.00	86	141344	41.06	41.1		
1	Chloroprene	4.24		0.00	53	1279906	35.80	35.8		
1	tert-Butyl Ethyl Ether	4.74		0.00	59	1288234	19.05	19.1		
1	2,2-Dichloropropane	4.97		0.00	77	330259	8.46	8.46		
1	cis-1,2-Dichloroethene	5.03		0.00	96	247642	8.53	8.53		
1	2-Butanone (MEK)	5.11		0.00	72	65389	50.13	50.1		
1	Ethyl Acetate	5.17		0.00	61	45025	24.12	24.1		
1	Propionitrile	5.29	-0.01	0.00	54	49030	29.96	30.0		
1	Methacrylonitrile	5.43		0.00	67	172139	28.28	28.3		
1	Bromochloromethane	5.35		0.00	128	113795	8.57	8.57		
1	Tetrahydrofuran				71	0d		0.94	U	
1	Chloroform	5.47		0.00	83	407617	8.61	8.61		
1	Cyclohexane				56	0d		0.36	U	
1	1,1,1-Trichloroethane (TCA)	5.60		0.00	97	321920	7.47	7.47		
1	Carbon Tetrachloride	5.75		0.00	117	271998	7.51	7.51		
1	1,1-Dichloropropene	5.81	-0.01	0.00	75	294105	9.09	9.09		
1	Isobutyl Alcohol	6.14		0.00	43	108877	329.03	329		
1	Benzene	6.05		0.00	78	900500	8.52	8.52		
1	1,2-Dichloroethane (EDC)	6.19		0.00	62	272890	8.59	8.59		
1	tert-Amyl Methyl Ether	6.20		0.00	55	255995	18.41	18.4		
1	Trichloroethene (TCE)	6.82		0.00	95	240369	8.44	8.44		
1	Methylcyclohexane				83	0d		0.33	U	
1	1,2-Dichloropropane	7.12	-0.01	0.00	63	248699	9.42	9.42		
1	Dibromomethane	7.25	-0.01	0.00	93	118770	8.64	8.64		
1	Methyl Methacrylate	7.27	-0.01	0.00	69	312290	27.89	27.9		
1	1,4-Dioxane	7.27		0.00	88	36010	465.39	465		
1	Bromodichloromethane	7.43		0.00	83	302784	8.62	8.62		
1	2-Nitropropane	7.77		0.00	41	106395	24.77	24.8		
1	2-Chloroethyl Vinyl Ether	7.80		0.00	63	106243	8.90	8.90		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
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E: Analyte concentration above high point of ICAL
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D: Result from dilution
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d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F004.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 10:41	**Quant Date:**	09/17/2013 11:34	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310087-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	cis-1,3-Dichloropropene	7.91	-0.01	0.00	75	341693	8.45	8.45		
1	4-Methyl-2-pentanone (MIBK)	8.09		0.00	58	234771	48.35	48.4		
1	Toluene	8.19		0.00	92	572719	8.73	8.73		
2	n-Octane				85	0d		0.16	U	
2	trans-1,3-Dichloropropene	8.52	-0.01	0.00	75	280914	8.15	8.15		
2	Ethyl Methacrylate	8.57	-0.01	0.00	69	651452	28.02	28.0		
2	1,1,2-Trichloroethane	8.70		0.00	83	144194	8.33	8.33		
2	Tetrachloroethene (PCE)	8.71		0.00	164	189759	7.39	7.39		
2	2-Hexanone	8.95		0.00	57	70756	44.11	44.1		
2	1,3-Dichloropropane	8.87		0.00	76	288951	8.60	8.60		
2	Dibromochloromethane	9.05		0.00	129	199856	7.73	7.73		
2	1,2-Dibromoethane (EDB)	9.16		0.00	107	157866	8.12	8.12		
2	1-Chlorohexane	9.61		0.00	91	273753	7.17	7.17		
2	Chlorobenzene	9.63		0.00	112	652663	8.59	8.59		
2	Ethylbenzene	9.72		0.00	106	339619	8.30	8.30		
2	1,1,1,2-Tetrachloroethane	9.73		0.00	131	221623	7.58	7.58		
2	m,p-Xylenes	9.84	-0.01	0.00	106	830181	17.15	17.2		
2	o-Xylene	10.24		0.00	106	408495	8.41	8.41		
2	Styrene	10.27		0.00	103	324817	8.53	8.53		
2	Bromoform	10.47		0.00	173	111580	7.01	7.01		
2	Isopropylbenzene	10.60		0.00	105	955209	7.66	7.66		
2	cis-1,4-Dichloro-2-butene	10.76		0.00	89	73003	27.21	27.2		
3	1,1,2,2-Tetrachloroethane	10.99		0.00	83	166246	8.79	8.79		
3	trans-1,4-Dichloro-2-butene	11.06		0.00	53	148379	29.99	30.0		
3	Bromobenzene	10.92		0.00	156	265259	8.40	8.40		
3	n-Propylbenzene	11.01		0.00	91	1220550	8.61	8.61		
3	1,2,3-Trichloropropane	11.03		0.00	110	49312	8.27	8.27		
3	2-Chlorotoluene	11.11		0.00	91	761933	8.94	8.94		
3	1,3,5-Trimethylbenzene	11.20		0.00	105	862435	8.65	8.65		
3	4-Chlorotoluene	11.23		0.00	91	799343m	8.99	8.99		
3	tert-Butylbenzene	11.50		0.00	119	721750	8.47	8.47		
3	1,2,4-Trimethylbenzene	11.57		0.00	105	864395	8.72	8.72		
3	sec-Butylbenzene	11.72		0.00	105	1024676	8.26	8.26		
3	4-Isopropyltoluene	11.87		0.00	119	871736	8.63	8.63		
3	1,3-Dichlorobenzene	11.86		0.00	146	504957	8.96	8.96		
3	1,4-Dichlorobenzene	11.96		0.00	146	492918	8.67	8.67		
3	n-Butylbenzene	12.28		0.00	91	784606	9.29	9.29		
3	1,2-Dichlorobenzene	12.33		0.00	146	440489	9.02	9.02		
3	1,2-Dibromo-3-chloropropane	13.14		0.00	155	21345	7.73	7.73		
3	1,3,5-Trichlorobenzene	13.28		0.00	180	369537	9.39	9.39		
3	1,2,4-Trichlorobenzene	13.92		0.00	180	246036	8.53	8.53		
3	Hexachlorobutadiene	14.05		0.00	225	129586	7.83	7.83		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F004.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 10:41	**Quant Date:**	09/17/2013 11:34	**Vial:**	4
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310087-3			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Naphthalene	14.17		0.00	128	298024	8.62	8.62		
3	1,2,3-Trichlorobenzene	14.41	-0.01	0.00	180	191534	8.60	8.60		
	Benzyl Chloride				0	0		1.0	U	NR
	Cyclohexanone				0	0		1.0	U	NR
	2-Ethoxyethanol				0	0		1.0	U	NR
	Bis(2-chloroethyl) Ether				0	0		20	U	NR
	beta-Pinene				0	0		1.0	U	NR
	1,1,2-Trifluoroethane				0	0		1.0	U	NR
	1,2,3-Trimethylbenzene				0	0		2.0	U	NR
	2,2,4-Trimethylpentane				0	0		1.0	U	NR
	Bis(chloromethyl) Ether				0	0		1.0	U	NR
	Bromoethane				0	0		1.0	U	NR
	Pentachloroethane				0	0		5.0	U	NR
	1,1-Dichloropropane				0	0		1.0	U	NR
	alpha-Pinene				0	0		1.0	U	NR
	1,1,1,2-Tetrafluoroethane				0	0		1.0	U	NR
	Nitrobenzene				0	0		20	U	NR

Prep Amount:	10 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:25:33 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.42	96	1019868	10.00	PPB	0.00
64) Chlorobenzene-d5	9.60	82	421891	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	349368	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	257393	9.36	PPB	0.00
Spiked Amount 10.000			Recovery =	93.60%		
47) 1,2-Dichloroethane-d4	6.10	65	243088	9.20	PPB	0.00
Spiked Amount 10.000			Recovery =	92.00%		
62) Toluene-d8	8.12	98	1023912	10.18	PPB	0.00
Spiked Amount 10.000			Recovery =	101.80%		
84) 4-Bromofluorobenzene	10.79	95	360786	9.69	PPB	0.00
Spiked Amount 10.000			Recovery =	96.90%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	186120	6.13	PPB	99
3) Chloromethane	1.29	50	352214	10.55	PPB	100
4) Vinyl Chloride	1.38	62	252219	8.04	PPB	99
6) Bromomethane	1.67	96	229660	11.47	PPB	99
7) Chloroethane	1.76	64	158597	9.13	PPB	97
8) Dichlorofluoromethane	1.97	67	438893	9.46	PPB	98
9) Trichlorofluoromethane	1.96	101	290001	6.76	PPB	99
10) Ethyl Ether	2.27	59	147551	9.78	PPB	98
11) Acrolein	2.46	56	930	0.65	PPB	81
12) Trichlorotrifluoroethane	2.47	151	146001	7.37	PPB	90
13) 1,1-Dichloroethene	2.50	96	184691	9.47	PPB	98
14) Acetone	2.65	43	158352	48.86	PPB	98
15) Iodomethane	2.67	142	660875	52.27	PPB	100
16) Carbon Disulfide	2.70	76	1320235	18.13	PPB	99
18) 3-Chloro-1-propene	2.95	76	437913	32.14	PPB	99
19) Methyl Acetate	3.01	43	99812	8.74	PPB	91
20) Acetonitrile	3.07	40	235196	315.44	PPB	97
21) Methylene Chloride	3.15	84	232570	9.33	PPB	97
22) tert-Butyl Alcohol	3.35	59	94071	115.18	PPB	96
23) Acrylonitrile	3.61	53	177399	38.85	PPB	97
24) Methyl tert-Butyl Ether	3.43	73	456909	8.72	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	217536	8.47	PPB	97
26) Hexane	3.74	57	1094235	32.95	PPB	98
27) Diisopropyl Ether	4.19	45	1518609	20.18	PPB	98
28) 1,1-Dichloroethane	4.16	63	405793	8.59	PPB	98
29) Vinyl Acetate	4.28	86	141344	41.06	PPB	96
30) Chloroprene	4.24	53	1279906	35.80	PPB	98
31) tert-Butyl Ethyl Ether	4.74	59	1288234	19.05	PPB	98
32) 2,2-Dichloropropane	4.97	77	330259	8.46	PPB	100
33) cis-1,2-Dichloroethene	5.03	96	247642	8.53	PPB	99
34) 2-Butanone	5.11	72	65389	50.13	PPB	95
35) Ethyl Acetate	5.17	61	45025	24.12	PPB	99
36) Propionitrile	5.29	54	49030	29.96	PPB	93
37) Methacrylonitrile	5.43	67	172139	28.28	PPB	96
38) Bromochloromethane	5.35	128	113795	8.57	PPB	95
40) Chloroform	5.47	83	407617	8.61	PPB	100
42) 1,1,1-Trichloroethane	5.60	97	321920	7.47	PPB	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:25:33 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Carbon Tetrachloride	5.75	117	271998	7.51	PPB	98
45)	1,1-Dichloropropene	5.81	75	294105	9.09	PPB	99
46)	Isobutyl Alcohol	6.14	43	108877	329.03	PPB	97
48)	Benzene	6.05	78	900500	8.52	PPB	100
49)	1,2-Dichloroethane	6.19	62	272890	8.59	PPB	97
50)	tert-Amyl Methyl Ether	6.20	55	255995	18.41	PPB	95
51)	Trichloroethene	6.82	95	240369	8.44	PPB	99
53)	1,2-Dichloropropane	7.12	63	248699	9.42	PPB	99
54)	Dibromomethane	7.25	93	118770	8.64	PPB	95
55)	Methyl methacrylate	7.27	69	312290	27.89	PPB	95
56)	1,4-Dioxane	7.27	88	36010	465.39	PPB	99
57)	Bromodichloromethane	7.43	83	302784	8.62	PPB	100
58)	2-Nitropropane	7.77	41	106395	24.77	PPB	96
59)	2-Chloroethyl Vinyl Ether	7.80	63	106243	8.90	PPB	99
60)	cis-1,3-Dichloropropene	7.91	75	341693	8.45	PPB	98
61)	4-Methyl-2-pentanone (MIBK	8.09	58	234771	48.35	PPB	98
63)	Toluene	8.19	92	572719	8.73	PPB	99
66)	trans-1,3-Dichloropropene	8.52	75	280914	8.15	PPB	99
67)	Ethyl methacrylate	8.57	69	651452	28.02	PPB	97
68)	1,1,2-Trichloroethane	8.70	83	144194	8.33	PPB	98
69)	Tetrachloroethene	8.71	164	189759	7.39	PPB	99
70)	2-Hexanone	8.95	57	70756	44.11	PPB	93
71)	1,3-Dichloropropane	8.87	76	288951	8.60	PPB	98
72)	Dibromochloromethane	9.05	129	199856	7.73	PPB	99
73)	1,2-Dibromoethane (EDB)	9.16	107	157866	8.12	PPB	99
74)	1-Chlorohexane	9.61	91	273753	7.17	PPB	98
75)	Chlorobenzene	9.63	112	652663	8.59	PPB	99
76)	Ethylbenzene	9.72	106	339619	8.30	PPB	98
77)	1,1,1,2-Tetrachloroethane	9.73	131	221623	7.58	PPB	94
78)	m,p-Xylenes	9.84	106	830181	17.15	PPB	98
79)	o-Xylene	10.24	106	408495	8.41	PPB	97
80)	Styrene	10.27	103	324817	8.53	PPB	96
81)	Bromoform	10.47	173	111580	7.01	PPB	97
82)	Isopropylbenzene	10.60	105	955209	7.66	PPB	100
83)	cis-1,4-Dichloro-2-butene	10.76	89	73003	27.21	PPB	92
86)	1,1,2,2-Tetrachloroethane	10.99	83	166246	8.79	PPB	93
87)	trans-1,4-Dichloro-2-buten	11.06	53	148379	29.99	PPB	94
88)	Bromobenzene	10.92	156	265259	8.40	PPB	93
89)	n-Propylbenzene	11.01	91	1220550	8.61	PPB	99
90)	1,2,3-Trichloropropane	11.03	110	49312	8.27	PPB	98
91)	2-Chlorotoluene	11.11	91	761933	8.94	PPB	100
92)	1,3,5-Trimethylbenzene	11.20	105	862435	8.65	PPB	99
93)	4-Chlorotoluene	11.23	91	799343m	8.99	PPB	
94)	tert-Butylbenzene	11.50	119	721750	8.47	PPB	98
95)	1,2,4-Trimethylbenzene	11.57	105	864395	8.72	PPB	99
96)	sec-Butylbenzene	11.72	105	1024676	8.26	PPB	99
97)	p-Isopropyltoluene	11.87	119	871736	8.63	PPB	99
98)	1,3-Dichlorobenzene	11.86	146	504957	8.96	PPB	100
99)	1,4-Dichlorobenzene	11.96	146	492918	8.67	PPB	99
100)	n-Butylbenzene	12.28	91	784606	9.29	PPB	98
101)	1,2-Dichlorobenzene	12.33	146	440489	9.02	PPB	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:25:33 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

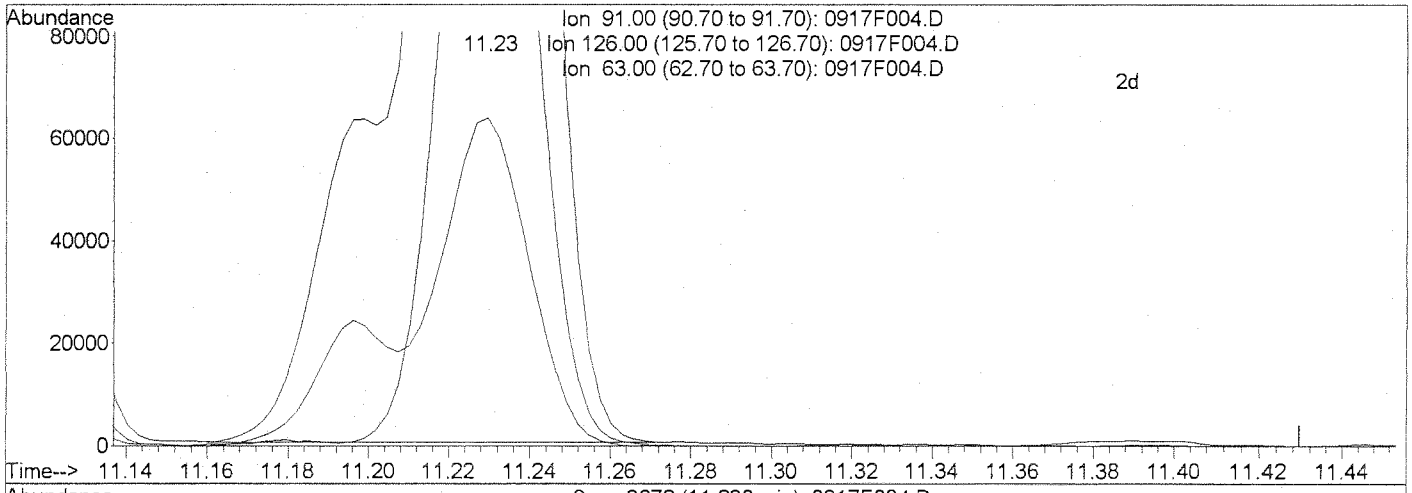
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
102)	1,2-Dibromo-3-chloropropan	13.14	155	21345	7.73	PPB	85
103)	1,3,5-Trichlorobenzene	13.28	180	369537	9.39	PPB	96
104)	1,2,4-Trichlorobenzene	13.92	180	246036	8.53	PPB	99
105)	Hexachlorobutadiene	14.05	225	129586	7.83	PPB	98
106)	Naphthalene	14.17	128	298024	8.62	PPB	99
107)	1,2,3-Trichlorobenzene	14.41	180	191534	8.60	PPB	95

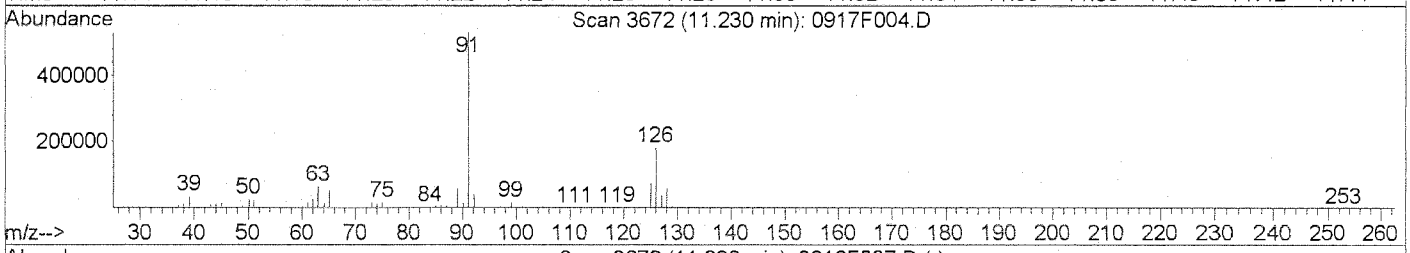
(#) = qualifier out of range (m) = manual integration

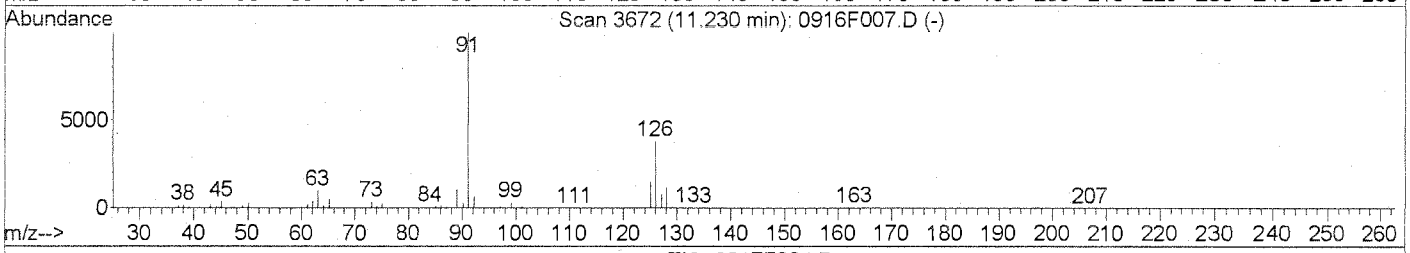
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:34 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F004.D

(93) 4-Chlorotoluene (T)

11.23min 9.59PPB

response 852588

Ion	Exp%	Act%
91.00	100	100
126.00	34.10	34.21
63.00	12.60	12.08
0.00	0.00	0.00

Manual Integration:

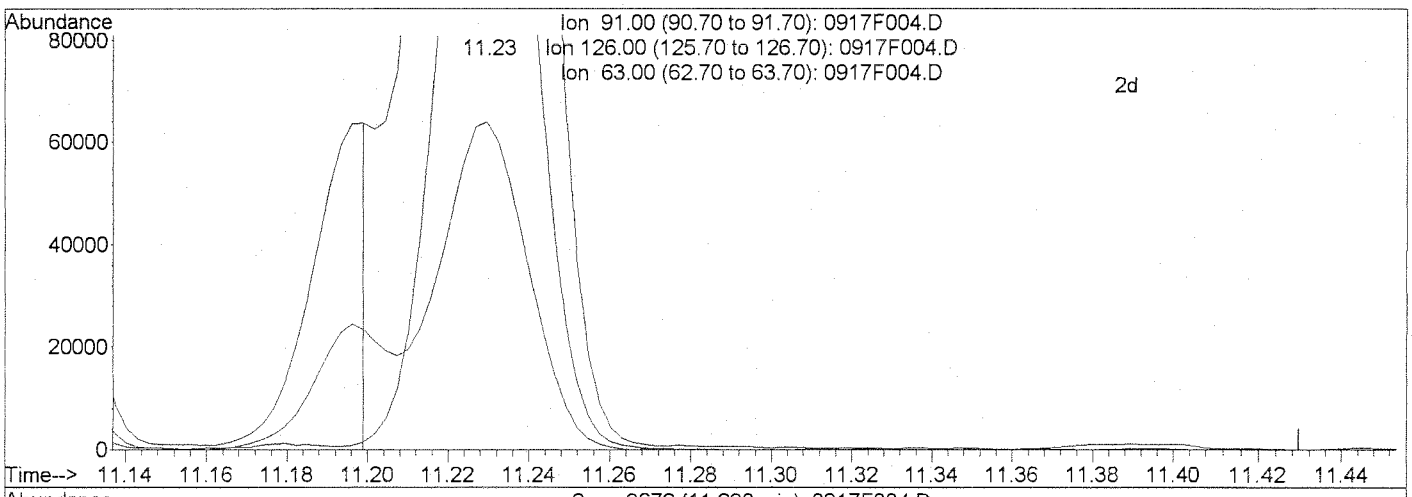
Before

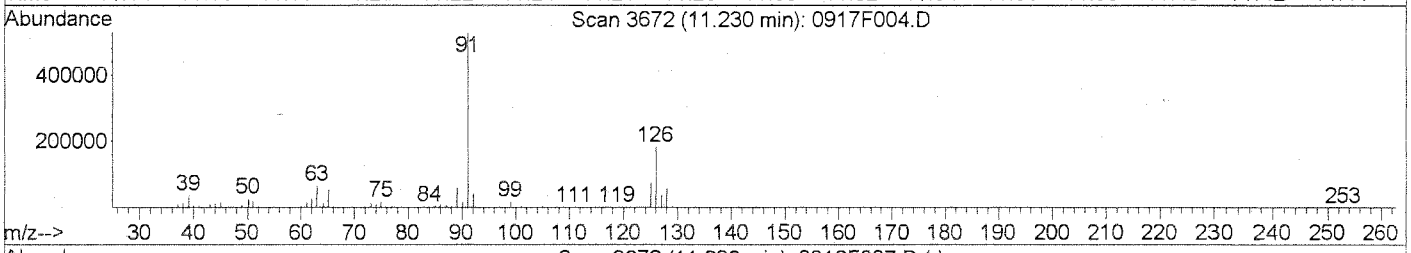
KS 9.17.13

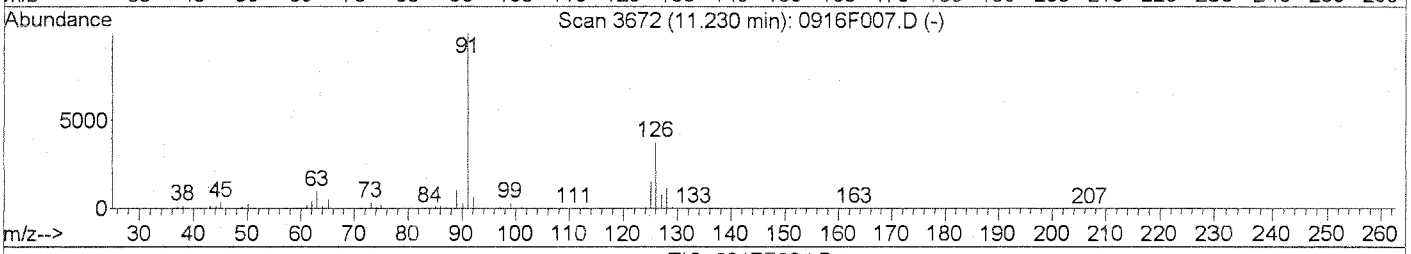
Quantitation Report (Qedit)

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:34 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F004.D

(93) 4-Chlorotoluene (T)

11.23min 8.99PPB m

response 799343

Ion	Exp%	Act%
91.00	100	100
126.00	34.10	34.20
63.00	12.60	12.07
0.00	0.00	0.00

Manual Integration:

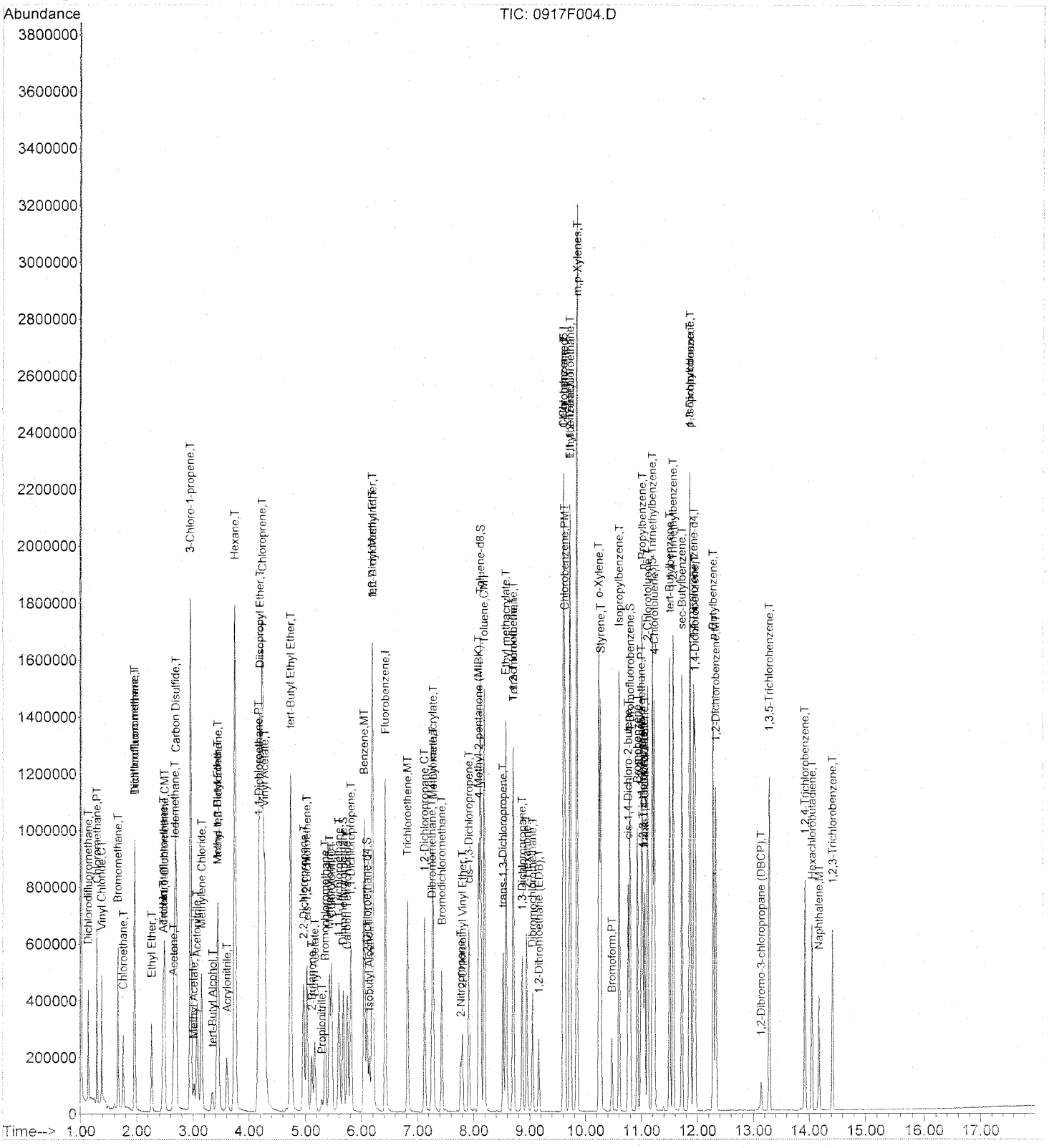
After

Shoulder KS

09/17/13 KS 9/17

Data File : J:\MS27\DATA\091713\0917F004.D Vial: 4
Acq On : 17 Sep 2013 10:41 am Operator: KS
Sample : LCS Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 11:34 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration



Organic Analysis:
Volatile Organic Compounds

Validation Package

Standards Data

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013
Time Analyzed: 08:52

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\091713\0917F002.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1310078

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.9	8434	PASS
75	95	30	60	49.9	23480	PASS
95	95	100	100	100.0	47101	PASS
96	95	5	9	6.6	3086	PASS
173	174	0	2	0.5	193	PASS
174	95	50	120	87.7	41296	PASS
175	174	5	9	6.9	2857	PASS
176	174	95	101	95.9	39600	PASS
177	176	5	9	6.0	2378	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1310078-1	J:\MS27\DATA\091713\0917F003.D	09/17/2013	09:20	
Lab Control Sample	KWG1310087-3	J:\MS27\DATA\091713\0917F004.D	09/17/2013	10:41	
Batch QCMS	KWG1310087-1	J:\MS27\DATA\091713\0917F005.D	09/17/2013	11:08	
Batch QCDMS	KWG1310087-2	J:\MS27\DATA\091713\0917F006.D	09/17/2013	11:35	
Method Blank	KWG1310087-4	J:\MS27\DATA\091713\0917F009.D	09/17/2013	12:57	
Batch QC	K1309439-003	J:\MS27\DATA\091713\0917F010.D	09/17/2013	13:24	
Trip Blank 2	K1309638-003	J:\MS27\DATA\091713\0917F012.D	09/17/2013	14:19	
Trip Blank 1	K1309638-006	J:\MS27\DATA\091713\0917F013.D	09/17/2013	14:46	
13253-BW-3	K1309638-004	J:\MS27\DATA\091713\0917F014.D	09/17/2013	15:13	
13253-Well D	K1309638-005	J:\MS27\DATA\091713\0917F015.D	09/17/2013	15:40	
Trip Blank 3	K1309638-009	J:\MS27\DATA\091713\0917F016.D	09/17/2013	16:08	
Trip Blank 4	K1309638-012	J:\MS27\DATA\091713\0917F017.D	09/17/2013	16:35	
13254-BW-4	K1309638-001	J:\MS27\DATA\091713\0917F018.D	09/17/2013	17:49	
13254-BW-2	K1309638-002	J:\MS27\DATA\091713\0917F019.D	09/17/2013	18:16	
13255-BW-1	K1309638-008	J:\MS27\DATA\091713\0917F020.D	09/17/2013	18:44	
13255-DUP	K1309638-010	J:\MS27\DATA\091713\0917F021.D	09/17/2013	19:11	
13255-Rinse	K1309638-011	J:\MS27\DATA\091713\0917F022.D	09/17/2013	19:38	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS27\DATA\091713\0917F002.D
Lab ID: KWG1310078-2
RunType: BFB
Matrix: WATER

Date Acquired: 09/17/2013 08:52
Date Quantitated:
Batch ID: KWG1310078
Analysis Method: BFB
ListJoinID: LJ774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: KS 9.18.13

Secondary Review: QDJ 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F002.D	**Instrument:**	MS27
Acqu Date:	09/17/2013 08:52	**Quant Date:**	**Vial:**	2
Run Type:	BFB		**Dilution:**	1.0
Lab ID:	KWG1310078-2		**Soln Conc. Units:**	

Bottle ID:		**Tier:**	**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**	**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**	**Report Group:**
Analysis Method:	BFB	**Prep Method:**	
Prep Ref:		**Prep Date:**	

Quant Method:	J:\MS27\METHODS\081213MS27_8	**Calibration ID:**	CAL12690
Title:	GC/MS Tuning Evaluation	**Report List ID:**	LJ774
Tune Ref:		**Method ID:**	MJ159
MB Ref:		**Quant based on Report List**	

Tune Results

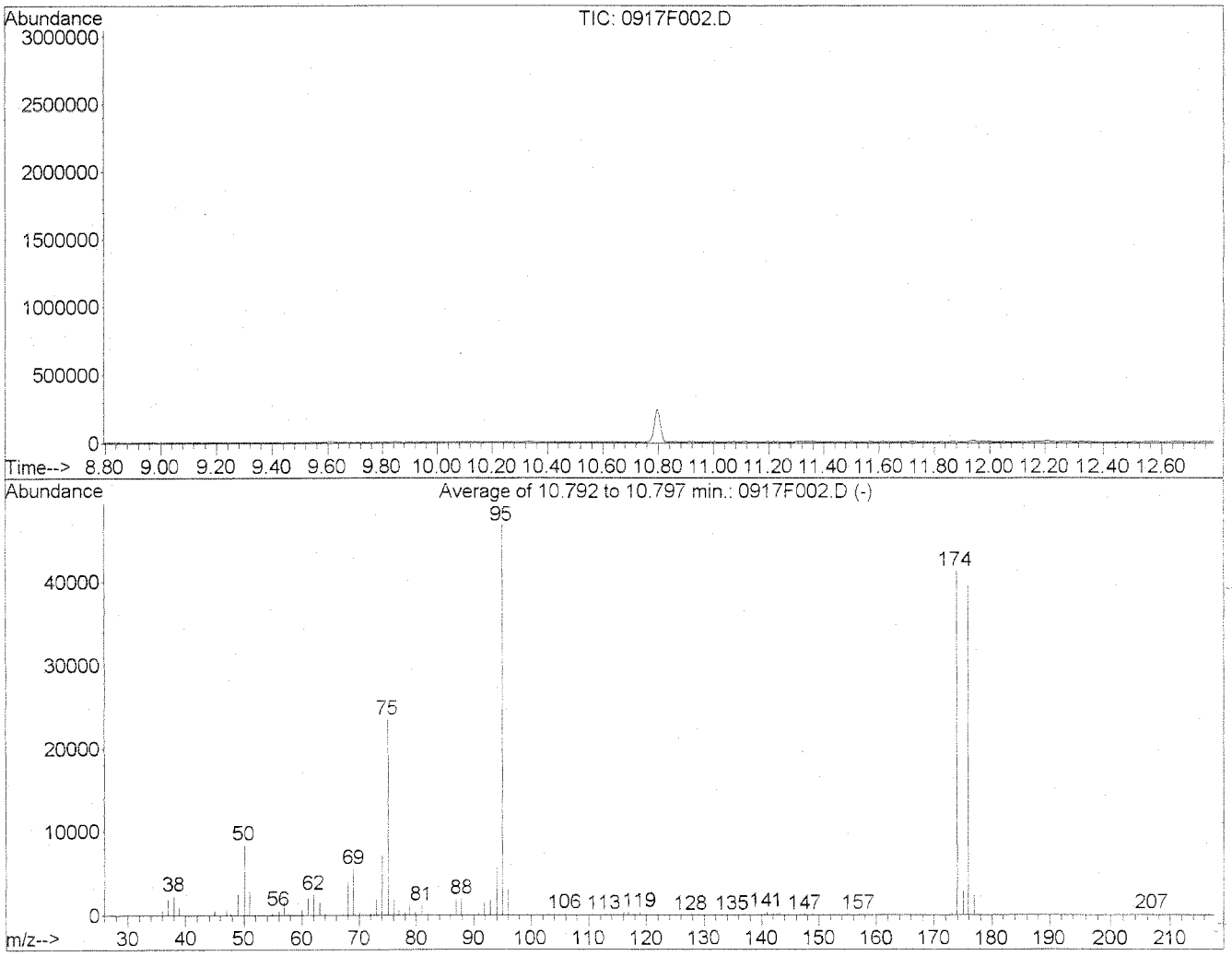
Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.9	8434	Pass
75	95	30	60	49.9	23480	Pass
95	95	100	100	100.0	47101	Pass
96	95	5	9	6.6	3086	Pass
173	174	0	2	0.5	193	Pass
174	95	50	120	87.7	41296	Pass
175	174	5	9	6.9	2857	Pass
176	174	95	101	95.9	39600	Pass
177	176	5	9	6.0	2378	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS27\DATA\091713\0917F002.D Vial: 2
Acq On : 17 Sep 2013 8:52 am Operator: KS
Sample : BFB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B



AutoFind: Scans 3515, 3516, 3517; Background Corrected with Scan 3500

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	8434	PASS
75	95	30	60	49.9	23480	PASS
95	95	100	100	100.0	47101	PASS
96	95	5	9	6.6	3086	PASS
173	174	0.00	2	0.5	193	PASS
174	95	50	120	87.7	41296	PASS
175	174	5	9	6.9	2857	PASS
176	174	95	101	95.9	39600	PASS
177	176	5	9	6.0	2378	PASS

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Level ID	File ID
A	J:\MS27\DATA\081213\0812F007.D
B	J:\MS27\DATA\081213\0812F008.D
C	J:\MS27\DATA\081213\0812F009.D
D	J:\MS27\DATA\081213\0812F010.D
E	J:\MS27\DATA\081213\0812F011.D
F	J:\MS27\DATA\081213\0812F012.D
G	J:\MS27\DATA\081213\0812F013.D
H	J:\MS27\DATA\081213\0812F014.D
I	J:\MS27\DATA\081213\0812F015.D
J	J:\MS27\DATA\081213\0812F016.D
K	J:\MS27\DATA\081213\0812F017.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Vinyl Chloride	A	0.10	0.331	B	0.20	0.315	C	0.50	0.311	D	1.0	0.306	E	2.0	0.281
	F	5.0	0.315	G	10	0.315	H	20	0.295	I	40	0.303	J	60	0.300
	K	80	0.310												
Methylene Chloride							C	0.50	0.262	D	1.0	0.261	E	2.0	0.227
	F	5.0	0.252	G	10	0.246	H	20	0.234	I	40	0.238	J	60	0.237
	K	80	0.242												
trans-1,2-Dichloroethene				B	0.20	0.243	C	0.50	0.272	D	1.0	0.263	E	2.0	0.235
	F	5.0	0.255	G	10	0.256	H	20	0.242	I	40	0.248	J	60	0.247
	K	80	0.257												
1,1-Dichloroethene				B	0.20	0.202	C	0.50	0.199	D	1.0	0.179	E	2.0	0.171
	F	5.0	0.199	G	10	0.197	H	20	0.187	I	40	0.191	J	60	0.188
	K	80	0.198												
cis-1,2-Dichloroethene	A	0.10	0.299	B	0.20	0.272	C	0.50	0.310	D	1.0	0.278	E	2.0	0.259
	F	5.0	0.286	G	10	0.289	H	20	0.278	I	40	0.283	J	60	0.286
	K	80	0.293												
Carbon Tetrachloride							C	0.50	0.308	D	1.0	0.344	E	2.0	0.318
	F	5.0	0.365	G	10	0.374	H	20	0.357	I	40	0.371	J	60	0.369
	K	80	0.387												
Benzene	A	0.10	1.02	B	0.20	1.09	C	0.50	1.04	D	1.0	1.07	E	2.0	0.951
	F	5.0	1.06	G	10	1.06	H	20	1.01	I	40	1.03	J	60	1.03
	K	80	1.06												
1,2-Dichloroethane (EDC)	A	0.10	0.237	B	0.20	0.325	C	0.50	0.323	D	1.0	0.327	E	2.0	0.292
	F	5.0	0.329	G	10	0.326	H	20	0.308	I	40	0.317	J	60	0.316
	K	80	0.325												
Trichloroethene (TCE)				B	0.20	0.250	C	0.50	0.272	D	1.0	0.283	E	2.0	0.262
	F	5.0	0.292	G	10	0.296	H	20	0.280	I	40	0.283	J	60	0.284
	K	80	0.293												
1,2-Dichloropropane	A	0.10	0.237	B	0.20	0.220	C	0.50	0.272	D	1.0	0.257	E	2.0	0.241
	F	5.0	0.275	G	10	0.273	H	20	0.265	I	40	0.265	J	60	0.268
	K	80	0.275												

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Toluene	A	0.10	0.582	B	0.20	0.610	C	0.50	0.648	D	1.0	0.652	E	2.0	0.607
	F	5.0	0.662	G	10	0.667	H	20	0.638	I	40	0.659	J	60	0.670
	K	80	0.681												
Tetrachloroethene (PCE)							C	0.50	0.639	D	1.0	0.610	E	2.0	0.564
	F	5.0	0.628	G	10	0.609	H	20	0.596	I	40	0.605	J	60	0.598
	K	80	0.631												
Chlorobenzene	A	0.10	1.58	B	0.20	1.64	C	0.50	1.91	D	1.0	1.78	E	2.0	1.68
	F	5.0	1.88	G	10	1.88	H	20	1.83	I	40	1.86	J	60	1.85
	K	80	1.92												
Ethylbenzene	A	0.10	0.889	B	0.20	0.927	C	0.50	0.992	D	1.0	0.992	E	2.0	0.928
	F	5.0	0.991	G	10	0.987	H	20	0.968	I	40	0.976	J	60	0.993
	K	80	1.03												
Styrene				B	0.20	0.834	C	0.50	0.855	D	1.0	0.879	E	2.0	0.798
	F	5.0	0.946	G	10	0.932	H	20	0.918	I	40	0.947	J	60	0.940
	K	80	0.977												
m,p-Xylenes	A	0.20	0.997	B	0.40	1.02	C	1.0	1.18	D	2.0	1.19	E	4.0	1.07
	F	10	1.21	G	20	1.20	H	40	1.18	I	80	1.21	J	120	1.21
o-Xylene	A	0.10	1.25	B	0.20	1.01	C	0.50	1.16	D	1.0	1.15	E	2.0	1.06
	F	5.0	1.18	G	10	1.17	H	20	1.15	I	40	1.16	J	60	1.17
	K	80	1.20												
1,1,1-Trichloroethane (TCA)				B	0.20	0.435	C	0.50	0.420	D	1.0	0.411	E	2.0	0.396
	F	5.0	0.429	G	10	0.440	H	20	0.416	I	40	0.423	J	60	0.420
	K	80	0.438												
1,4-Dichlorobenzene	A	0.10	1.63	B	0.20	1.71	C	0.50	1.68	D	1.0	1.61	E	2.0	1.50
	F	5.0	1.64	G	10	1.68	H	20	1.59	I	40	1.58	J	60	1.61
	K	80	1.67												
1,2-Dichlorobenzene	A	0.10	1.13	B	0.20	1.27	C	0.50	1.43	D	1.0	1.37	E	2.0	1.31
	F	5.0	1.52	G	10	1.53	H	20	1.45	I	40	1.42	J	60	1.45
	K	80	1.49												
1,2,4-Trichlorobenzene													E	2.0	0.406
	F	5.0	0.688	G	10	0.810	H	20	0.875	I	40	0.912	J	60	0.953
	K	80	1.01												
4-Bromofluorobenzene	A	10	0.835	B	10	0.838	C	10	0.861	D	10	0.868	E	10	0.865
	F	10	0.896	G	10	0.887	H	10	0.908	I	10	0.918	J	10	0.912
	K	10	0.916												

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Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dibromofluoromethane	A	10	0.266	B	10	0.272	C	10	0.271	D	10	0.274	E	10	0.270
	F	10	0.274	G	10	0.270	H	10	0.265	I	10	0.272	J	10	0.265
	K	10	0.269												
1,1,2-Trichloroethane				B	0.20	0.377	C	0.50	0.419	D	1.0	0.458	E	2.0	0.390
	F	5.0	0.423	G	10	0.407	H	20	0.405	I	40	0.405	J	60	0.402
	K	80	0.419												
Toluene-d8	A	10	0.984	B	10	0.977	C	10	0.977	D	10	0.976	E	10	0.975
	F	10	0.983	G	10	0.987	H	10	0.973	I	10	1.00	J	10	1.01
	K	10	1.00												

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Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL12690
Instrument ID: MS27

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Vinyl Chloride	MS	AverageRF	% RSD	4.2		≤ 20	0.307		0.100
Methylene Chloride	TRG	AverageRF	% RSD	5.0		≤ 20	0.244		0.100
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.3		≤ 20	0.252		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	5.3		≤ 20	0.191		0.100
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.8		≤ 20	0.285		0.100
Carbon Tetrachloride	MS	AverageRF	% RSD	7.5		≤ 20	0.355		0.100
Benzene	MS	AverageRF	% RSD	3.5		≤ 20	1.04		0.500
1,2-Dichloroethane (EDC)	TRG	AverageRF	% RSD	8.6		≤ 20	0.311		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	5.2		≤ 20	0.279		0.200
1,2-Dichloropropane	TRG	AverageRF	% RSD	7.1		≤ 20	0.259		0.100
Toluene	MS	AverageRF	% RSD	4.8		≤ 20	0.643		0.400
Tetrachloroethene (PCE)	TRG	AverageRF	% RSD	3.7		≤ 20	0.609		0.200
Chlorobenzene	MS	AverageRF	% RSD	6.4		≤ 20	1.80		0.500
Ethylbenzene	MS	AverageRF	% RSD	4.1		≤ 20	0.970		0.100
Styrene	TRG	AverageRF	% RSD	6.4		≤ 20	0.902		0.300
m,p-Xylenes	TRG	AverageRF	% RSD	7.2		≤ 20	1.15		0.100
o-Xylene	TRG	AverageRF	% RSD	5.5		≤ 20	1.15		0.300
1,1,1-Trichloroethane (TCA)	TRG	AverageRF	% RSD	3.2		≤ 20	0.423		0.100
1,4-Dichlorobenzene	TRG	AverageRF	% RSD	3.6		≤ 20	1.63		0.500
1,2-Dichlorobenzene	MS	AverageRF	% RSD	8.6		≤ 20	1.40		0.400
1,2,4-Trichlorobenzene	TRG	Quadratic(0,0)	COD	1.000		≥ 0.990	0.808		0.200
4-Bromofluorobenzene	SURR	AverageRF	% RSD	3.5		≤ 20	0.882		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	1.2		≤ 20	0.270		0.01
1,1,2-Trichloroethane	MS	AverageRF	% RSD	5.3		≤ 20	0.410		0.100
Toluene-d8	SURR	AverageRF	% RSD	1.3		≤ 20	0.986		0.01

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QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 08/12/2013
Date Analyzed: 08/12/2013

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL12690
Units: PPB

File ID: J:\MS27\DATA\081213\0812F020.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	10	0.307	0.310	1	NA	± 30 %	AverageRF
Methylene Chloride	10	10	0.244	0.250	2	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.252	0.261	4	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	12	0.191	0.231	21	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.7	0.285	0.277	-3	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	10	0.355	0.365	3	NA	± 30 %	AverageRF
Benzene	10	9.7	1.04	1.01	-3	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.311	0.321	3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	10	0.279	0.284	2	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	10	0.259	0.265	2	NA	± 30 %	AverageRF
Toluene	10	9.9	0.643	0.635	-1	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.4	0.609	0.570	-6	NA	± 30 %	AverageRF
Chlorobenzene	10	9.7	1.80	1.74	-3	NA	± 30 %	AverageRF
Ethylbenzene	10	9.6	0.970	0.936	-4	NA	± 30 %	AverageRF
Styrene	10	9.7	0.902	0.880	-3	NA	± 30 %	AverageRF
m,p-Xylenes	20	20	1.15	1.12	-2	NA	± 30 %	AverageRF
o-Xylene	10	9.5	1.15	1.09	-5	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	0.423	0.423	0	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.7	1.63	1.58	-3	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	9.9	1.40	1.38	-1	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	8.6	0.808	0.712	NA	-14	± 30 %	)uadratic(0,(
1,1,2-Trichloroethane	10	9.5	0.410	0.388	-5	NA	± 30 %	AverageRF

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† **SPCC Compound** ‡ **CCC Compound**

Date: 8/12/13

Columbia Analytical Services, Inc.

Tune File: BFBaug12

By: ka

Injection Log

New Tune: yes

IS/SS Std. ID: 71004 - 81E Mix

MS27 - Agilent 5975C

CCV Std ID: See preps sheet

ICAL Date: 8/12&13 Cal 12690

MS/DMS/LCS/ICV Std ID: 1

Second RV: 8/13/13

BFB Std. ID: 71004 - 85&81A

LIMS ID:

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	BFB	081205	8260.m	4.4 mL 44 mL		
2	IB	6				
3	8260 Ical 0.1	7				
4	0.2	8				
5	0.5	9				
6	1	10				
7	2	11				
8	5	12				
9	10	13				
10	20	14				
11	40	15				
12	60	16				
13	80	17				
14	IS	18				
15	IB	19				
16	ICV	20				
17	ICV CLP	21	1			(NC)
18	BFB	081300 2	8260.m	4.4 mL 44 mL		
19	ICV - CLP12prep	3	1			
20						
21						
22						
23						
24						
25						
26						
27						

INTIAL CALIBRATION CURVE

Date 8/12/13 Analysis: 8260

Prepared By KR Instrument:

Matrix: Water

Stock Solution #1 — Analytes: Init. Concentration:

Stock Solution #2 72w0A-4C 8/13 Analytes: Low 8260 Init. Concentration: 5/10/20/100/200ppm

Stock Solution #3 71w0A-4B 8/13 Analytes: 8260 Init. Concentration: 50/100/200/1000/2000ppm

Stock Solution #4 72w0A-4D 8/13 Analytes: Low Ketones Init. Concentration: 200ppm

Stock Solution #5 72w0A-4B 8/13 Analytes: Ketones Init. Concentration: 2000ppm

Aliquot of Stock Solution #1 (µL)	Final Conc. of #1 (µg/L)	Aliquot of Stock Solution #2 (µL)	Final Conc. of #2 (µg/L)	Aliquot of Stock Solution #3 (µL)	Final Conc. of #3 (µg/L)	Aliquot of Stock Solution #4 (µL)	Final Conc. of #4 (µg/L)	Aliquot of Stock Solution #5 (µL)	Final Conc. of #5 (µg/L)	Final Volume (mL)
		1	0.1			1	4			50
		2	0.2			2	8			50
		5.0	0.5			5	20			50
		10	1			10	40			50
				2.0	2			2	80	50
				5.0	5			2.5	100	50
				10	10			5.0	200	50
				20	20			10	400	50
				40	40			20	800	50
				60	60			40	1600	50
				80	80			50	2000	50

8260 ICV: 10uL of 50/250ppm Accustd ICV (72w0B 8/13) + 50uL of 100ppm Acrolein (72w0J0 8/13) +

5uL of 100ppm Dichlorofluoromethane (72w0A8 8/13) + 5uL of 200ppm n-Octane/TBF/Tetrahydrafuran (72w0A9C 8/13)

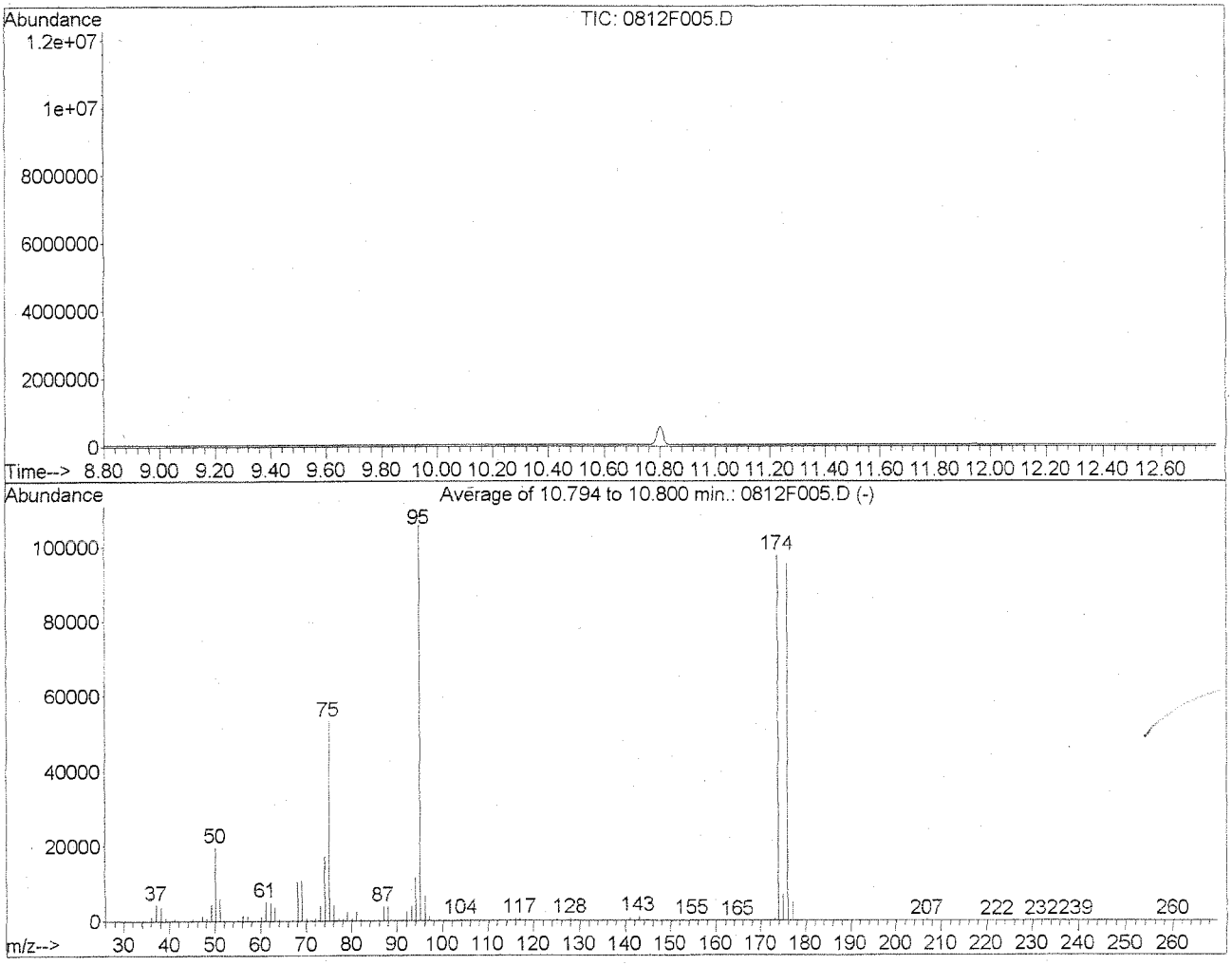
5uL of 100ppm Oxygenates (72w0A5A 8/13) + 7.5uL of Appendix ICV mix(72w0A1C 8/13) + 25uL of 1000ppm 2-Propanol(72w04-3D 8/14/13)

Spl wtr- CCV 72w0A9C 8/15

BFB

Data File : J:\MS27\DATA\081213\0812F005.D
Acq On : 12 Aug 2013 11:29 am
Sample : BFB
Misc :
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\051713MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B

Vial: 2
Operator: KR
Inst : MS27
Multiplr: 1.00



AutoFind: Scans 3516, 3517, 3518; Background Corrected with Scan 3498

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.7	19788	PASS
75	95	30	60	50.4	53309	PASS
95	95	100	100	100.0	105668	PASS
96	95	5	9	6.4	6741	PASS
173	174	0.00	2	0.7	707	PASS
174	95	50	120	92.4	97653	PASS
175	174	5	9	7.4	7192	PASS
176	174	95	101	97.7	95405	PASS
177	176	5	9	5.2	4957	PASS

KR 8/12/13

0812F005.D 051713MS27_8260.M Mon Aug 12 11:55:38 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F006.D Vial: 3
Acq On : 12 Aug 2013 12:14 pm Operator: KR
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 12:32:45 2013 Quant Results File: 051713MS27_8260

Quant Method : J:\MS27\METHODS\051713MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

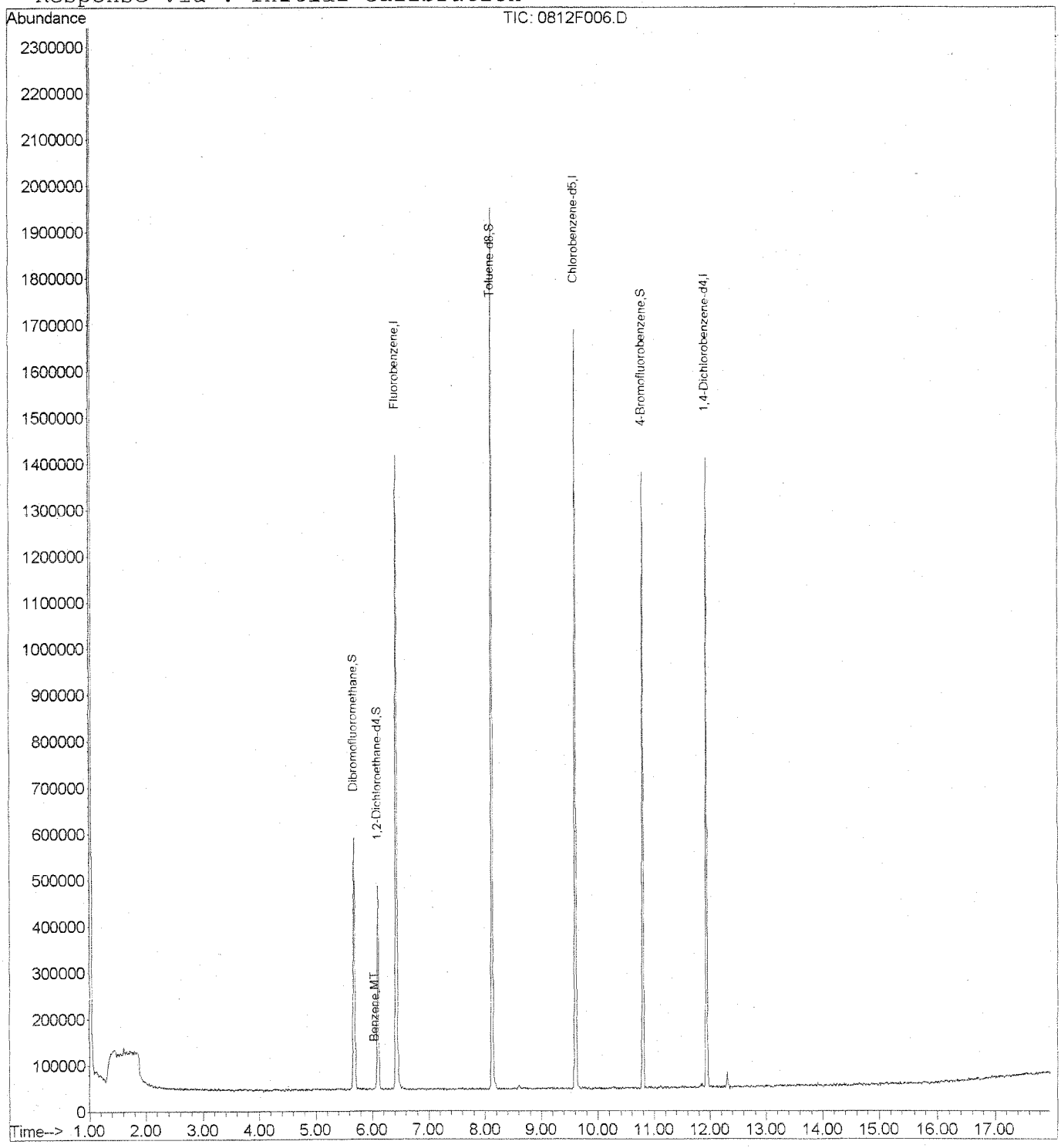
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1221630	10.00	PPB	0.00
64) Chlorobenzene-d5	9.60	82	467321	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	341505	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	327235	10.71	PPB	0.00
Spiked Amount 10.000			Recovery =	107.10%		
47) 1,2-Dichloroethane-d4	6.10	65	306832	9.53	PPB	0.00
Spiked Amount 10.000			Recovery =	95.30%		
62) Toluene-d8	8.12	98	1187423	9.93	PPB	0.00
Spiked Amount 10.000			Recovery =	99.30%		
84) 4-Bromofluorobenzene	10.79	95	395181	10.22	PPB	0.00
Spiked Amount 10.000			Recovery =	102.20%		
Target Compounds						Qvalue
48) Benzene	6.05	78	2663	0.02	PPB	87

(#) = qualifier out of range (m) = manual integration
0812F006.D 081213MS27_8260.M Mon Aug 12 13:50:04 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F006.D Vial: 3
Acq On : 12 Aug 2013 12:14 pm Operator: KR
Sample : IB Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:53 2013 Quant Results File: 051713MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:50:12 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.42	96	1205043	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	472441	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	346441	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.67	113	320544	10.63	PPB		0.00
Spiked Amount 10.000			Recovery =	106.30%			
47) 1,2-Dichloroethane-d4	6.10	65	297583	9.37	PPB		0.00
Spiked Amount 10.000			Recovery =	93.70%			
62) Toluene-d8	8.12	98	1185512	10.05	PPB		0.00
Spiked Amount 10.000			Recovery =	100.50%			
84) 4-Bromofluorobenzene	10.79	95	394351	10.09	PPB		0.00
Spiked Amount 10.000			Recovery =	100.90%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	2457	0.07	PPB		79
3) Chloromethane	1.29	50	4160	0.08	PPB		93
4) Vinyl Chloride	1.38	62	3987	0.08	PPB		81
7) Chloroethane	1.76	64	1656	0.07	PPB		78
9) Trichlorofluoromethane	1.96	101	3639	0.08	PPB		89
10) Ethyl Ether	2.27	59	1209	0.05	PPB		82
12) Trichlorotrifluoroethane	2.47	151	1950	0.10	PPB	#	59
14) Acetone	2.66	43	16435	3.31	PPB		95
15) Iodomethane	2.68	142	3185	0.12	PPB		94
16) Carbon Disulfide	2.69	76	8200	0.09	PPB		97
17) 2-Propanol (Isopropyl Alco	2.84	45	2093	2.93	PPB		90
21) Methylene Chloride	3.16	84	5420	0.15	PPB	#	78
24) Methyl tert-Butyl Ether	3.45	73	10786	0.15	PPB		67
27) Diisopropyl Ether	4.20	45	7920	0.07	PPB		90
30) Chloroprene	4.24	53	12337	0.28	PPB		82
31) tert-Butyl Ethyl Ether	4.75	59	6089	0.07	PPB		90
32) 2,2-Dichloropropane	4.97	77	3930	0.09	PPB		94
33) cis-1,2-Dichloroethene	5.03	96	3602	0.10	PPB	#	60
34) 2-Butanone	5.13	72	5023m	2.59	PPB		
40) Chloroform	5.47	83	4688	0.08	PPB		83
45) 1,1-Dichloropropene	5.81	75	3480	0.09	PPB		75
48) Benzene	6.05	78	12310	0.08	PPB		94
49) 1,2-Dichloroethane	6.19	62	2857	0.07	PPB		90
53) 1,2-Dichloropropane	7.12	63	2850	0.07	PPB		81
57) Bromodichloromethane	7.43	83	3956	0.09	PPB		96
60) cis-1,3-Dichloropropene	7.91	75	4508	0.09	PPB		96
61) 4-Methyl-2-pentanone (MIBK	8.09	58	18636	2.42	PPB	#	74

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:50:12 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

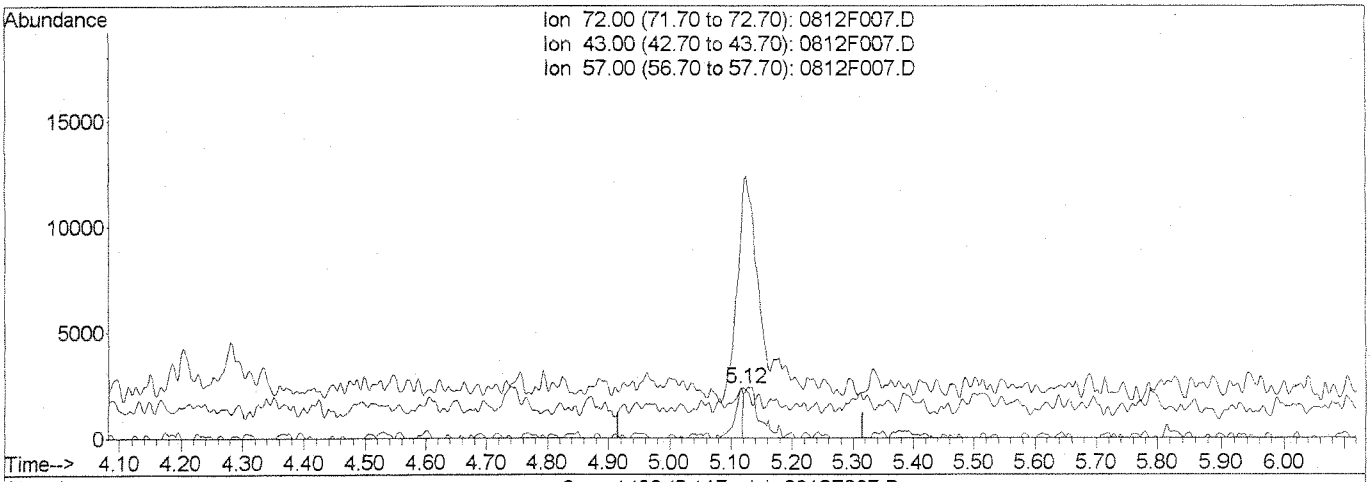
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
63)	Toluene	8.19	92	7013	0.09	PPB		88
66)	trans-1,3-Dichloropropene	8.52	75	3483	0.09	PPB		89
69)	Tetrachloroethene	8.71	164	2655	0.12	PPB		83
70)	2-Hexanone	8.96	57	6388	3.13	PPB	#	88
71)	1,3-Dichloropropane	8.86	76	3444	0.08	PPB		75
72)	Dibromochloromethane	9.05	129	2144	0.09	PPB		82
73)	1,2-Dibromoethane (EDB)	9.17	107	2182	0.11	PPB		80
74)	1-Chlorohexane	9.61	91	5993	0.16	PPB		97
75)	Chlorobenzene	9.63	112	7482	0.09	PPB		91
76)	Ethylbenzene	9.72	106	4201	0.10	PPB	#	77
77)	1,1,1,2-Tetrachloroethane	9.74	131	2538	0.09	PPB		87
78)	m,p-Xylenes	9.84	106	9417	0.19	PPB	#	78
79)	o-Xylene	10.24	106	5910	0.12	PPB	#	67
80)	Styrene	10.28	103	3978	0.10	PPB		96
81)	Bromoform	10.47	173	1438	0.11	PPB	#	56
82)	Isopropylbenzene	10.60	105	11863	0.09	PPB		96
83)	cis-1,4-Dichloro-2-butene	10.76	89	1228	0.43	PPB		91
88)	Bromobenzene	10.92	156	2867	0.09	PPB	#	75
89)	n-Propylbenzene	11.01	91	13858	0.09	PPB		94
91)	2-Chlorotoluene	11.11	91	8927	0.09	PPB		97
92)	1,3,5-Trimethylbenzene	11.20	105	8737	0.08	PPB		91
93)	4-Chlorotoluene	11.23	91	9332	0.09	PPB		81
94)	tert-Butylbenzene	11.51	119	7814	0.09	PPB		90
95)	1,2,4-Trimethylbenzene	11.57	105	9816	0.09	PPB		96
96)	sec-Butylbenzene	11.72	105	12008	0.09	PPB		90
97)	p-Isopropyltoluene	11.88	119	7745	0.07	PPB		94
98)	1,3-Dichlorobenzene	11.86	146	5077	0.09	PPB		94
99)	1,4-Dichlorobenzene	11.96	146	5648	0.09	PPB		75
100)	n-Butylbenzene	12.28	91	7040	0.07	PPB		86
101)	1,2-Dichlorobenzene	12.32	146	3904m	0.07	PPB		
103)	1,3,5-Trichlorobenzene	13.28	180	1674	0.04	PPB		81
104)	1,2,4-Trichlorobenzene	13.93	180	1248	0.74	PPB		83
105)	Hexachlorobutadiene	14.04	225	1038	0.07	PPB		81
106)	Naphthalene	14.17	128	1948	1.07	PPB		66
107)	1,2,3-Trichlorobenzene	14.42	180	1045	0.94	PPB		99

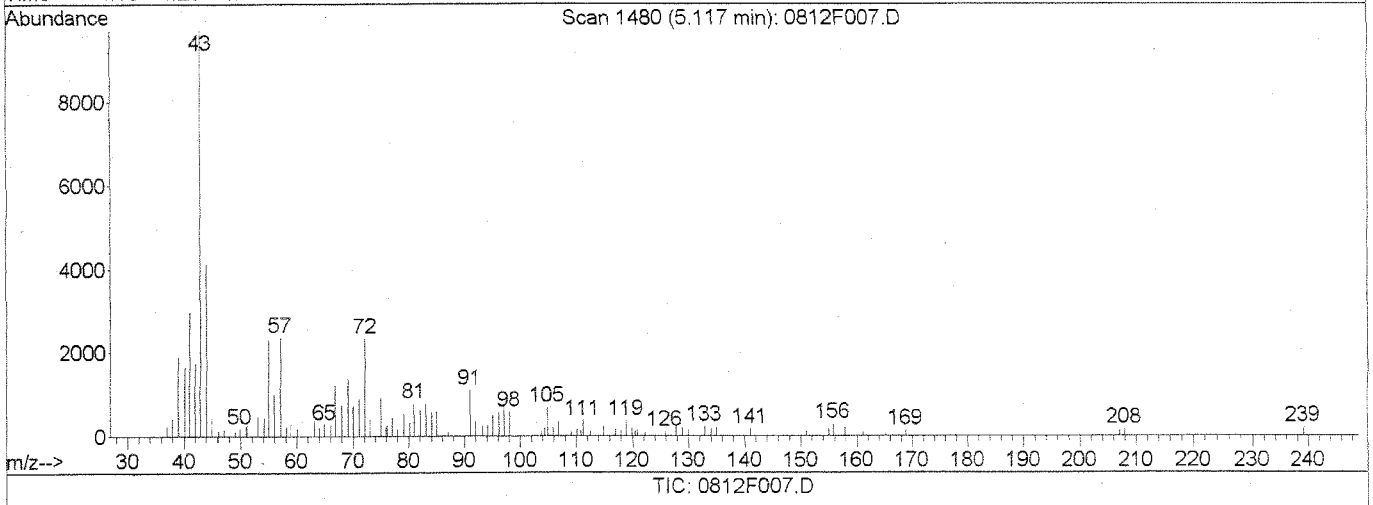
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:54 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F007.D

(34) 2-Butanone (T)

5.12min 1.09PPB

response 2117

Ion	Exp%	Act%
72.00	100	100
43.00	424.60	344.64#
57.00	32.40	25.25
0.00	0.00	0.00

Manual Integration:

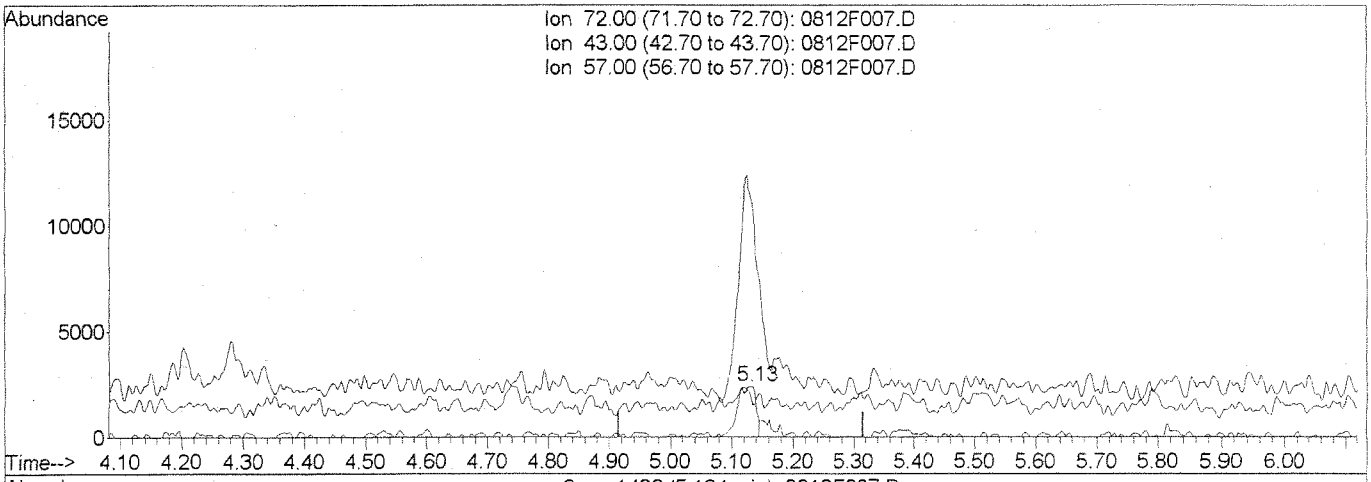
Before

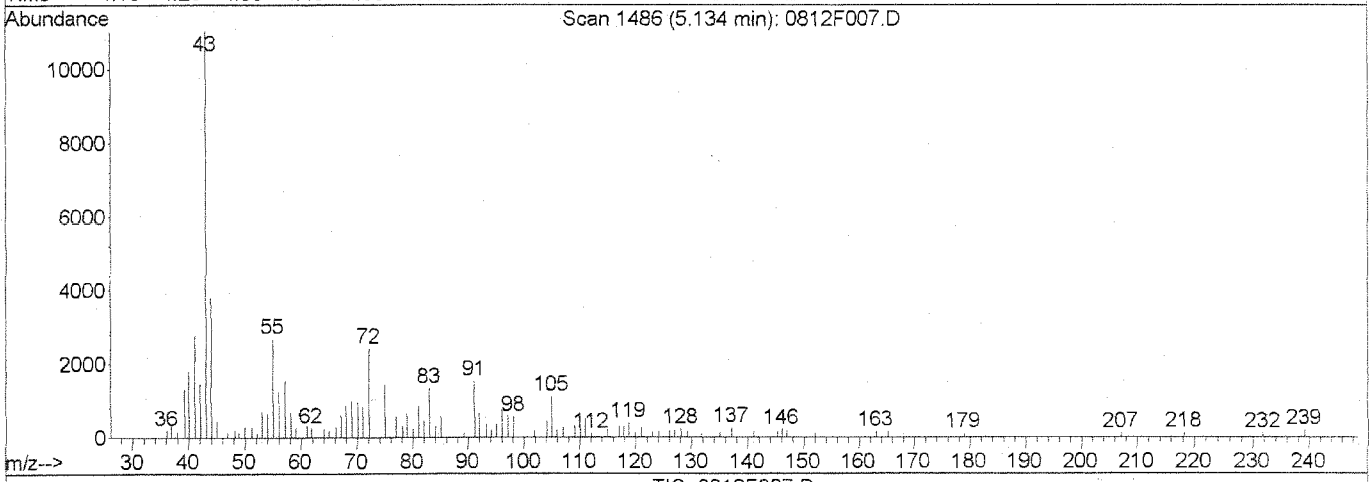
0812F007.D 081213MS27_8260.M Mon Aug 12 13:51:13 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:54 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F007.D

(34) 2-Butanone (T)

5.13min 2.59PPB m

response 5023

Ion	Exp%	Act%
72.00	100	100
43.00	424.60	456.22#
57.00	32.40	63.87#
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

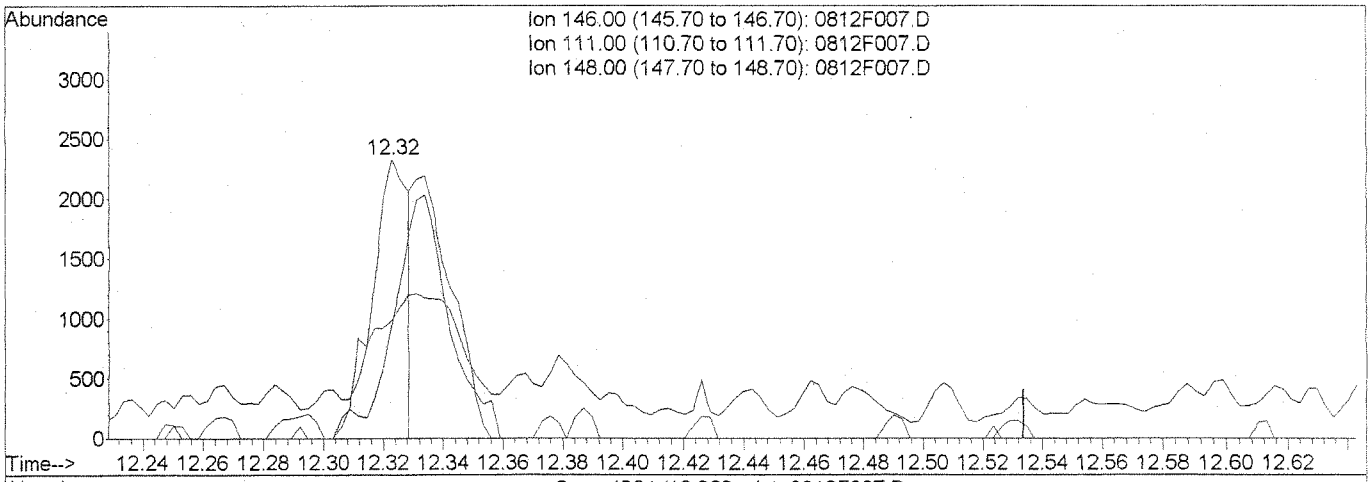
08/12/13

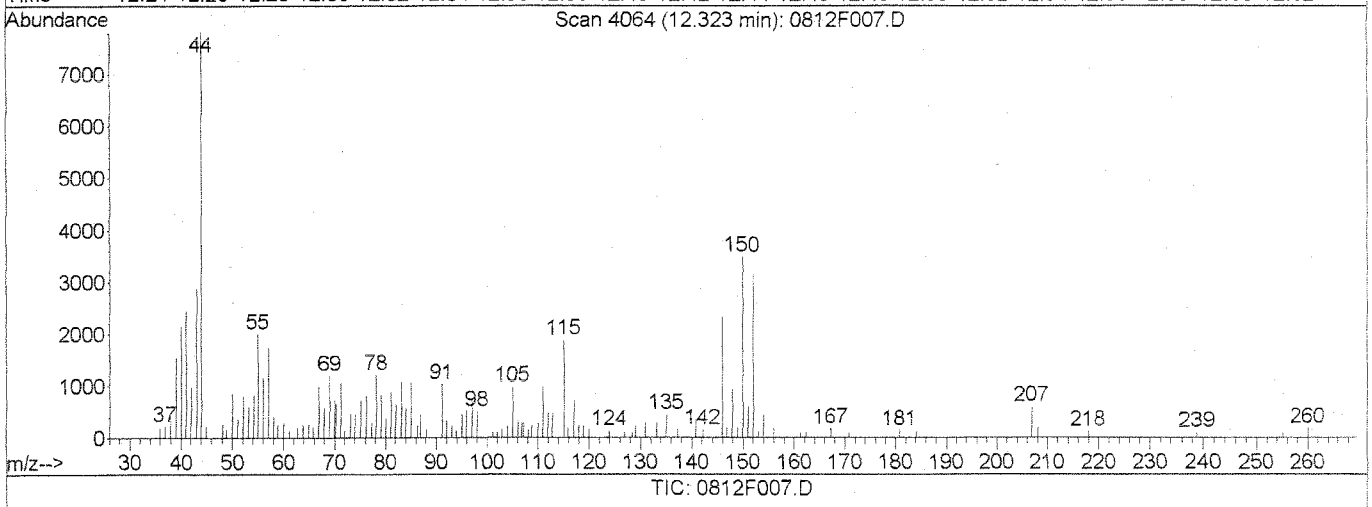
0812F007.D 081213MS27_8260.M Mon Aug 12 13:51:21 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:56 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F007.D

(101) 1,2-Dichlorobenzene (MT)

12.32min 0.04PPB

response 1987

Ion	Exp%	Act%
146.00	100	100
111.00	42.30	24.79
148.00	61.00	40.14
0.00	0.00	0.00

Manual Integration:

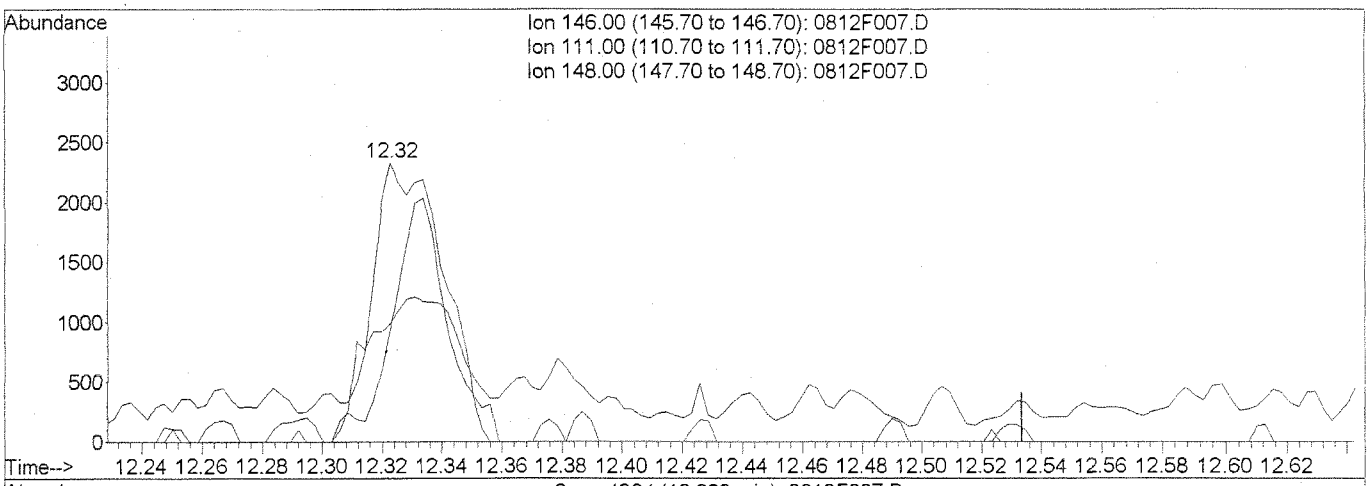
Before

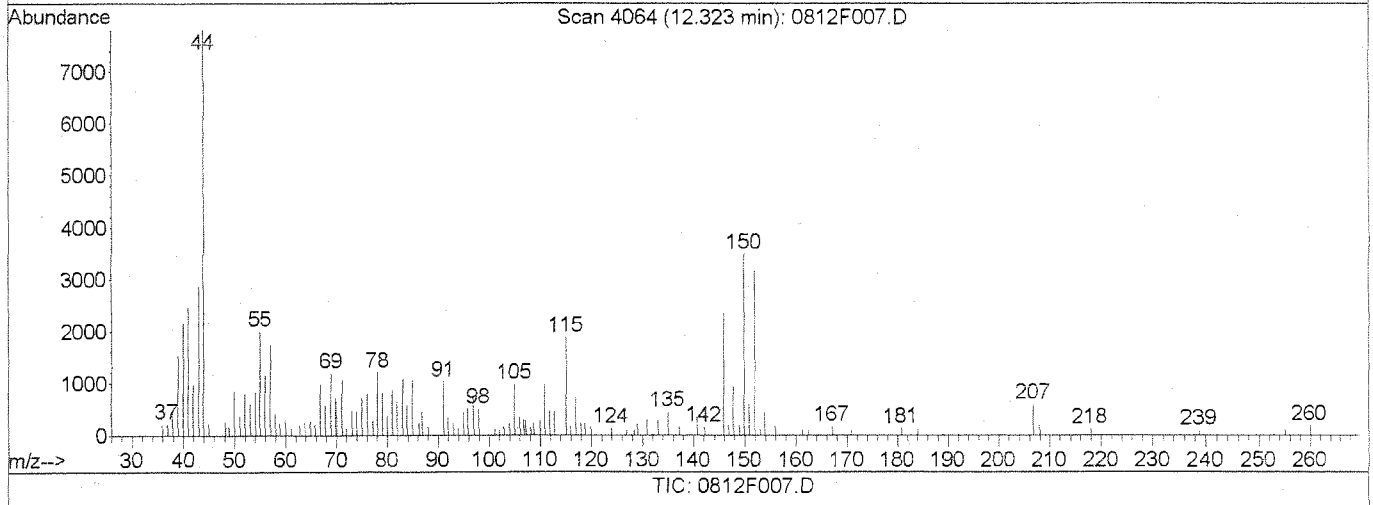
0812F007.D 081213MS27_8260.M Mon Aug 12 13:53:21 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:56 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F007.D

(101) 1,2-Dichlorobenzene (MT)

12.32min 0.07PPB m

response 3904

Ion	Exp%	Act%
146.00	100	100
111.00	42.30	42.28
148.00	61.00	40.14
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

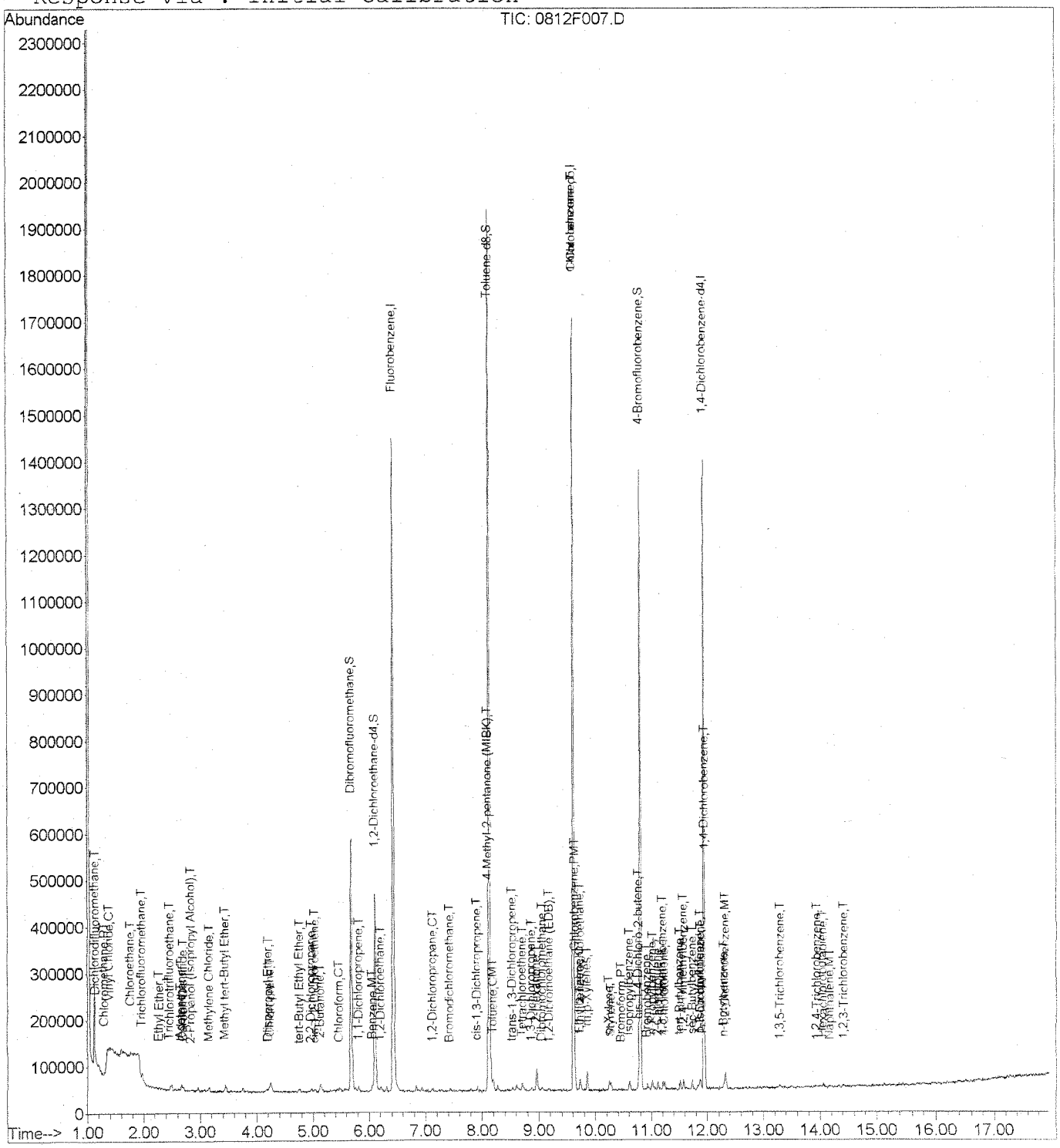
08/12/13

0812F007.D 081213MS27_8260.M Mon Aug 12 13:53:25 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F007.D Vial: 4
Acq On : 12 Aug 2013 1:31 pm Operator: KR
Sample : 8260 ICAL 0.1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 13:56 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:26:09 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	1175770	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	458898	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	348669	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	319268	10.85	PPB		0.00
Spiked Amount 10.000			Recovery =	108.50%			
47) 1,2-Dichloroethane-d4	6.10	65	300957	9.72	PPB		0.00
Spiked Amount 10.000			Recovery =	97.20%			
62) Toluene-d8	8.12	98	1148175	9.98	PPB		0.00
Spiked Amount 10.000			Recovery =	99.80%			
84) 4-Bromofluorobenzene	10.79	95	384344	10.12	PPB		0.00
Spiked Amount 10.000			Recovery =	101.20%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	6593	0.19	PPB		99
3) Chloromethane	1.29	50	8841	0.17	PPB		99
4) Vinyl Chloride	1.38	62	7398	0.15	PPB		90
6) Bromomethane	1.67	96	5700	0.21	PPB		98
7) Chloroethane	1.76	64	4599	0.19	PPB		92
8) Dichlorofluoromethane	1.97	67	8639	0.14	PPB		84
9) Trichlorofluoromethane	1.96	101	9424	0.21	PPB		92
10) Ethyl Ether	2.28	59	3551	0.16	PPB		90
11) Acrolein	2.48	56	7170	2.50	PPB		96
12) Trichlorotrifluoroethane	2.47	151	4231	0.22	PPB		93
13) 1,1-Dichloroethene	2.50	96	4748	0.20	PPB	#	74
14) Acetone	2.66	43	24849	5.13	PPB		100
15) Iodomethane	2.68	142	6280	0.25	PPB		89
16) Carbon Disulfide	2.70	76	16511	0.18	PPB		92
17) 2-Propanol (Isopropyl Alco	2.83	45	2770	3.97	PPB		66
18) 3-Chloro-1-propene	2.96	76	2854	0.16	PPB	#	71
20) Acetonitrile	3.08	40	5312	4.32	PPB		93
21) Methylene Chloride	3.16	84	5277	0.15	PPB		80
23) Acrylonitrile	3.61	53	2687	0.36	PPB		80
24) Methyl tert-Butyl Ether	3.44	73	21762	0.32	PPB		96
25) trans-1,2-Dichloroethene	3.45	96	5723	0.19	PPB		91
26) Hexane	3.75	57	9736	0.23	PPB		98
27) Diisopropyl Ether	4.20	45	15686	0.14	PPB		86
28) 1,1-Dichloroethane	4.17	63	10803	0.17	PPB		96
30) Chloroprene	4.24	53	30119	0.71	PPB		87
31) tert-Butyl Ethyl Ether	4.75	59	14611m	0.16	PPB		
32) 2,2-Dichloropropane	4.98	77	7996	0.19	PPB		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:26:09 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
33)	cis-1,2-Dichloroethene	5.03	96	6400	0.18	PPB	#	76
34)	2-Butanone	5.12	72	10703	5.66	PPB	#	88
40)	Chloroform	5.47	83	9287	0.16	PPB		84
41)	Cyclohexane	5.55	56	8837	0.17	PPB		92
42)	1,1,1-Trichloroethane	5.60	97	10223	0.23	PPB		96
44)	Carbon Tetrachloride	5.75	117	7016	0.20	PPB		97
45)	1,1-Dichloropropene	5.81	75	6813	0.17	PPB		97
48)	Benzene	6.05	78	25569	0.18	PPB		94
49)	1,2-Dichloroethane	6.20	62	7650	0.19	PPB		92
51)	Trichloroethene	6.82	95	5880	0.18	PPB		93
53)	1,2-Dichloropropane	7.12	63	5181	0.14	PPB	#	56
54)	Dibromomethane	7.25	93	2499	0.15	PPB		82
57)	Bromodichloromethane	7.44	83	7771	0.19	PPB		98
58)	2-Nitropropane	7.76	41	5874	1.31	PPB		86
59)	2-Chloroethyl Vinyl Ether	7.80	63	2388	0.15	PPB		82
60)	cis-1,3-Dichloropropene	7.92	75	8524	0.17	PPB		96
61)	4-Methyl-2-pentanone (MIBK	8.09	58	40380	5.37	PPB		91
63)	Toluene	8.19	92	14352	0.18	PPB	#	73
65)	n-Octane	8.27	85	2946	0.20	PPB	#	71
66)	trans-1,3-Dichloropropene	8.53	75	7098	0.19	PPB		97
68)	1,1,2-Trichloroethane	8.70	83	3458	0.17	PPB		87
69)	Tetrachloroethene	8.71	164	5908	0.27	PPB	#	81
70)	2-Hexanone	8.96	57	12729	6.43	PPB	#	59
71)	1,3-Dichloropropane	8.87	76	6723	0.17	PPB		81
72)	Dibromochloromethane	9.05	129	5421	0.23	PPB		96
73)	1,2-Dibromoethane (EDB)	9.17	107	4131	0.21	PPB		97
74)	1-Chlorohexane	9.61	91	10303	0.28	PPB		97
75)	Chlorobenzene	9.63	112	15020	0.19	PPB		95
76)	Ethylbenzene	9.72	106	8512	0.21	PPB	#	82
77)	1,1,1,2-Tetrachloroethane	9.73	131	6074	0.23	PPB		82
78)	m,p-Xylenes	9.85	106	18810	0.39	PPB		93
79)	o-Xylene	10.24	106	9303	0.19	PPB		85
80)	Styrene	10.28	103	7650	0.20	PPB		94
81)	Bromoform	10.47	173	3602	0.28	PPB		84
82)	Isopropylbenzene	10.60	105	25196	0.20	PPB		97
83)	cis-1,4-Dichloro-2-butene	10.76	89	2005	0.72	PPB	#	54
86)	1,1,2,2-Tetrachloroethane	11.00	83	3874	0.15	PPB		74
88)	Bromobenzene	10.92	156	6257	0.20	PPB	#	73
89)	n-Propylbenzene	11.01	91	27298	0.17	PPB		98
91)	2-Chlorotoluene	11.11	91	15670	0.16	PPB		92
92)	1,3,5-Trimethylbenzene	11.20	105	20744	0.20	PPB		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:26:09 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

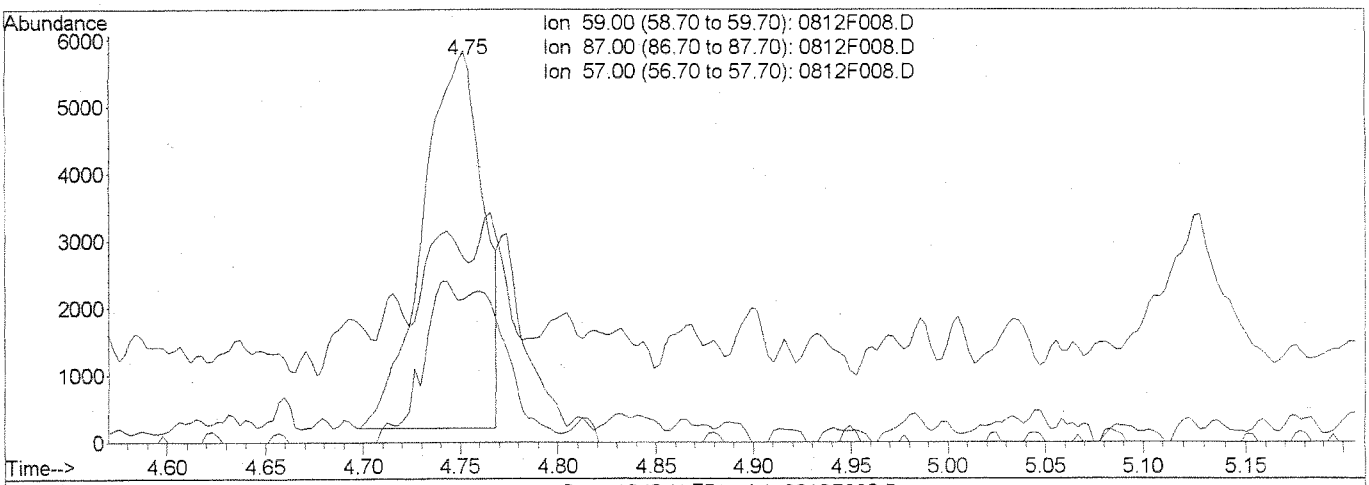
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
93)	4-Chlorotoluene	11.23	91	17126	0.17	PPB		93
94)	tert-Butylbenzene	11.50	119	15714	0.18	PPB		95
95)	1,2,4-Trimethylbenzene	11.57	105	17647	0.16	PPB		95
96)	sec-Butylbenzene	11.73	105	22732	0.17	PPB		88
97)	p-Isopropyltoluene	11.88	119	17168	0.16	PPB		92
98)	1,3-Dichlorobenzene	11.86	146	10386	0.17	PPB		87
99)	1,4-Dichlorobenzene	11.96	146	11898	0.20	PPB		91
100)	n-Butylbenzene	12.28	91	11039	0.11	PPB		91
101)	1,2-Dichlorobenzene	12.33	146	8883	0.16	PPB		94
103)	1,3,5-Trichlorobenzene	13.28	180	3958	0.10	PPB		93
104)	1,2,4-Trichlorobenzene	13.93	180	1935	0.76	PPB		95
105)	Hexachlorobutadiene	14.05	225	1925	0.13	PPB	#	74
106)	Naphthalene	14.18	128	3985	1.11	PPB		90
107)	1,2,3-Trichlorobenzene	14.41	180	1679	0.97	PPB	#	63

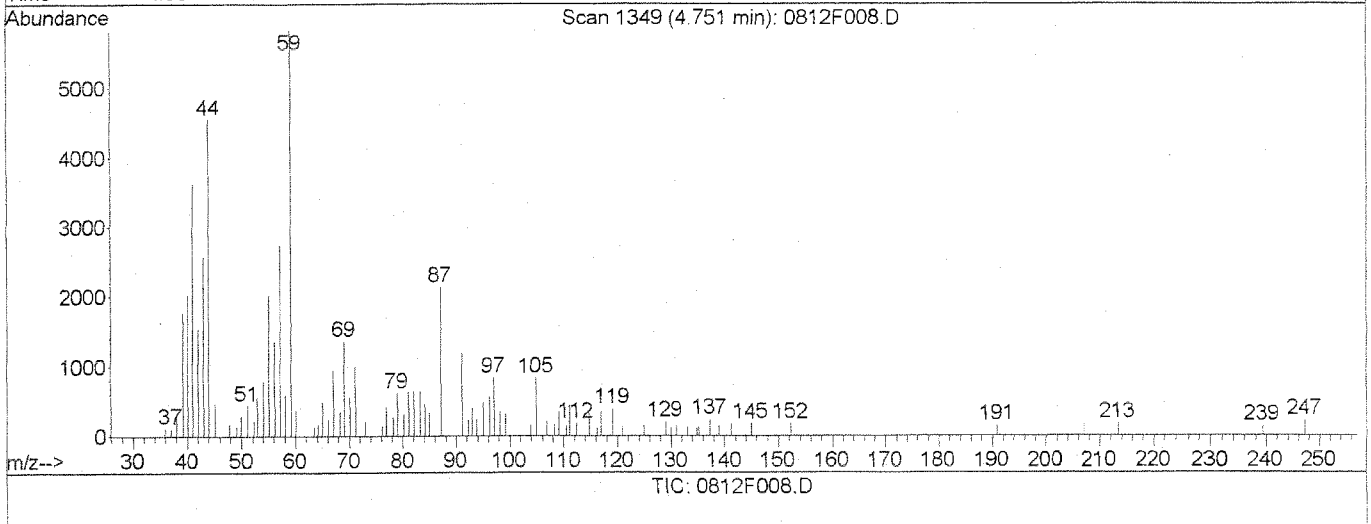
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:31 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F008.D

(31) tert-Butyl Ethyl Ether (T)

4.75min 0.13PPB

response 12050

Ion	Exp%	Act%
59.00	100	100
87.00	37.50	37.85
57.00	33.00	17.71
0.00	0.00	0.00

Manual Integration:

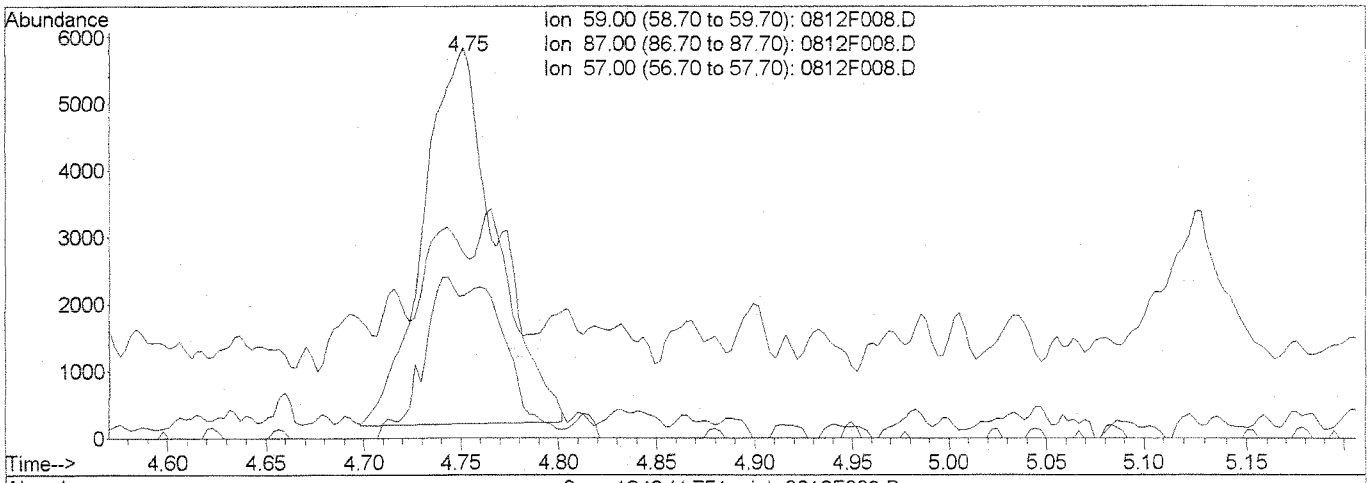
Before

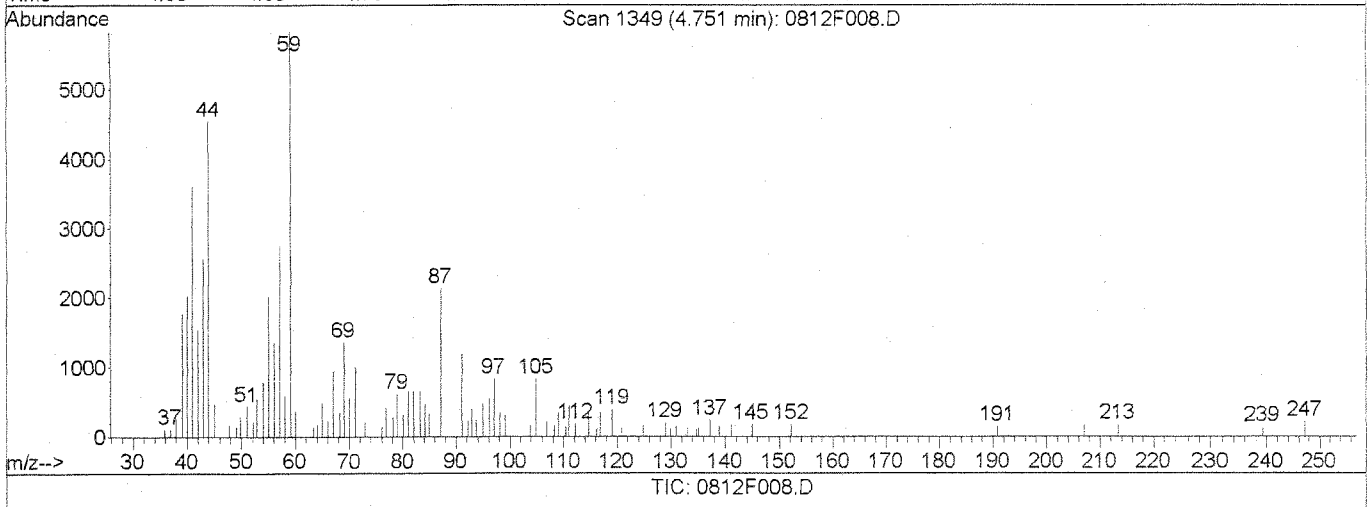
0812F008.D 081213MS27_8260.M Mon Aug 12 14:27:59 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:31 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F008.D

(31) tert-Butyl Ethyl Ether (T)

4.75min 0.16PPB m

response 14611

Ion	Exp%	Act%
59.00	100	100
87.00	37.50	36.47
57.00	33.00	47.16
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

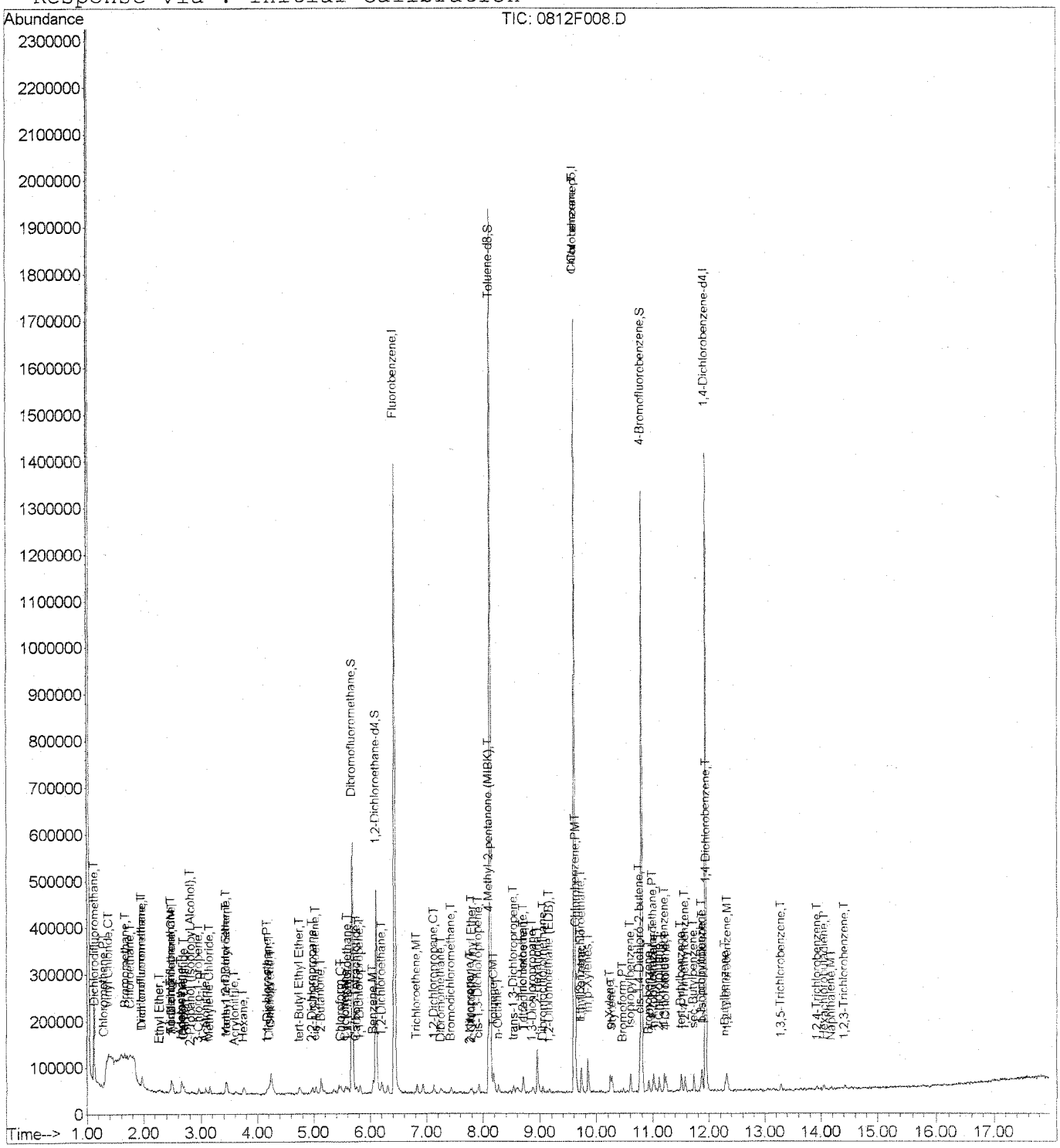
08/12/13

0812F008.D 081213MS27_8260.M Mon Aug 12 14:28:07 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F008.D Vial: 5
Acq On : 12 Aug 2013 1:59 pm Operator: KR
Sample : 8260 ICAL 0.2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:33 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F009.D Vial: 6
Acq On : 12 Aug 2013 2:26 pm Operator: KR
Sample : 8260 ICAL 0.5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:58:34 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	1129485	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	438244	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	334933	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	305568	10.81	PPB		0.00
Spiked Amount 10.000			Recovery =	108.10%			
47) 1,2-Dichloroethane-d4	6.10	65	292045	9.81	PPB		0.00
Spiked Amount 10.000			Recovery =	98.10%			
62) Toluene-d8	8.12	98	1103767	9.98	PPB		0.00
Spiked Amount 10.000			Recovery =	99.80%			
84) 4-Bromofluorobenzene	10.79	95	377358	10.40	PPB		0.00
Spiked Amount 10.000			Recovery =	104.00%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	17929	0.53	PPB		99
3) Chloromethane	1.29	50	19220	0.39	PPB		99
4) Vinyl Chloride	1.38	62	17576	0.38	PPB		91
6) Bromomethane	1.67	96	11270	0.44	PPB		96
7) Chloroethane	1.76	64	10186	0.43	PPB		92
8) Dichlorofluoromethane	1.97	67	26304	0.45	PPB		91
9) Trichlorofluoromethane	1.96	101	23874	0.56	PPB		94
10) Ethyl Ether	2.27	59	9842	0.45	PPB		95
11) Acrolein	2.48	56	18741	6.81	PPB		95
12) Trichlorotrifluoroethane	2.47	151	10759	0.58	PPB		90
13) 1,1-Dichloroethene	2.50	96	11259	0.50	PPB		91
14) Acetone	2.65	43	74226	15.96	PPB		91
15) Iodomethane	2.68	142	18306	0.75	PPB		92
16) Carbon Disulfide	2.70	76	38767	0.44	PPB		99
17) 2-Propanol (Isopropyl Alco	2.83	45	11401	17.00	PPB		94
18) 3-Chloro-1-propene	2.96	76	7307	0.43	PPB		97
19) Methyl Acetate	3.03	43	8290	0.57	PPB		78
20) Acetonitrile	3.08	40	16858	14.29	PPB		92
21) Methylene Chloride	3.16	84	14814	0.44	PPB		93
23) Acrylonitrile	3.61	53	10313	1.42	PPB		89
24) Methyl tert-Butyl Ether	3.44	73	60522	0.92	PPB		97
25) trans-1,2-Dichloroethene	3.45	96	15342	0.54	PPB	#	82
26) Hexane	3.75	57	17796	0.44	PPB		94
27) Diisopropyl Ether	4.21	45	40592	0.39	PPB		92
28) 1,1-Dichloroethane	4.17	63	25988	0.43	PPB		97
29) Vinyl Acetate	4.29	86	4119	0.94	PPB	#	20
30) Chloroprene	4.24	53	78099	1.92	PPB		98

(#) = qualifier out of range (m) = manual integration
0812F009.D 081213MS27_8260.M Mon Aug 12 15:00:50 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F009.D Vial: 6
Acq On : 12 Aug 2013 2:26 pm Operator: KR
Sample : 8260 ICAL 0.5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:58:34 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
31)	tert-Butyl Ethyl Ether	4.75	59	38438	0.44	PPB		96
32)	2,2-Dichloropropane	4.97	77	23194	0.58	PPB		96
33)	cis-1,2-Dichloroethene	5.03	96	17534	0.53	PPB	#	79
34)	2-Butanone	5.13	72	29823	16.42	PPB		95
37)	Methacrylonitrile	5.44	67	13700	1.63	PPB		90
38)	Bromochloromethane	5.35	128	7816	0.59	PPB	#	61
40)	Chloroform	5.47	83	28332	0.51	PPB		97
41)	Cyclohexane	5.55	56	21719	0.42	PPB		84
42)	1,1,1-Trichloroethane	5.60	97	23728	0.56	PPB		96
44)	Carbon Tetrachloride	5.76	117	17417	0.53	PPB		97
45)	1,1-Dichloropropene	5.82	75	18295	0.48	PPB		92
46)	Isobutyl Alcohol	6.15	43	6602	13.10	PPB		95
48)	Benzene	6.05	78	59003	0.43	PPB		95
49)	1,2-Dichloroethane	6.19	62	18253	0.48	PPB		95
50)	tert-Amyl Methyl Ether	6.20	55	9159	0.45	PPB	#	64
51)	Trichloroethene	6.82	95	15344	0.49	PPB		96
52)	Methylcyclohexane	6.93	83	21008	0.44	PPB		93
53)	1,2-Dichloropropane	7.12	63	15333	0.42	PPB		97
54)	Dibromomethane	7.26	93	7549	0.47	PPB		84
55)	Methyl methacrylate	7.28	69	6318	0.43	PPB		89
56)	1,4-Dioxane	7.28	88	1702	16.13	PPB		91
57)	Bromodichloromethane	7.43	83	18525	0.47	PPB		91
58)	2-Nitropropane	7.77	41	9956	2.31	PPB		88
59)	2-Chloroethyl Vinyl Ether	7.80	63	7614	0.48	PPB		87
60)	cis-1,3-Dichloropropene	7.92	75	22095	0.46	PPB		95
61)	4-Methyl-2-pentanone (MIBK	8.09	58	114819	15.90	PPB		96
63)	Toluene	8.19	92	36596	0.49	PPB		95
65)	n-Octane	8.27	85	10420	0.75	PPB		78
66)	trans-1,3-Dichloropropene	8.53	75	17492	0.50	PPB		94
67)	Ethyl methacrylate	8.58	69	12294	0.47	PPB		86
68)	1,1,2-Trichloroethane	8.70	83	9186	0.46	PPB		92
69)	Tetrachloroethene	8.71	164	13998	0.68	PPB		96
70)	2-Hexanone	8.95	57	34003	17.97	PPB	#	89
71)	1,3-Dichloropropane	8.87	76	18396	0.47	PPB		90
72)	Dibromochloromethane	9.05	129	12528	0.56	PPB		90
73)	1,2-Dibromoethane (EDB)	9.17	107	9780	0.51	PPB		89
74)	1-Chlorohexane	9.61	91	20885	0.59	PPB		97
75)	Chlorobenzene	9.63	112	41806	0.55	PPB		90
76)	Ethylbenzene	9.72	106	21745	0.57	PPB		88
77)	1,1,1,2-Tetrachloroethane	9.73	131	15592	0.63	PPB		98
78)	m,p-Xylenes	9.85	106	51692	1.12	PPB		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F009.D Vial: 6
Acq On : 12 Aug 2013 2:26 pm Operator: KR
Sample : 8260 ICAL 0.5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 14:58:34 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

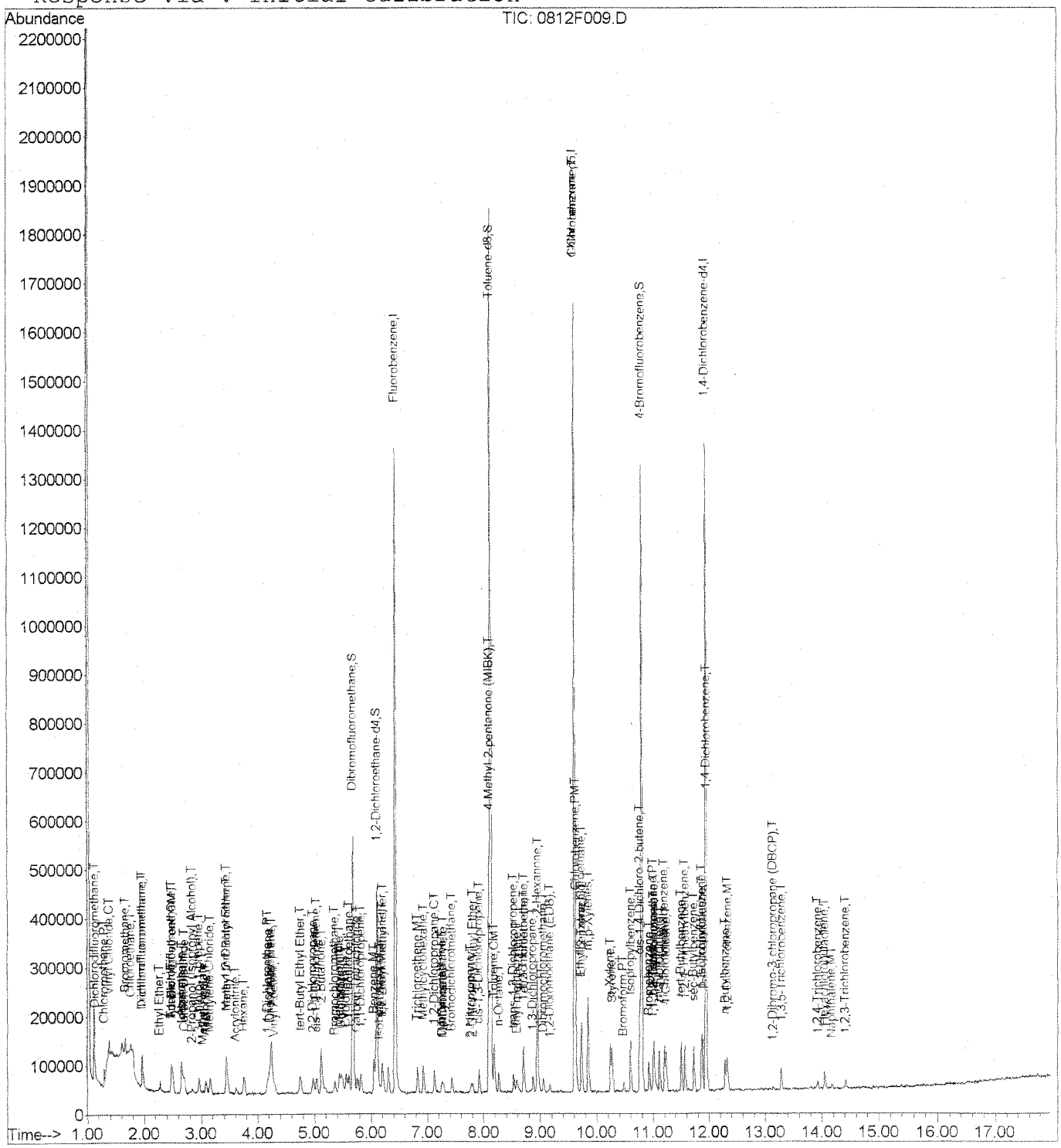
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
79)	o-Xylene	10.25	106	25498	0.54	PPB		85
80)	Styrene	10.27	103	18737	0.50	PPB		99
81)	Bromoform	10.47	173	7516	0.61	PPB		94
82)	Isopropylbenzene	10.60	105	63153	0.54	PPB		96
83)	cis-1,4-Dichloro-2-butene	10.76	89	5699	2.15	PPB	#	86
86)	1,1,2,2-Tetrachloroethane	10.99	83	9804	0.41	PPB		88
88)	Bromobenzene	10.93	156	16799	0.55	PPB	#	71
89)	n-Propylbenzene	11.01	91	71816	0.47	PPB		97
90)	1,2,3-Trichloropropane	11.03	110	3631	0.58	PPB	#	57
91)	2-Chlorotoluene	11.11	91	43217	0.45	PPB		88
92)	1,3,5-Trimethylbenzene	11.20	105	50819	0.50	PPB		94
93)	4-Chlorotoluene	11.23	91	43095	0.43	PPB		94
94)	tert-Butylbenzene	11.51	119	43124	0.51	PPB		99
95)	1,2,4-Trimethylbenzene	11.57	105	48389	0.47	PPB		99
96)	sec-Butylbenzene	11.73	105	59565	0.45	PPB		97
97)	p-Isopropyltoluene	11.88	119	45285	0.44	PPB		95
98)	1,3-Dichlorobenzene	11.86	146	27457	0.48	PPB		93
99)	1,4-Dichlorobenzene	11.96	146	28131	0.49	PPB		90
100)	n-Butylbenzene	12.28	91	31938	0.32	PPB		96
101)	1,2-Dichlorobenzene	12.33	146	23988	0.46	PPB		98
102)	1,2-Dibromo-3-chloropropan	13.14	155	1269	0.51	PPB	#	44
103)	1,3,5-Trichlorobenzene	13.29	180	12623	0.33	PPB		97
104)	1,2,4-Trichlorobenzene	13.92	180	4265	0.85	PPB		89
105)	Hexachlorobutadiene	14.05	225	6992	0.48	PPB		96
106)	Naphthalene	14.17	128	9092	1.24	PPB		94
107)	1,2,3-Trichlorobenzene	14.41	180	4091	1.07	PPB		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F009.D Vial: 6
Acq On : 12 Aug 2013 2:26 pm Operator: KR
Sample : 8260 ICAL 0.5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:03 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:25:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	1144063	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	447413	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	352455	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	312954	10.93	PPB		0.00
Spiked Amount 10.000			Recovery =	109.30%			
47) 1,2-Dichloroethane-d4	6.10	65	290576	9.64	PPB		0.00
Spiked Amount 10.000			Recovery =	96.40%			
62) Toluene-d8	8.12	98	1116137	9.97	PPB		0.00
Spiked Amount 10.000			Recovery =	99.70%			
84) 4-Bromofluorobenzene	10.80	95	388403	10.49	PPB		0.00
Spiked Amount 10.000			Recovery =	104.90%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	34920	1.02	PPB		98
3) Chloromethane	1.29	50	37061	0.74	PPB		98
4) Vinyl Chloride	1.38	62	35051	0.75	PPB		95
6) Bromomethane	1.67	96	23224	0.90	PPB		99
7) Chloroethane	1.76	64	20010	0.84	PPB		95
8) Dichlorofluoromethane	1.97	67	55201	0.92	PPB		98
9) Trichlorofluoromethane	1.96	101	49716	1.14	PPB		97
10) Ethyl Ether	2.27	59	17630	0.80	PPB		87
11) Acrolein	2.48	56	37921	13.60	PPB		87
12) Trichlorotrifluoroethane	2.47	151	23022	1.23	PPB		96
13) 1,1-Dichloroethene	2.50	96	20428	0.90	PPB		85
14) Acetone	2.65	43	142302	30.20	PPB		99
15) Iodomethane	2.68	142	38830	1.57	PPB		93
16) Carbon Disulfide	2.70	76	81017	0.92	PPB		96
17) 2-Propanol (Isopropyl Alco	2.83	45	19683	28.98	PPB		94
18) 3-Chloro-1-propene	2.96	76	16433	0.97	PPB	#	82
19) Methyl Acetate	3.03	43	12847	0.87	PPB		90
20) Acetonitrile	3.08	40	32326	27.05	PPB		93
21) Methylene Chloride	3.15	84	29886	0.87	PPB		98
22) tert-Butyl Alcohol	3.35	59	4826m	4.09	PPB		
23) Acrylonitrile	3.61	53	20967	2.86	PPB		93
24) Methyl tert-Butyl Ether	3.44	73	120571	1.81	PPB		94
25) trans-1,2-Dichloroethene	3.45	96	30110	1.04	PPB	#	81
26) Hexane	3.75	57	37639	0.93	PPB		96
27) Diisopropyl Ether	4.20	45	86071	0.81	PPB		93
28) 1,1-Dichloroethane	4.17	63	52288	0.86	PPB		97
29) Vinyl Acetate	4.29	86	7698	1.74	PPB	#	37

(#) = qualifier out of range (m) = manual integration
0812F010.D 081213MS27_8260.M Mon Aug 12 15:27:22 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:25:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	Chloroprene	4.24	53	161344	3.92	PPB		98
31)	tert-Butyl Ethyl Ether	4.75	59	77604	0.88	PPB		97
32)	2,2-Dichloropropane	4.97	77	47240	1.17	PPB		93
33)	cis-1,2-Dichloroethene	5.03	96	31773	0.94	PPB		90
34)	2-Butanone	5.12	72	58161	31.62	PPB		99
35)	Ethyl Acetate	5.17	61	4244	1.56	PPB		83
36)	Propionitrile	5.30	54	7620	3.02	PPB		83
37)	Methacrylonitrile	5.43	67	27351	3.22	PPB		92
38)	Bromochloromethane	5.36	128	14720	1.09	PPB	#	70
40)	Chloroform	5.47	83	55317	0.99	PPB		93
41)	Cyclohexane	5.56	56	42729	0.82	PPB		93
42)	1,1,1-Trichloroethane	5.60	97	47066	1.10	PPB		97
44)	Carbon Tetrachloride	5.75	117	39398	1.17	PPB		95
45)	1,1-Dichloropropene	5.82	75	38496	1.00	PPB		92
46)	Isobutyl Alcohol	6.15	43	11343	22.23	PPB		86
48)	Benzene	6.05	78	122163	0.88	PPB		98
49)	1,2-Dichloroethane	6.20	62	37430	0.97	PPB		95
50)	tert-Amyl Methyl Ether	6.20	55	13319	0.65	PPB	#	73
51)	Trichloroethene	6.83	95	32380	1.03	PPB		92
52)	Methylcyclohexane	6.93	83	46676	0.97	PPB		86
53)	1,2-Dichloropropane	7.13	63	29453	0.80	PPB		88
54)	Dibromomethane	7.25	93	15795	0.98	PPB		86
55)	Methyl methacrylate	7.28	69	13001	0.87	PPB		92
56)	1,4-Dioxane	7.28	88	3603m	33.72	PPB		
57)	Bromodichloromethane	7.43	83	38564	0.97	PPB		90
58)	2-Nitropropane	7.77	41	24033	5.50	PPB		94
59)	2-Chloroethyl Vinyl Ether	7.80	63	12654	0.79	PPB		90
60)	cis-1,3-Dichloropropene	7.92	75	46410	0.95	PPB		95
61)	4-Methyl-2-pentanone (MIBK	8.09	58	225326	30.80	PPB		96
63)	Toluene	8.19	92	74647	0.99	PPB		97
65)	n-Octane	8.27	85	17035	1.21	PPB		88
66)	trans-1,3-Dichloropropene	8.53	75	36052	1.00	PPB		93
67)	Ethyl methacrylate	8.58	69	24146	0.90	PPB		93
68)	1,1,2-Trichloroethane	8.70	83	20512	1.01	PPB		97
69)	Tetrachloroethene	8.71	164	27282	1.29	PPB		93
70)	2-Hexanone	8.95	57	63284	32.77	PPB	#	89
71)	1,3-Dichloropropane	8.87	76	38065	0.96	PPB		96
72)	Dibromochloromethane	9.05	129	27721	1.21	PPB		99
73)	1,2-Dibromoethane (EDB)	9.16	107	21105	1.08	PPB		91
74)	1-Chlorohexane	9.61	91	40681	1.12	PPB		98
75)	Chlorobenzene	9.63	112	79457	1.03	PPB		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:25:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

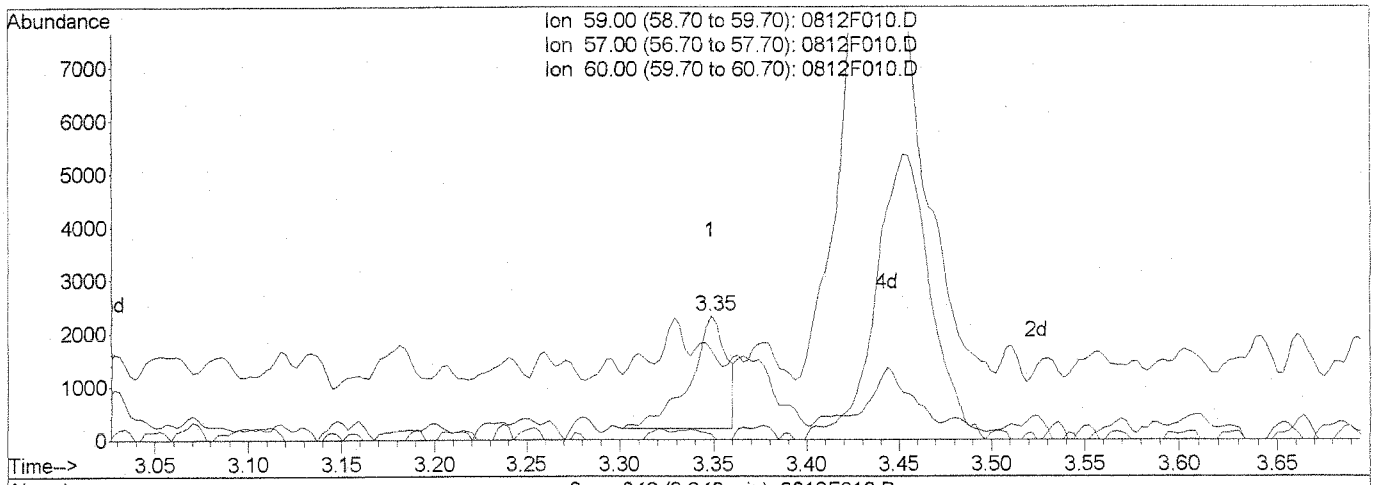
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
76)	Ethylbenzene	9.72	106	44403	1.13	PPB		92
77)	1,1,1,2-Tetrachloroethane	9.73	131	31822	1.25	PPB		94
78)	m,p-Xylenes	9.85	106	106074	2.24	PPB		89
79)	o-Xylene	10.24	106	51287	1.07	PPB		92
80)	Styrene	10.27	103	39330	1.03	PPB		97
81)	Bromoform	10.47	173	16828	1.34	PPB		93
82)	Isopropylbenzene	10.60	105	131417	1.09	PPB		98
83)	cis-1,4-Dichloro-2-butene	10.76	89	11210	4.14	PPB	#	77
86)	1,1,2,2-Tetrachloroethane	10.99	83	19927	0.78	PPB		98
87)	trans-1,4-Dichloro-2-buten	11.06	53	5215	0.84	PPB		82
88)	Bromobenzene	10.93	156	34232	1.06	PPB		87
89)	n-Propylbenzene	11.01	91	150326	0.93	PPB		96
90)	1,2,3-Trichloropropane	11.03	110	6776	1.03	PPB	#	64
91)	2-Chlorotoluene	11.11	91	89956	0.89	PPB		97
92)	1,3,5-Trimethylbenzene	11.20	105	103893	0.97	PPB		95
93)	4-Chlorotoluene	11.23	91	92490	0.88	PPB		96
94)	tert-Butylbenzene	11.51	119	90784	1.03	PPB		97
95)	1,2,4-Trimethylbenzene	11.57	105	101991	0.93	PPB		98
96)	sec-Butylbenzene	11.73	105	130613	0.94	PPB		96
97)	p-Isopropyltoluene	11.88	119	99911	0.91	PPB		98
98)	1,3-Dichlorobenzene	11.86	146	57998	0.97	PPB		94
99)	1,4-Dichlorobenzene	11.96	146	56888	0.94	PPB		97
100)	n-Butylbenzene	12.28	91	74223	0.70	PPB		97
101)	1,2-Dichlorobenzene	12.33	146	48318	0.88	PPB		94
102)	1,2-Dibromo-3-chloropropan	13.14	155	3019	1.16	PPB		94
103)	1,3,5-Trichlorobenzene	13.29	180	33195	0.83	PPB		97
104)	1,2,4-Trichlorobenzene	13.92	180	11122	1.06	PPB		97
105)	Hexachlorobutadiene	14.05	225	16108	1.05	PPB		90
106)	Naphthalene	14.17	128	16265	1.40	PPB		96
107)	1,2,3-Trichlorobenzene	14.42	180	8640	1.24	PPB		86

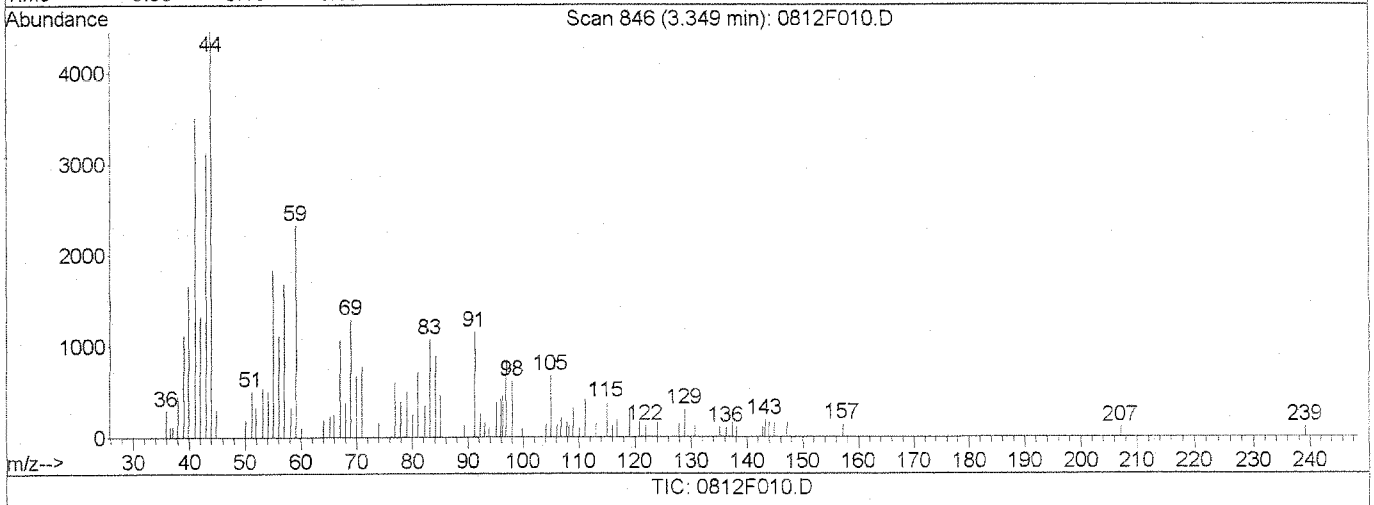
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F010.D

(22) tert-Butyl Alcohol (T)

3.35min 2.46PPB

response 2900

Ion	Exp%	Act%
59.00	100	100
57.00	14.60	21.60
60.00	3.00	4.89
0.00	0.00	0.00

Manual Integration:

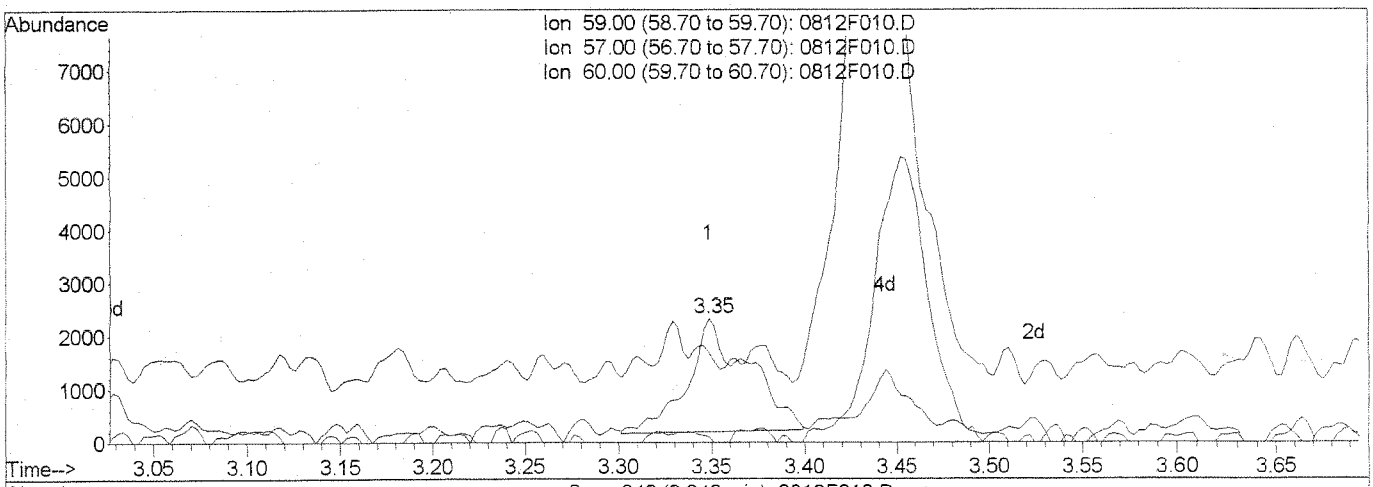
Before

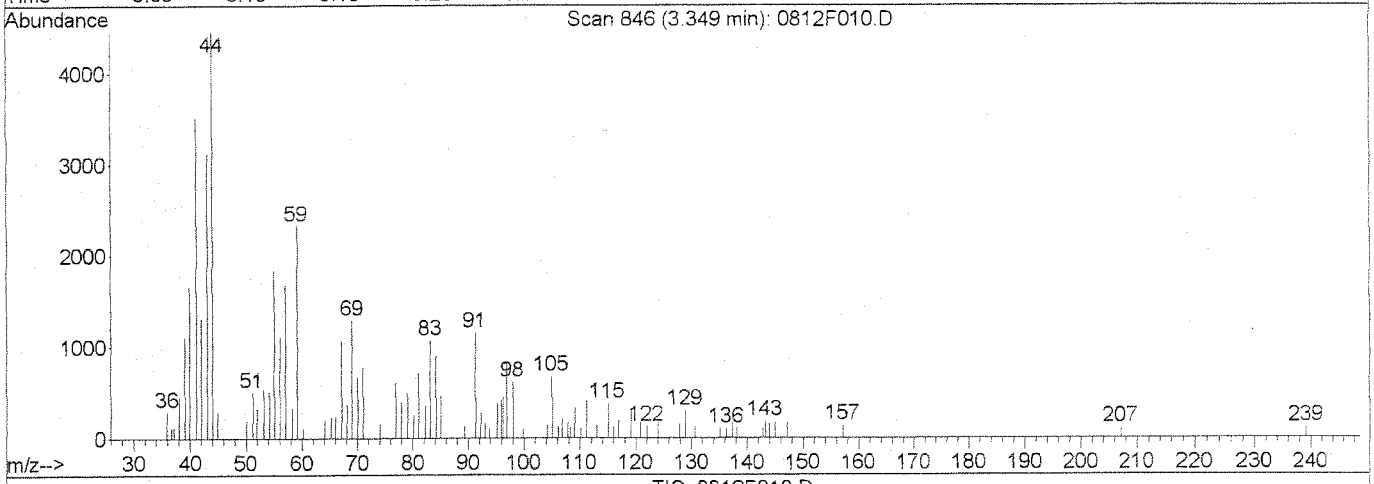
0812F010.D 081213MS27_8260.M Mon Aug 12 15:26:06 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F010.D

(22) tert-Butyl Alcohol (T)

3.35min 4.09PPB m

response 4826

Ion	Exp%	Act%
59.00	100	100
57.00	14.60	72.13#
60.00	3.00	4.46
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

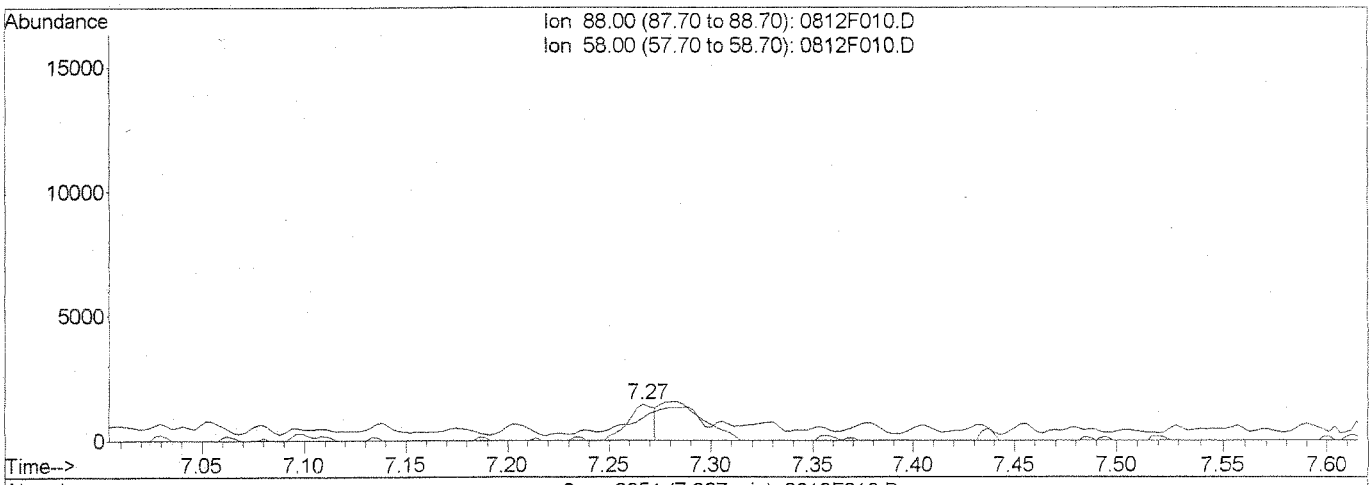
08/12/13

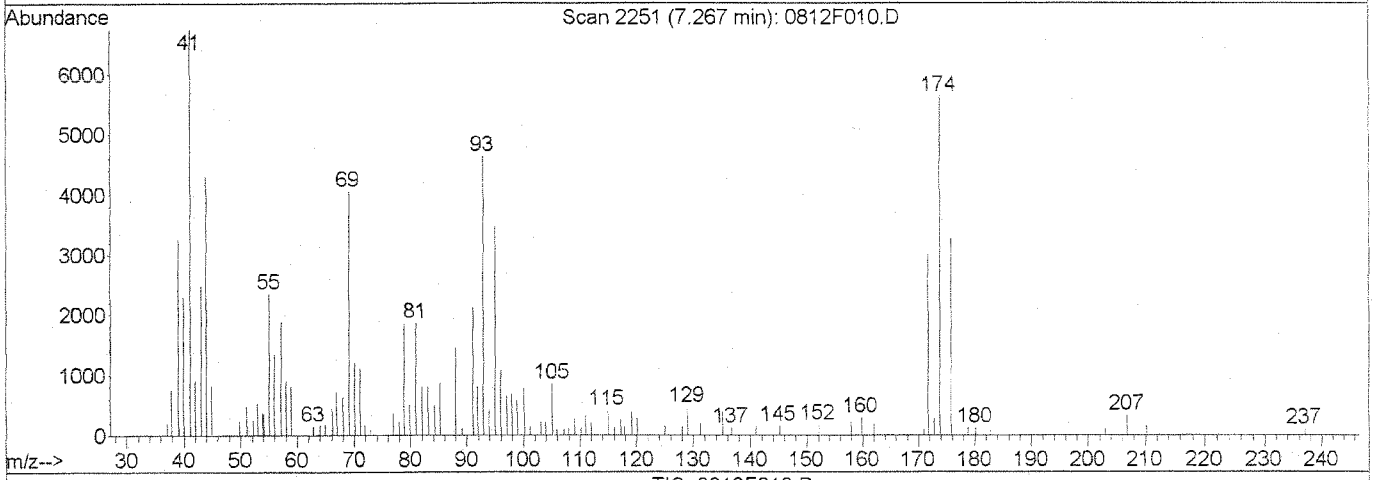
0812F010.D 081213MS27_8260.M Mon Aug 12 15:26:11 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F010.D

(56) 1,4-Dioxane (T)

7.27min 12.22PPB

response 1306

Ion	Exp%	Act%
88.00	100	100
58.00	76.90	38.14#
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

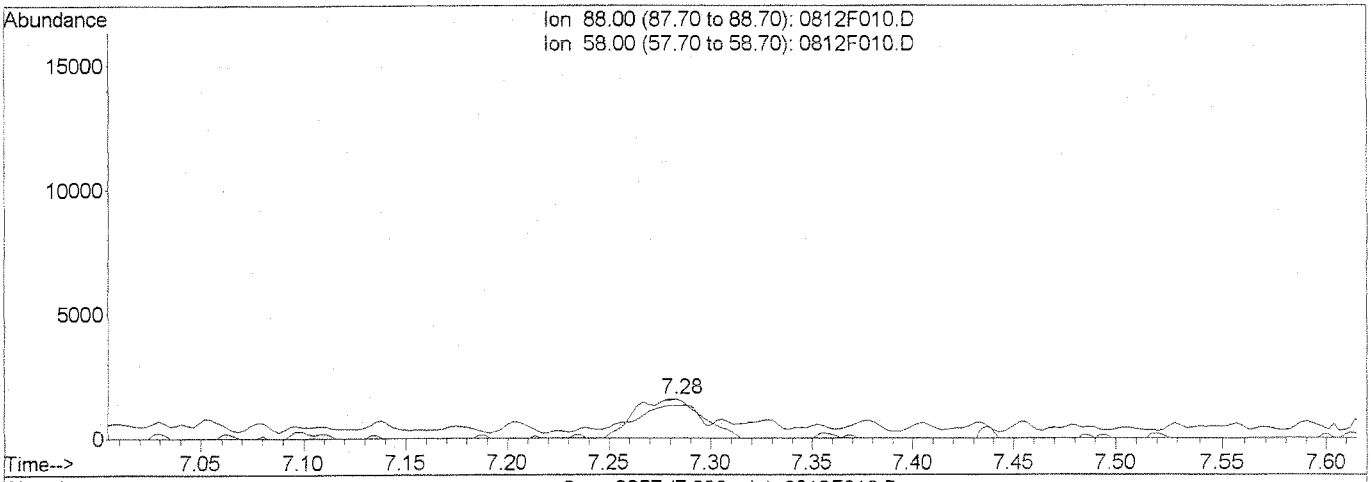
Before

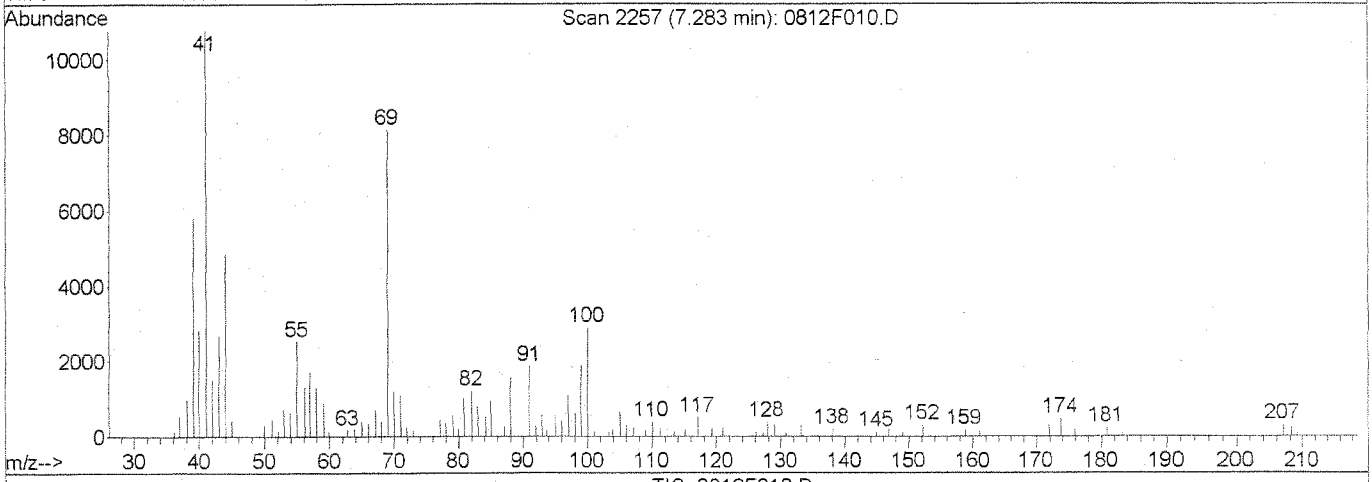
0812F010.D 081213MS27_8260.M Mon Aug 12 15:26:44 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F010.D

(56) 1,4-Dioxane (T)

7.28min 33.72PPB m

response 3603

Ion	Exp%	Act%
88.00	100	100
58.00	76.90	83.37
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

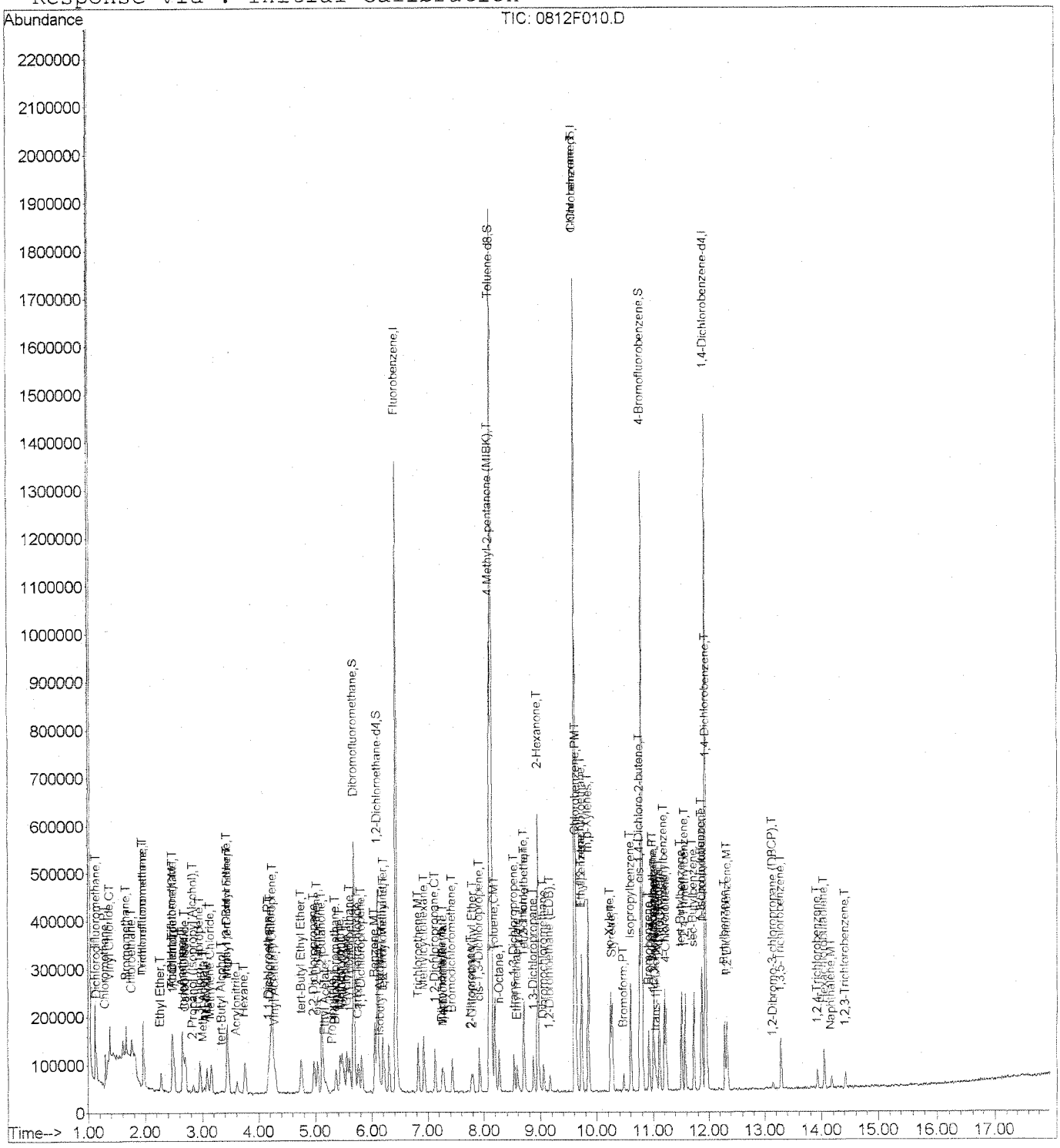
08/12/13

0812F010.D 081213MS27_8260.M Mon Aug 12 15:26:48 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F010.D Vial: 7
Acq On : 12 Aug 2013 2:53 pm Operator: KR
Sample : 8260 ICAL 1 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:29 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:57:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

8/12/13

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1143353	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	449189	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	358988	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	308631	10.79	PPB	0.00
Spiked Amount 10.000			Recovery =	107.90%		
47) 1,2-Dichloroethane-d4	6.10	65	301416	10.01	PPB	0.00
Spiked Amount 10.000			Recovery =	100.10%		
62) Toluene-d8	8.12	98	1115165	9.96	PPB	0.00
Spiked Amount 10.000			Recovery =	99.60%		
84) 4-Bromofluorobenzene	10.79	95	388477	10.45	PPB	0.00
Spiked Amount 10.000			Recovery =	104.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	63139	1.84	PPB	99
3) Chloromethane	1.29	50	72870	1.46	PPB	95
4) Vinyl Chloride	1.38	62	64298	1.37	PPB	98
6) Bromomethane	1.67	96	41619	1.61	PPB	93
7) Chloroethane	1.76	64	37904	1.58	PPB	93
8) Dichlorofluoromethane	1.97	67	98143	1.64	PPB	95
9) Trichlorofluoromethane	1.96	101	88759	2.04	PPB	97
10) Ethyl Ether	2.27	59	32680	1.48	PPB	93
11) Acrolein	2.48	56	52161	18.72	PPB	97
12) Trichlorotrifluoroethane	2.47	151	40464	2.17	PPB	93
13) 1,1-Dichloroethene	2.50	96	39129	1.73	PPB	87
14) Acetone	2.65	43	284529	60.43	PPB	96
15) Iodomethane	2.68	142	72068	2.91	PPB	99
16) Carbon Disulfide	2.70	76	147939	1.68	PPB	99
17) 2-Propanol (Isopropyl Alco	2.83	45	43118	63.51	PPB	97
18) 3-Chloro-1-propene	2.96	76	26605	1.56	PPB	97
19) Methyl Acetate	3.02	43	22540	1.53	PPB	96
20) Acetonitrile	3.08	40	62493	52.32	PPB	95
21) Methylene Chloride	3.15	84	51915	1.51	PPB	95
22) tert-Butyl Alcohol	3.35	59	8475	7.19	PPB	88
23) Acrylonitrile	3.61	53	40209	5.48	PPB	99
24) Methyl tert-Butyl Ether	3.44	73	217546	3.28	PPB	94
25) trans-1,2-Dichloroethene	3.45	96	53822	1.86	PPB	92
26) Hexane	3.75	57	66693	1.64	PPB	95
27) Diisopropyl Ether	4.20	45	156622	1.47	PPB	96
28) 1,1-Dichloroethane	4.17	63	98818	1.63	PPB	100
29) Vinyl Acetate	4.29	86	11301	2.55	PPB	# 84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:57:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	Chloroprene	4.24	53	293791	7.15	PPB		96
31)	tert-Butyl Ethyl Ether	4.75	59	143027	1.63	PPB		97
32)	2,2-Dichloropropane	4.97	77	83418	2.06	PPB		92
33)	cis-1,2-Dichloroethene	5.04	96	59238	1.76	PPB		93
34)	2-Butanone	5.12	72	117251	63.79	PPB		92
35)	Ethyl Acetate	5.19	61	7401m	2.72	PPB		
36)	Propionitrile	5.31	54	12184	4.83	PPB		85
37)	Methacrylonitrile	5.44	67	48027	5.65	PPB		96
38)	Bromochloromethane	5.36	128	27596	2.04	PPB	#	68
39)	Tetrahydrofuran	5.38	71	2851	1.41	PPB	#	52
40)	Chloroform	5.47	83	98648	1.76	PPB		94
41)	Cyclohexane	5.56	56	77906	1.50	PPB		95
42)	1,1,1-Trichloroethane	5.60	97	90540	2.12	PPB		95
44)	Carbon Tetrachloride	5.75	117	72762	2.17	PPB		95
45)	1,1-Dichloropropene	5.82	75	67267	1.75	PPB		98
46)	Isobutyl Alcohol	6.15	43	24990	49.00	PPB		97
48)	Benzene	6.05	78	217546	1.57	PPB		95
49)	1,2-Dichloroethane	6.20	62	66842	1.74	PPB		96
50)	tert-Amyl Methyl Ether	6.20	55	28352	1.39	PPB	#	86
51)	Trichloroethene	6.82	95	59842	1.90	PPB		94
52)	Methylcyclohexane	6.93	83	80396	1.67	PPB		95
53)	1,2-Dichloropropane	7.13	63	55050	1.50	PPB		90
54)	Dibromomethane	7.25	93	29866	1.85	PPB		90
55)	Methyl methacrylate	7.28	69	21658	1.44	PPB		96
56)	1,4-Dioxane	7.28	88	5991	56.10	PPB		89
57)	Bromodichloromethane	7.43	83	73548	1.85	PPB		98
58)	2-Nitropropane	7.77	41	41388	9.47	PPB		97
59)	2-Chloroethyl Vinyl Ether	7.80	63	24065	1.51	PPB		93
60)	cis-1,3-Dichloropropene	7.92	75	81604	1.66	PPB		94
61)	4-Methyl-2-pentanone (MIBK	8.09	58	441012	60.31	PPB		96
63)	Toluene	8.19	92	138831	1.84	PPB		95
65)	n-Octane	8.27	85	28131	1.99	PPB		82
66)	trans-1,3-Dichloropropene	8.53	75	66670	1.84	PPB		90
67)	Ethyl methacrylate	8.58	69	45685	1.69	PPB		98
68)	1,1,2-Trichloroethane	8.70	83	35003	1.71	PPB		99
69)	Tetrachloroethene	8.71	164	50637	2.39	PPB		98
70)	2-Hexanone	8.95	57	138790	71.57	PPB		92
71)	1,3-Dichloropropane	8.87	76	66724	1.68	PPB		98
72)	Dibromochloromethane	9.05	129	51250	2.23	PPB		95
73)	1,2-Dibromoethane (EDB)	9.17	107	38946	1.99	PPB		95
74)	1-Chlorohexane	9.61	91	70891	1.94	PPB		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 15:57:43 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

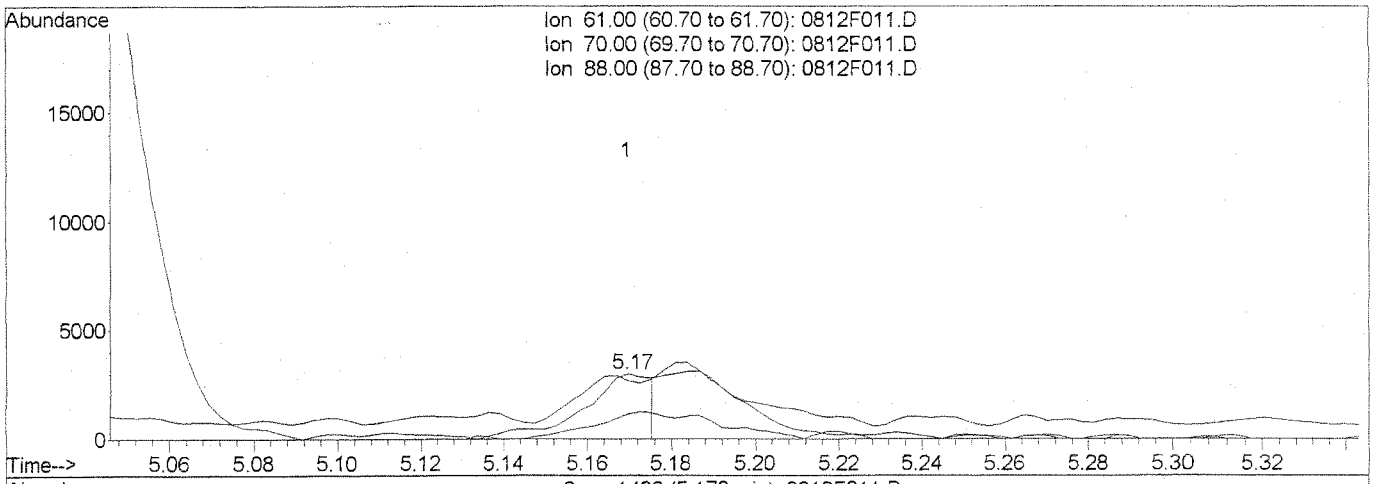
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75)	Chlorobenzene	9.63	112	151296	1.95	PPB		92
76)	Ethylbenzene	9.72	106	83408	2.12	PPB	#	85
77)	1,1,1,2-Tetrachloroethane	9.73	131	56880	2.23	PPB		93
78)	m,p-Xylenes	9.85	106	193010	4.06	PPB		92
79)	o-Xylene	10.24	106	95586	1.99	PPB		90
80)	Styrene	10.27	103	71659m	1.87	PPB		
81)	Bromoform	10.47	173	30249	2.39	PPB		96
82)	Isopropylbenzene	10.60	105	242341	2.01	PPB		98
83)	cis-1,4-Dichloro-2-butene	10.76	89	18209	6.69	PPB		87
86)	1,1,2,2-Tetrachloroethane	10.99	83	36384	1.41	PPB		97
87)	trans-1,4-Dichloro-2-buten	11.06	53	9059	1.43	PPB		75
88)	Bromobenzene	10.92	156	61770	1.87	PPB	#	80
89)	n-Propylbenzene	11.01	91	277741	1.68	PPB		97
90)	1,2,3-Trichloropropane	11.03	110	11791	1.76	PPB	#	79
91)	2-Chlorotoluene	11.11	91	165008	1.60	PPB		96
92)	1,3,5-Trimethylbenzene	11.20	105	191804	1.75	PPB		96
93)	4-Chlorotoluene	11.23	91	173524m	1.63	PPB		
94)	tert-Butylbenzene	11.50	119	167839	1.86	PPB		96
95)	1,2,4-Trimethylbenzene	11.57	105	193236	1.73	PPB		98
96)	sec-Butylbenzene	11.72	105	242258	1.72	PPB		100
97)	p-Isopropyltoluene	11.88	119	189137	1.70	PPB		96
98)	1,3-Dichlorobenzene	11.86	146	108657	1.78	PPB		93
99)	1,4-Dichlorobenzene	11.96	146	107555	1.74	PPB		98
100)	n-Butylbenzene	12.28	91	145637	1.35	PPB		94
101)	1,2-Dichlorobenzene	12.33	146	94375	1.68	PPB		99
102)	1,2-Dibromo-3-chloropropan	13.14	155	5480	2.06	PPB		85
103)	1,3,5-Trichlorobenzene	13.28	180	71834	1.76	PPB		93
104)	1,2,4-Trichlorobenzene	13.92	180	29157	1.64	PPB		95
105)	Hexachlorobutadiene	14.05	225	30068	1.92	PPB		98
106)	Naphthalene	14.17	128	33801	1.79	PPB		98
107)	1,2,3-Trichlorobenzene	14.42	180	22294	1.75	PPB		99

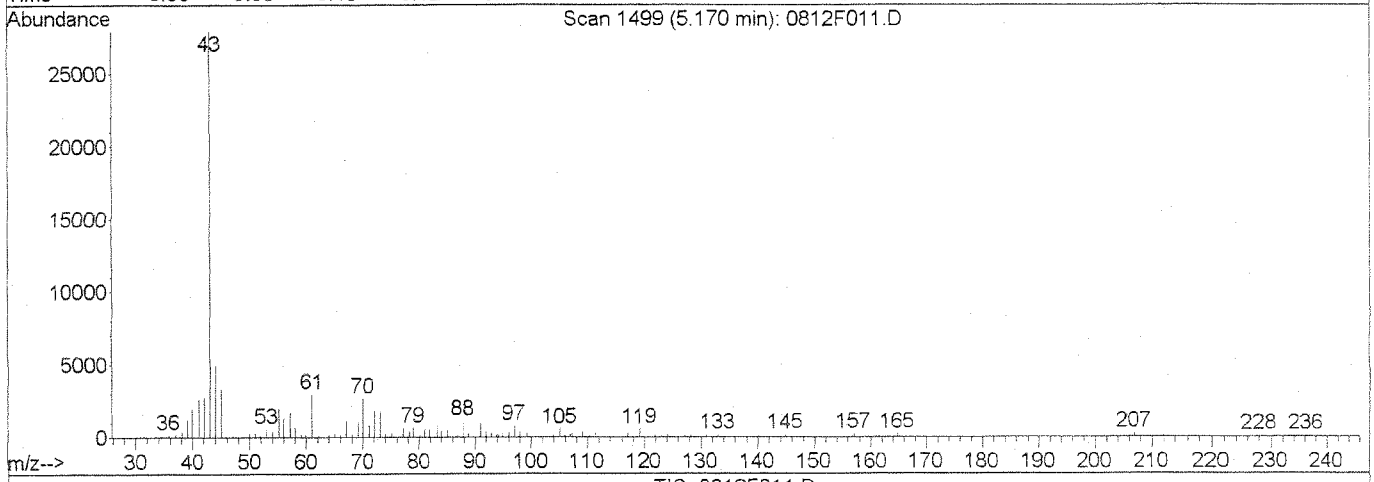
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:01 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F011.D

(35) Ethyl Acetate (T)

5.17min 1.26PPB

response 3425

Ion	Exp%	Act%
61.00	100	100
70.00	72.90	54.25
88.00	21.80	33.58
0.00	0.00	0.00

Manual Integration:

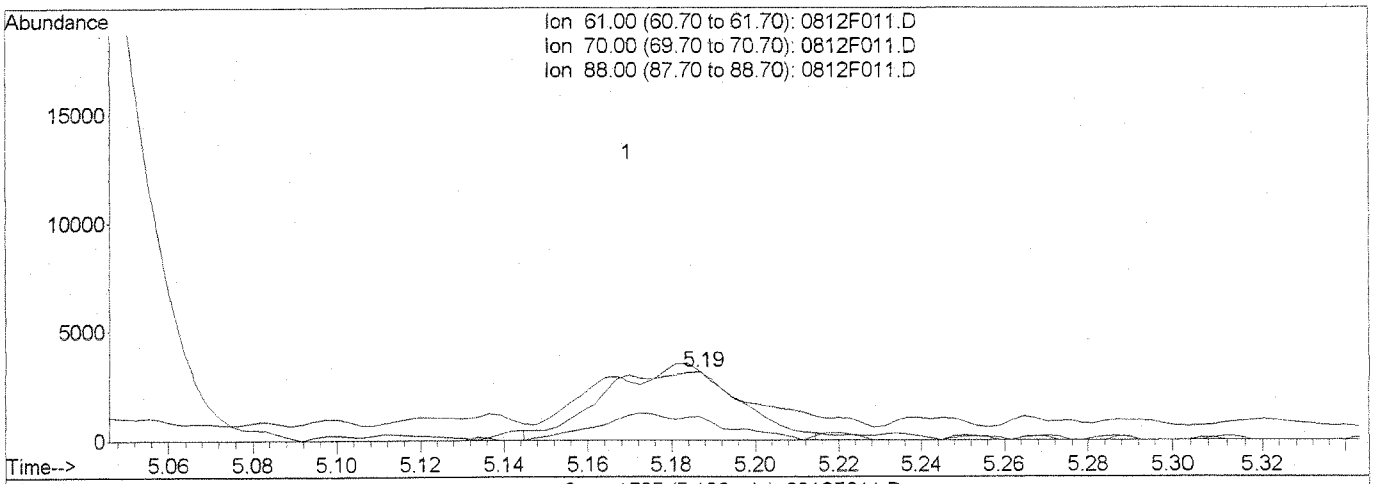
Before

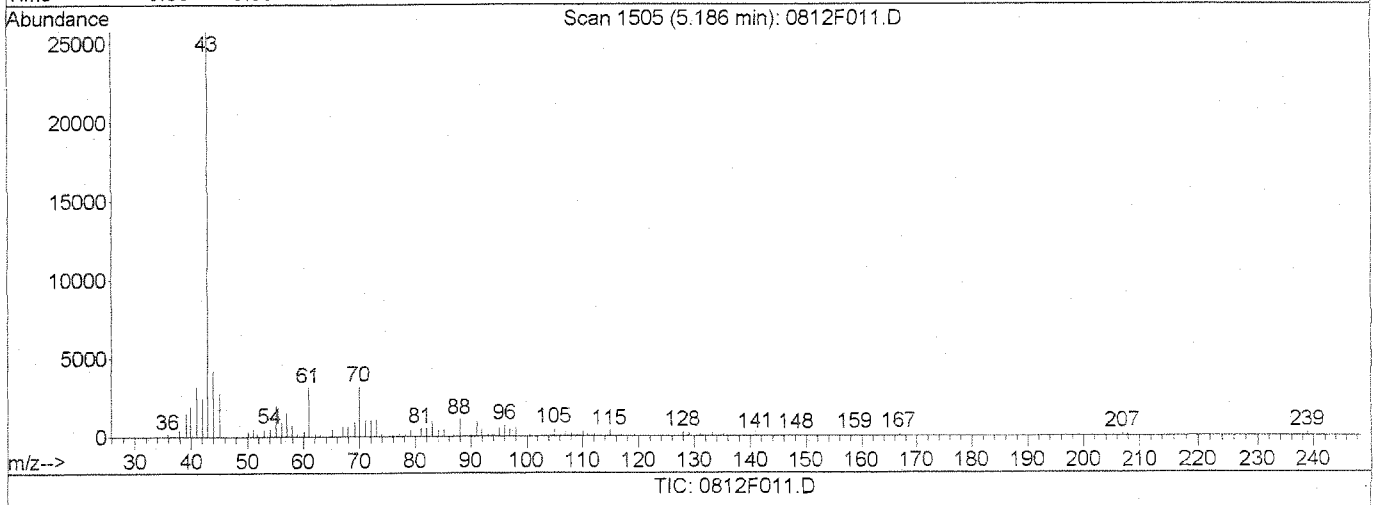
0812F011.D 081213MS27_8260.M Mon Aug 12 15:58:08 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:01 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Single Level Calibration





TIC: 0812F011.D

(35) Ethyl Acetate (T)

5.19min 2.72PPB m

response 7401

Ion	Exp%	Act%
61.00	100	100
70.00	72.90	101.60
88.00	21.80	34.92
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

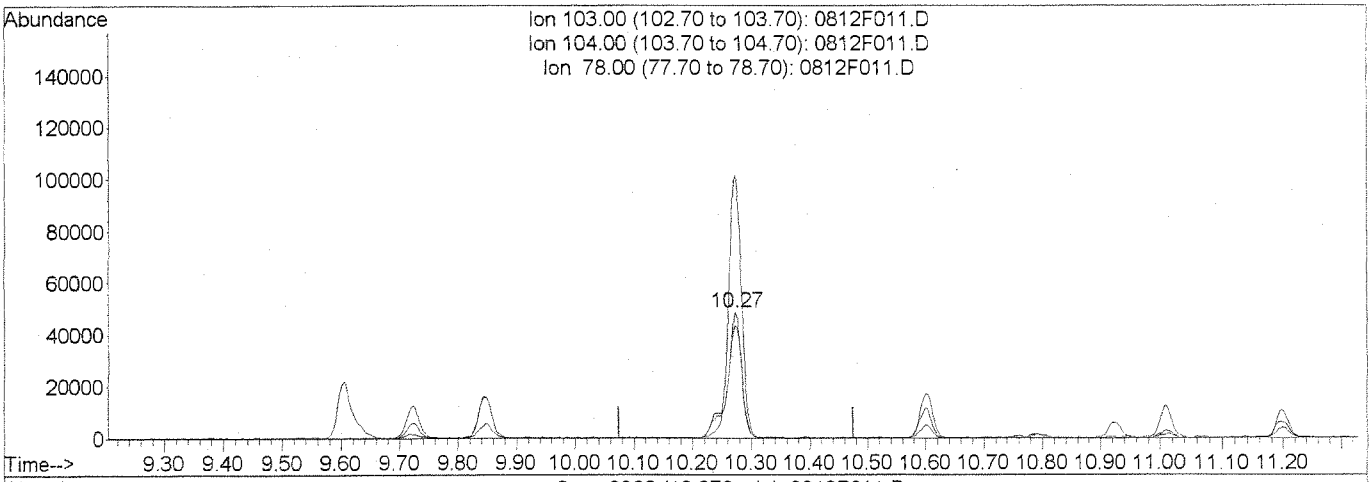
08/12/13

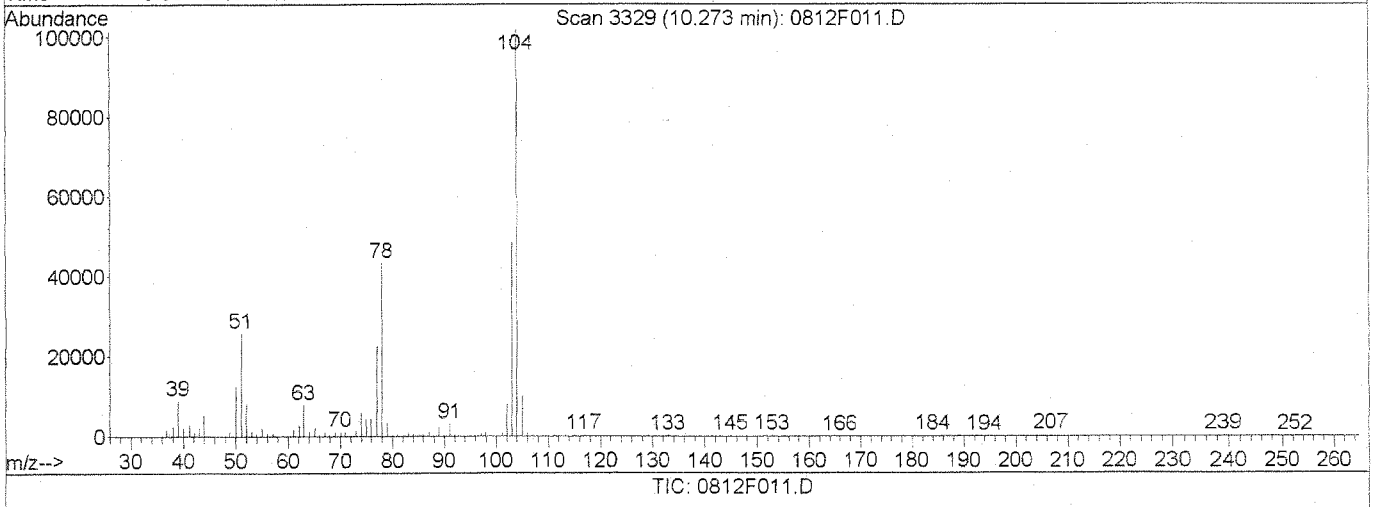
0812F011.D 081213MS27_8260.M Mon Aug 12 15:58:12 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:01 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F011.D

(80) Styrene (T)

10.27min 2.19PPB

response 83928

Ion	Exp%	Act%
103.00	100	100
104.00	208.00	209.00
78.00	92.50	89.10
0.00	0.00	0.00

Manual Integration:

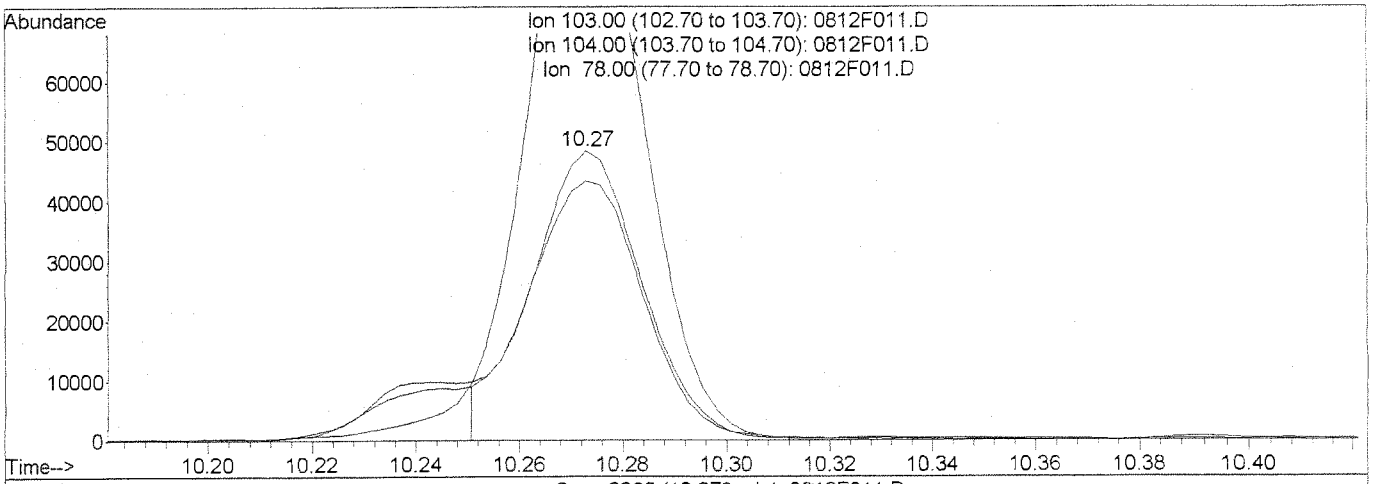
Before

0812F011.D 081213MS27_8260.M Mon Aug 12 15:58:51 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:02 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration



TIC: 0812F011.D

(80) Styrene (T)

10.27min 1.87PPB m

response 71659

Ion	Exp%	Act%
103.00	100	100
104.00	208.00	209.58
78.00	92.50	89.60
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

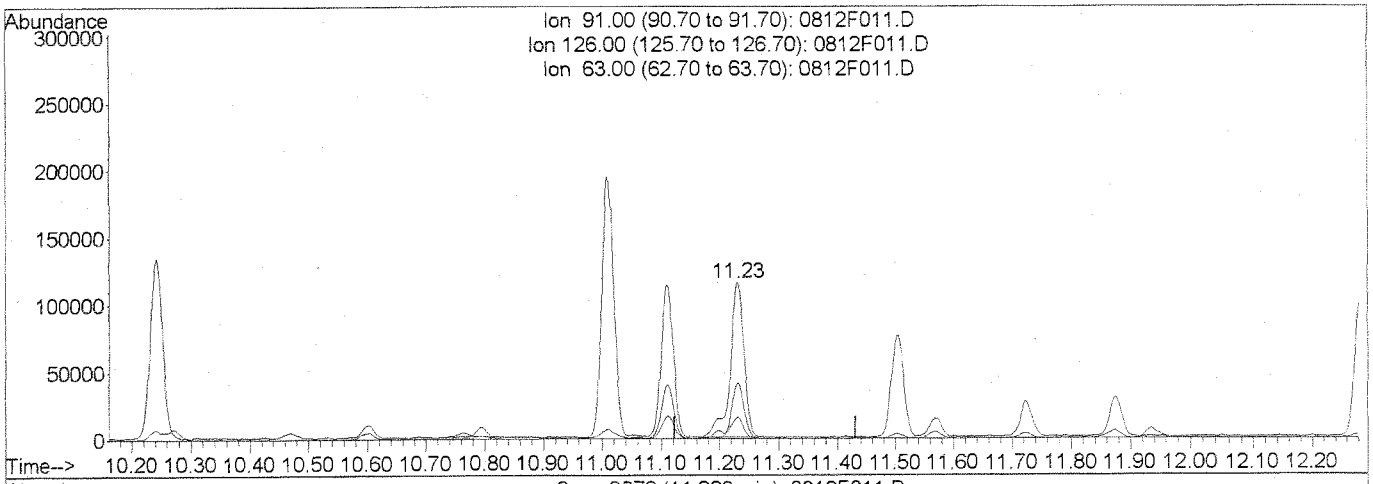
08/12/13

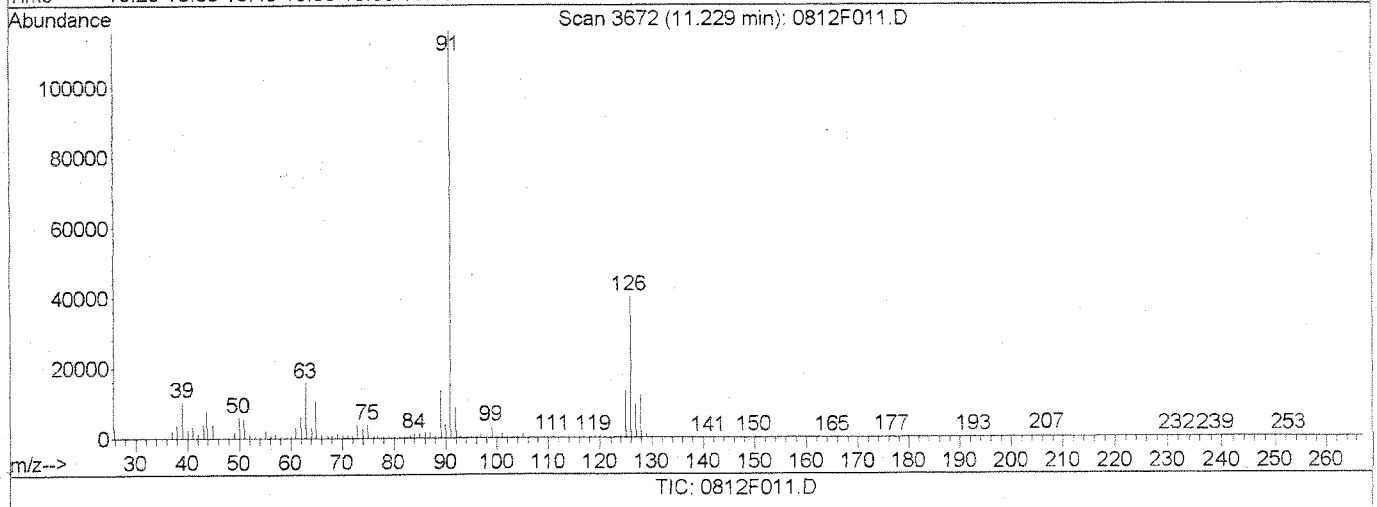
0812F011.D 081213MS27_8260.M Mon Aug 12 15:58:58 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:02 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F011.D

(93) 4-Chlorotoluene (T)

11.23min 1.76PPB

response 188427

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	35.08
63.00	12.70	13.63
0.00	0.00	0.00

Manual Integration:

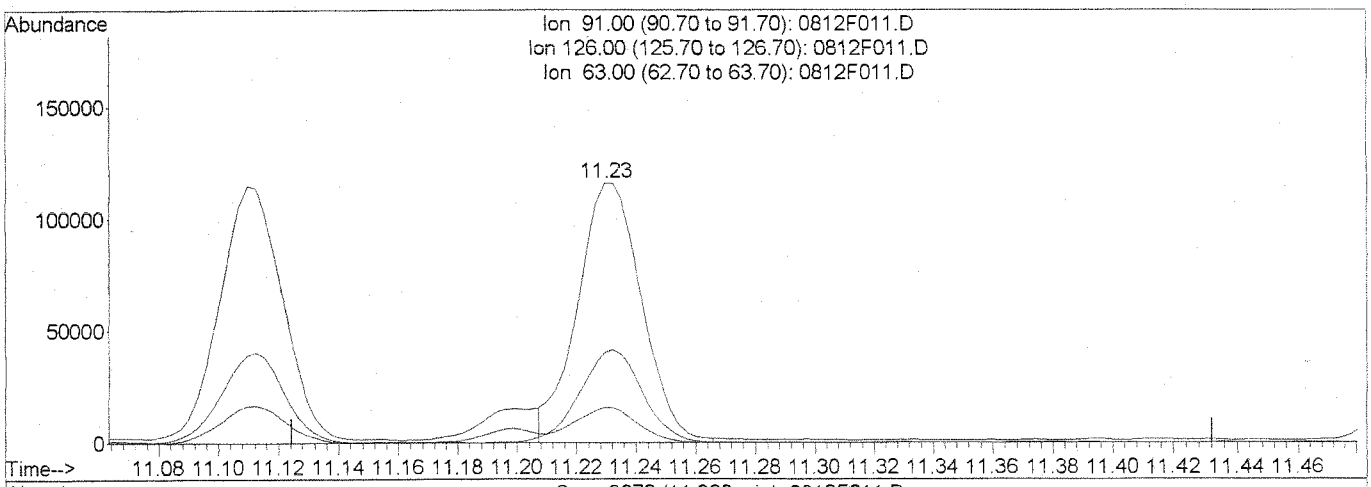
Before

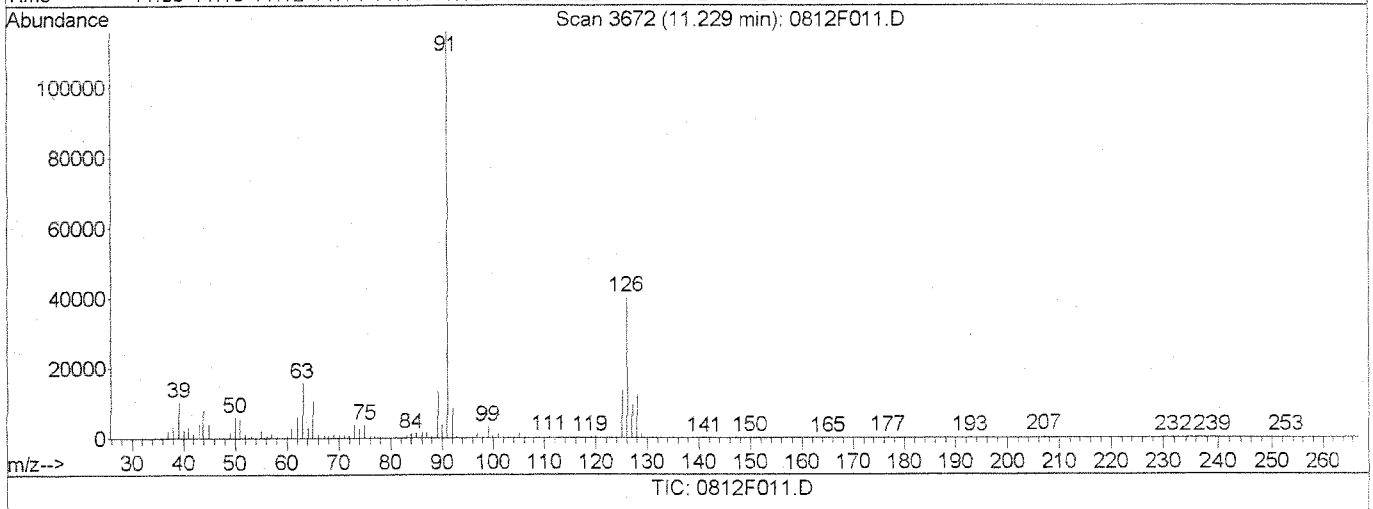
0812F011.D 081213MS27_8260.M Mon Aug 12 15:59:07 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:02 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F011.D

(93) 4-Chlorotoluene (T)

11.23min 1.63PPB m

response 173524

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	34.70
63.00	12.70	13.65
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

08/12/13

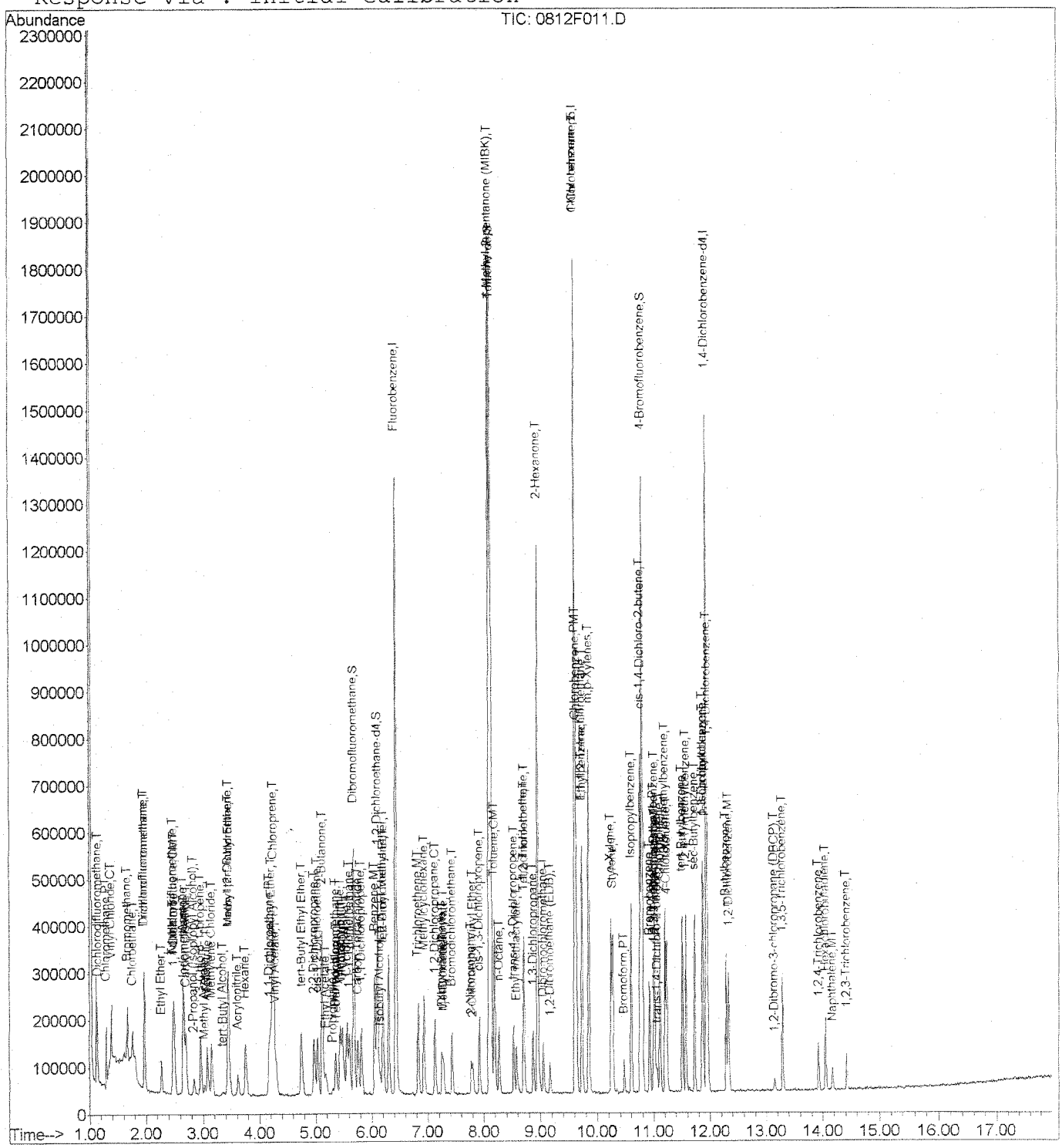
KL 8/13/13

0812F011.D 081213MS27_8260.M Mon Aug 12 15:59:12 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F011.D Vial: 8
Acq On : 12 Aug 2013 3:21 pm Operator: KR
Sample : 8260 ICAL 2 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:02 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:08:57 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1128472	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	444880	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	377329	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	309548	10.96	PPB	0.00
Spiked Amount 10.000			Recovery =	109.60%		
47) 1,2-Dichloroethane-d4	6.10	65	303391	10.20	PPB	0.00
Spiked Amount 10.000			Recovery =	102.00%		
62) Toluene-d8	8.12	98	1109270	10.04	PPB	0.00
Spiked Amount 10.000			Recovery =	100.40%		
84) 4-Bromofluorobenzene	10.80	95	398561	10.82	PPB	0.00
Spiked Amount 10.000			Recovery =	108.20%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	177119	5.24	PPB	100
3) Chloromethane	1.29	50	188468	3.83	PPB	98
4) Vinyl Chloride	1.38	62	177928	3.84	PPB	99
6) Bromomethane	1.67	96	109513	4.29	PPB	98
7) Chloroethane	1.76	64	97106	4.11	PPB	98
8) Dichlorofluoromethane	1.97	67	270620	4.58	PPB	94
9) Trichlorofluoromethane	1.96	101	256502	5.97	PPB	97
10) Ethyl Ether	2.27	59	86344	3.95	PPB	95
11) Acrolein	2.48	56	153665	55.88	PPB	98
12) Trichlorotrifluoroethane	2.47	151	114574	6.23	PPB	90
13) 1,1-Dichloroethene	2.50	96	112259	5.02	PPB	91
14) Acetone	2.65	43	315364	67.86	PPB	96
15) Iodomethane	2.68	142	230539	9.38	PPB	97
16) Carbon Disulfide	2.70	76	418741	4.81	PPB	100
17) 2-Propanol (Isopropyl Alco	2.83	45	122417	182.70	PPB	98
18) 3-Chloro-1-propene	2.96	76	78035	4.65	PPB	100
19) Methyl Acetate	3.02	43	61770	4.24	PPB	97
20) Acetonitrile	3.08	40	172724	146.51	PPB	98
21) Methylene Chloride	3.15	84	142417	4.19	PPB	95
22) tert-Butyl Alcohol	3.35	59	23994	20.63	PPB	80
23) Acrylonitrile	3.61	53	108796	15.02	PPB	97
24) Methyl tert-Butyl Ether	3.44	73	612333	9.34	PPB	96
25) trans-1,2-Dichloroethene	3.45	96	143823	5.04	PPB	86
26) Hexane	3.75	57	183245	4.57	PPB	98
27) Diisopropyl Ether	4.20	45	443319	4.22	PPB	94
28) 1,1-Dichloroethane	4.17	63	273231	4.57	PPB	98
29) Vinyl Acetate	4.29	86	38915	8.90	PPB #	75

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:08:57 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	Chloroprene	4.24	53	821854	20.26	PPB		94
31)	tert-Butyl Ethyl Ether	4.75	59	401278	4.64	PPB		93
32)	2,2-Dichloropropane	4.97	77	228884	5.72	PPB		98
33)	cis-1,2-Dichloroethene	5.04	96	161193	4.85	PPB		92
34)	2-Butanone	5.12	72	127560	70.32	PPB		94
35)	Ethyl Acetate	5.17	61	21894	8.14	PPB		94
36)	Propionitrile	5.30	54	36695	14.74	PPB		95
37)	Methacrylonitrile	5.43	67	135955	16.21	PPB		96
38)	Bromochloromethane	5.35	128	74748	5.60	PPB	#	77
39)	Tetrahydrofuran	5.37	71	7508	3.77	PPB		92
40)	Chloroform	5.47	83	277788	5.03	PPB		98
41)	Cyclohexane	5.56	56	220012	4.28	PPB		95
42)	1,1,1-Trichloroethane	5.60	97	241890	5.74	PPB		96
44)	Carbon Tetrachloride	5.75	117	206186	6.23	PPB		98
45)	1,1-Dichloropropene	5.82	75	186977	4.92	PPB		97
46)	Isobutyl Alcohol	6.15	43	77994	154.94	PPB		98
48)	Benzene	6.06	78	596631	4.38	PPB		99
49)	1,2-Dichloroethane	6.20	62	185582	4.90	PPB		95
50)	tert-Amyl Methyl Ether	6.20	55	82214	4.07	PPB	#	84
51)	Trichloroethene	6.82	95	164639	5.30	PPB		95
52)	Methylcyclohexane	6.93	83	221938	4.67	PPB		96
53)	1,2-Dichloropropane	7.13	63	155095	4.28	PPB		97
54)	Dibromomethane	7.25	93	79887	5.01	PPB		87
55)	Methyl methacrylate	7.28	69	65640	4.43	PPB		98
56)	1,4-Dioxane	7.27	88	17414	165.21	PPB		79
57)	Bromodichloromethane	7.43	83	203144	5.19	PPB		98
58)	2-Nitropropane	7.77	41	123284	28.58	PPB		96
59)	2-Chloroethyl Vinyl Ether	7.80	63	68337	4.34	PPB		93
60)	cis-1,3-Dichloropropene	7.92	75	231709	4.78	PPB		95
61)	4-Methyl-2-pentanone (MIBK	8.09	58	479125	66.39	PPB		96
63)	Toluene	8.19	92	373685	5.01	PPB		99
65)	n-Octane	8.27	85	78098	5.57	PPB		88
66)	trans-1,3-Dichloropropene	8.53	75	191142	5.34	PPB		96
67)	Ethyl methacrylate	8.58	69	123565	4.62	PPB		97
68)	1,1,2-Trichloroethane	8.70	83	93982	4.64	PPB		96
69)	Tetrachloroethene	8.71	164	139713	6.66	PPB		95
70)	2-Hexanone	8.95	57	153520	79.94	PPB		91
71)	1,3-Dichloropropane	8.87	76	189710	4.81	PPB		99
72)	Dibromochloromethane	9.05	129	139325	6.12	PPB		99
73)	1,2-Dibromoethane (EDB)	9.16	107	107380	5.54	PPB		95
74)	1-Chlorohexane	9.61	91	197451	5.46	PPB		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:08:57 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

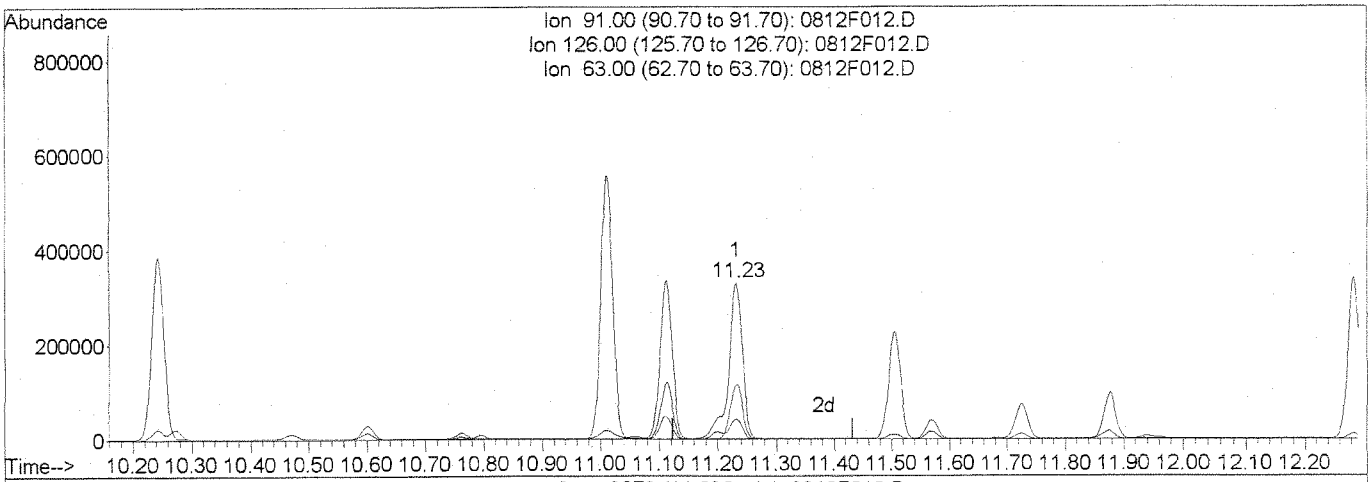
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75)	Chlorobenzene	9.63	112	417926	5.45	PPB		94
76)	Ethylbenzene	9.72	106	220330	5.66	PPB		95
77)	1,1,1,2-Tetrachloroethane	9.73	131	159636	6.31	PPB		97
78)	m,p-Xylenes	9.85	106	537196	11.41	PPB		93
79)	o-Xylene	10.24	106	262369	5.50	PPB		95
80)	Styrene	10.27	103	210531	5.55	PPB		98
81)	Bromoform	10.47	173	86956	6.94	PPB		99
82)	Isopropylbenzene	10.60	105	690210	5.77	PPB		98
83)	cis-1,4-Dichloro-2-butene	10.76	89	56637	21.02	PPB	#	84
86)	1,1,2,2-Tetrachloroethane	10.99	83	106419	3.91	PPB		99
87)	trans-1,4-Dichloro-2-buten	11.06	53	27023	4.05	PPB		88
88)	Bromobenzene	10.93	156	172719	4.98	PPB	#	86
89)	n-Propylbenzene	11.01	91	786022	4.52	PPB		97
90)	1,2,3-Trichloropropane	11.03	110	32711	4.65	PPB	#	82
91)	2-Chlorotoluene	11.11	91	479626	4.43	PPB		94
92)	1,3,5-Trimethylbenzene	11.20	105	556288	4.84	PPB		97
93)	4-Chlorotoluene	11.23	91	490059m	4.37	PPB		
94)	tert-Butylbenzene	11.51	119	482965	5.10	PPB		98
95)	1,2,4-Trimethylbenzene	11.57	105	562859	4.80	PPB		98
96)	sec-Butylbenzene	11.73	105	686225	4.63	PPB		98
97)	p-Isopropyltoluene	11.88	119	561530	4.79	PPB		99
98)	1,3-Dichlorobenzene	11.86	146	319536	4.97	PPB		96
99)	1,4-Dichlorobenzene	11.96	146	309721	4.77	PPB		98
100)	n-Butylbenzene	12.28	91	482477	4.27	PPB		97
101)	1,2-Dichlorobenzene	12.33	146	286559	4.87	PPB		95
102)	1,2-Dibromo-3-chloropropan	13.14	155	14757	5.29	PPB		87
103)	1,3,5-Trichlorobenzene	13.28	180	231499	5.41	PPB		99
104)	1,2,4-Trichlorobenzene	13.92	180	129733	4.60	PPB		97
105)	Hexachlorobutadiene	14.05	225	94088	5.72	PPB		98
106)	Naphthalene	14.17	128	144702	4.07	PPB		99
107)	1,2,3-Trichlorobenzene	14.42	180	103293	4.57	PPB		95

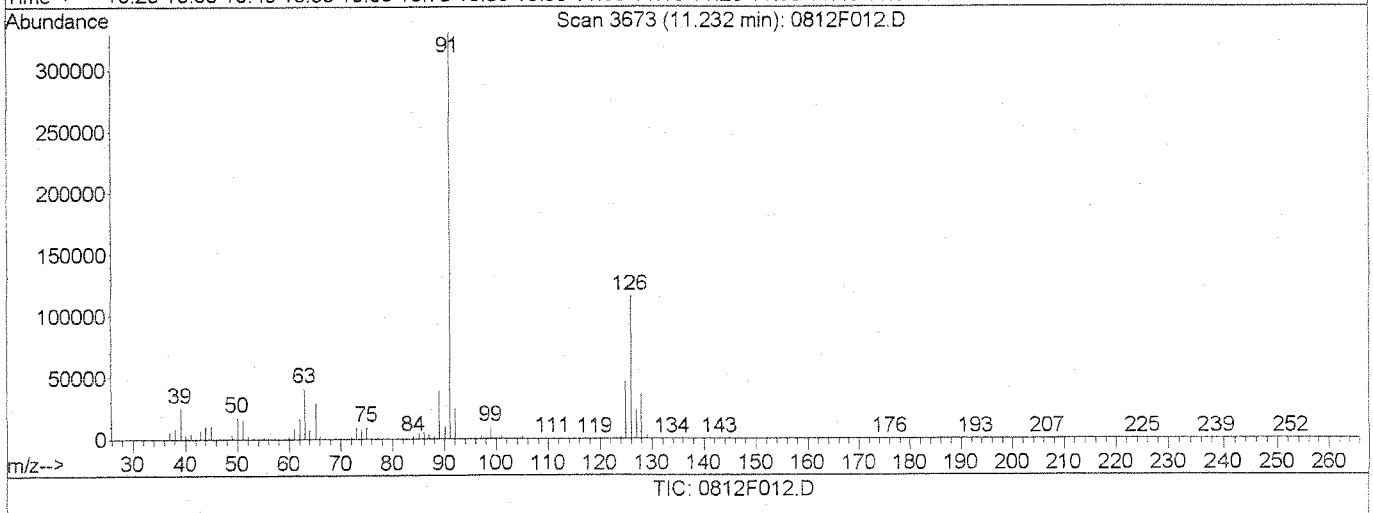
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:13 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F012.D

(93) 4-Chlorotoluene (T)

11.23min 4.81PPB

response 540023

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	35.23
63.00	12.70	12.74
0.00	0.00	0.00

Manual Integration:

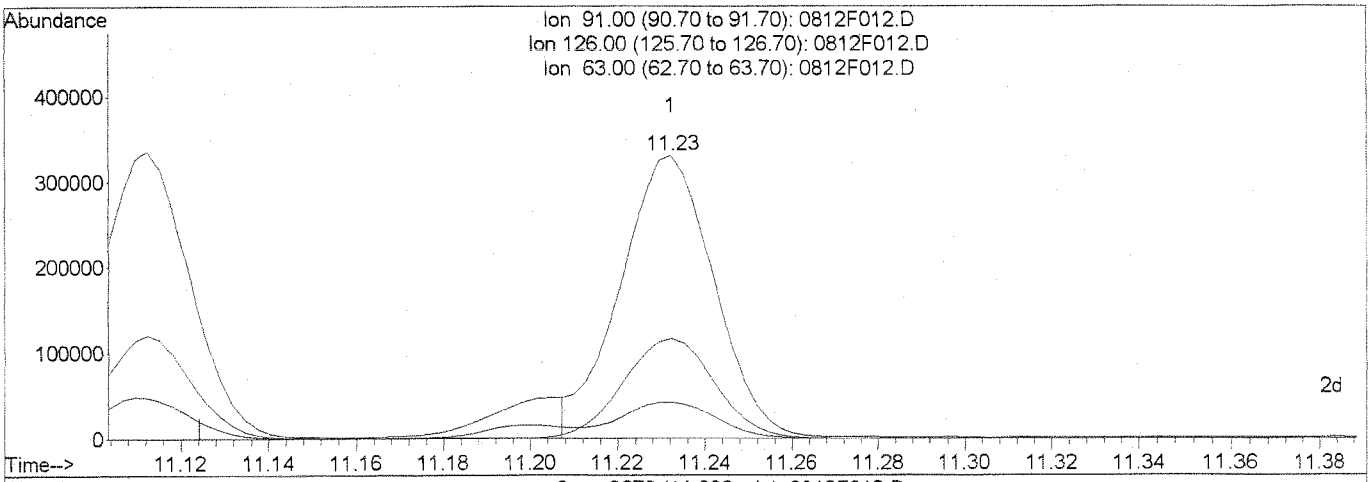
Before

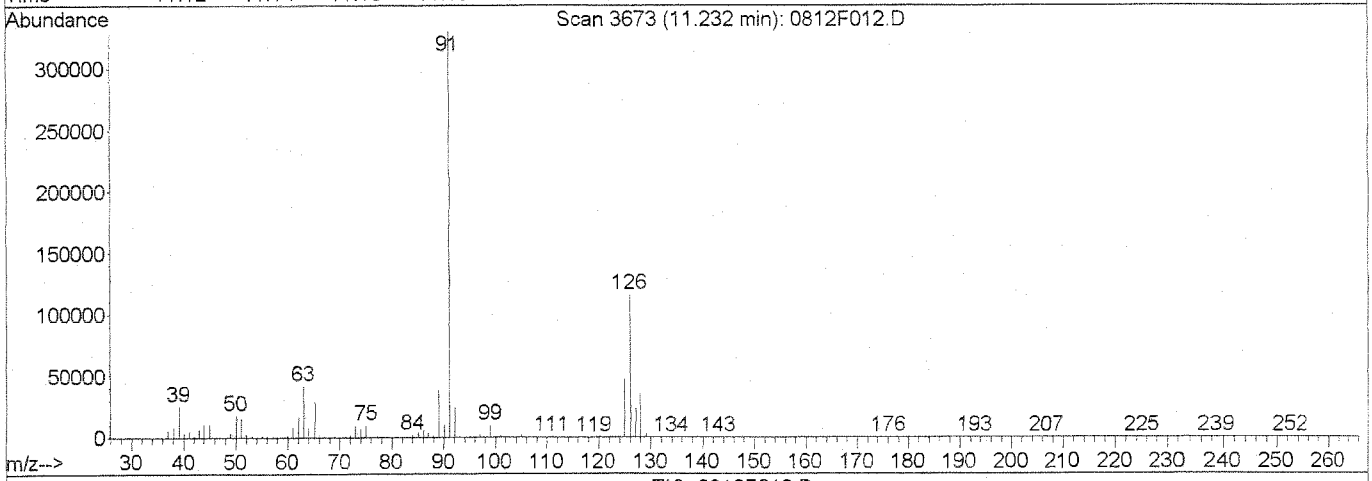
0812F012.D 081213MS27_8260.M Mon Aug 12 16:10:45 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:14 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F012.D

(93) 4-Chlorotoluene (T)

11.23min 4.37PPB m

response 490059

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	35.14
63.00	12.70	12.68
0.00	0.00	0.00

Manual Integration:

After

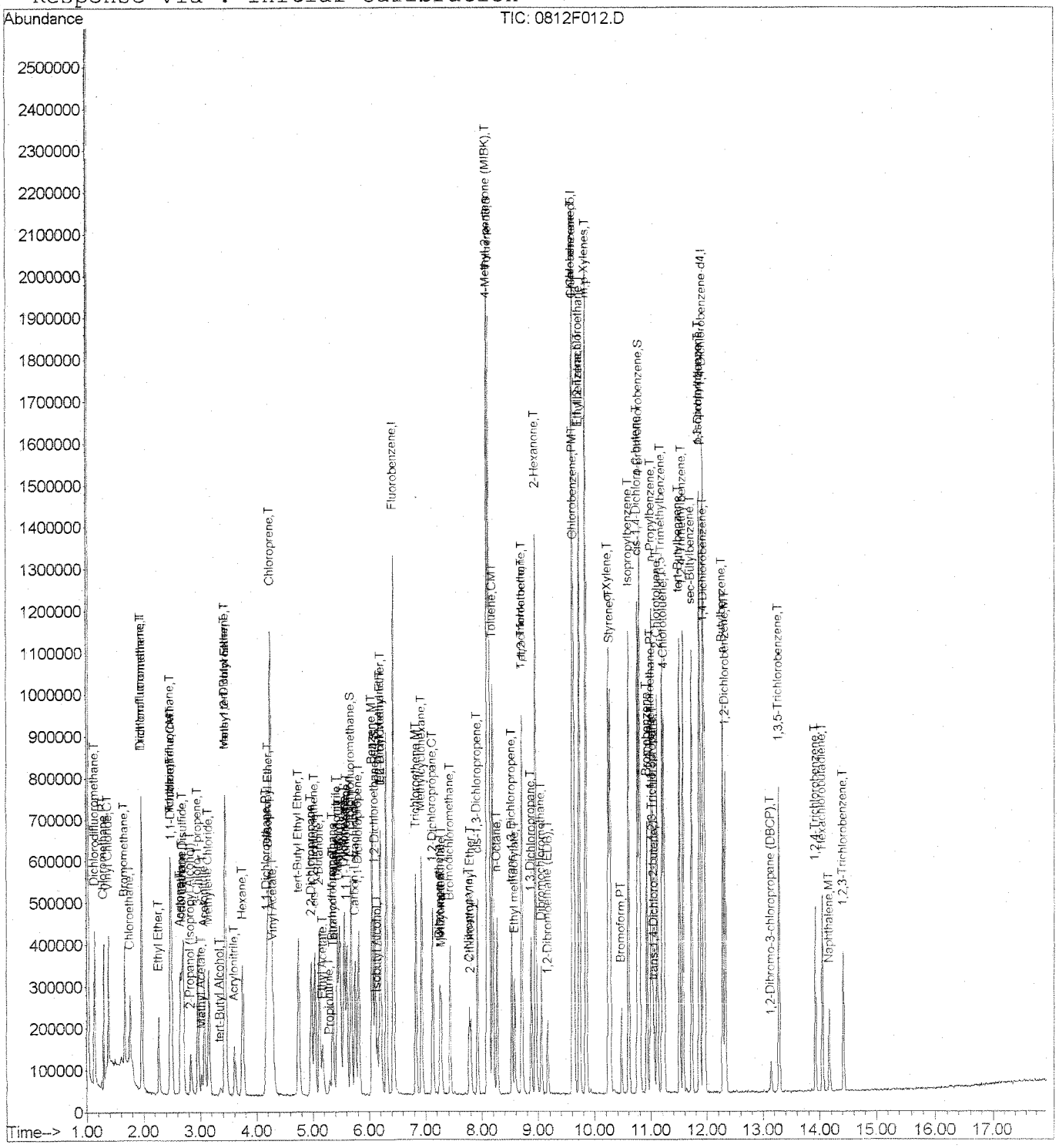
Baseline correction

08/12/13

0812F012.D 081213MS27_8260.M Mon Aug 12 16:11:26 2013

Data File : J:\MS27\DATA\081213\0812F012.D Vial: 9
Acq On : 12 Aug 2013 3:48 pm Operator: KR
Sample : 8260 ICAL 5 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:14 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:35:52 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

kr 8/12/13

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1118048	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	448052	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	377387	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	302409	10.81	PPB	0.00
Spiked Amount 10.000			Recovery =	108.10%		
47) 1,2-Dichloroethane-d4	6.10	65	299581	10.17	PPB	0.00
Spiked Amount 10.000			Recovery =	101.70%		
62) Toluene-d8	8.12	98	1103204	10.08	PPB	0.00
Spiked Amount 10.000			Recovery =	100.80%		
84) 4-Bromofluorobenzene	10.80	95	397257	10.71	PPB	0.00
Spiked Amount 10.000			Recovery =	107.10%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	349085	10.42	PPB	97
3) Chloromethane	1.29	50	369454	7.58	PPB	99
4) Vinyl Chloride	1.38	62	351801	7.67	PPB	99
6) Bromomethane	1.67	96	214657	8.49	PPB	98
7) Chloroethane	1.76	64	188447	8.06	PPB	98
8) Dichlorofluoromethane	1.97	67	530063	9.06	PPB	97
9) Trichlorofluoromethane	1.96	101	514583	12.10	PPB	98
10) Ethyl Ether	2.27	59	172583	7.97	PPB	98
11) Acrolein	2.48	56	302507	111.03	PPB	98
12) Trichlorotrifluoroethane	2.47	151	231586	12.71	PPB	94
13) 1,1-Dichloroethene	2.50	96	220796	9.97	PPB	92
14) Acetone	2.65	43	774313	168.18	PPB	95
15) Iodomethane	2.68	142	515559	21.02	PPB	99
16) Carbon Disulfide	2.70	76	845020	9.80	PPB	99
17) 2-Propanol (Isopropyl Alco	2.83	45	255770	385.28	PPB	99
18) 3-Chloro-1-propene	2.96	76	157419	9.46	PPB	91
19) Methyl Acetate	3.02	43	122209	8.46	PPB	98
20) Acetonitrile	3.07	40	338318	289.64	PPB	99
21) Methylene Chloride	3.15	84	274587	8.16	PPB	96
22) tert-Butyl Alcohol	3.35	59	45437	39.43	PPB	91
23) Acrylonitrile	3.61	53	214482	29.90	PPB	97
24) Methyl tert-Butyl Ether	3.44	73	1219167	18.78	PPB	96
25) trans-1,2-Dichloroethene	3.45	96	286472	10.12	PPB	93
26) Hexane	3.75	57	365368	9.20	PPB	96
27) Diisopropyl Ether	4.20	45	873320	8.39	PPB	94
28) 1,1-Dichloroethane	4.17	63	539222	9.10	PPB	98
29) Vinyl Acetate	4.28	86	78966	18.23	PPB #	77

(#) = qualifier out of range (m) = manual integration
0812F013.D 081213MS27_8260.M Mon Aug 12 16:36:51 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:35:52 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30) Chloroprene	4.24	53	1648058	41.01	PPB		97
31) tert-Butyl Ethyl Ether	4.74	59	790973	9.22	PPB		95
32) 2,2-Dichloropropane	4.97	77	455575	11.50	PPB		98
33) cis-1,2-Dichloroethene	5.04	96	322891	9.81	PPB		91
34) 2-Butanone	5.11	72	319986	178.03	PPB		92
35) Ethyl Acetate	5.17	61	42095	15.80	PPB		96
36) Propionitrile	5.30	54	76249	30.91	PPB		98
37) Methacrylonitrile	5.43	67	279195	33.59	PPB		99
38) Bromochloromethane	5.35	128	148545	11.24	PPB	#	79
39) Tetrahydrofuran	5.37	71	16463	8.34	PPB		95
40) Chloroform	5.47	83	555102	10.14	PPB		98
41) Cyclohexane	5.56	56	435771	8.56	PPB		89
42) 1,1,1-Trichloroethane	5.60	97	491818	11.78	PPB		97
44) Carbon Tetrachloride	5.75	117	418078	12.76	PPB		98
45) 1,1-Dichloropropene	5.82	75	371069	9.85	PPB		98
46) Isobutyl Alcohol	6.14	43	154598	309.99	PPB		97
48) Benzene	6.05	78	1182839	8.76	PPB		99
49) 1,2-Dichloroethane	6.20	62	364498	9.71	PPB		97
50) tert-Amyl Methyl Ether	6.20	55	153447	7.67	PPB	#	69
51) Trichloroethene	6.82	95	330982	10.75	PPB		94
52) Methylcyclohexane	6.93	83	456297	9.70	PPB		95
53) 1,2-Dichloropropane	7.13	63	304860	8.50	PPB		95
54) Dibromomethane	7.25	93	163310	10.33	PPB		90
55) Methyl methacrylate	7.28	69	121905	8.30	PPB		86
56) 1,4-Dioxane	7.27	88	33914	324.74	PPB		91
57) Bromodichloromethane	7.43	83	404024	10.41	PPB		99
58) 2-Nitropropane	7.77	41	243199	56.91	PPB		91
59) 2-Chloroethyl Vinyl Ether	7.80	63	134402	8.61	PPB		90
60) cis-1,3-Dichloropropene	7.92	75	464229	9.67	PPB		93
61) 4-Methyl-2-pentanone (MIBK	8.09	58	1169525	163.57	PPB		96
63) Toluene	8.19	92	745600	10.10	PPB		99
65) n-Octane	8.27	85	150341	10.65	PPB		94
66) trans-1,3-Dichloropropene	8.53	75	381539	10.58	PPB		99
67) Ethyl methacrylate	8.58	69	255434	9.48	PPB		98
68) 1,1,2-Trichloroethane	8.70	83	182268	8.94	PPB		96
69) Tetrachloroethene	8.71	164	272661	12.90	PPB		97
70) 2-Hexanone	8.95	57	377514	195.18	PPB		92
71) 1,3-Dichloropropane	8.87	76	361621	9.10	PPB		100
72) Dibromochloromethane	9.05	129	281879	12.28	PPB		98
73) 1,2-Dibromoethane (EDB)	9.17	107	208852	10.70	PPB		96
74) 1-Chlorohexane	9.61	91	397158	10.91	PPB		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:35:52 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

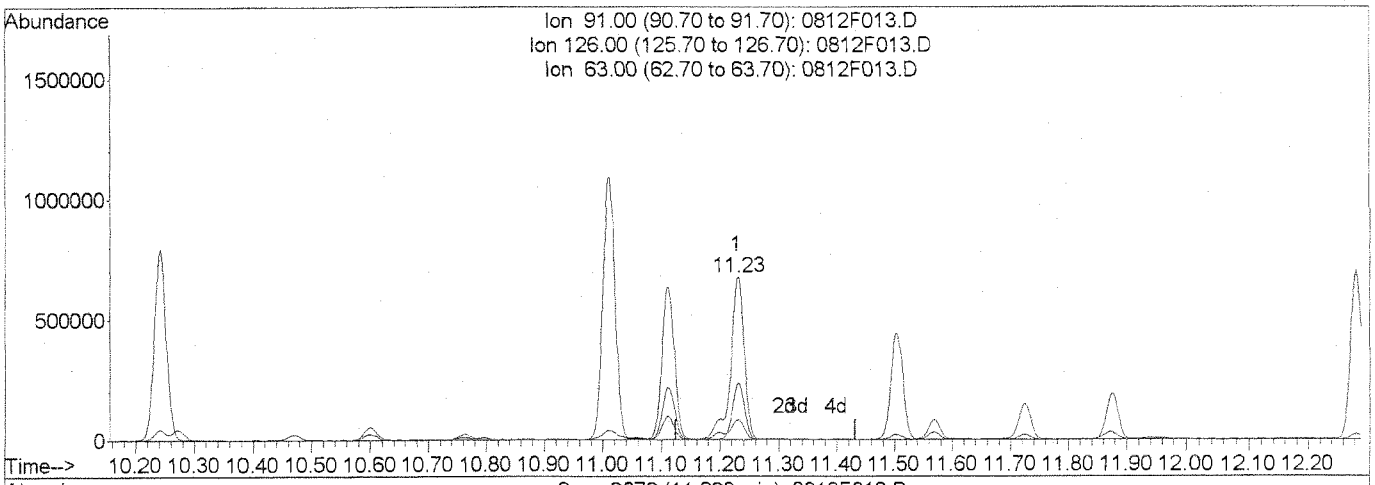
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75) Chlorobenzene	9.63	112	840481	10.88	PPB		94
76) Ethylbenzene	9.72	106	442417	11.28	PPB		91
77) 1,1,1,2-Tetrachloroethane	9.73	131	312481	12.27	PPB		98
78) m,p-Xylenes	9.85	106	1076217	22.71	PPB		92
79) o-Xylene	10.24	106	525386	10.94	PPB		97
80) Styrene	10.27	103	417427	10.93	PPB		99
81) Bromoform	10.47	173	174062	13.80	PPB		99
82) Isopropylbenzene	10.60	105	1375751	11.42	PPB		99
83) cis-1,4-Dichloro-2-butene	10.76	89	113095	41.68	PPB		89
86) 1,1,2,2-Tetrachloroethane	10.99	83	210641	7.74	PPB		99
87) trans-1,4-Dichloro-2-buten	11.06	53	54909	8.23	PPB		80
88) Bromobenzene	10.93	156	351154	10.13	PPB	#	83
89) n-Propylbenzene	11.01	91	1595538	9.18	PPB		97
90) 1,2,3-Trichloropropane	11.03	110	62330	8.86	PPB	#	83
91) 2-Chlorotoluene	11.11	91	951338	8.78	PPB		96
92) 1,3,5-Trimethylbenzene	11.20	105	1124362	9.78	PPB		98
93) 4-Chlorotoluene	11.23	91	1001034m	8.92	PPB		
94) tert-Butylbenzene	11.50	119	970676	10.25	PPB		96
95) 1,2,4-Trimethylbenzene	11.57	105	1125575	9.61	PPB		97
96) sec-Butylbenzene	11.73	105	1389122	9.36	PPB		97
97) p-Isopropyltoluene	11.88	119	1156141	9.87	PPB		99
98) 1,3-Dichlorobenzene	11.86	146	653594	10.16	PPB		96
99) 1,4-Dichlorobenzene	11.96	146	633146	9.74	PPB		98
100) n-Butylbenzene	12.28	91	997508	8.82	PPB		97
101) 1,2-Dichlorobenzene	12.33	146	577114	9.80	PPB		95
102) 1,2-Dibromo-3-chloropropan	13.14	155	31392	11.25	PPB		90
103) 1,3,5-Trichlorobenzene	13.28	180	473293	11.06	PPB		96
104) 1,2,4-Trichlorobenzene	13.92	180	305815	9.63	PPB		98
105) Hexachlorobutadiene	14.05	225	189035	11.49	PPB		97
106) Naphthalene	14.17	128	370145	8.48	PPB		99
107) 1,2,3-Trichlorobenzene	14.42	180	248379	9.47	PPB		96

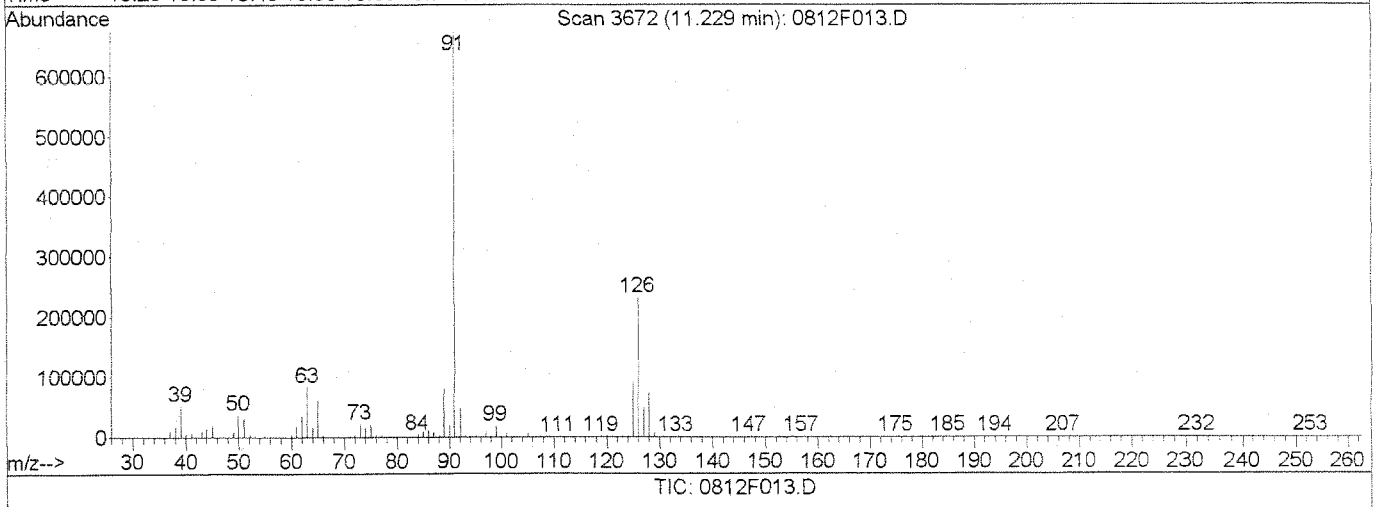
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:39 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F013.D

(93) 4-Chlorotoluene (T)

11.23min 9.76PPB

response 1095085

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	34.29
63.00	12.70	12.30
0.00	0.00	0.00

Manual Integration:

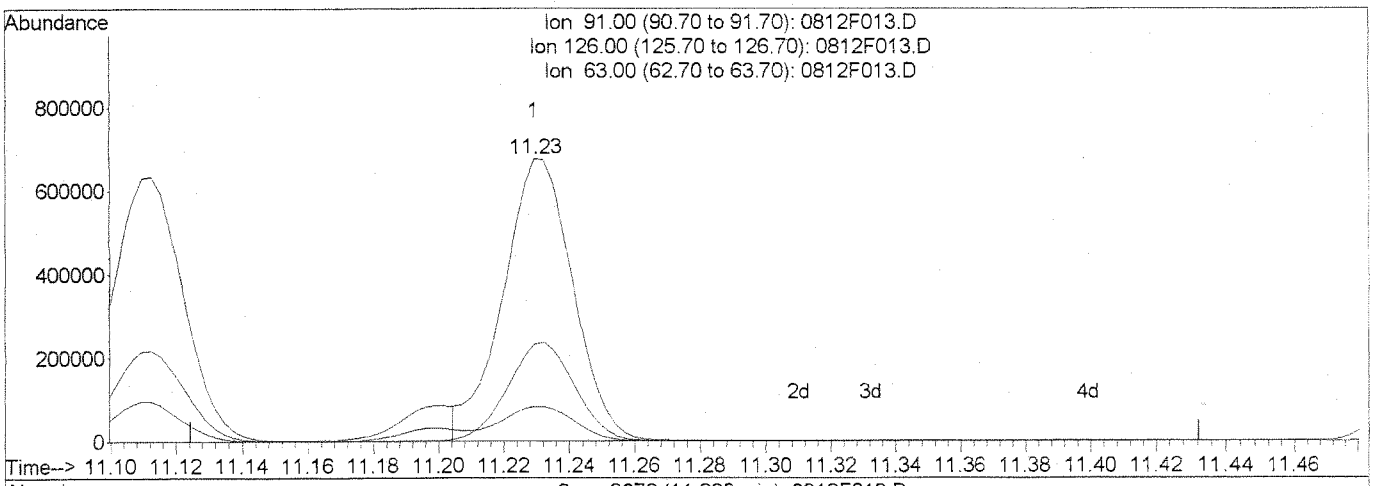
Before

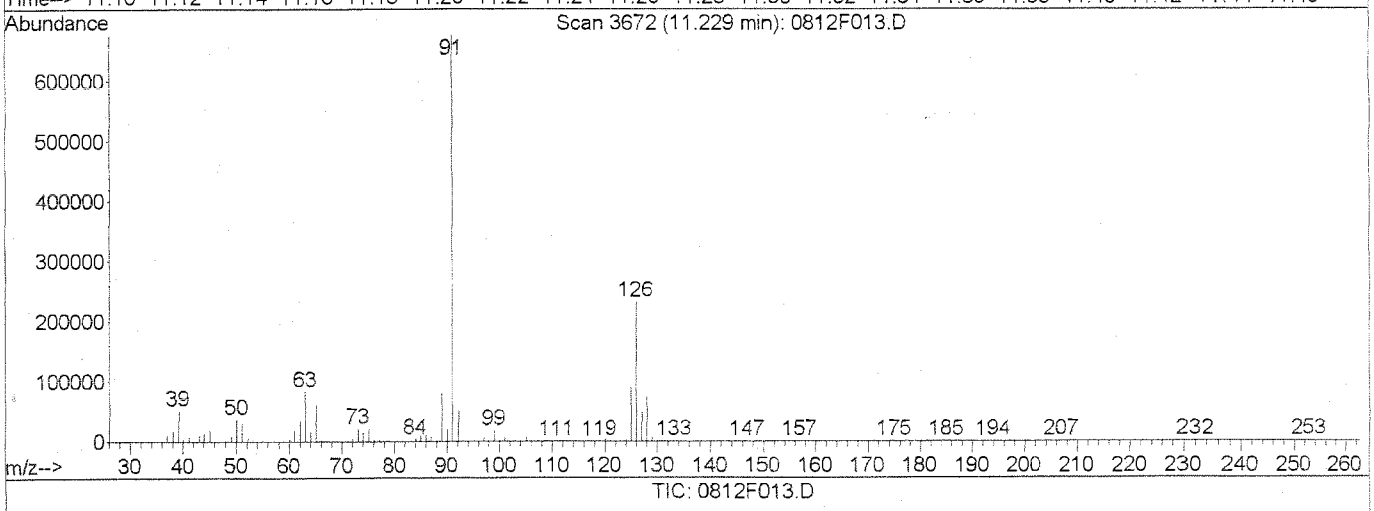
0812F013.D 081213MS27_8260.M Mon Aug 12 16:36:32 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:39 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Multiple Level Calibration





TIC: 0812F013.D

(93) 4-Chlorotoluene (T)

11.23min 8.92PPB m

response 1001034

Ion	Exp%	Act%
91.00	100	100
126.00	31.50	34.25
63.00	12.70	12.30
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

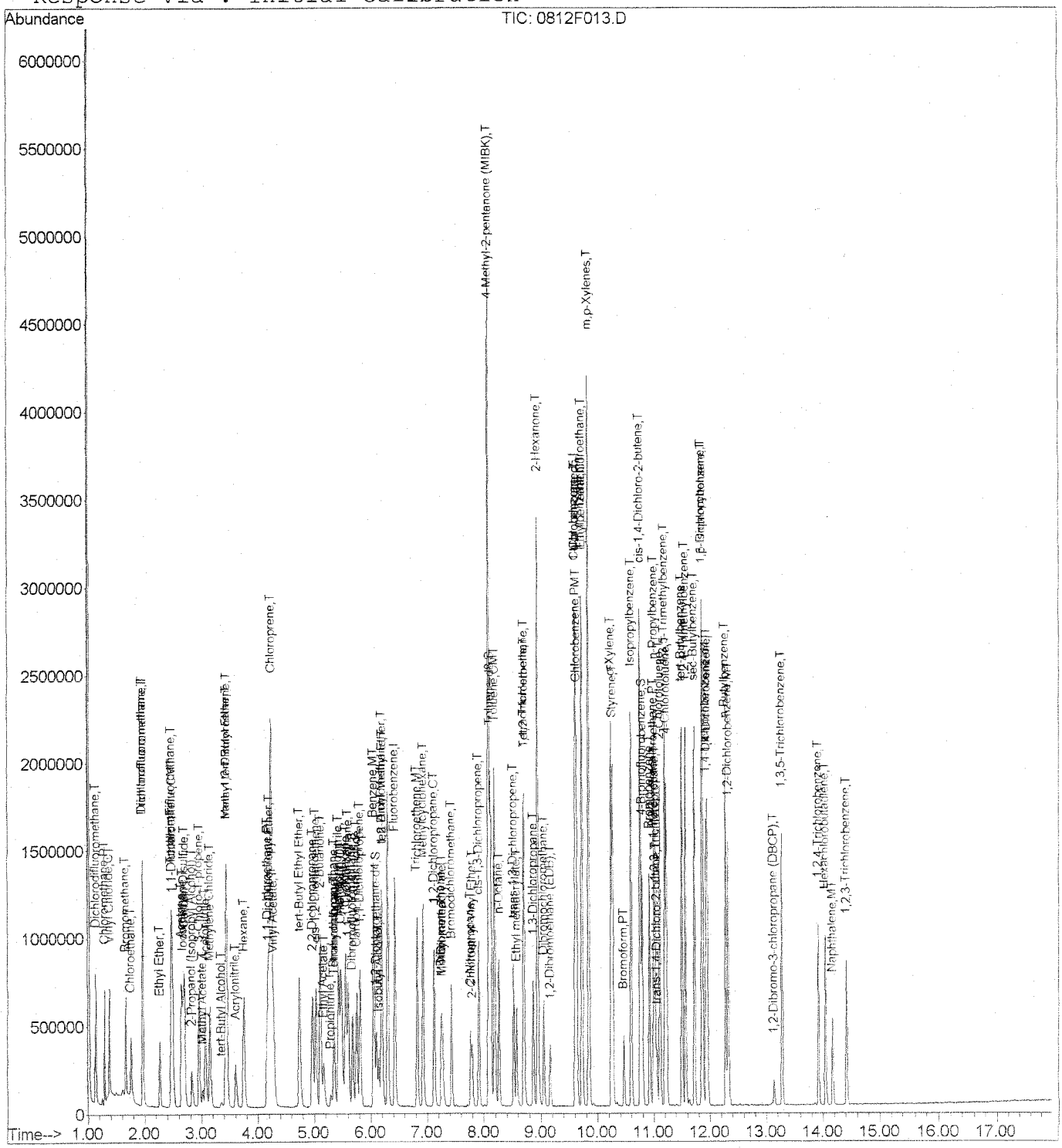
08/12/13

0812F013.D 081213MS27_8260.M Mon Aug 12 16:36:36 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F013.D Vial: 10
Acq On : 12 Aug 2013 4:15 pm Operator: KR
Sample : 8260 ICAL 10 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 16:39 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 06 14:39:06 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:06:19 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1178501	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	465092	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	406319	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	312255	9.78	PPB	0.00
Spiked Amount 10.000			Recovery =	97.80%		
47) 1,2-Dichloroethane-d4	6.10	65	305918	10.01	PPB	0.00
Spiked Amount 10.000			Recovery =	100.10%		
62) Toluene-d8	8.12	98	1146727	9.93	PPB	0.00
Spiked Amount 10.000			Recovery =	99.30%		
84) 4-Bromofluorobenzene	10.79	95	422488	10.51	PPB	0.00
Spiked Amount 10.000			Recovery =	105.10%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	696099	19.63	PPB	97
3) Chloromethane	1.29	50	735461	18.44	PPB	99
4) Vinyl Chloride	1.38	62	695211	18.99	PPB	98
6) Bromomethane	1.67	96	437412	18.36	PPB	97
7) Chloroethane	1.76	64	378899	18.25	PPB	99
8) Dichlorofluoromethane	1.97	67	1067357	20.14	PPB	99
9) Trichlorofluoromethane	1.96	101	1016611	21.09	PPB	99
10) Ethyl Ether	2.27	59	347806	20.06	PPB	98
11) Acrolein	2.48	56	598538	350.42	PPB	98
12) Trichlorotrifluoroethane	2.47	151	456756	20.07	PPB	99
13) 1,1-Dichloroethene	2.50	96	441813	19.60	PPB	99
14) Acetone	2.65	43	1451796	395.29	PPB	99
15) Iodomethane	2.68	142	1164888	106.95	PPB	100
16) Carbon Disulfide	2.70	76	1696370	20.47	PPB	100
17) 2-Propanol (Isopropyl Alco	2.82	45	465731	1052.90	PPB	99
18) 3-Chloro-1-propene	2.96	76	314025	20.24	PPB	98
19) Methyl Acetate	3.02	43	252327	18.57	PPB	98
20) Acetonitrile	3.07	40	648245	751.93	PPB	99
21) Methylene Chloride	3.15	84	551111	18.73	PPB	99
22) tert-Butyl Alcohol	3.35	59	85836	89.69	PPB	85
23) Acrylonitrile	3.61	53	429099	83.97	PPB	98
24) Methyl tert-Butyl Ether	3.43	73	2436074	40.91	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	570893	19.06	PPB	97
26) Hexane	3.75	57	721642	18.36	PPB	100
27) Diisopropyl Ether	4.20	45	1770022	20.83	PPB	98
28) 1,1-Dichloroethane	4.17	63	1075872	19.74	PPB	100
29) Vinyl Acetate	4.29	86	159592	41.13	PPB	# 92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:06:19 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Chloroprene	4.24	53	3293565	80.91	PPB	99
31) tert-Butyl Ethyl Ether	4.74	59	1597535	20.95	PPB	98
32) 2,2-Dichloropropane	4.97	77	907844	20.21	PPB	100
33) cis-1,2-Dichloroethene	5.03	96	656103	19.56	PPB	98
34) 2-Butanone	5.11	72	610461	420.92	PPB	99
35) Ethyl Acetate	5.17	61	81570	37.95	PPB	99
36) Propionitrile	5.30	54	146807	78.74	PPB	99
37) Methacrylonitrile	5.43	67	556951	79.94	PPB	97
38) Bromochloromethane	5.35	128	298554	19.40	PPB	99
39) Tetrahydrofuran	5.36	71	31330	19.69	PPB	90
40) Chloroform	5.47	83	1108908	20.65	PPB	98
41) Cyclohexane	5.56	56	875502	19.77	PPB	95
42) 1,1,1-Trichloroethane	5.60	97	981072	19.74	PPB	98
44) Carbon Tetrachloride	5.75	117	841490	20.87	PPB	99
45) 1,1-Dichloropropene	5.82	75	744092	20.12	PPB	98
46) Isobutyl Alcohol	6.14	43	300636	847.74	PPB	96
48) Benzene	6.05	78	2372621	19.34	PPB	99
49) 1,2-Dichloroethane	6.19	62	725654	19.95	PPB	99
50) tert-Amyl Methyl Ether	6.20	55	318188	19.69	PPB	95
51) Trichloroethene	6.82	95	661022	20.34	PPB	99
52) Methylcyclohexane	6.93	83	910963	19.99	PPB	98
53) 1,2-Dichloropropane	7.13	63	624094	20.90	PPB	99
54) Dibromomethane	7.25	93	318431	20.36	PPB	96
55) Methyl methacrylate	7.28	69	255417	19.86	PPB	94
56) 1,4-Dioxane	7.27	88	65088	741.21	PPB	92
57) Bromodichloromethane	7.43	83	822195	20.63	PPB	98
58) 2-Nitropropane	7.77	41	484253	98.37	PPB	98
59) 2-Chloroethyl Vinyl Ether	7.80	63	271653	19.94	PPB	100
60) cis-1,3-Dichloropropene	7.92	75	948854	20.75	PPB	98
61) 4-Methyl-2-pentanone (MIBK	8.09	58	2276086	416.45	PPB	100
63) Toluene	8.19	92	1502913	20.16	PPB	99
65) n-Octane	8.27	85	309414	18.34	PPB	97
66) trans-1,3-Dichloropropene	8.53	75	780294	21.09	PPB	99
67) Ethyl methacrylate	8.58	69	506250	19.90	PPB	98
68) 1,1,2-Trichloroethane	8.70	83	376726	19.65	PPB	98
69) Tetrachloroethene	8.71	164	554344	19.55	PPB	99
70) 2-Hexanone	8.95	57	728266	425.02	PPB	97
71) 1,3-Dichloropropane	8.87	76	733679	19.88	PPB	100
72) Dibromochloromethane	9.05	129	573743	20.52	PPB	99
73) 1,2-Dibromoethane (EDB)	9.17	107	422707	19.80	PPB	98
74) 1-Chlorohexane	9.61	91	807285	18.77	PPB	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:06:19 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

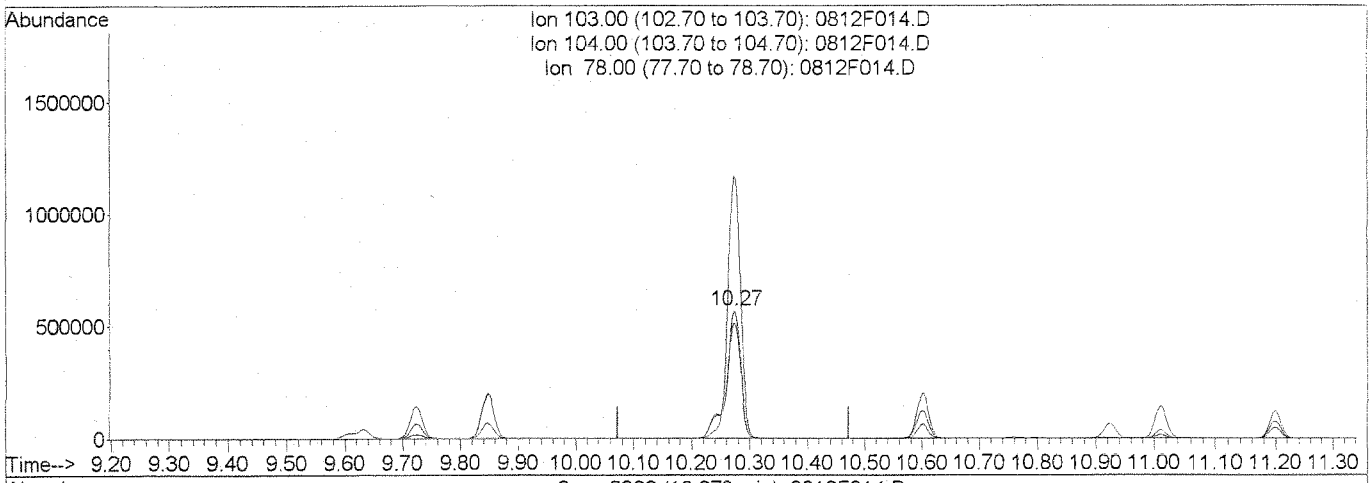
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Chlorobenzene	9.63	112	1704781	20.79	PPB	99
76)	Ethylbenzene	9.72	106	900779	20.21	PPB	96
77)	1,1,1,2-Tetrachloroethane	9.73	131	639306	19.96	PPB	98
78)	m,p-Xylenes	9.85	106	2195021	41.98	PPB	99
79)	o-Xylene	10.24	106	1067230	20.10	PPB	99
80)	Styrene	10.27	103	853681m	21.00	PPB	
81)	Bromoform	10.47	173	352701	20.66	PPB	98
82)	Isopropylbenzene	10.60	105	2777142	20.55	PPB	98
83)	cis-1,4-Dichloro-2-butene	10.76	89	242162	85.33	PPB	96
86)	1,1,2,2-Tetrachloroethane	10.99	83	424259	18.78	PPB	100
87)	trans-1,4-Dichloro-2-buten	11.06	53	116873	20.44	PPB	98
88)	Bromobenzene	10.93	156	715199	19.24	PPB	97
89)	n-Propylbenzene	11.01	91	3241490	19.44	PPB	100
90)	1,2,3-Trichloropropane	11.03	110	129307	17.45	PPB	98
91)	2-Chlorotoluene	11.11	91	1928047	19.18	PPB	99
92)	1,3,5-Trimethylbenzene	11.20	105	2295333	19.69	PPB	100
93)	4-Chlorotoluene	11.23	91	2009553m	19.22	PPB	
94)	tert-Butylbenzene	11.51	119	1995882	20.07	PPB	100
95)	1,2,4-Trimethylbenzene	11.57	105	2298001	20.00	PPB	100
96)	sec-Butylbenzene	11.73	105	2823896	19.35	PPB	100
97)	p-Isopropyltoluene	11.88	119	2371367	20.53	PPB	100
98)	1,3-Dichlorobenzene	11.86	146	1315934	20.28	PPB	98
99)	1,4-Dichlorobenzene	11.96	146	1290492	19.42	PPB	99
100)	n-Butylbenzene	12.28	91	2102272	23.01	PPB	98
101)	1,2-Dichlorobenzene	12.33	146	1177274	21.20	PPB	98
102)	1,2-Dibromo-3-chloropropan	13.14	155	62460	19.26	PPB	98
103)	1,3,5-Trichlorobenzene	13.28	180	976024	23.20	PPB	99
104)	1,2,4-Trichlorobenzene	13.92	180	711402	31.55	PPB	99
105)	Hexachlorobutadiene	14.05	225	397014	21.31	PPB	98
106)	Naphthalene	14.17	128	901742	33.12	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	577442	32.28	PPB	98

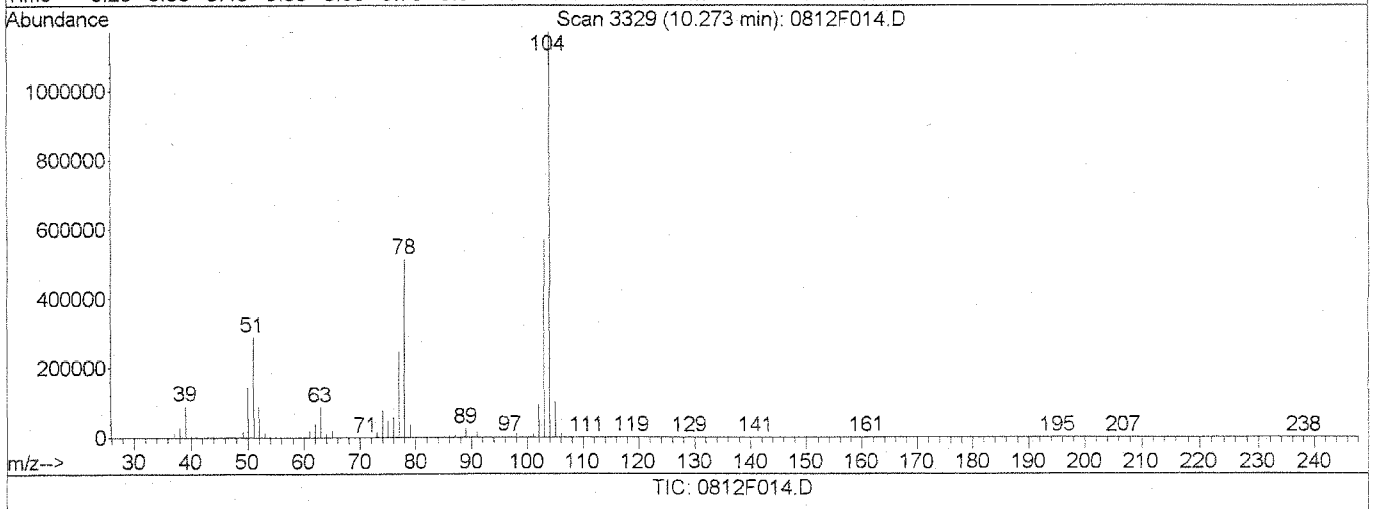
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:09 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Multiple Level Calibration





TIC: 0812F014.D

(80) Styrene (T)

10.27min 24.39PPB

response 991207

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	206.33
78.00	90.50	90.63
0.00	0.00	0.00

Manual Integration:

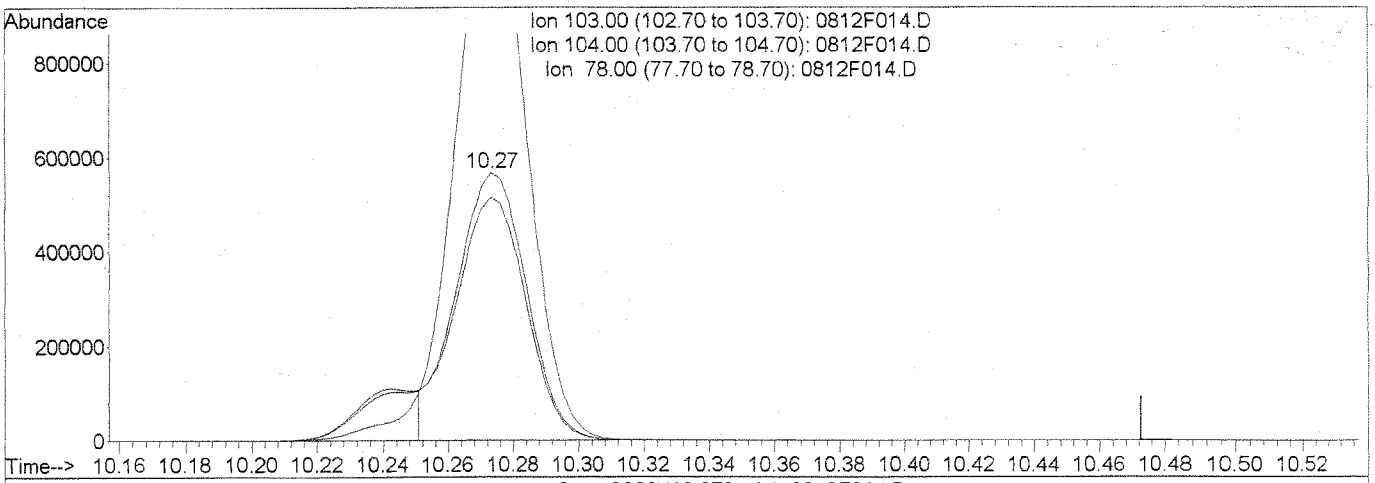
Before

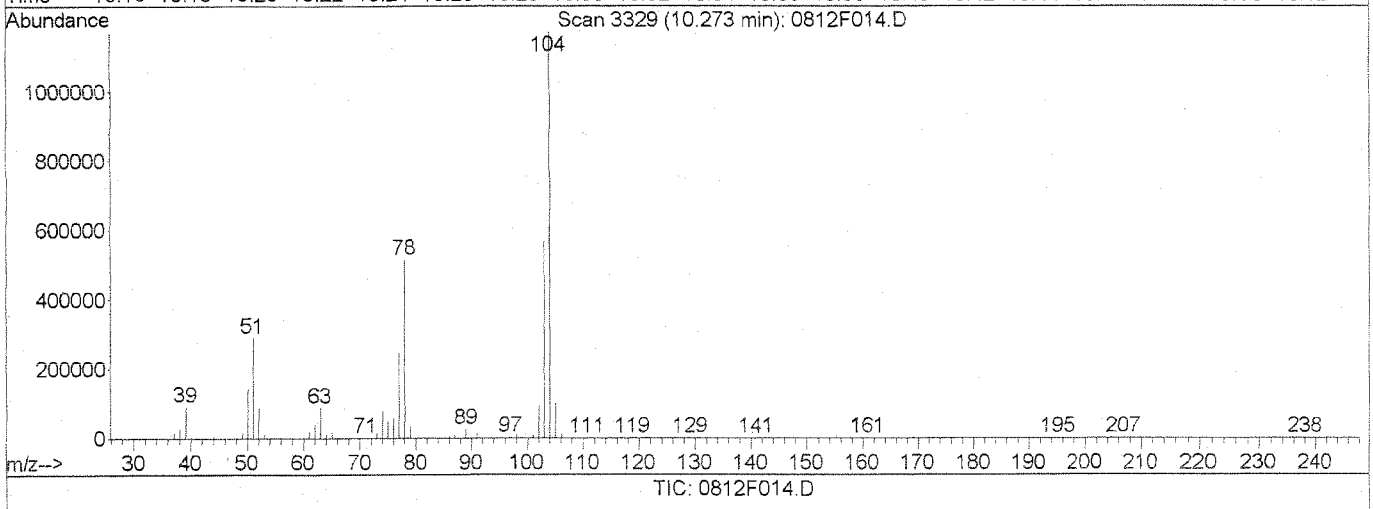
0812F014.D 081213MS27_8260.M Mon Aug 12 17:06:54 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:10 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Multiple Level Calibration





TIC: 0812F014.D

(80) Styrene (T)
10.27min 21.00PPB m
response 853681

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	206.38
78.00	90.50	90.70
0.00	0.00	0.00

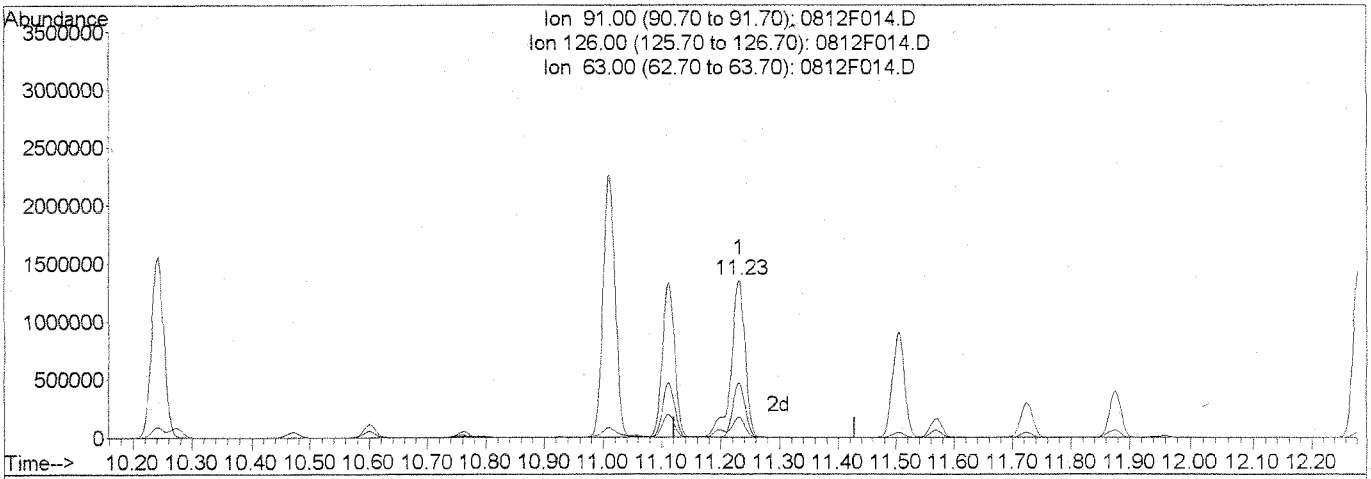
Manual Integration:
After
Baseline correction
08/12/13

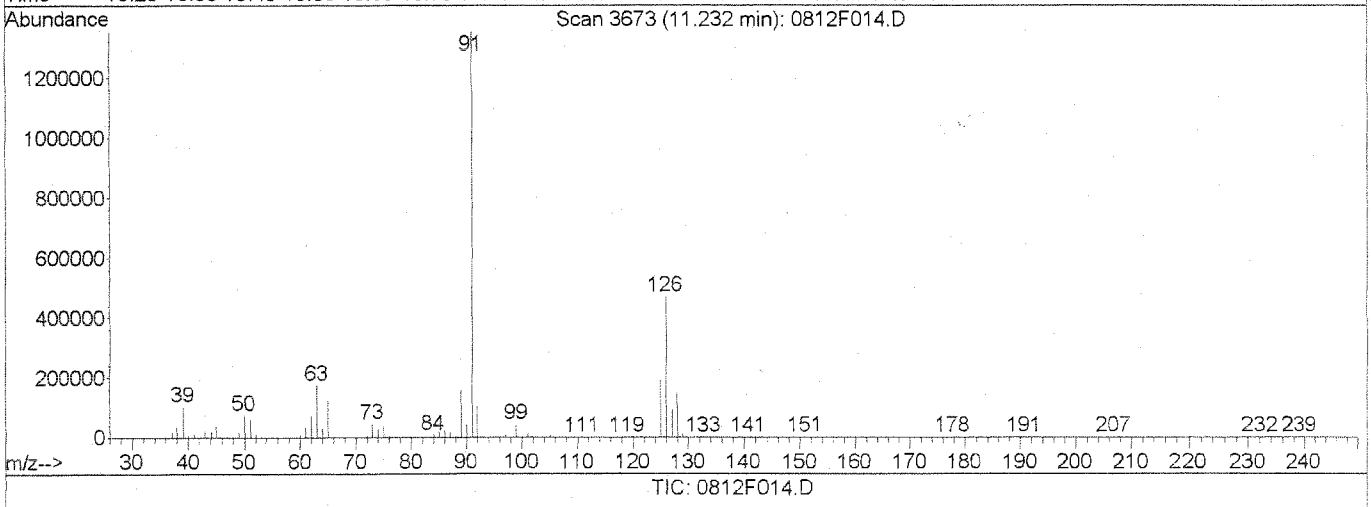
0812F014.D 081213MS27_8260.M Mon Aug 12 17:06:59 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:10 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Multiple Level Calibration





TIC: 0812F014.D

(93) 4-Chlorotoluene (T)

11.23min 21.29PPB

response 2226455

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.75
63.00	12.30	12.88
0.00	0.00	0.00

Manual Integration:

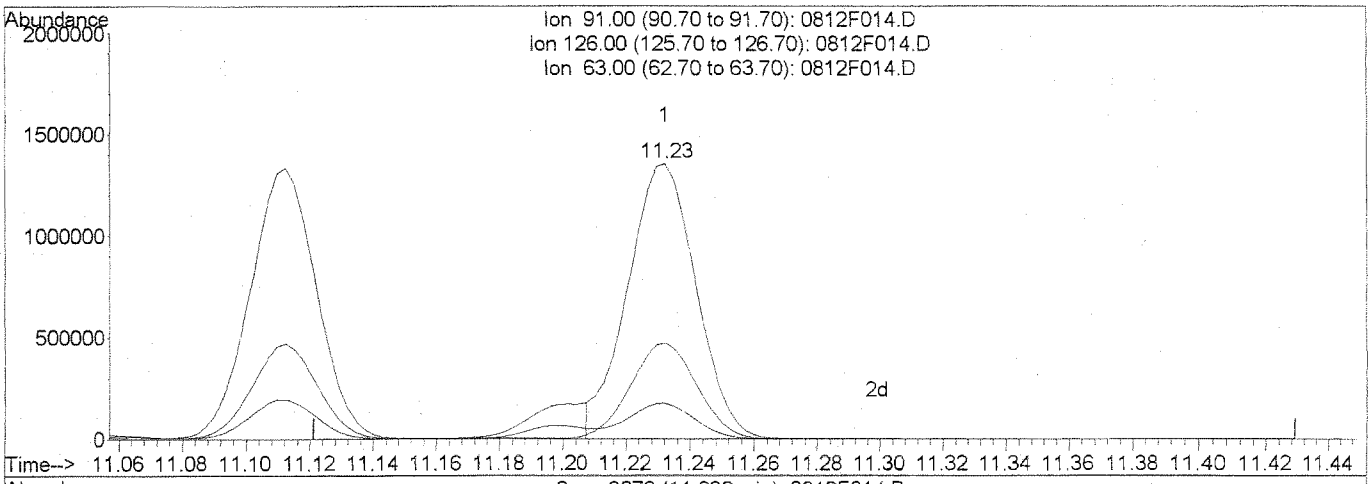
Before

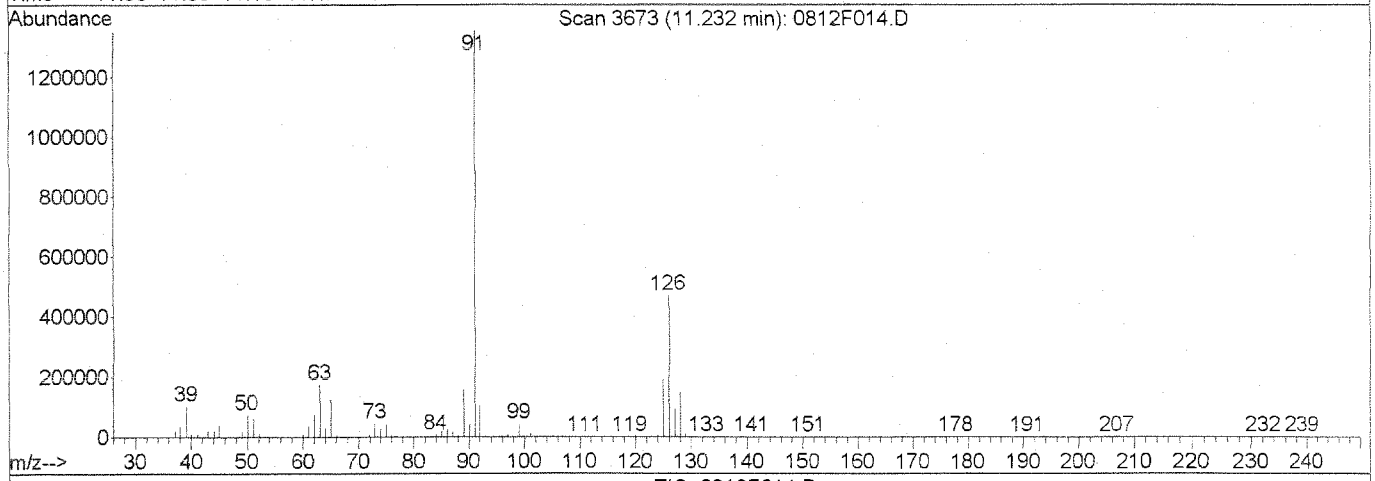
0812F014.D 081213MS27_8260.M Mon Aug 12 17:07:05 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:10 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Multiple Level Calibration





TIC: 0812F014.D

(93) 4-Chlorotoluene (T)

11.23min 19.22PPB m

response 2009553

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.74
63.00	12.30	12.88
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

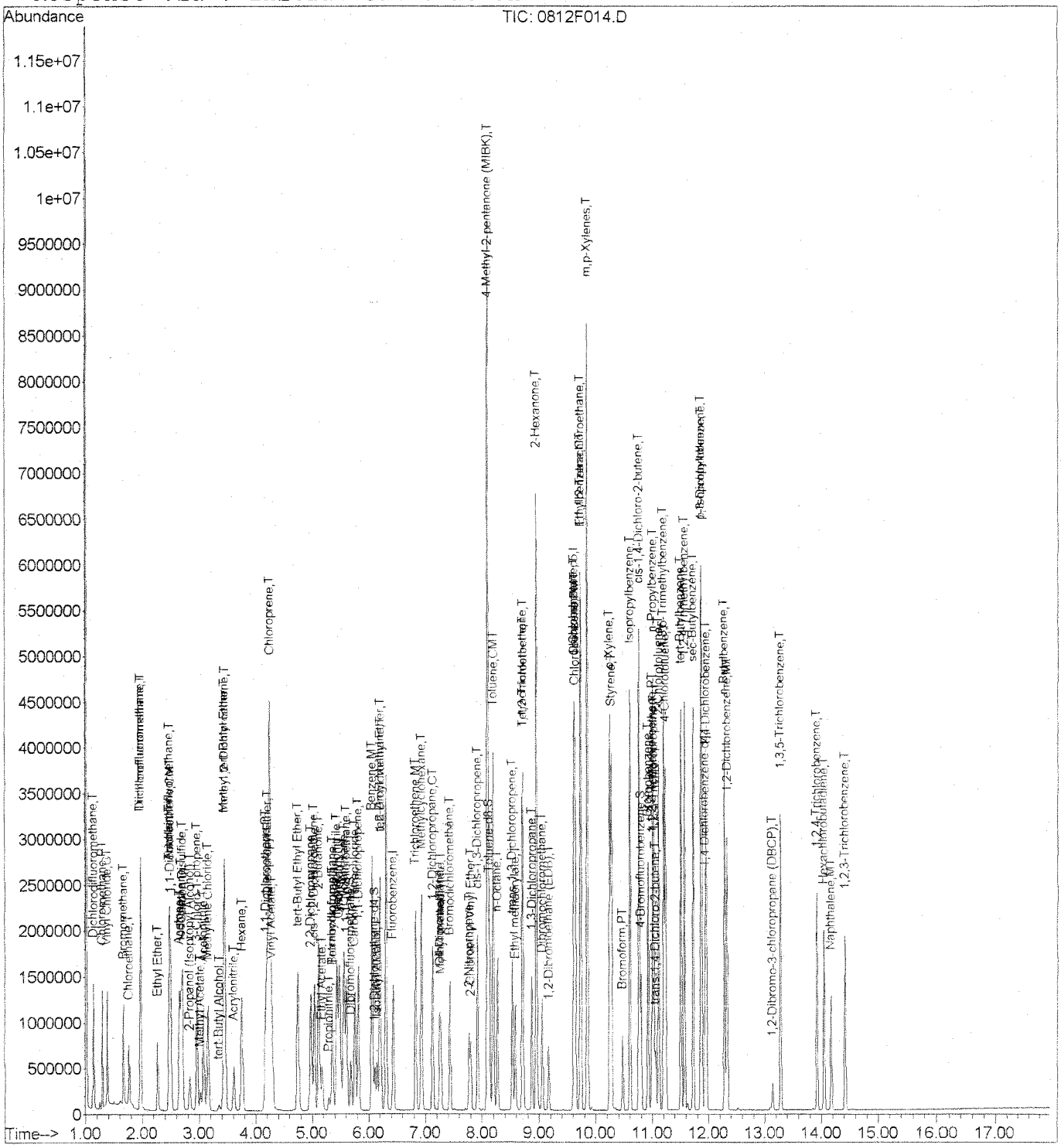
08/12/13

0812F014.D 081213MS27_8260.M Mon Aug 12 17:07:10 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F014.D Vial: 11
Acq On : 12 Aug 2013 4:43 pm Operator: KR
Sample : 8260 ICAL 20 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:10 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 16:42:45 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:31:55 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

KR 8/12/13

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1135839	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	456398	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	416809	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	308601	10.06	PPB	0.00
Spiked Amount 10.000			Recovery =	100.60%		
47) 1,2-Dichloroethane-d4	6.10	65	295044	10.01	PPB	0.00
Spiked Amount 10.000			Recovery =	100.10%		
62) Toluene-d8	8.12	98	1137611	10.23	PPB	0.00
Spiked Amount 10.000			Recovery =	102.30%		
84) 4-Bromofluorobenzene	10.80	95	418801	10.55	PPB	0.00
Spiked Amount 10.000			Recovery =	105.50%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	1325523	38.89	PPB	98
3) Chloromethane	1.29	50	1367441	35.93	PPB	99
4) Vinyl Chloride	1.38	62	1375820	39.24	PPB	100
6) Bromomethane	1.67	96	848018	37.37	PPB	97
7) Chloroethane	1.76	64	724588	36.66	PPB	100
8) Dichlorofluoromethane	1.97	67	2085956	40.79	PPB	99
9) Trichlorofluoromethane	1.96	101	2010095	42.98	PPB	98
10) Ethyl Ether	2.27	59	674530	40.34	PPB	98
11) Acrolein	2.48	56	1238658	765.98	PPB	97
12) Trichlorotrifluoroethane	2.47	151	891800	40.63	PPB	100
13) 1,1-Dichloroethene	2.50	96	867261	40.04	PPB	98
14) Acetone	2.65	43	3082629	872.14	PPB	99
15) Iodomethane	2.68	142	2493797	224.93	PPB	99
16) Carbon Disulfide	2.70	76	3322507	41.48	PPB	99
17) 2-Propanol (Isopropyl Alco	2.82	45	967272	2251.87	PPB	99
18) 3-Chloro-1-propene	2.96	76	622801	41.58	PPB	100
19) Methyl Acetate	3.02	43	483028	37.33	PPB	96
20) Acetonitrile	3.07	40	1296870	1576.58	PPB	100
21) Methylene Chloride	3.15	84	1079179	38.46	PPB	98
22) tert-Butyl Alcohol	3.35	59	170572	188.82	PPB	86
23) Acrylonitrile	3.61	53	859757	173.34	PPB	99
24) Methyl tert-Butyl Ether	3.43	73	4776164	82.99	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	1128323	39.35	PPB	97
26) Hexane	3.75	57	1428643	38.16	PPB	98
27) Diisopropyl Ether	4.20	45	3480043	42.27	PPB	99
28) 1,1-Dichloroethane	4.17	63	2100473	40.06	PPB	100
29) Vinyl Acetate	4.28	86	317767	84.57	PPB	# 91

(#) = qualifier out of range (m) = manual integration

8/13/13

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:31:55 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30) Chloroprene	4.24	53	6493529	165.25	PPB	100
31) tert-Butyl Ethyl Ether	4.74	59	3122090	42.23	PPB	98
32) 2,2-Dichloropropane	4.97	77	1746879	40.30	PPB	98
33) cis-1,2-Dichloroethene	5.03	96	1286515	39.90	PPB	99
34) 2-Butanone	5.11	72	1277726	908.17	PPB	99
35) Ethyl Acetate	5.17	61	165703	80.81	PPB	99
36) Propionitrile	5.30	54	290240	162.03	PPB	99
37) Methacrylonitrile	5.43	67	1095381	163.15	PPB	96
38) Bromochloromethane	5.35	128	585721	39.68	PPB	98
39) Tetrahydrofuran	5.36	71	61955	40.56	PPB	92
40) Chloroform	5.47	83	2180042	41.95	PPB	98
41) Cyclohexane	5.56	56	1701214	39.93	PPB	97
42) 1,1,1-Trichloroethane	5.60	97	1923669	40.23	PPB	99
44) Carbon Tetrachloride	5.75	117	1687183	43.11	PPB	98
45) 1,1-Dichloropropene	5.82	75	1473916	41.32	PPB	99
46) Isobutyl Alcohol	6.14	43	610458	1768.45	PPB	99
48) Benzene	6.05	78	4657175	39.54	PPB	100
49) 1,2-Dichloroethane	6.20	62	1438312	41.05	PPB	100
50) tert-Amyl Methyl Ether	6.20	55	610723	39.32	PPB	99
51) Trichloroethene	6.82	95	1285474	40.95	PPB	98
52) Methylcyclohexane	6.93	83	1785433	40.66	PPB	98
53) 1,2-Dichloropropane	7.12	63	1206081	41.66	PPB	100
54) Dibromomethane	7.25	93	621265	41.11	PPB	97
55) Methyl methacrylate	7.28	69	499321	40.33	PPB	97
56) 1,4-Dioxane	7.27	88	131449	1572.39	PPB	99
57) Bromodichloromethane	7.43	83	1600891	41.52	PPB	97
58) 2-Nitropropane	7.77	41	961870	203.20	PPB	96
59) 2-Chloroethyl Vinyl Ether	7.80	63	540562	41.19	PPB	99
60) cis-1,3-Dichloropropene	7.92	75	1853610	41.86	PPB	97
61) 4-Methyl-2-pentanone (MIBK	8.09	58	4741104	895.45	PPB	97
63) Toluene	8.19	92	2995372	41.64	PPB	99
65) n-Octane	8.27	85	612222	37.42	PPB	97
66) trans-1,3-Dichloropropene	8.53	75	1541637	42.18	PPB	99
67) Ethyl methacrylate	8.58	69	1004413	40.27	PPB	99
68) 1,1,2-Trichloroethane	8.70	83	738990	39.38	PPB	98
69) Tetrachloroethene	8.71	164	1104284	39.83	PPB	100
70) 2-Hexanone	8.95	57	1542579	910.30	PPB	100
71) 1,3-Dichloropropane	8.87	76	1453024	40.15	PPB	99
72) Dibromochloromethane	9.05	129	1147484	41.66	PPB	99
73) 1,2-Dibromoethane (EDB)	9.17	107	841116	40.21	PPB	97
74) 1-Chlorohexane	9.61	91	1575563	37.66	PPB	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:31:55 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

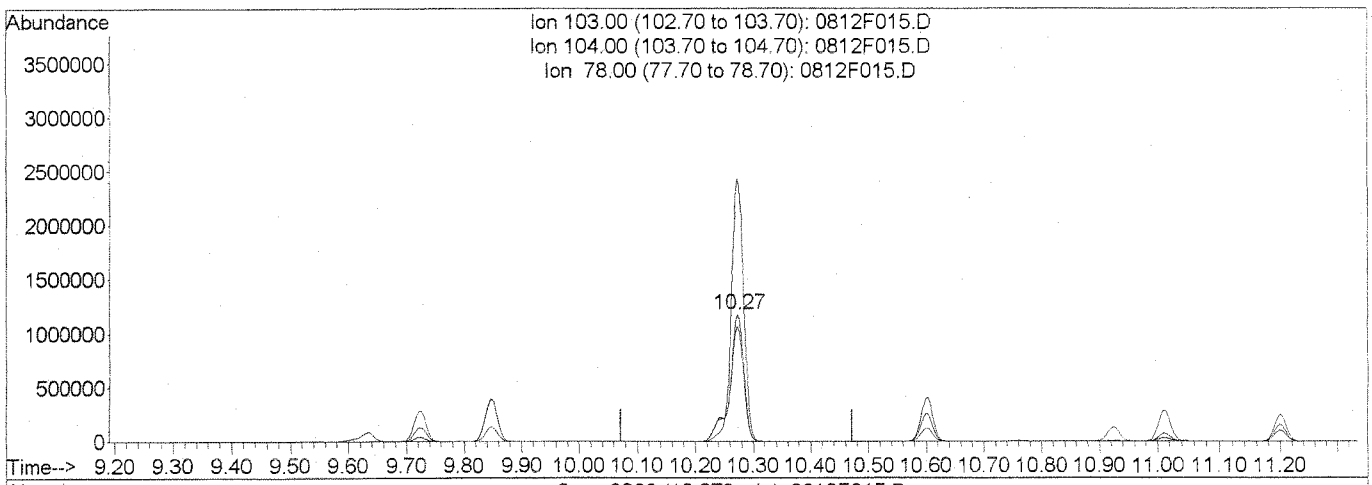
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Chlorobenzene	9.63	112	3388708	41.90	PPB	99
76)	Ethylbenzene	9.72	106	1782614	40.71	PPB	98
77)	1,1,1,2-Tetrachloroethane	9.73	131	1266097	40.29	PPB	98
78)	m,p-Xylenes	9.85	106	4419626	85.61	PPB	99
79)	o-Xylene	10.24	106	2122025	40.71	PPB	100
80)	Styrene	10.27	103	1728274m	43.02	PPB	
81)	Bromoform	10.47	173	713304	42.35	PPB	99
82)	Isopropylbenzene	10.60	105	5550371	41.69	PPB	99
83)	cis-1,4-Dichloro-2-butene	10.76	89	479633	170.34	PPB	99
86)	1,1,2,2-Tetrachloroethane	10.99	83	854028	37.18	PPB	99
87)	trans-1,4-Dichloro-2-buten	11.06	53	230998	39.21	PPB	96
88)	Bromobenzene	10.93	156	1437364	37.87	PPB	99
89)	n-Propylbenzene	11.01	91	6531401	38.31	PPB	100
90)	1,2,3-Trichloropropane	11.03	110	252817	33.98	PPB	98
91)	2-Chlorotoluene	11.11	91	3871163	37.73	PPB	99
92)	1,3,5-Trimethylbenzene	11.20	105	4616884	38.69	PPB	99
93)	4-Chlorotoluene	11.23	91	4063114m	38.07	PPB	
94)	tert-Butylbenzene	11.51	119	3943726	38.65	PPB	99
95)	1,2,4-Trimethylbenzene	11.57	105	4661096	39.54	PPB	100
96)	sec-Butylbenzene	11.73	105	5749484	38.62	PPB	99
97)	p-Isopropyltoluene	11.88	119	4816519	40.47	PPB	99
98)	1,3-Dichlorobenzene	11.86	146	2673564	40.10	PPB	99
99)	1,4-Dichlorobenzene	11.96	146	2634118	38.78	PPB	98
100)	n-Butylbenzene	12.28	91	4284401	44.60	PPB	99
101)	1,2-Dichlorobenzene	12.33	146	2362435	41.16	PPB	99
102)	1,2-Dibromo-3-chloropropan	13.14	155	126826	38.35	PPB	92
103)	1,3,5-Trichlorobenzene	13.28	180	2037102	45.97	PPB	97
104)	1,2,4-Trichlorobenzene	13.92	180	1520446	58.93	PPB	99
105)	Hexachlorobutadiene	14.05	225	804289	41.62	PPB	98
106)	Naphthalene	14.17	128	2061474	65.25	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	1260336	61.16	PPB	97

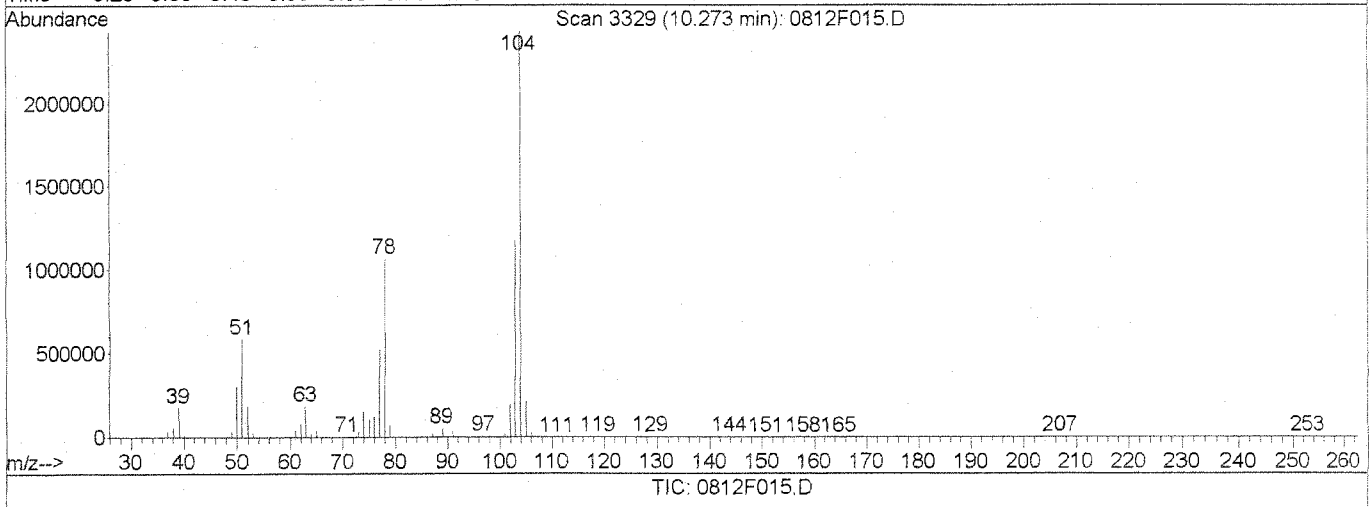
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:35 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Multiple Level Calibration





TIC: 0812F015.D

(80) Styrene (T)

10.27min 49.75PPB

response 1998437

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	207.49
78.00	90.50	90.96
0.00	0.00	0.00

Manual Integration:

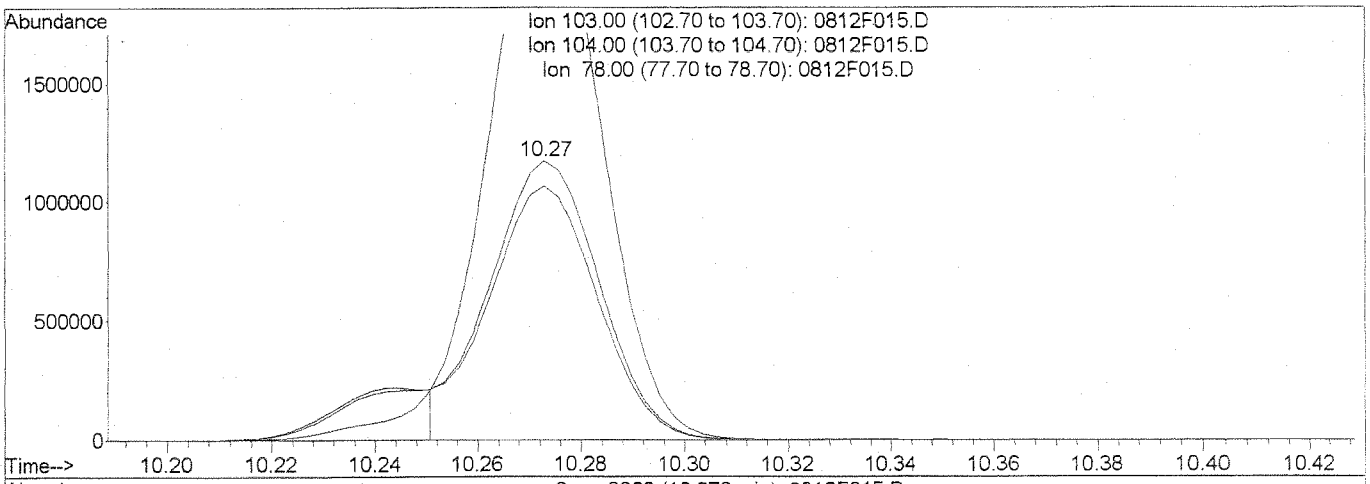
Before

0812F015.D 081213MS27_8260.M Mon Aug 12 17:32:29 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:35 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Multiple Level Calibration



TIC: 0812F015.D

(80) Styrene (T)

10.27min 43.02PPB m

response 1728274

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	207.51
78.00	90.50	90.96
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

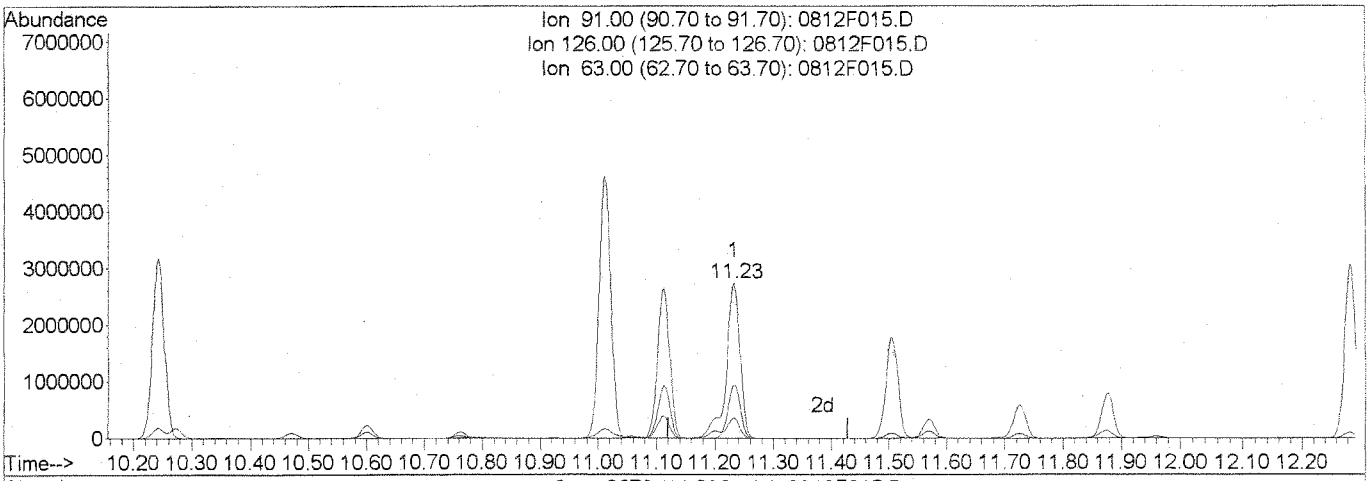
08/12/13

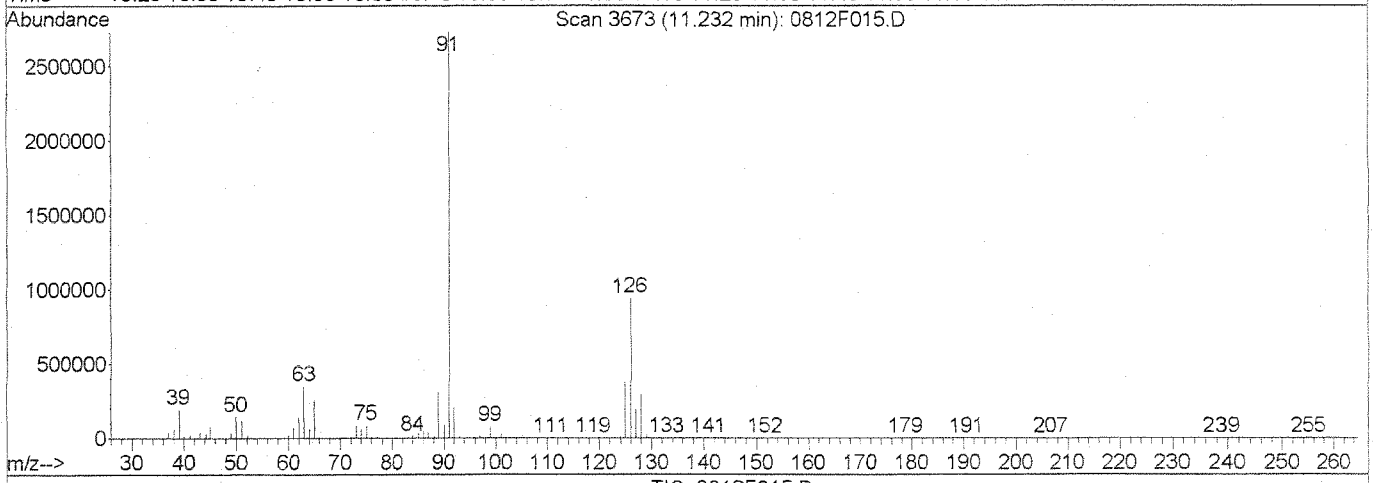
0812F015.D 081213MS27_8260.M Mon Aug 12 17:32:34 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:35 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Multiple Level Calibration





TIC: 0812F015.D

(93) 4-Chlorotoluene (T)

11.23min 42.17PPB

response 4501490

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.49
63.00	12.30	12.88
0.00	0.00	0.00

Manual Integration:

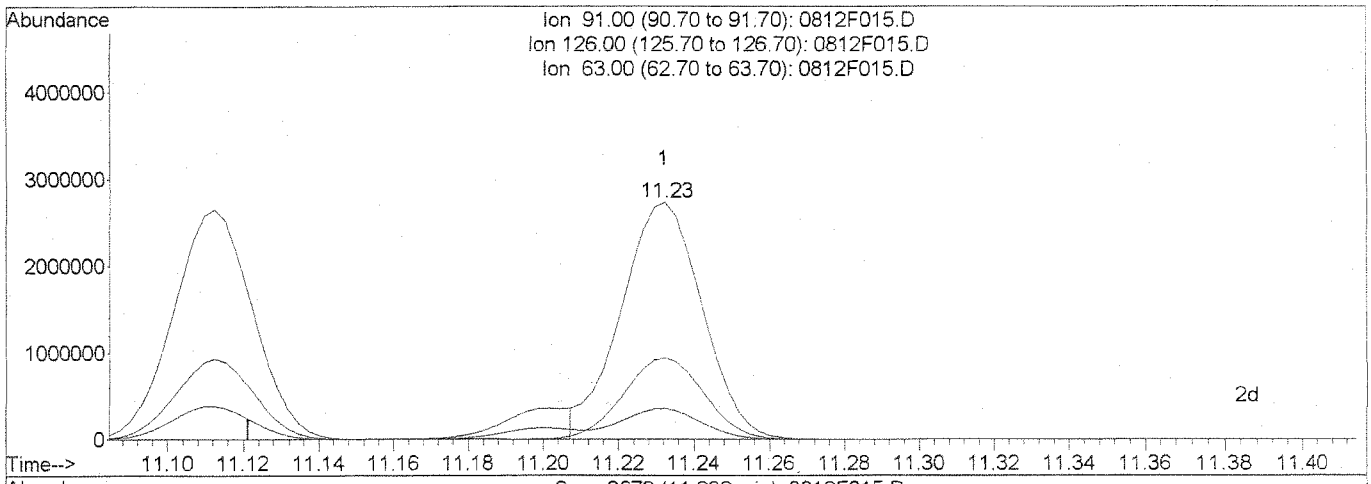
Before

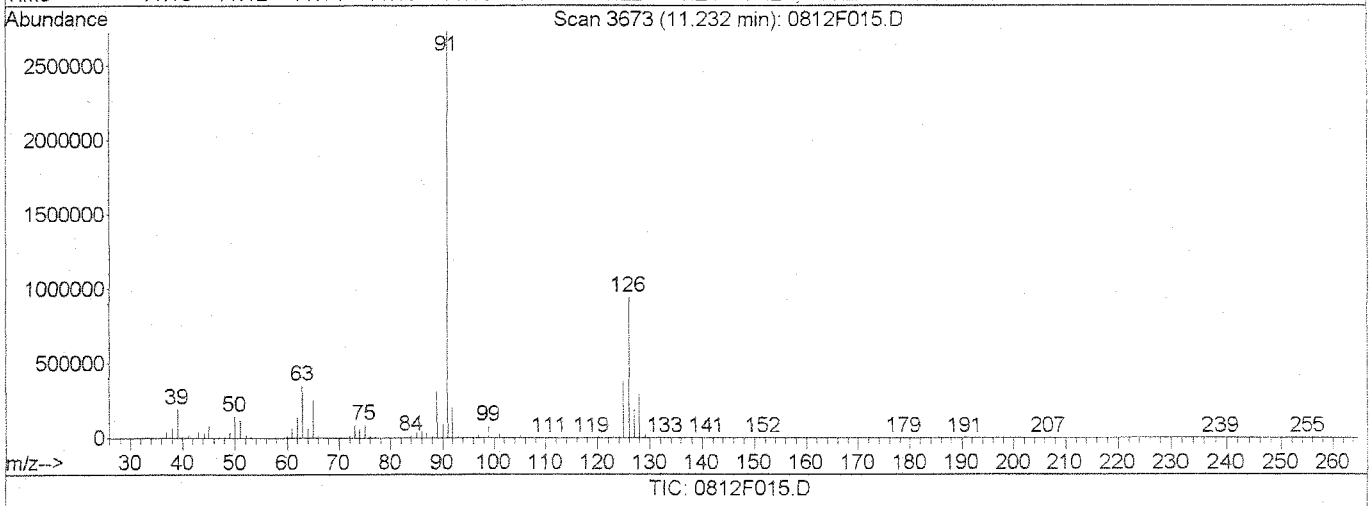
0812F015.D 081213MS27_8260.M Mon Aug 12 17:32:41 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:35 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Multiple Level Calibration





TIC: 0812F015.D

(93) 4-Chlorotoluene (T)

11.23min 38.07PPB m

response 4063114

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.48
63.00	12.30	12.88
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

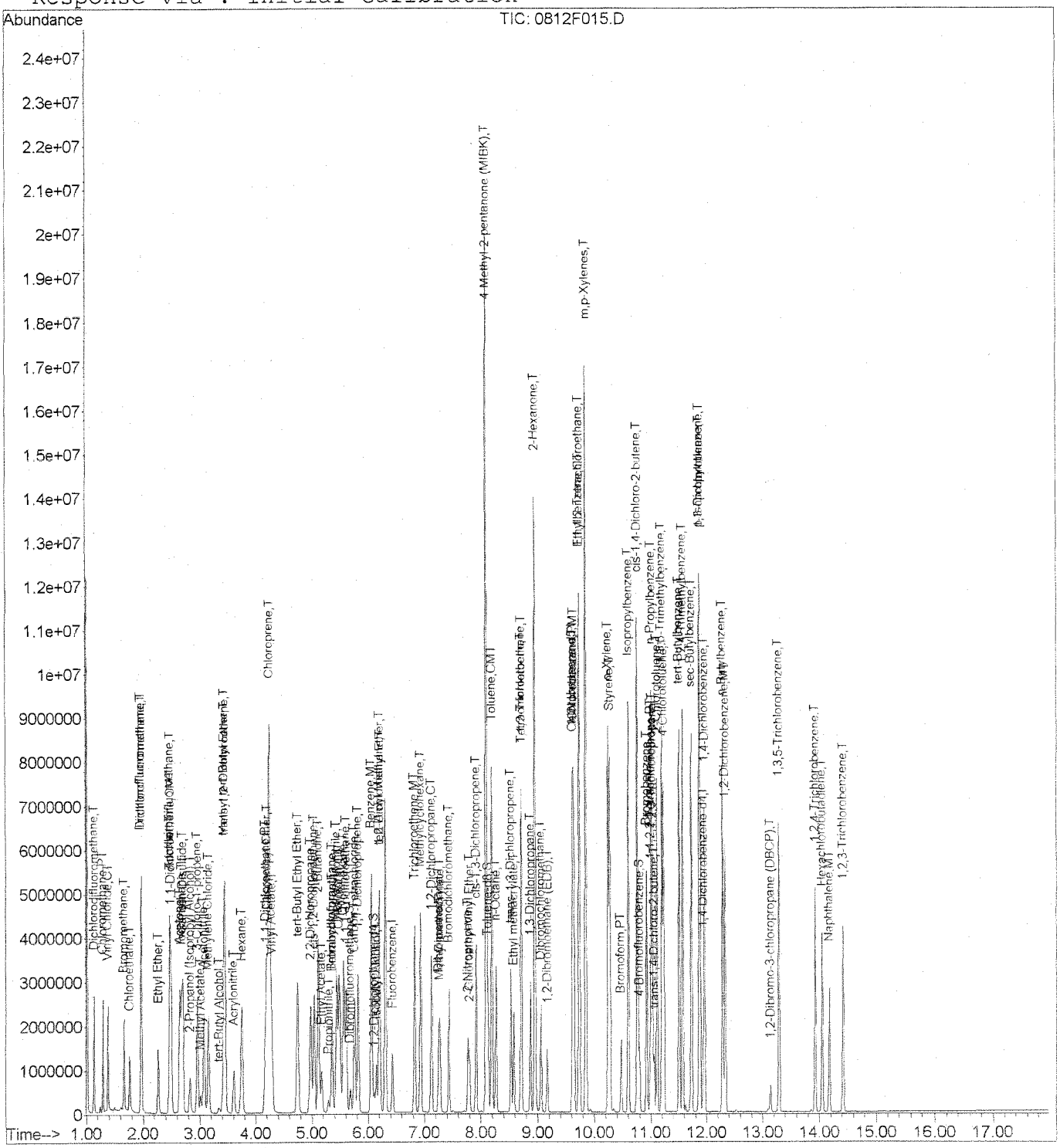
08/12/13

0812F015.D 081213MS27_8260.M Mon Aug 12 17:32:45 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F015.D Vial: 12
Acq On : 12 Aug 2013 5:10 pm Operator: KR
Sample : 8260 ICAL 40 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 17:35 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:07:25 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:25:47 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1170985	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	479551	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	424777	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	310277	9.80	PPB	0.00
Spiked Amount 10.000			Recovery =	98.00%		
47) 1,2-Dichloroethane-d4	6.10	65	298589	9.83	PPB	0.00
Spiked Amount 10.000			Recovery =	98.30%		
62) Toluene-d8	8.12	98	1181916	10.28	PPB	0.00
Spiked Amount 10.000			Recovery =	102.80%		
84) 4-Bromofluorobenzene	10.79	95	437381	10.42	PPB	0.00
Spiked Amount 10.000			Recovery =	104.20%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	2027175	57.89	PPB	97
3) Chloromethane	1.29	50	2151476	55.46	PPB	100
4) Vinyl Chloride	1.38	62	2107684	58.44	PPB	100
6) Bromomethane	1.66	96	1301414	56.09	PPB	97
7) Chloroethane	1.76	64	1125247	55.81	PPB	99
8) Dichlorofluoromethane	1.97	67	3241511	61.34	PPB	99
9) Trichlorofluoromethane	1.96	101	3039366	62.51	PPB	100
10) Ethyl Ether	2.27	59	1040041	60.28	PPB	97
11) Acrolein	2.47	56	1888719	1138.98	PPB	98
12) Trichlorotrifluoroethane	2.47	151	1347508	59.44	PPB	98
13) 1,1-Dichloroethene	2.50	96	1320226	59.12	PPB	98
14) Acetone	2.64	43	6185150	1680.56	PPB	100
15) Iodomethane	2.68	142	4093862	338.54	PPB	100
16) Carbon Disulfide	2.70	76	5121195	61.76	PPB	99
17) 2-Propanol (Isopropyl Alco	2.82	45	1726028	3837.29	PPB	99
18) 3-Chloro-1-propene	2.96	76	946977	61.03	PPB	96
19) Methyl Acetate	3.01	43	757443	57.33	PPB	96
20) Acetonitrile	3.07	40	2118706	2503.60	PPB	99
21) Methylene Chloride	3.15	84	1662438	57.78	PPB	99
22) tert-Butyl Alcohol	3.35	59	295102	319.85	PPB	87
23) Acrylonitrile	3.61	53	1322759	256.02	PPB	99
24) Methyl tert-Butyl Ether	3.43	73	7417029	124.50	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	1736737	58.88	PPB	97
26) Hexane	3.75	57	2187171	56.99	PPB	98
27) Diisopropyl Ether	4.20	45	5375394	62.94	PPB	99
28) 1,1-Dichloroethane	4.17	63	3233235	59.80	PPB	99
29) Vinyl Acetate	4.28	86	486750	124.64	PPB #	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:25:47 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30) Chloroprene	4.24	53	10007462	246.02	PPB		100
31) tert-Butyl Ethyl Ether	4.74	59	4850961	63.25	PPB		98
32) 2,2-Dichloropropane	4.97	77	2674031	59.79	PPB		98
33) cis-1,2-Dichloroethene	5.03	96	2006133	60.36	PPB		98
34) 2-Butanone	5.11	72	2549040	1731.39	PPB		100
35) Ethyl Acetate	5.17	61	269212	127.14	PPB		98
36) Propionitrile	5.29	54	468645	253.24	PPB		98
37) Methacrylonitrile	5.43	67	1695471	244.26	PPB		98
38) Bromochloromethane	5.35	128	907692	59.71	PPB		97
39) Tetrahydrofuran	5.36	71	96739	61.26	PPB		94
40) Chloroform	5.47	83	3345329	62.11	PPB		99
41) Cyclohexane	5.56	56	2614725	59.54	PPB		98
42) 1,1,1-Trichloroethane	5.60	97	2947819	59.75	PPB		99
44) Carbon Tetrachloride	5.75	117	2593245	63.57	PPB		99
45) 1,1-Dichloropropene	5.82	75	2251013	60.99	PPB		99
46) Isobutyl Alcohol	6.14	43	1077712	2983.47	PPB		98
48) Benzene	6.05	78	7202187	59.39	PPB		100
49) 1,2-Dichloroethane	6.19	62	2222863	61.36	PPB		100
50) tert-Amyl Methyl Ether	6.20	55	949876	59.46	PPB		97
51) Trichloroethene	6.82	95	1994343	61.44	PPB		98
52) Methylcyclohexane	6.93	83	2754370	60.70	PPB		99
53) 1,2-Dichloropropane	7.12	63	1881488	62.76	PPB		99
54) Dibromomethane	7.25	93	970036	62.05	PPB		96
55) Methyl methacrylate	7.28	69	780228	61.06	PPB		96
56) 1,4-Dioxane	7.27	88	243443	2831.64	PPB		98
57) Bromodichloromethane	7.43	83	2493698	62.47	PPB		98
58) 2-Nitropropane	7.77	41	1520221	310.89	PPB		96
59) 2-Chloroethyl Vinyl Ether	7.80	63	845020	62.22	PPB		99
60) cis-1,3-Dichloropropene	7.92	75	2911058	63.44	PPB		97
61) 4-Methyl-2-pentanone (MIBK	8.09	58	9557105	1727.96	PPB	#	45
63) Toluene	8.19	92	4708088	63.20	PPB		100
65) n-Octane	8.27	85	945046	55.41	PPB		99
66) trans-1,3-Dichloropropene	8.53	75	2446428	63.32	PPB		99
67) Ethyl methacrylate	8.58	69	1604713	61.17	PPB		99
68) 1,1,2-Trichloroethane	8.70	83	1156384	58.76	PPB		98
69) Tetrachloroethene	8.71	164	1721548	59.13	PPB		99
70) 2-Hexanone	8.95	57	3137622	1735.57	PPB	#	54
71) 1,3-Dichloropropane	8.87	76	2287496m	60.13	PPB		
72) Dibromochloromethane	9.05	129	1802899	61.97	PPB		99
73) 1,2-Dibromoethane (EDB)	9.17	107	1336649	60.78	PPB		100
74) 1-Chlorohexane	9.61	91	2499950	57.29	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:25:47 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

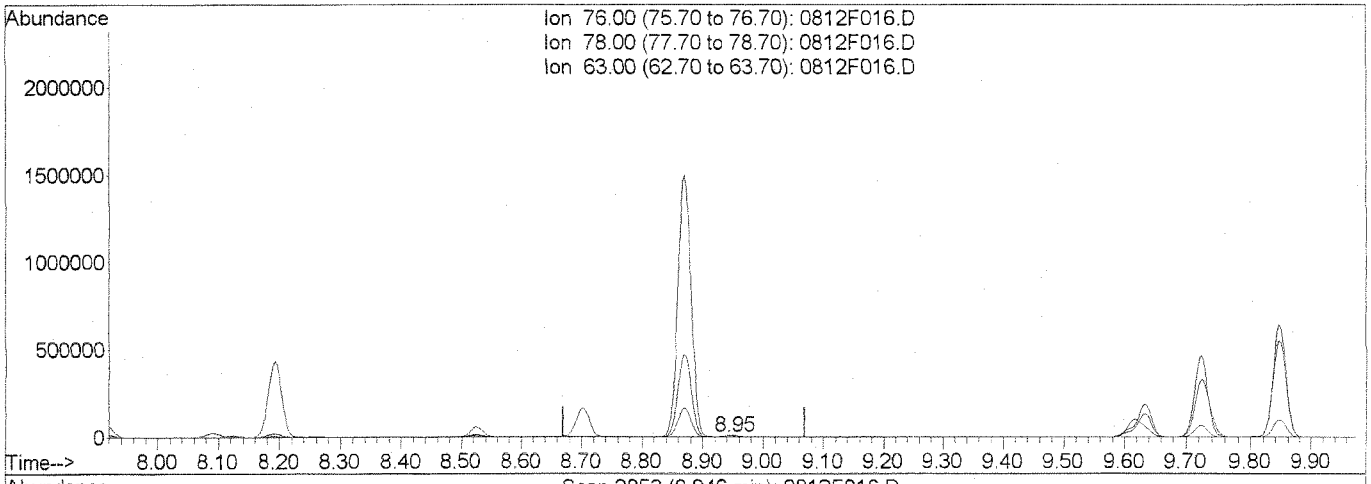
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	Chlorobenzene	9.63	112	5333002	62.43	PPB	99
76)	Ethylbenzene	9.72	106	2856574	61.96	PPB	99
77)	1,1,1,2-Tetrachloroethane	9.73	131	1993590	60.32	PPB	98
78)	m,p-Xylenes	9.85	106	6990027	127.87	PPB	87
79)	o-Xylene	10.24	106	3368652	61.38	PPB	98
80)	Styrene	10.27	103	2704499m	63.47	PPB	
81)	Bromoform	10.47	173	1124304	63.00	PPB	97
82)	Isopropylbenzene	10.60	105	8664759	61.61	PPB	98
83)	cis-1,4-Dichloro-2-butene	10.76	89	776398	260.02	PPB	99
86)	1,1,2,2-Tetrachloroethane	10.99	83	1321771	56.97	PPB	100
87)	trans-1,4-Dichloro-2-buten	11.06	53	360477	60.24	PPB	99
88)	Bromobenzene	10.93	156	2265982	58.93	PPB	100
89)	n-Propylbenzene	11.01	91	10173344	58.83	PPB	100
90)	1,2,3-Trichloropropane	11.03	110	395760	53.34	PPB	97
91)	2-Chlorotoluene	11.11	91	6064417	58.37	PPB	99
92)	1,3,5-Trimethylbenzene	11.20	105	7170436	59.18	PPB	100
93)	4-Chlorotoluene	11.23	91	6429193m	59.42	PPB	
94)	tert-Butylbenzene	11.51	119	6148841	59.35	PPB	99
95)	1,2,4-Trimethylbenzene	11.57	105	7262063	60.53	PPB	99
96)	sec-Butylbenzene	11.73	105	8908723	59.01	PPB	100
97)	p-Isopropyltoluene	11.88	119	7527476	61.96	PPB	99
98)	1,3-Dichlorobenzene	11.86	146	4193135	61.69	PPB	98
99)	1,4-Dichlorobenzene	11.96	146	4097553	59.40	PPB	98
100)	n-Butylbenzene	12.28	91	6689773	67.23	PPB	98
101)	1,2-Dichlorobenzene	12.33	146	3696465	63.00	PPB	98
102)	1,2-Dibromo-3-chloropropan	13.14	155	203601	60.77	PPB	92
103)	1,3,5-Trichlorobenzene	13.28	180	3165312	68.63	PPB	98
104)	1,2,4-Trichlorobenzene	13.92	180	2429559	85.64	PPB	98
105)	Hexachlorobutadiene	14.05	225	1244753	62.85	PPB	97
106)	Naphthalene	14.17	128	3436116	96.57	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	2039588	89.25	PPB	97

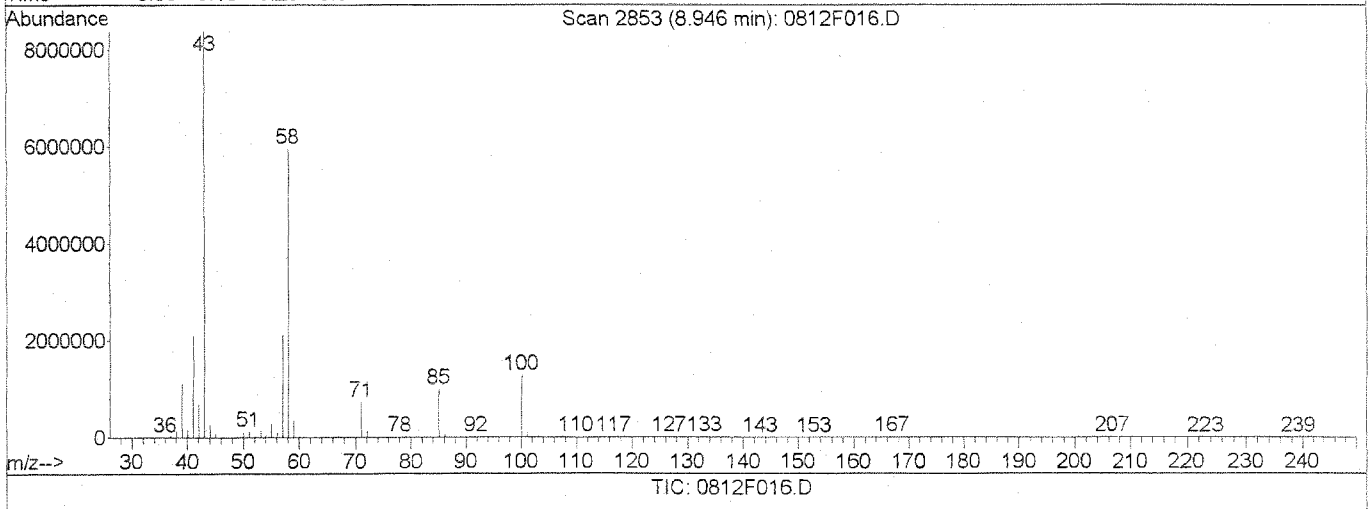
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:28 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(71) 1,3-Dichloropropane (T)

8.95min 0.02PPB

response 896

Ion	Exp%	Act%
76.00	100	100
78.00	32.30	101.75#
63.00	11.50	1375.93#
0.00	0.00	0.00

Manual Integration:

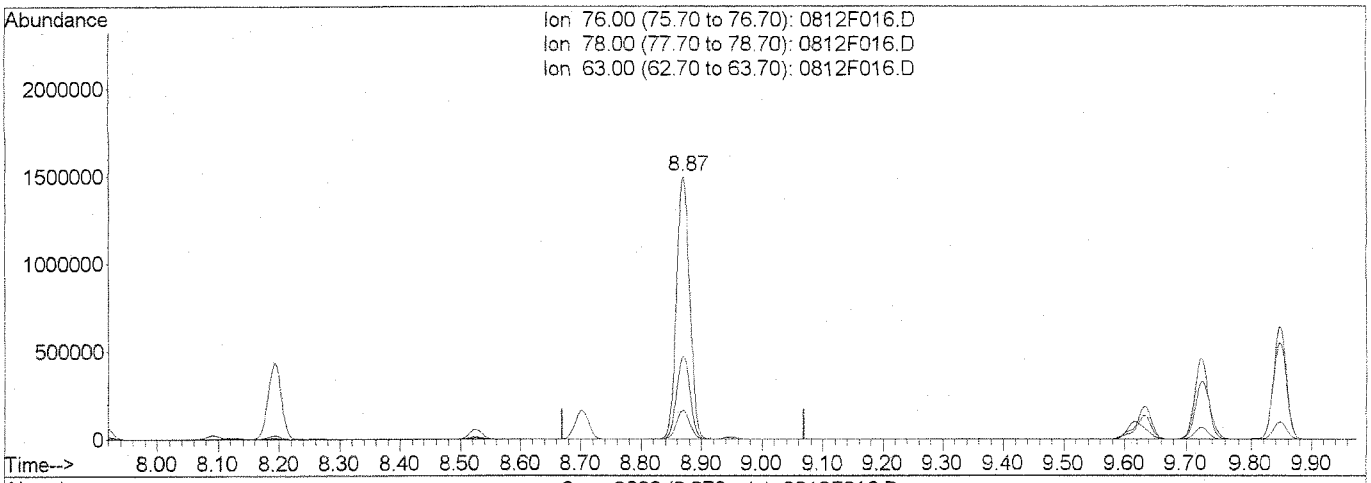
Before

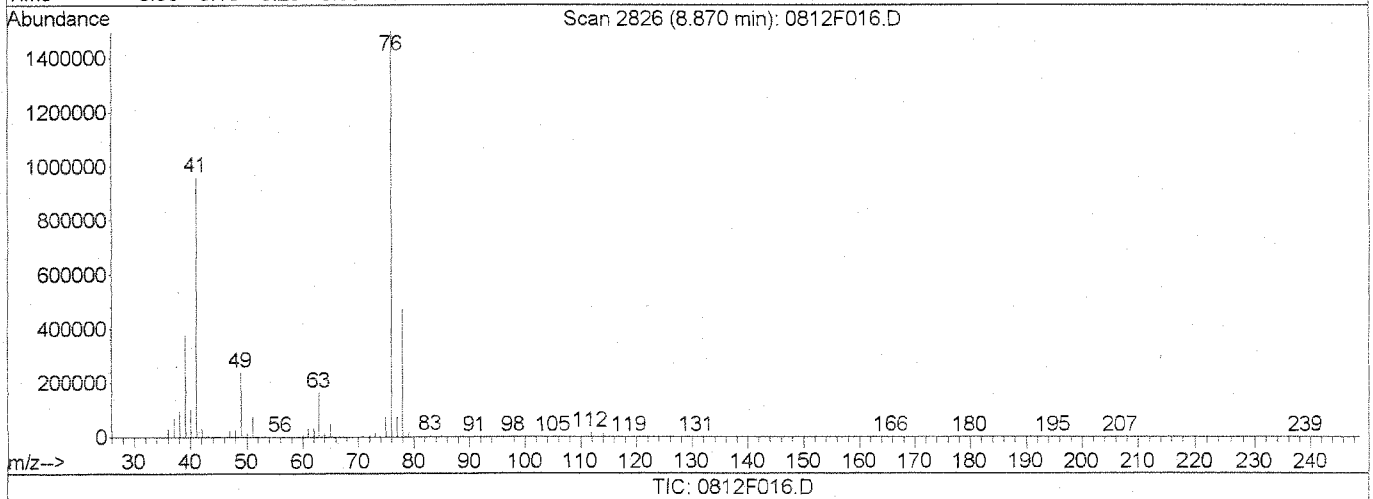
0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:30 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(71) 1,3-Dichloropropane (T)

8.87min 60.13PPB m

response 2287496

Ion	Exp%	Act%
76.00	100	100
78.00	32.30	31.42
63.00	11.50	10.98
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

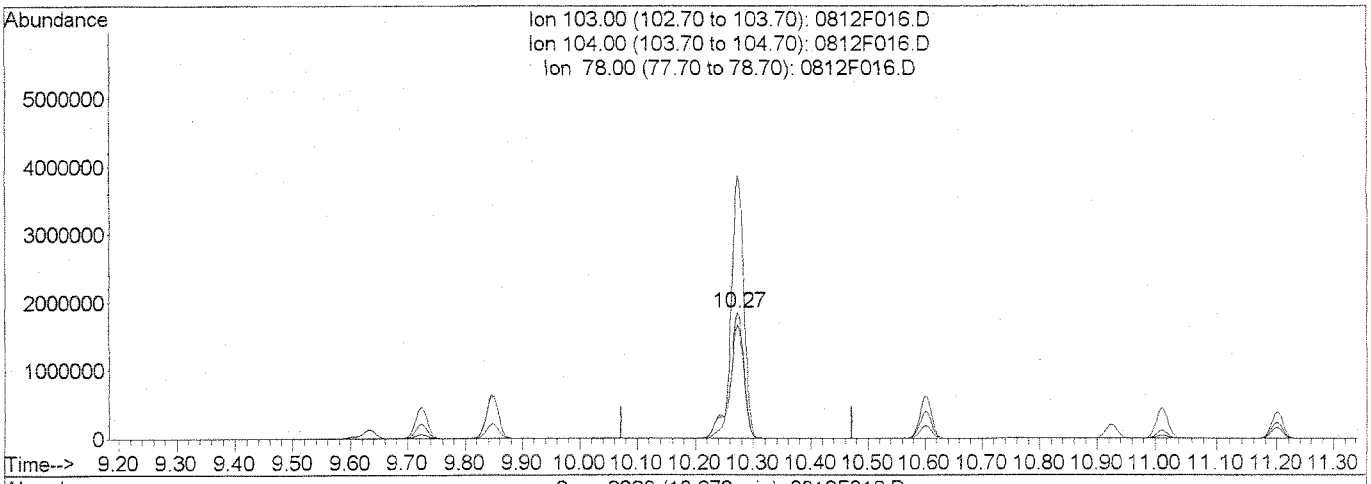
08/12/13

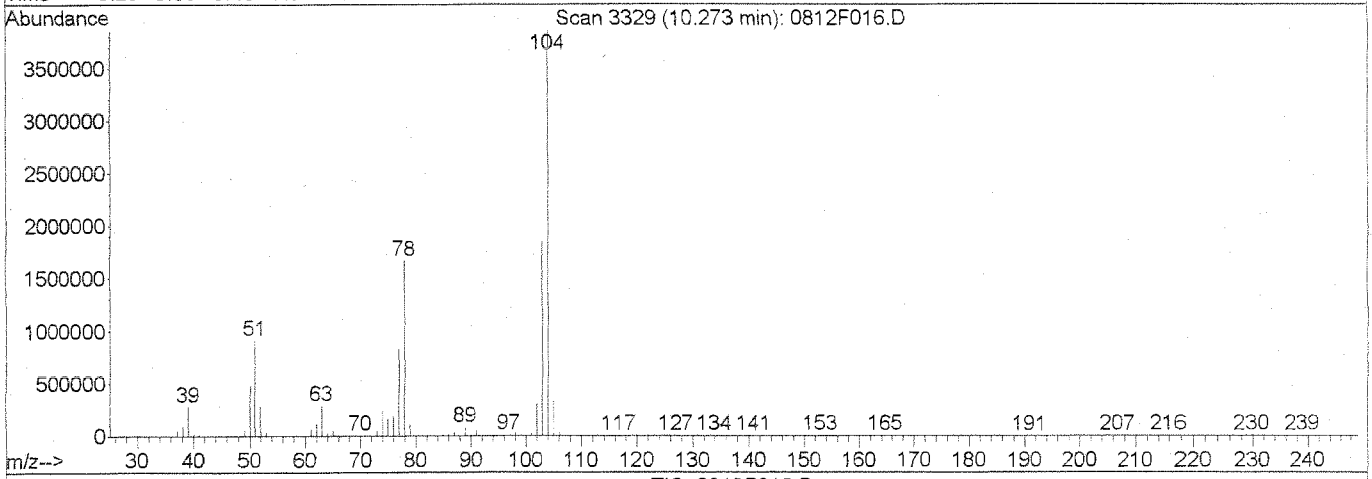
0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:34 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(80) Styrene (T)

10.27min 73.38PPB

response 3126499

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	209.04
78.00	90.50	90.31
0.00	0.00	0.00

Manual Integration:

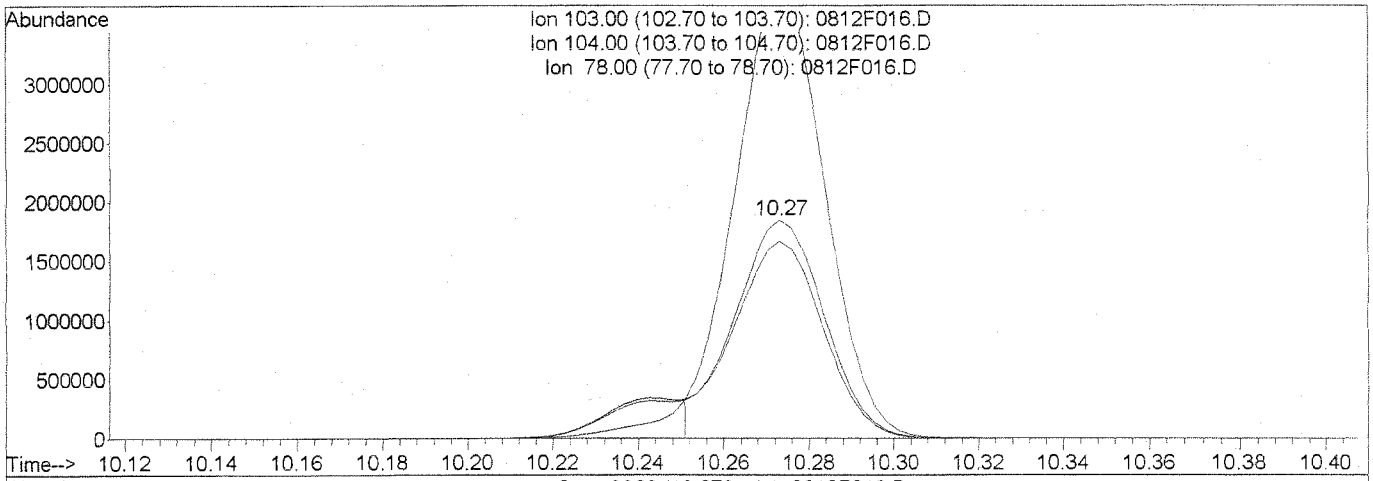
Before

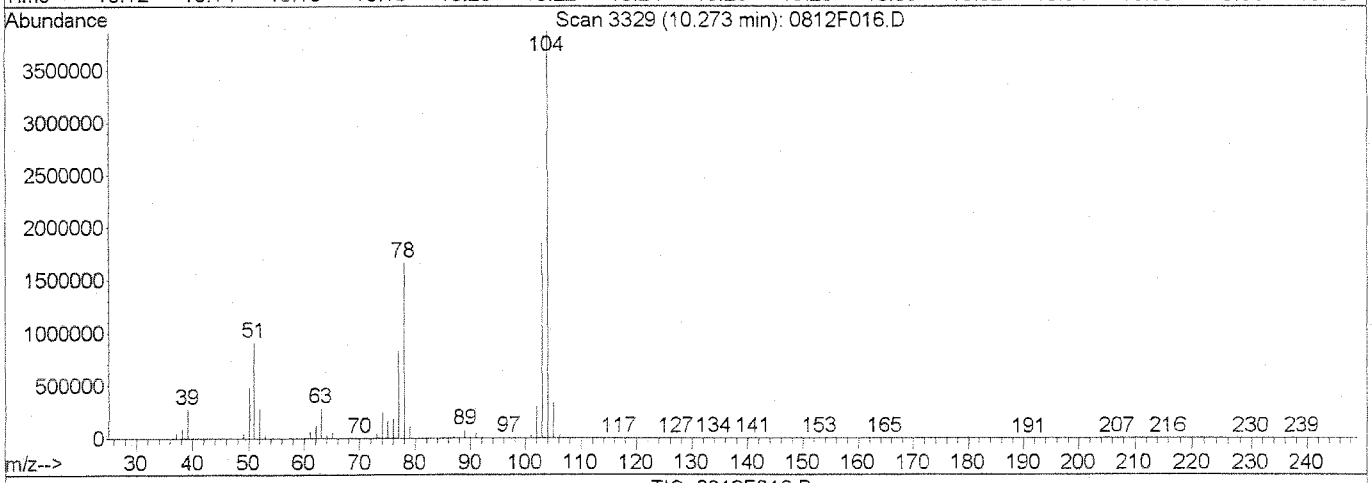
0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:41 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(80) Styrene (T)

10.27min 63.47PPB m

response 2704499

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	209.07
78.00	90.50	90.32
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

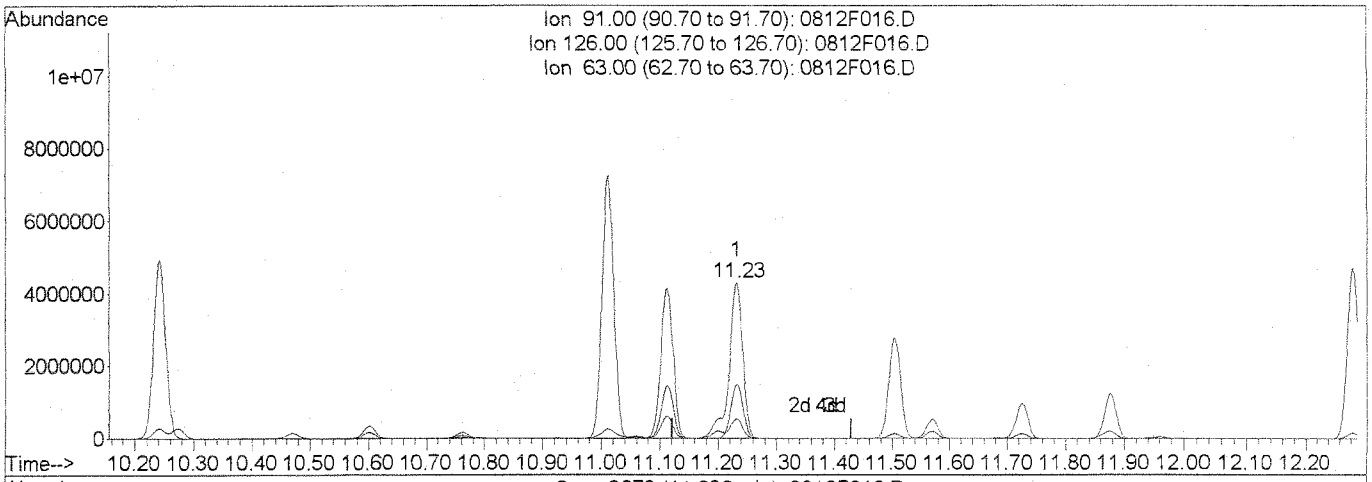
08/12/13

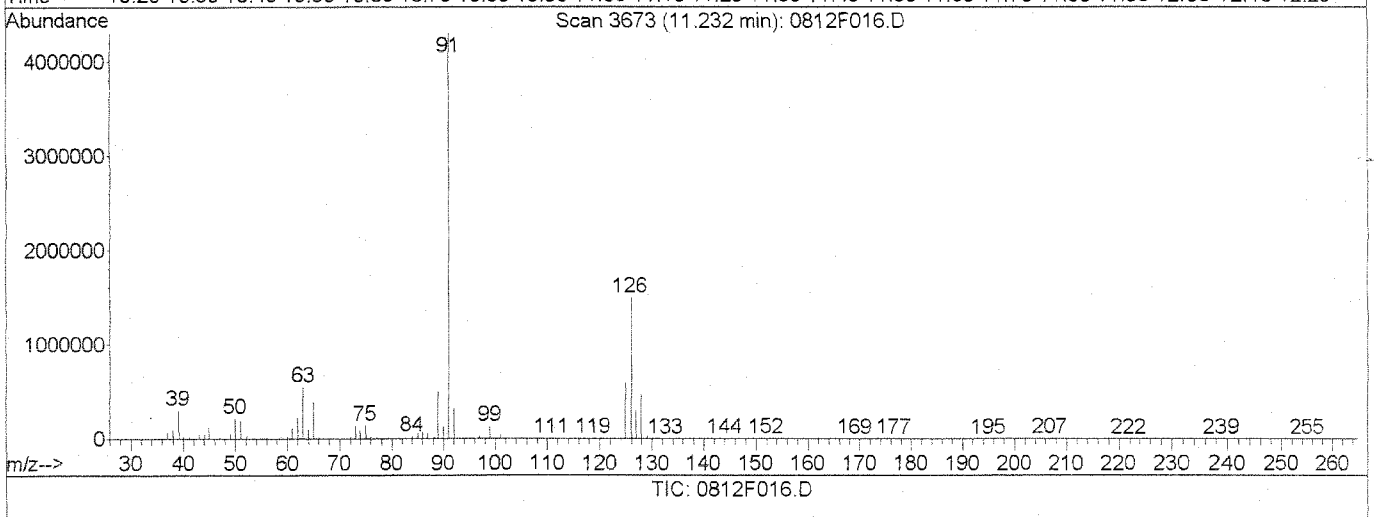
0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:46 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:29 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(93) 4-Chlorotoluene (T)

11.23min 64.88PPB

response 7019997

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.65
63.00	12.30	12.64
0.00	0.00	0.00

Manual Integration:

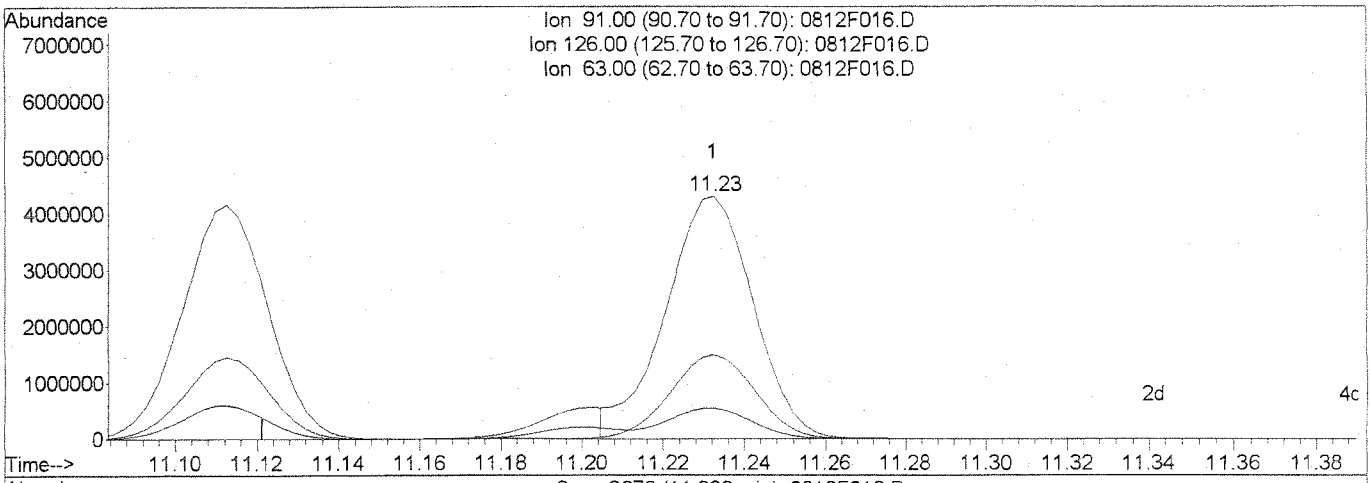
Before

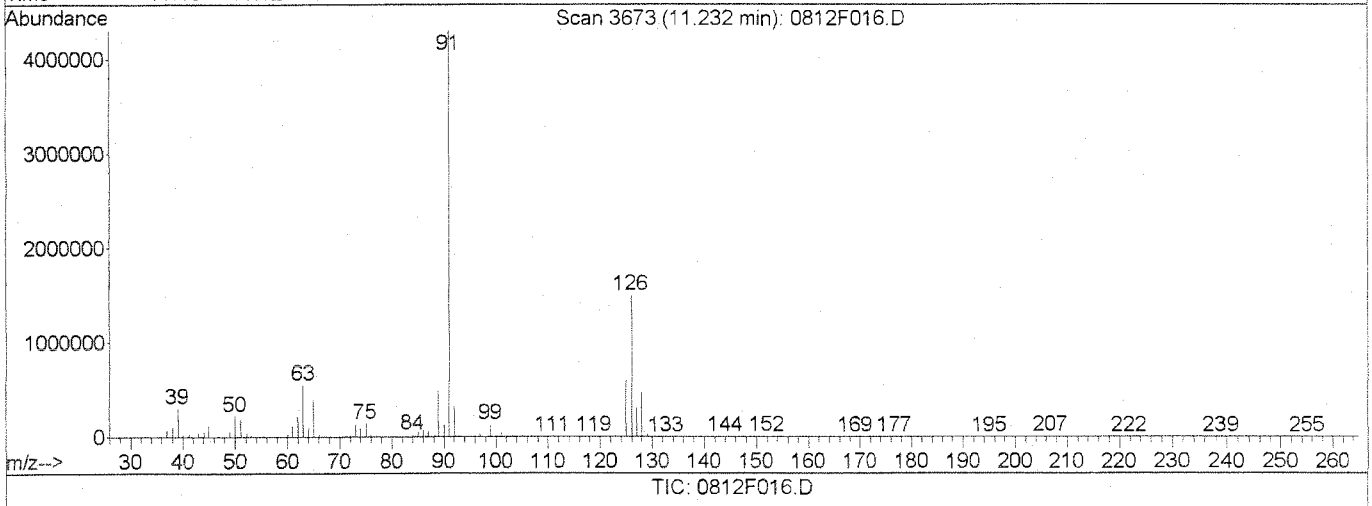
0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:53 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:30 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Multiple Level Calibration





TIC: 0812F016.D

(93) 4-Chlorotoluene (T)
11.23min 59.42PPB m
response 6429193

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.65
63.00	12.30	12.64
0.00	0.00	0.00

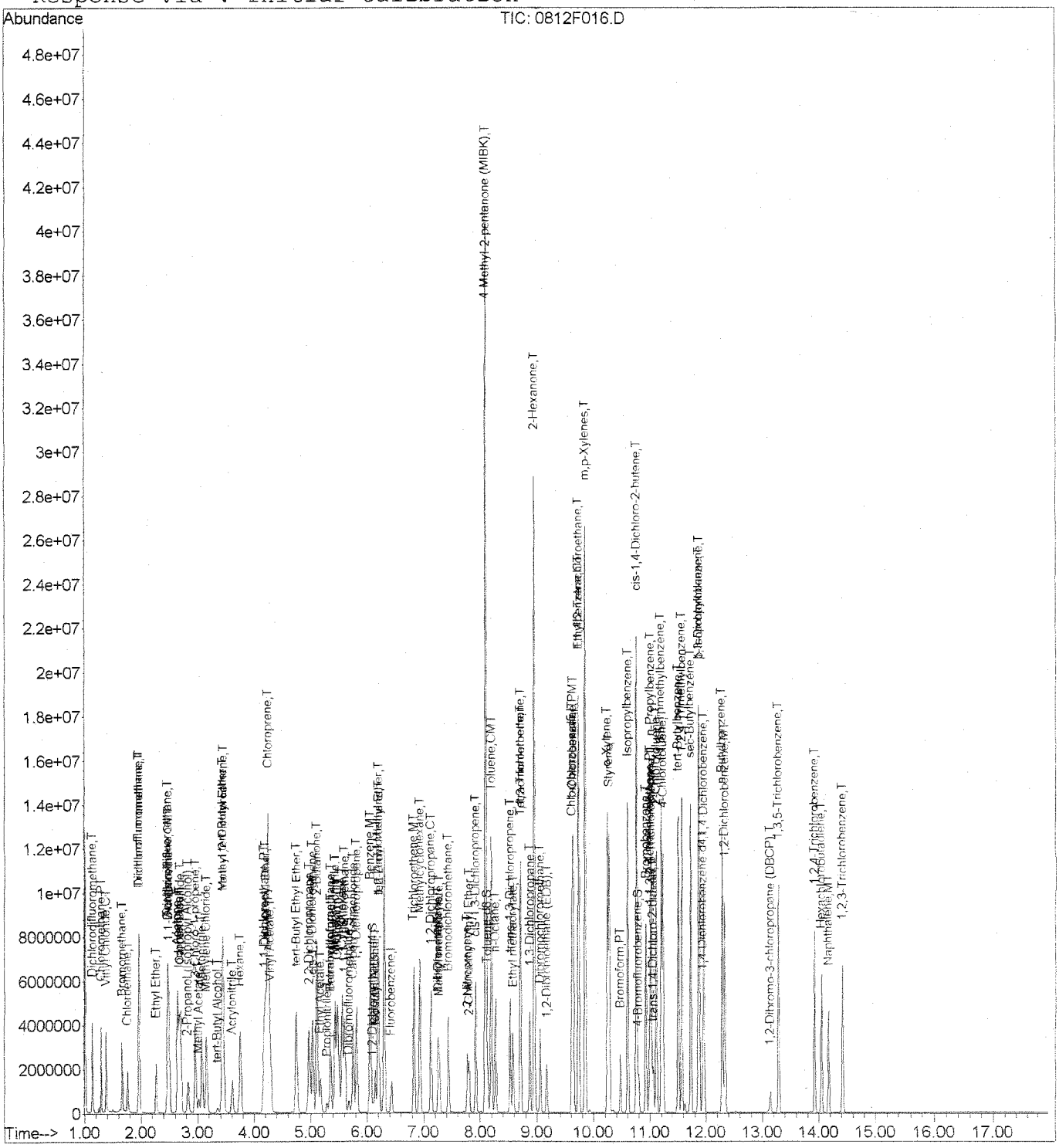
Manual Integration:
After
Baseline correction
08/12/13

0812F016.D 081213MS27_8260.M Mon Aug 12 18:26:58 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F016.D Vial: 13
Acq On : 12 Aug 2013 5:37 pm Operator: KR
Sample : 8260 ICAL 60 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:30 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 17:33:01 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:28:22 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1174209	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	466620	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	413682	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	315812	9.97	PPB	0.00
Spiked Amount 10.000			Recovery =	99.70%		
47) 1,2-Dichloroethane-d4	6.10	65	305032	10.03	PPB	0.00
Spiked Amount 10.000			Recovery =	100.30%		
62) Toluene-d8	8.13	98	1175487	10.17	PPB	0.00
Spiked Amount 10.000			Recovery =	101.70%		
84) 4-Bromofluorobenzene	10.79	95	427436	10.42	PPB	0.00
Spiked Amount 10.000			Recovery =	104.20%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	2778054	79.42	PPB	97
3) Chloromethane	1.29	50	2939927	76.15	PPB	100
4) Vinyl Chloride	1.38	62	2914006	80.78	PPB	100
6) Bromomethane	1.66	96	1809583	78.34	PPB	98
7) Chloroethane	1.76	64	1551841	77.35	PPB	100
8) Dichlorofluoromethane	1.97	67	4464708	84.04	PPB	99
9) Trichlorofluoromethane	1.96	101	4271603	87.25	PPB	100
10) Ethyl Ether	2.27	59	1434600	82.88	PPB	97
11) Acrolein	2.47	56	2693215	1628.86	PPB	97
12) Trichlorotrifluoroethane	2.47	151	1889861	83.22	PPB	98
13) 1,1-Dichloroethene	2.50	96	1858651	83.13	PPB	99
14) Acetone	2.64	43	7901295	2130.23	PPB	100
15) Iodomethane	2.68	142	5731292	449.57	PPB	100
16) Carbon Disulfide	2.70	76	7075103	84.84	PPB	99
17) 2-Propanol (Isopropyl Alco	2.82	45	2265412	4871.55	PPB	99
18) 3-Chloro-1-propene	2.96	76	1326788	85.11	PPB	98
19) Methyl Acetate	3.01	43	1036620	78.68	PPB	98
20) Acetonitrile	3.07	40	2881979	3377.96	PPB	100
21) Methylene Chloride	3.15	84	2275276	79.23	PPB	99
22) tert-Butyl Alcohol	3.35	59	394032	421.92	PPB	88
23) Acrylonitrile	3.61	53	1790090	342.97	PPB	99
24) Methyl tert-Butyl Ether	3.43	73	10239162	170.75	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	2416965	81.88	PPB	97
26) Hexane	3.75	57	3029840	79.17	PPB	99
27) Diisopropyl Ether	4.20	45	7405351	86.05	PPB	100
28) 1,1-Dichloroethane	4.17	63	4502199	83.07	PPB	99
29) Vinyl Acetate	4.29	86	670554	170.41	PPB	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:28:22 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
30)	Chloroprene	4.24	53	13920956	340.34	PPB		99
31)	tert-Butyl Ethyl Ether	4.74	59	6644265	85.93	PPB		98
32)	2,2-Dichloropropane	4.97	77	3684676	82.19	PPB		99
33)	cis-1,2-Dichloroethene	5.04	96	2748524	82.42	PPB		99
34)	2-Butanone	5.11	72	3272773	2198.81	PPB		96
35)	Ethyl Acetate	5.17	61	353224	164.95	PPB		95
36)	Propionitrile	5.29	54	634489	339.24	PPB		99
37)	Methacrylonitrile	5.43	67	2324494	333.22	PPB		98
38)	Bromochloromethane	5.35	128	1263988	82.98	PPB		99
39)	Tetrahydrofuran	5.36	71	130409	82.07	PPB		90
40)	Chloroform	5.47	83	4633358	85.49	PPB		98
41)	Cyclohexane	5.56	56	3664673	83.29	PPB		96
42)	1,1,1-Trichloroethane	5.60	97	4115690	83.23	PPB		98
44)	Carbon Tetrachloride	5.75	117	3635559	88.22	PPB		99
45)	1,1-Dichloropropene	5.82	75	3137507	84.64	PPB		99
46)	Isobutyl Alcohol	6.14	43	1417401	3797.66	PPB		99
48)	Benzene	6.05	78	9918124	81.65	PPB		99
49)	1,2-Dichloroethane	6.20	62	3052213	83.83	PPB		100
50)	tert-Amyl Methyl Ether	6.20	55	1288029	80.50	PPB		97
51)	Trichloroethene	6.82	95	2747771	84.19	PPB		98
52)	Methylcyclohexane	6.93	83	3813187	83.68	PPB		98
53)	1,2-Dichloropropane	7.13	63	2584070	85.56	PPB		99
54)	Dibromomethane	7.25	93	1335914	84.89	PPB		97
55)	Methyl methacrylate	7.28	69	1064998	82.93	PPB		96
56)	1,4-Dioxane	7.27	88	309079	3506.39	PPB		98
57)	Bromodichloromethane	7.43	83	3428656	85.30	PPB		98
58)	2-Nitropropane	7.77	41	2057978	418.03	PPB		97
59)	2-Chloroethyl Vinyl Ether	7.80	63	1144132	83.67	PPB		99
60)	cis-1,3-Dichloropropene	7.92	75	3971967	85.83	PPB		97
61)	4-Methyl-2-pentanone (MIBK	8.09	58	12059448	2157.16	PPB	#	34
63)	Toluene	8.19	92	6398146	85.19	PPB		97
65)	n-Octane	8.27	85	1277745	77.66	PPB		99
66)	trans-1,3-Dichloropropene	8.53	75	3301466	87.34	PPB		99
67)	Ethyl methacrylate	8.58	69	2136455	83.49	PPB		99
68)	1,1,2-Trichloroethane	8.70	83	1563242	81.82	PPB		98
69)	Tetrachloroethene	8.71	164	2356077	83.32	PPB		99
70)	2-Hexanone	8.95	57	3880796	2187.61	PPB	#	31
71)	1,3-Dichloropropane	8.87	76	3080241	83.20	PPB		100
72)	Dibromochloromethane	9.05	129	2427908	85.46	PPB		99
73)	1,2-Dibromoethane (EDB)	9.17	107	1790071	83.54	PPB		98
74)	1-Chlorohexane	9.61	91	3361784	79.58	PPB		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:28:22 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

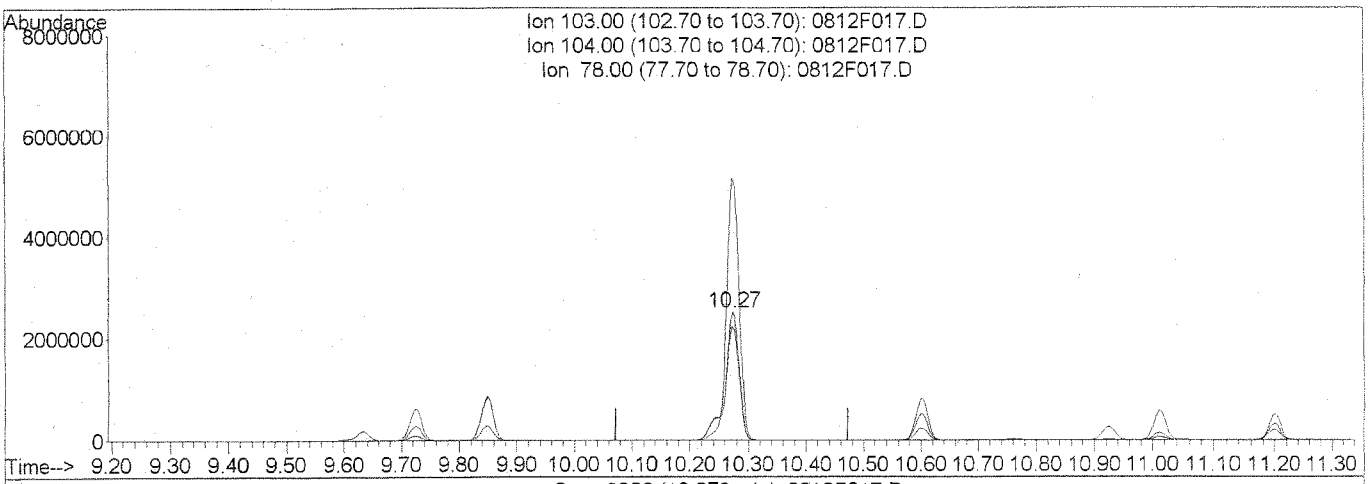
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75)	Chlorobenzene	9.63	112	7160461	85.80	PPB		99
76)	Ethylbenzene	9.72	106	3838112	85.28	PPB		98
77)	1,1,1,2-Tetrachloroethane	9.73	131	2688130	83.54	PPB		98
78)	m,p-Xylenes	9.85	106	9322226	174.12	PPB	#	59
79)	o-Xylene	10.24	106	4477725	83.65	PPB		98
80)	Styrene	10.27	103	3646311m	87.39	PPB		
81)	Bromoform	10.47	173	1496204	85.62	PPB		98
82)	Isopropylbenzene	10.60	105	11585118	84.41	PPB		98
83)	cis-1,4-Dichloro-2-butene	10.76	89	1030863	351.15	PPB		99
86)	1,1,2,2-Tetrachloroethane	10.99	83	1738639	77.38	PPB		99
87)	trans-1,4-Dichloro-2-buten	11.06	53	483658	82.95	PPB		95
88)	Bromobenzene	10.93	156	2984191	79.83	PPB		99
89)	n-Propylbenzene	11.01	91	13239493	78.77	PPB		97
90)	1,2,3-Trichloropropane	11.03	110	523812	73.52	PPB		99
91)	2-Chlorotoluene	11.11	91	8039820	79.68	PPB		99
92)	1,3,5-Trimethylbenzene	11.20	105	9590613	81.39	PPB		99
93)	4-Chlorotoluene	11.23	91	8421894m	80.00	PPB		
94)	tert-Butylbenzene	11.51	119	8207530	81.43	PPB		99
95)	1,2,4-Trimethylbenzene	11.57	105	9692795	82.88	PPB		99
96)	sec-Butylbenzene	11.73	105	11900611	81.11	PPB		100
97)	p-Isopropyltoluene	11.88	119	10131804	85.29	PPB		99
98)	1,3-Dichlorobenzene	11.86	146	5606581	84.46	PPB		99
99)	1,4-Dichlorobenzene	11.96	146	5523533	82.30	PPB		98
100)	n-Butylbenzene	12.28	91	9037246	91.87	PPB		99
101)	1,2-Dichlorobenzene	12.33	146	4933148	85.90	PPB		98
102)	1,2-Dibromo-3-chloropropan	13.14	155	264153	80.83	PPB		92
103)	1,3,5-Trichlorobenzene	13.28	180	4299227	94.03	PPB		98
104)	1,2,4-Trichlorobenzene	13.92	180	3342257	120.98	PPB		99
105)	Hexachlorobutadiene	14.05	225	1693977	87.30	PPB		98
106)	Naphthalene	14.17	128	4729632	136.48	PPB		99
107)	1,2,3-Trichlorobenzene	14.42	180	2778613	124.85	PPB		98

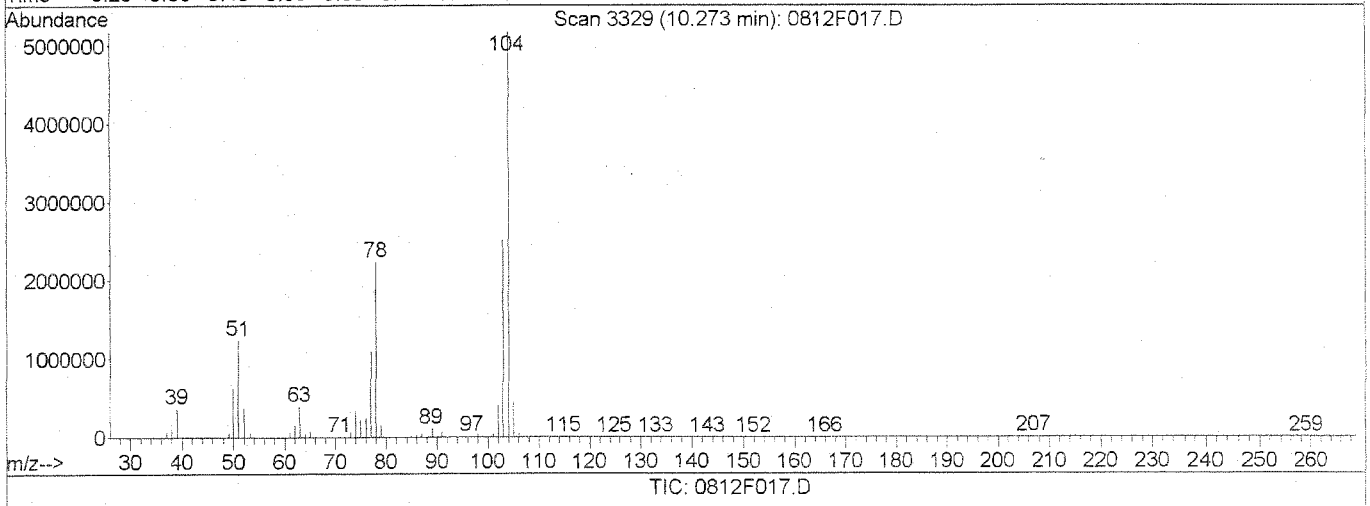
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:31 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Multiple Level Calibration





TIC: 0812F017.D

(80) Styrene (T)

10.27min 100.59PPB

response 4197165

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	205.79
78.00	90.50	88.95
0.00	0.00	0.00

Manual Integration:

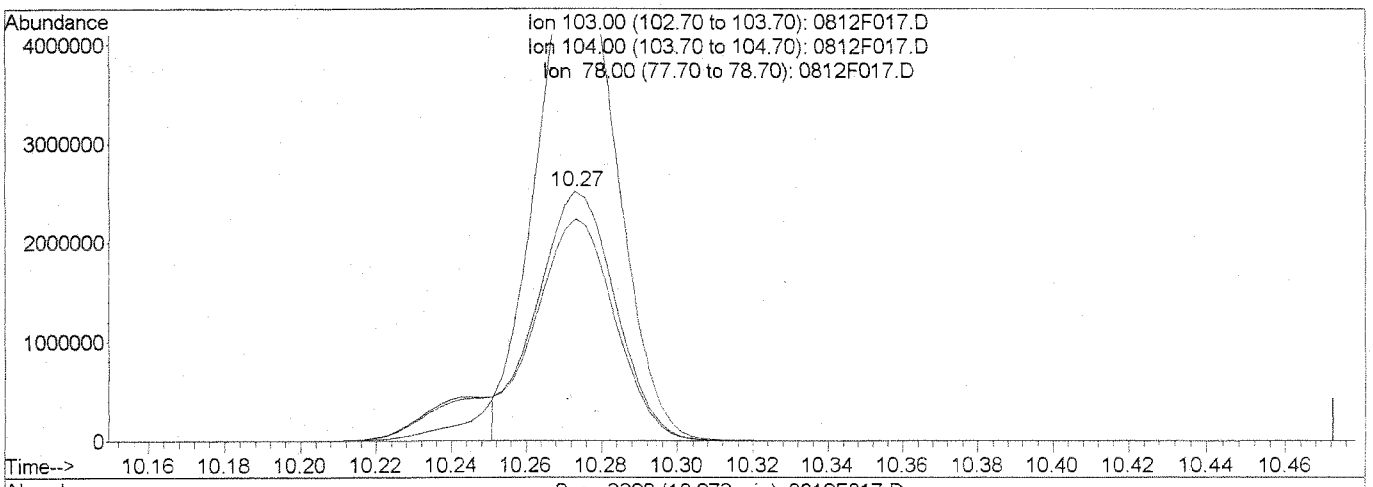
Before

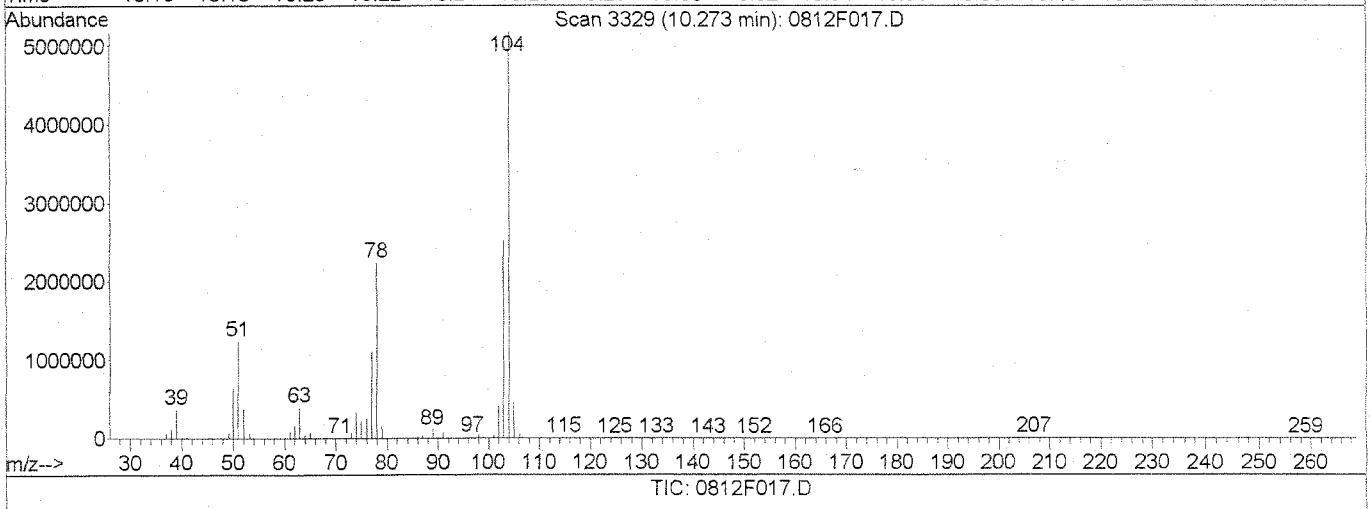
0812F017.D 081213MS27_8260.M Mon Aug 12 18:29:09 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:32 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Multiple Level Calibration





TIC: 0812F017.D

(80) Styrene (T)

10.27min 87.39PPB m

response 3646311

Ion	Exp%	Act%
103.00	100	100
104.00	207.20	205.78
78.00	90.50	88.95
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

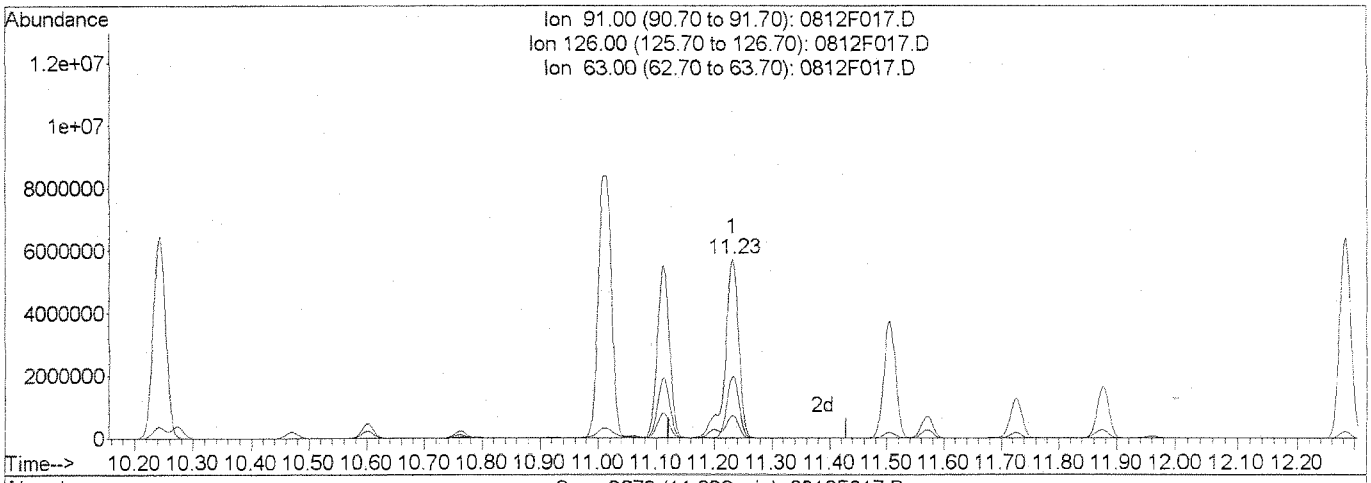
08/12/13

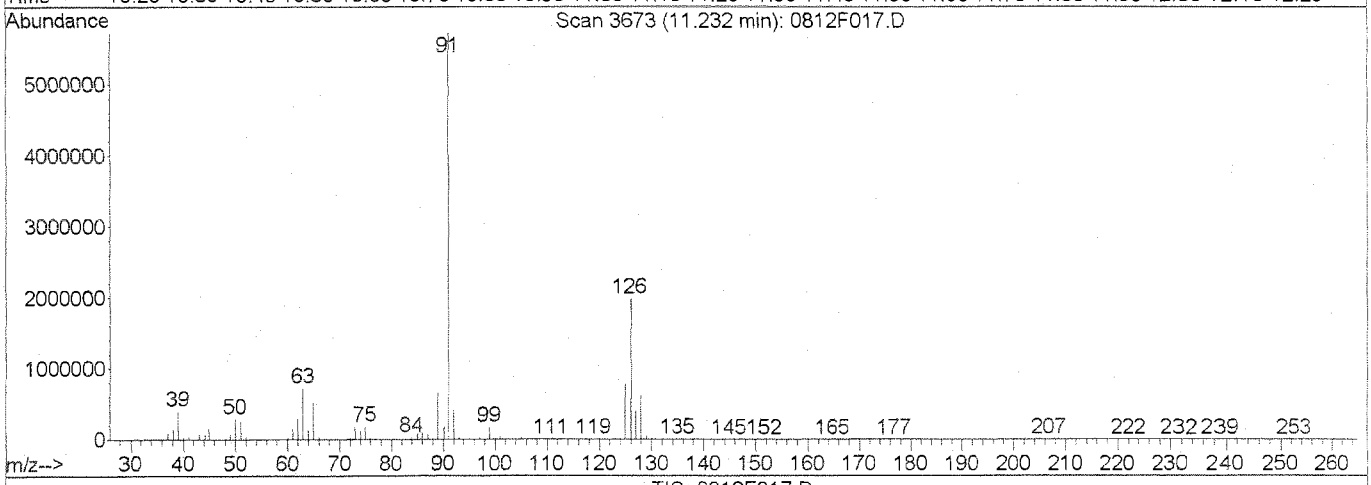
0812F017.D 081213MS27_8260.M Mon Aug 12 18:29:13 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:32 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Multiple Level Calibration





TIC: 0812F017.D

(93) 4-Chlorotoluene (T)

11.23min 88.66PPB

response 9333416

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.63
63.00	12.30	12.69
0.00	0.00	0.00

Manual Integration:

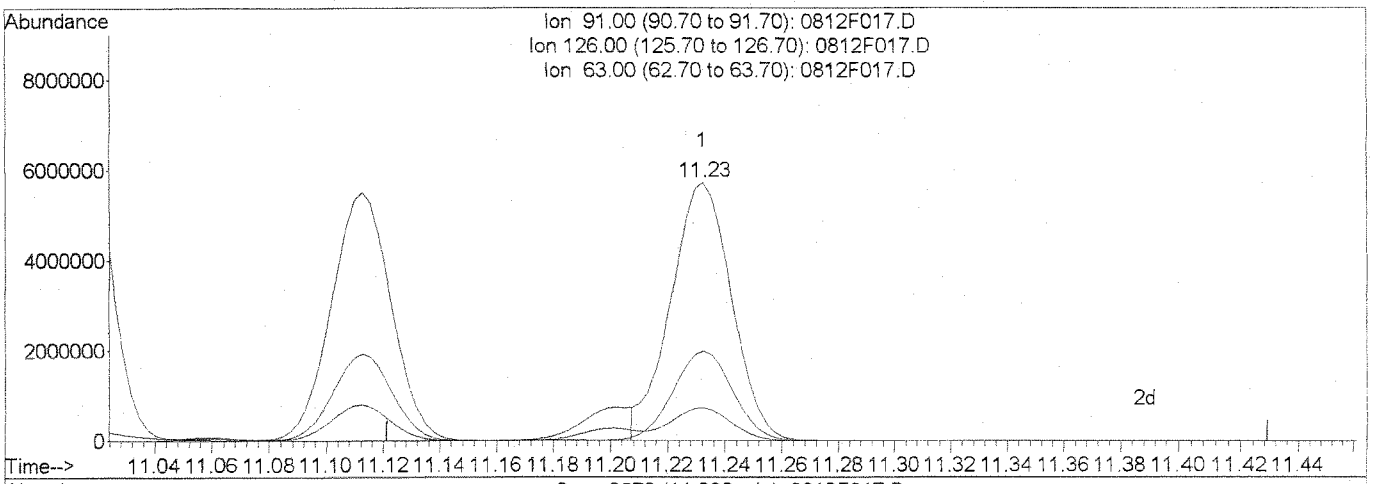
Before

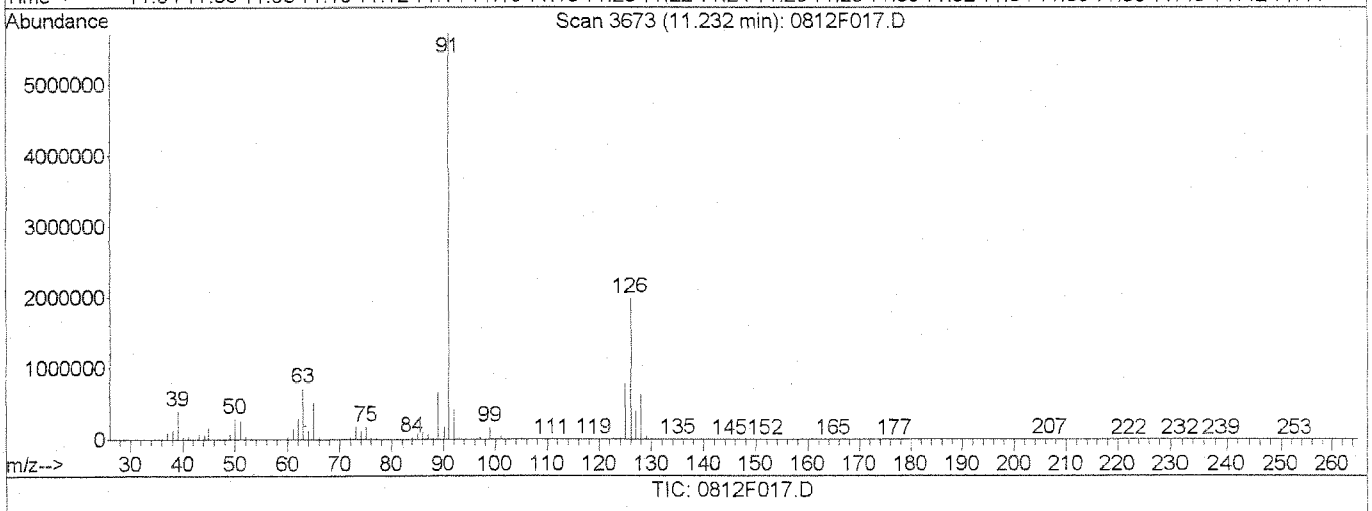
0812F017.D 081213MS27_8260.M Mon Aug 12 18:29:20 2013

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:32 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Multiple Level Calibration





TIC: 0812F017.D

(93) 4-Chlorotoluene (T)

11.23min 80.00PPB m

response 8421894

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.63
63.00	12.30	12.69
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

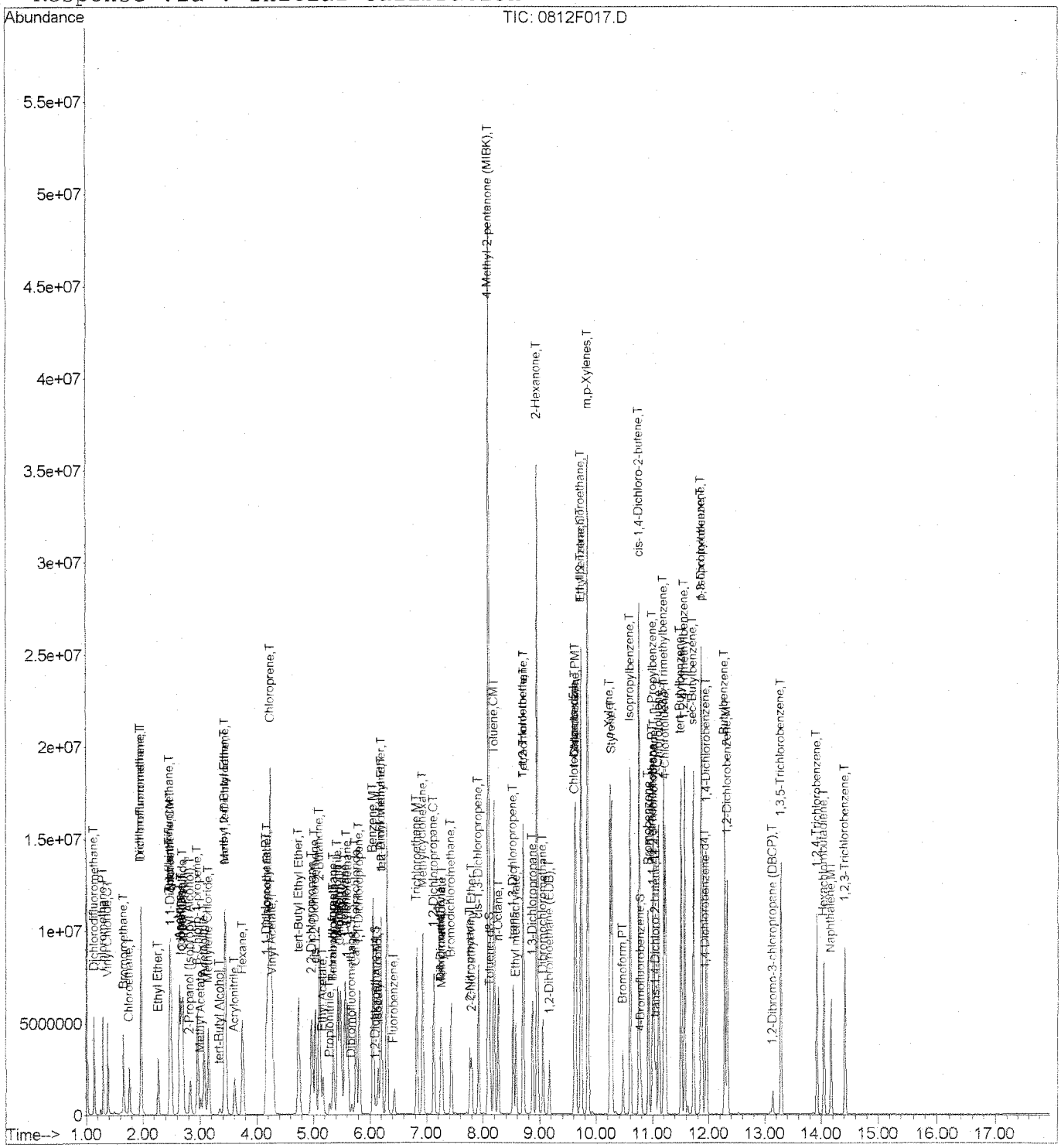
08/12/13

0812F017.D 081213MS27_8260.M Mon Aug 12 18:29:24 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F017.D Vial: 14
Acq On : 12 Aug 2013 6:05 pm Operator: KR
Sample : 8260 ICAL 80 Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 12 18:32 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Mon Aug 12 18:27:16 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 09:01:36 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

KT 8/13/13

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	1124020	10.00	PPB		0.00
64) Chlorobenzene-d5	9.61	82	458514	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.93	152	382277	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	302483	9.98	PPB		0.00
Spiked Amount 10.000			Recovery =	99.80%			
47) 1,2-Dichloroethane-d4	6.10	65	294576	10.12	PPB		0.00
Spiked Amount 10.000			Recovery =	101.20%			
62) Toluene-d8	8.12	98	1107950	10.00	PPB		0.00
Spiked Amount 10.000			Recovery =	100.00%			
84) 4-Bromofluorobenzene	10.79	95	402796	9.96	PPB		0.00
Spiked Amount 10.000			Recovery =	99.60%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	363808	10.87	PPB		99
3) Chloromethane	1.29	50	381306	10.36	PPB		100
4) Vinyl Chloride	1.38	62	348689	10.09	PPB		100
6) Bromomethane	1.66	96	233504	10.58	PPB		95
7) Chloroethane	1.76	64	195398	10.21	PPB		100
8) Dichlorofluoromethane	1.97	67	540388	10.57	PPB		98
9) Trichlorofluoromethane	1.96	101	449171	9.51	PPB		99
10) Ethyl Ether	2.27	59	182113	10.96	PPB		98
11) Acrolein	2.48	56	221592	139.75	PPB		97
12) Trichlorotrifluoroethane	2.47	151	220515	10.10	PPB		97
13) 1,1-Dichloroethene	2.50	96	259973	12.10	PPB		97
14) Acetone	2.65	43	198941	55.70	PPB		99
15) Iodomethane	2.68	142	839763	59.86	PPB		99
16) Carbon Disulfide	2.70	76	1808294	22.53	PPB		99
18) 3-Chloro-1-propene	2.96	76	455194	30.31	PPB		98
20) Acetonitrile	3.07	40	246011	299.37	PPB		98
21) Methylene Chloride	3.15	84	280674	10.22	PPB		99
22) tert-Butyl Alcohol	3.35	59	109233	121.36	PPB	#	1
23) Acrylonitrile	3.61	53	209053	41.54	PPB		98
24) Methyl tert-Butyl Ether	3.44	73	590775	10.23	PPB		98
25) trans-1,2-Dichloroethene	3.45	96	293696	10.37	PPB		95
26) Hexane	3.75	57	1831083	50.04	PPB		97
27) Diisopropyl Ether	4.20	45	1603290	19.33	PPB		99
28) 1,1-Dichloroethane	4.17	63	524410	10.07	PPB		98
29) Vinyl Acetate	4.29	86	200472	52.84	PPB		98
30) Chloroprene	4.24	53	1375591	34.91	PPB		99
31) tert-Butyl Ethyl Ether	4.74	59	1445981	19.40	PPB		98

(#) = qualifier out of range (m) = manual integration
0812F020.D 081213MS27_8260.M Tue Aug 13 09:02:39 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 09:01:36 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
32)	2,2-Dichloropropane	4.97	77	419157	9.74	PPB		99
33)	cis-1,2-Dichloroethene	5.04	96	311449	9.73	PPB		98
34)	2-Butanone	5.12	72	76893	53.48	PPB		92
35)	Ethyl Acetate	5.18	61	60053	29.18	PPB		99
36)	Propionitrile	5.30	54	52849	29.30	PPB		99
37)	Methacrylonitrile	5.43	67	203829	30.38	PPB		94
38)	Bromochloromethane	5.35	128	143653	9.81	PPB		97
39)	Tetrahydrofuran	5.36	71	30020	19.66	PPB	#	77
40)	Chloroform	5.47	83	527731	10.11	PPB		99
42)	1,1,1-Trichloroethane	5.60	97	475056	10.00	PPB		96
44)	Carbon Tetrachloride	5.75	117	410424	10.29	PPB		96
45)	1,1-Dichloropropene	5.82	75	405819	11.38	PPB		100
46)	Isobutyl Alcohol	6.15	43	105251	288.60	PPB		95
48)	Benzene	6.05	78	1134318	9.74	PPB		100
49)	1,2-Dichloroethane	6.19	62	360369	10.29	PPB		99
50)	tert-Amyl Methyl Ether	6.20	55	289267	18.87	PPB		96
51)	Trichloroethene	6.82	95	319312	10.17	PPB		98
53)	1,2-Dichloropropane	7.13	63	298125	10.25	PPB		99
54)	Dibromomethane	7.25	93	152124	10.04	PPB		98
55)	Methyl methacrylate	7.28	69	377665	30.60	PPB		97
56)	1,4-Dioxane	7.27	88	23832	279.46	PPB		81
57)	Bromodichloromethane	7.43	83	387918	10.02	PPB		98
58)	2-Nitropropane	7.77	41	146306	30.91	PPB		98
59)	2-Chloroethyl Vinyl Ether	7.80	63	133290	10.14	PPB		98
60)	cis-1,3-Dichloropropene	7.92	75	417584	9.36	PPB		98
61)	4-Methyl-2-pentanone (MIBK	8.09	58	288072	53.83	PPB		99
63)	Toluene	8.19	92	714139	9.88	PPB		98
65)	n-Octane	8.27	85	276613	17.16	PPB		98
66)	trans-1,3-Dichloropropene	8.53	75	355638	9.50	PPB		98
67)	Ethyl methacrylate	8.58	69	774086	30.64	PPB		100
68)	1,1,2-Trichloroethane	8.70	83	177982	9.46	PPB		97
69)	Tetrachloroethene	8.71	164	261418	9.37	PPB		97
70)	2-Hexanone	8.95	57	98484	56.50	PPB		99
71)	1,3-Dichloropropane	8.87	76	346795	9.50	PPB		99
72)	Dibromochloromethane	9.05	129	265673	9.45	PPB		97
73)	1,2-Dibromoethane (EDB)	9.16	107	198683	9.40	PPB		98
74)	1-Chlorohexane	9.61	91	372203	8.97	PPB		98
75)	Chlorobenzene	9.63	112	797396	9.66	PPB		99
76)	Ethylbenzene	9.72	106	429267	9.65	PPB		98
77)	1,1,1,2-Tetrachloroethane	9.73	131	296479	9.34	PPB		97
78)	m,p-Xylenes	9.85	106	1030313	19.58	PPB		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 09:01:36 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

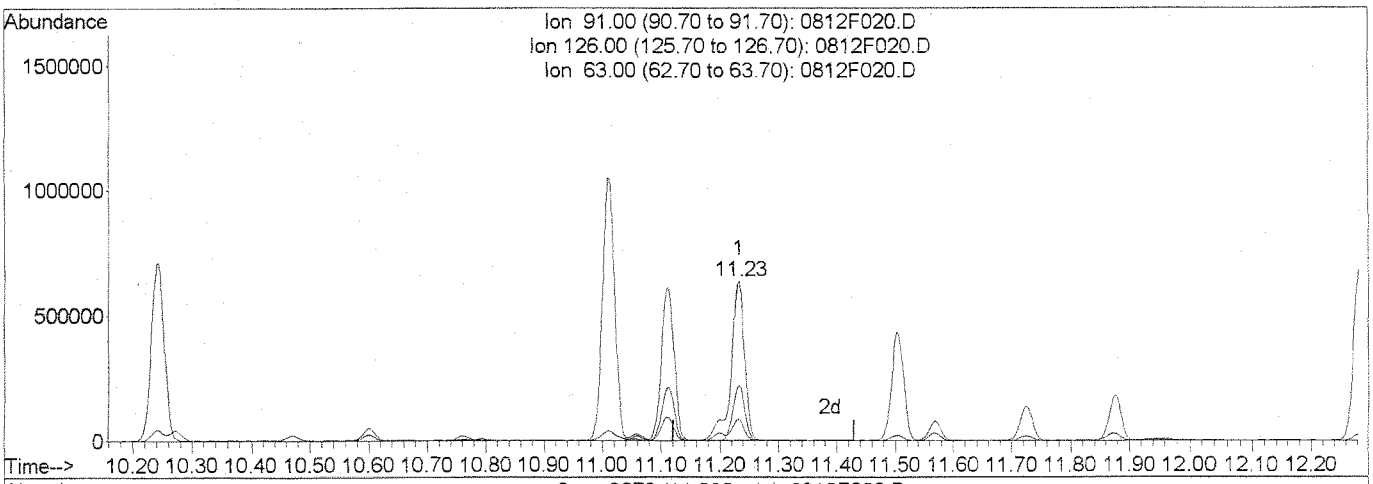
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
79)	o-Xylene	10.24	106	500791	9.48	PPB	98
80)	Styrene	10.27	103	403273	9.75	PPB	97
81)	Bromoform	10.47	173	158881	9.18	PPB	97
82)	Isopropylbenzene	10.60	105	1223823	9.02	PPB	100
83)	cis-1,4-Dichloro-2-butene	10.76	89	93702	32.13	PPB	99
86)	1,1,2,2-Tetrachloroethane	10.99	83	197554	9.55	PPB	98
87)	trans-1,4-Dichloro-2-buten	11.06	53	170394	31.48	PPB	98
88)	Bromobenzene	10.92	156	330293	9.56	PPB	98
89)	n-Propylbenzene	11.01	91	1524014	9.83	PPB	99
90)	1,2,3-Trichloropropane	11.03	110	61249	9.39	PPB	96
91)	2-Chlorotoluene	11.11	91	911798	9.78	PPB	99
92)	1,3,5-Trimethylbenzene	11.20	105	1071904	9.83	PPB	99
93)	4-Chlorotoluene	11.23	91	925517m	9.51	PPB	
94)	tert-Butylbenzene	11.50	119	932362	9.99	PPB	99
95)	1,2,4-Trimethylbenzene	11.57	105	1046838	9.65	PPB	99
96)	sec-Butylbenzene	11.73	105	1284725	9.46	PPB	99
97)	p-Isopropyltoluene	11.88	119	1094148	9.89	PPB	99
98)	1,3-Dichlorobenzene	11.86	146	605357	9.82	PPB	100
99)	1,4-Dichlorobenzene	11.96	146	602170	9.68	PPB	98
100)	n-Butylbenzene	12.28	91	954932	10.33	PPB	98
101)	1,2-Dichlorobenzene	12.33	146	527155	9.87	PPB	97
102)	1,2-Dibromo-3-chloropropan	13.14	155	27872	9.22	PPB	91
103)	1,3,5-Trichlorobenzene	13.28	180	435212	10.10	PPB	98
104)	1,2,4-Trichlorobenzene	13.92	180	272245	8.62	PPB	99
105)	Hexachlorobutadiene	14.05	225	182872	10.10	PPB	96
106)	Naphthalene	14.17	128	324057	8.58	PPB	99
107)	1,2,3-Trichlorobenzene	14.42	180	218267	8.88	PPB	96

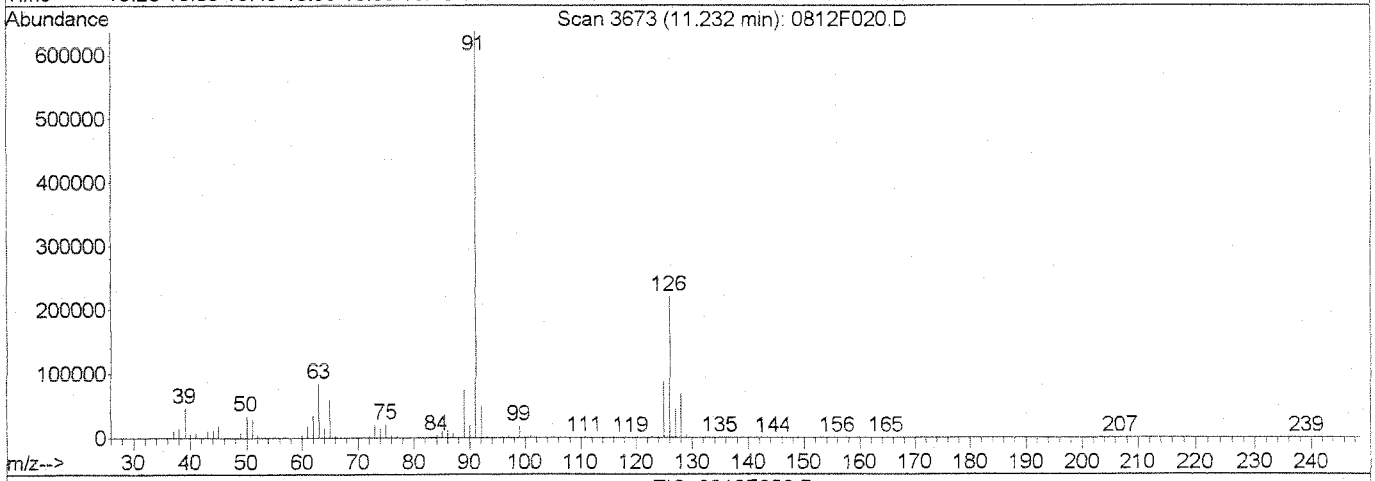
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 9:05 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Multiple Level Calibration





TIC: 0812F020.D

(93) 4-Chlorotoluene (T)

11.23min 10.57PPB

response 1028596

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.79
63.00	12.30	13.30
0.00	0.00	0.00

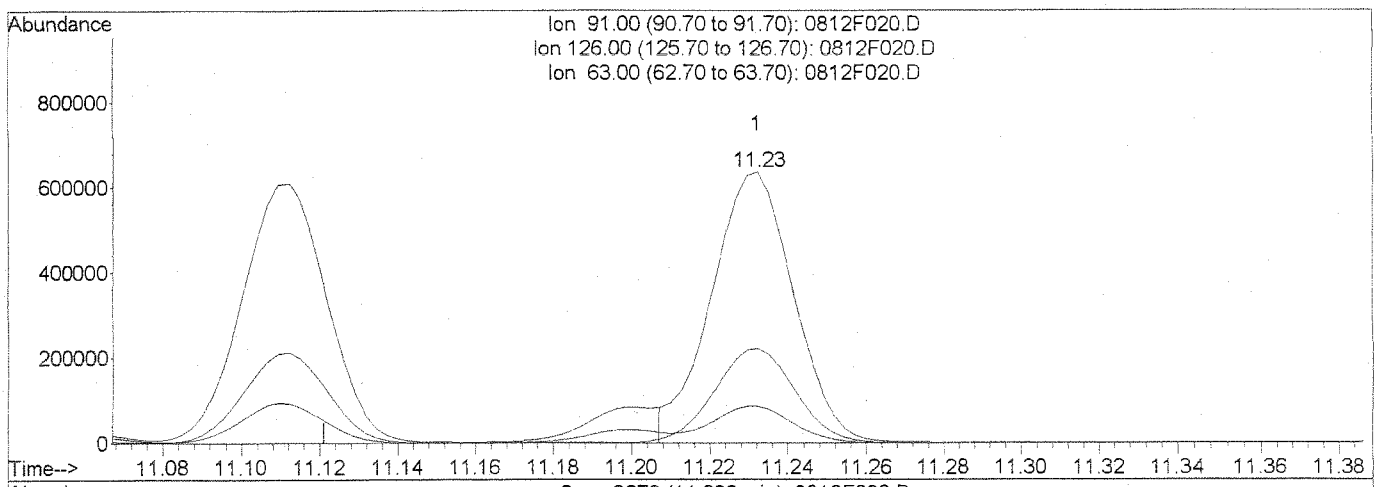
Manual Integration:

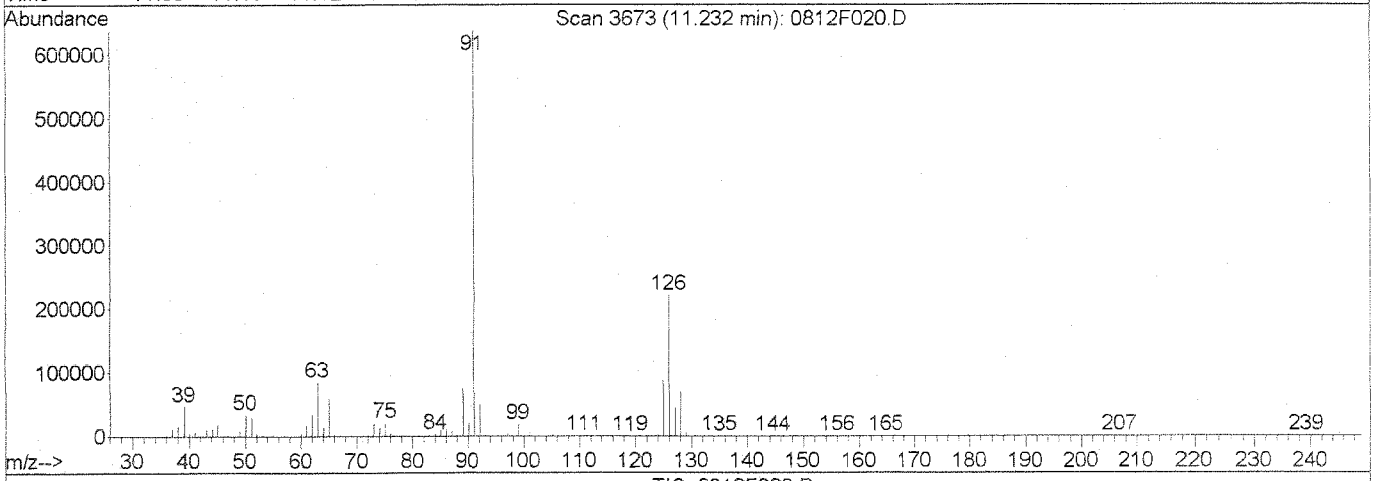
Before

Quantitation Report (Qedit)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 9:05 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Multiple Level Calibration





TIC: 0812F020.D

(93) 4-Chlorotoluene (T)

11.23min 9.51PPB m

response 925517

Ion	Exp%	Act%
91.00	100	100
126.00	34.30	34.75
63.00	12.30	13.32
0.00	0.00	0.00

Manual Integration:

After

Baseline correction

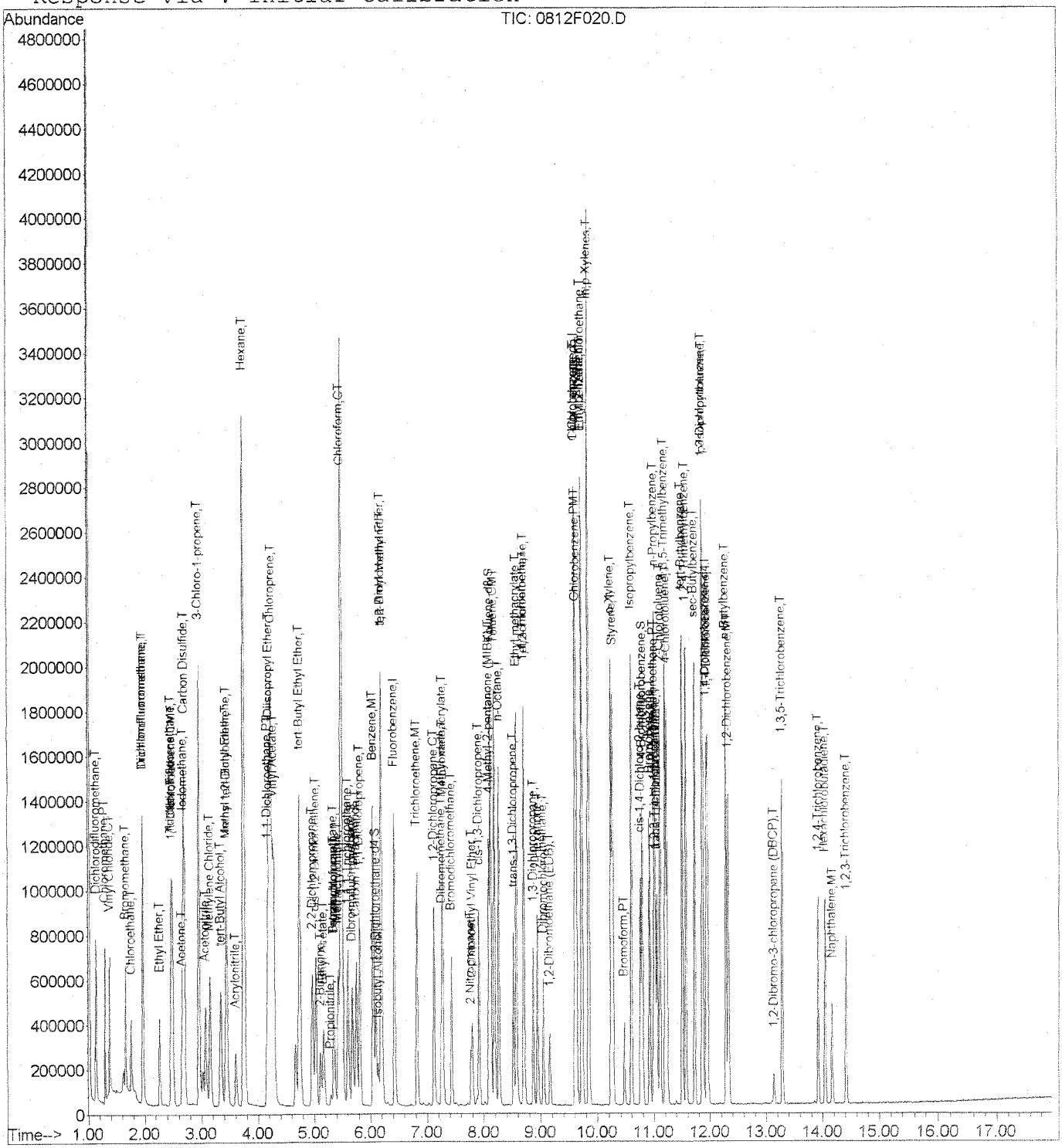
08/13/13

0812F020.D 081213MS27_8260.M Tue Aug 13 09:02:34 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081213\0812F020.D Vial: 17
Acq On : 12 Aug 2013 7:27 pm Operator: KR
Sample : ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 9:05 2013 Quant Results File: 081213MS27_8

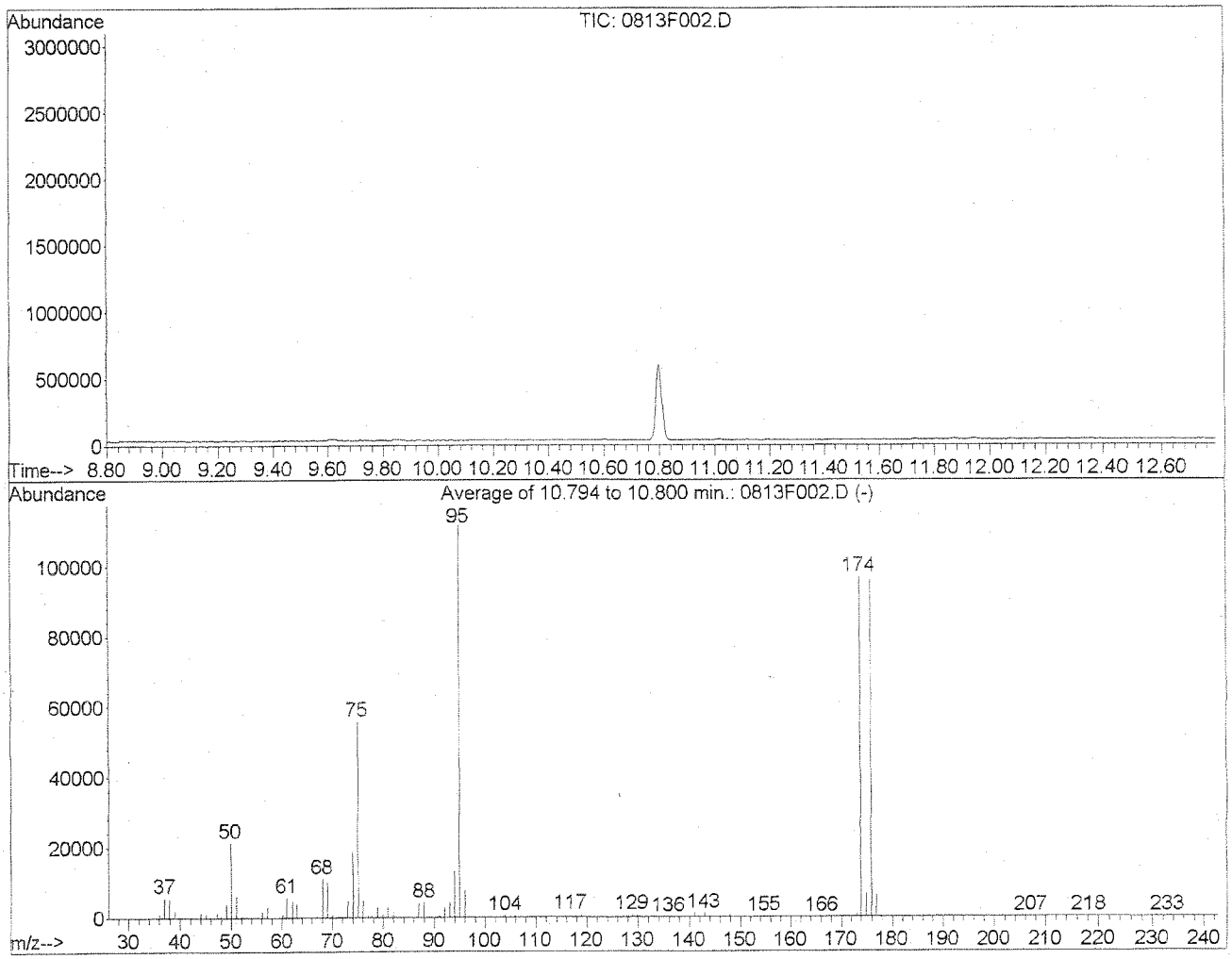
Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration



BFB

Data File : J:\MS27\DATA\081313\0813F002.D
Acq On : 13 Aug 2013 8:09 am
Sample : BFB
Misc :
MS Integration Params: rteint.p
Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B

Vial: 2
Operator: KR
Inst : MS27
Multiplr: 1.00



AutoFind: Scans 3516, 3517, 3518; Background Corrected with Scan 3501

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	21343	PASS
75	95	30	60	49.9	55896	PASS
95	95	100	100	100.0	111981	PASS
96	95	5	9	6.8	7617	PASS
173	174	0.00	2	0.8	802	PASS
174	95	50	120	86.5	96917	PASS
175	174	5	9	6.7	6458	PASS
176	174	95	101	99.0	95981	PASS
177	176	5	9	6.4	6143	PASS

0813F002.D 081213MS27_8260.M Tue Aug 13 09:03:20 2013

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081313\0813F003.D Vial: 3
Acq On : 13 Aug 2013 8:50 am Operator: KR
Sample : CLP/2-PROP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 09:08:26 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	1136330	10.00	PPB	0.00
64) Chlorobenzene-d5	9.60	82	445159	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	311879	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	311112	10.15	PPB	0.00
Spiked Amount 10.000			Recovery =	101.50%		
47) 1,2-Dichloroethane-d4	6.10	65	295610	10.04	PPB	0.00
Spiked Amount 10.000			Recovery =	100.40%		
62) Toluene-d8	8.12	98	1113367	9.94	PPB	0.00
Spiked Amount 10.000			Recovery =	99.40%		
84) 4-Bromofluorobenzene	10.79	95	362261	9.23	PPB	0.00
Spiked Amount 10.000			Recovery =	92.30%		
Target Compounds						Qvalue
17) 2-Propanol (Isopropyl Alco	2.82	45	241087	524.29	PPB	99
19) Methyl Acetate	3.02	43	97300	7.65	PPB	98
41) Cyclohexane	5.55	56	507086	11.86	PPB	96
52) Methylcyclohexane	6.93	83	517384	11.67	PPB	98

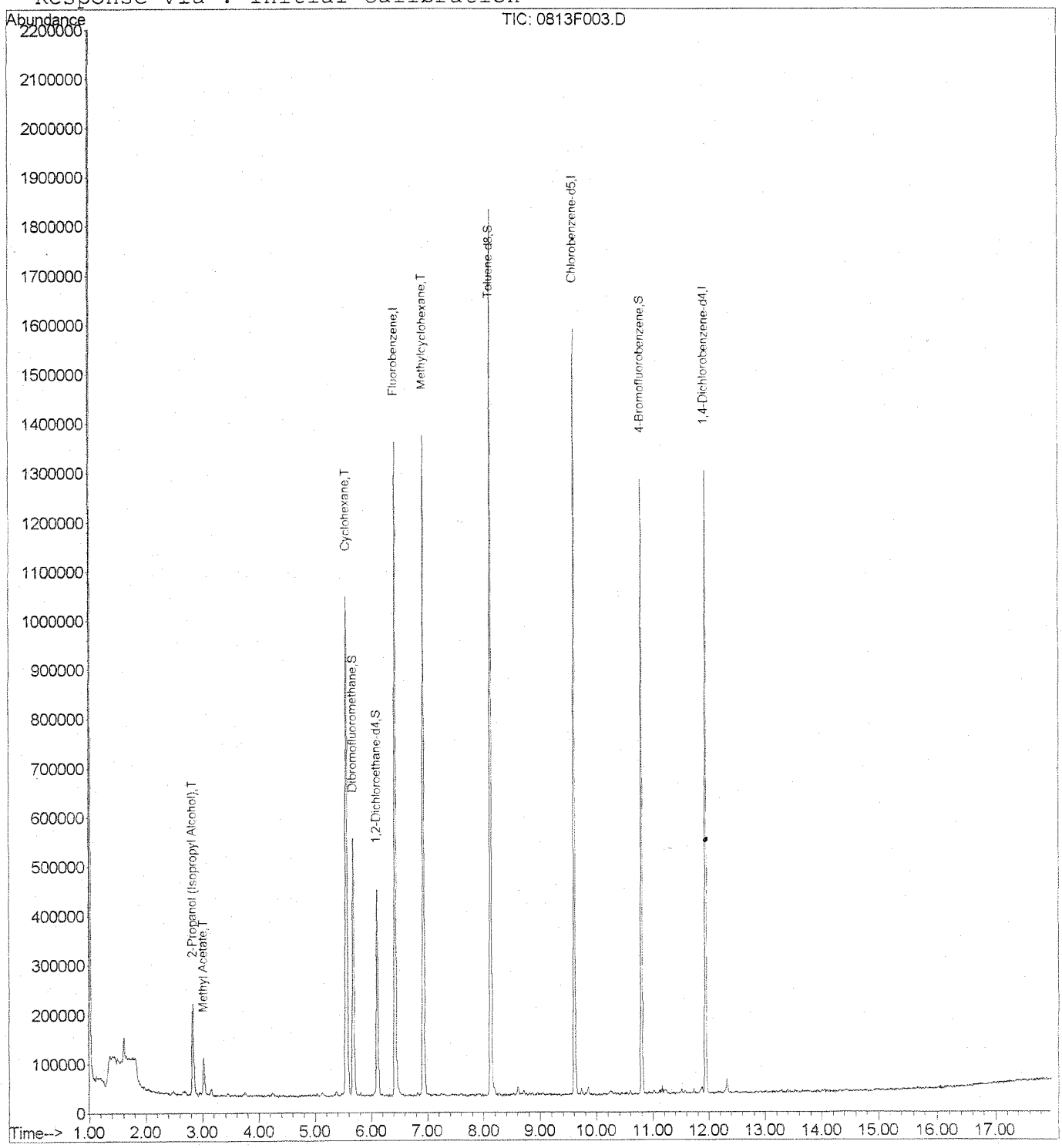
8/13/13

(#) = qualifier out of range (m) = manual integration
0813F003.D 081213MS27_8260.M Tue Aug 13 09:09:07 2013 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\081313\0813F003.D Vial: 3
Acq On : 13 Aug 2013 8:50 am Operator: KR
Sample : CLP/2-PROP ICV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Aug 13 9:12 2013 Quant Results File: 081213MS27_8

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Aug 13 09:00:09 2013
Response via : Initial Calibration



QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 09/17/2013

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 08/12/2013
Calibration ID: CAL12690
Analysis Lot: KWG1310078
Units: PPB

File ID: J:\MS27\DATA\091713\0917F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Vinyl Chloride	10	9.7	0.100	0.307	0.298	-3	NA	± 20 %	AverageRF
Methylene Chloride	10	11	0.100	0.244	0.259	6	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	9.5	0.100	0.252	0.238	-5	NA	± 20 %	AverageRF
1,1-Dichloroethene	10	9.1	0.100	0.191	0.174	-9	NA	± 20 %	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.100	0.285	0.271	-5	NA	± 20 %	AverageRF
Carbon Tetrachloride	10	8.3	0.100	0.355	0.294	-17	NA	± 20 %	AverageRF
Benzene	10	10	0.500	1.04	1.04	1	NA	± 20 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.100	0.311	0.321	3	NA	± 20 %	AverageRF
Trichloroethene (TCE)	10	9.4	0.200	0.279	0.263	-6	NA	± 20 %	AverageRF
1,2-Dichloropropane	10	11	0.100	0.259	0.287	11	NA	± 20 %	AverageRF
Toluene	10	10	0.400	0.643	0.665	3	NA	± 20 %	AverageRF
Tetrachloroethene (PCE)	10	8.5	0.200	0.609	0.515	-15	NA	± 20 %	AverageRF
Chlorobenzene	10	10	0.500	1.80	1.85	3	NA	± 20 %	AverageRF
Ethylbenzene	10	9.7	0.100	0.970	0.938	-3	NA	± 20 %	AverageRF
Styrene	10	10	0.300	0.902	0.938	4	NA	± 20 %	AverageRF
m,p-Xylenes	20	20	0.100	1.15	1.15	1	NA	± 20 %	AverageRF
o-Xylene	10	9.8	0.300	1.15	1.13	-2	NA	± 20 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	8.7	0.100	0.423	0.366	-13	NA	± 20 %	AverageRF
1,4-Dichlorobenzene	10	10	0.500	1.63	1.67	2	NA	± 20 %	AverageRF
1,2-Dichlorobenzene	10	11	0.400	1.40	1.54	10	NA	± 20 %	AverageRF
1,2,4-Trichlorobenzene	10	11	0.200	0.808	0.879	NA	6	± 20 %	Quadratic(0,0
4-Bromofluorobenzene	10	9.8	0.01	0.882	0.861	-2	NA	± 20 %	AverageRF
Dibromofluoromethane	10	9.5	0.01	0.270	0.257	-5	NA	± 20 %	AverageRF
Toluene-d8	10	10	0.01	0.986	0.992	1	NA	± 20 %	AverageRF
1,1,2-Trichloroethane	10	10	0.100	0.410	0.431	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS27\DATA\091713\0917F003.D
Lab ID: KWG1310078-1
RunType: CCV
Matrix: WATER

Date Acquired: 09/17/2013 09:20
Date Quantitated: 09/17/2013 09:47
Batch ID: KWG1310078
Analysis Method: 8260C
MethodJoinID: MJ1093

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA		x
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Initial Calibration Minimum RF	Acetonitrile	0.0073	0.01	NA	AJT
	tert-Butyl Alcohol	0.0080	0.01	NA	
	Isobutyl Alcohol	0.0032	0.01	NA	
	1,4-Dioxane	0.0008	0.01	NA	
Second Source ICAL Verification	Acrolein	39.8	NA	30	
	Iodomethane	99.5	NA	30	

Primary Review: KS 9.18.13

Secondary Review: AJT 9/19/13

Quantitation Report

Data File:	J:\MS27\DATA\091713\0917F003.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 09:20	**Quant Date:**	09/17/2013 09:47	**Vial:**	3
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1310078-1			**Soln Conc. Units:**	PPB

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8260C VOC FP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1310078	**Prep Lot:**		**Report Group:**	
Analysis Method:	8260C	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS27\METHODS\081213MS27_8			**Calibration ID:**	CAL12690
Title:					
Tune Ref:	J:\MS27\DATA\091713\0917F002.D			**Method ID:**	MJ1093
MB Ref:				**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Fluorobenzene	6.43	0.00	96	965184	10.00	OK
2	Chlorobenzene-d5	9.61	0.00	82	393203	10.00	OK
3	1,4-Dichlorobenzene-d4	11.94	0.00	152	332735	10.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dibromofluoromethane	5.68			113	247631	9.51		85-115	NA	
1	1,2-Dichloroethane-d4	6.10			65	237514	9.50		70-120	NA	
1	Toluene-d8	8.12			98	957753	10.07		85-120	NA	
2	4-Bromofluorobenzene	10.79			95	338653	9.76		75-120	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorodifluoromethane	1.14			85	253855	8.84			
1	Chloromethane	1.29			50	367226	11.62			
1	Vinyl Chloride	1.38			62	287873	9.70			
1	Bromomethane	1.67			96	250408	13.22			
1	Chloroethane	1.76			64	163018	9.92			
1	Trichlorofluoromethane	1.96			101	340336	8.39			
1	Acrolein	2.48			56	262814	193.03			
1	Trichlorotrifluoroethane	2.47			151	168029	8.97			
1	1,1-Dichloroethene	2.50			96	167910	9.10			
1	Acetone	2.65			43	603998	196.94			
1	Iodomethane	2.68			142	603341	50.50			
1	Carbon Disulfide	2.70			76	689170	10.00			
1	3-Chloro-1-propene	2.96			76	135906	10.54			
1	Acetonitrile	3.07			40	326618	462.87			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F003.D			**Instrument:**	MS27
Acqu Date:	09/17/2013 09:20	**Quant Date:**	09/17/2013 09:47	**Vial:**	3
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1310078-1			**Soln Conc. Units:**	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Methylene Chloride	3.15			84	249524	10.58			
1	tert-Butyl Alcohol	3.34			59	48825	63.17			
1	Acrylonitrile	3.61			53	197340	45.67			
1	Methyl tert-Butyl Ether	3.43			73	1058666	21.35			
1	trans-1,2-Dichloroethene	3.45			96	230042	9.46			
1	1,1-Dichloroethane	4.17			63	442234	9.89			
1	Vinyl Acetate	4.29			86	70532	21.65			
1	Chloroprene	4.24			53	1347741	39.83			
1	2,2-Dichloropropane	4.97			77	345443	9.35			
1	cis-1,2-Dichloroethene	5.03			96	261436	9.51			
1	2-Butanone (MEK)	5.11			72	259920	210.54			
1	Ethyl Acetate	5.17			61	36800	20.83			
1	Propionitrile	5.30			54	71662	46.27			
1	Methacrylonitrile	5.43			67	249390	43.29			
1	Bromochloromethane	5.35			128	125716	10.00			
1	Chloroform	5.47			83	449835	10.03			
1	1,1,1-Trichloroethane (TCA)	5.60			97	353571	8.66			
1	Carbon Tetrachloride	5.75			117	283680	8.28			
1	1,1-Dichloropropene	5.82			75	285741	9.33			
1	Isobutyl Alcohol	6.14			43	171451	547.49			
1	Benzene	6.05			78	1007417	10.07			
1	1,2-Dichloroethane (EDC)	6.19			62	309463	10.30			
1	Trichloroethene (TCE)	6.82			95	254305	9.43			
1	1,2-Dichloropropane	7.13			63	277180	11.10			
1	Dibromomethane	7.26			93	138186	10.62			
1	Methyl Methacrylate	7.28			69	117090	11.05			
1	1,4-Dioxane	7.27			88	43656	596.18			
1	Bromodichloromethane	7.43			83	333383	10.03			
1	2-Nitropropane	7.77			41	189261	46.56			
1	2-Chloroethyl Vinyl Ether	7.80			63	122741	10.87			
1	cis-1,3-Dichloropropene	7.92			75	405150	10.58			
1	4-Methyl-2-pentanone (MIBK)	8.09			58	971140	211.33			
1	Toluene	8.19			92	641598	10.33			
2	trans-1,3-Dichloropropene	8.53			75	330975	10.30			
2	Ethyl Methacrylate	8.58			69	234516	10.82			
2	1,1,2-Trichloroethane	8.70			83	169308	10.49			
2	Tetrachloroethene (PCE)	8.71			164	202454	8.46			
2	2-Hexanone	8.95			57	304732	203.85			
2	1,3-Dichloropropane	8.87			76	334622	10.69			
2	Dibromochloromethane	9.05			129	234014	9.71			
2	1,2-Dibromoethane (EDB)	9.16			107	186386	10.28			
2	1-Chlorohexane	9.61			91	303871	8.54			
2	Chlorobenzene	9.63			112	729004	10.30			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS27\DATA\091713\0917F003.D			Instrument:	MS27
Acqu Date:	09/17/2013 09:20	Quant Date:	09/17/2013 09:47	Vial:	3
Run Type:	CCV			Dilution:	1.0
Lab ID:	KWG1310078-1			Soln Conc. Units:	PPB

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Ethylbenzene	9.72			106	368640	9.66			
2	1,1,1,2-Tetrachloroethane	9.73			131	251985	9.25			
2	m,p-Xylenes	9.85			106	907875	20.12			
2	o-Xylene	10.24			106	445628	9.84			
2	Styrene	10.27			103	368714m	10.39			
2	Bromoform	10.47			173	134016	9.03			
2	Isopropylbenzene	10.60			105	1115001	9.59			
2	cis-1,4-Dichloro-2-butene	10.76			89	105154	42.05			
3	1,1,2,2-Tetrachloroethane	10.99			83	199921	11.10			
3	trans-1,4-Dichloro-2-butene	11.06			53	54676	11.60			
3	Bromobenzene	10.92			156	303896	10.11			
3	n-Propylbenzene	11.01			91	1333975	9.88			
3	1,2,3-Trichloropropane	11.03			110	58114	10.23			
3	2-Chlorotoluene	11.11			91	830021	10.23			
3	1,3,5-Trimethylbenzene	11.20			105	939795	9.90			
3	4-Chlorotoluene	11.23			91	903511m	10.67			
3	tert-Butylbenzene	11.50			119	778889	9.59			
3	1,2,4-Trimethylbenzene	11.57			105	972198	10.30			
3	sec-Butylbenzene	11.72			105	1128515	9.55			
3	4-Isopropyltoluene	11.87			119	938105	9.75			
3	1,3-Dichlorobenzene	11.86			146	553148	10.31			
3	1,4-Dichlorobenzene	11.96			146	554649	10.25			
3	n-Butylbenzene	12.28			91	857746	10.66			
3	1,2-Dichlorobenzene	12.33			146	511061	10.99			
3	1,2-Dibromo-3-chloropropane	13.14			155	26667	10.13			
3	1,3,5-Trichlorobenzene	13.28			180	382728	10.21			
3	1,2,4-Trichlorobenzene	13.92			180	292524	10.58			
3	Hexachlorobutadiene	14.05			225	131219	8.32			
3	Naphthalene	14.17			128	386894	11.03			
3	1,2,3-Trichlorobenzene	14.42			180	230625	10.38			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 09:41:17 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	6.43	96	965184	10.00	PPB	0.00
64) Chlorobenzene-d5	9.61	82	393203	10.00	PPB	0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	332735	10.00	PPB	0.00
System Monitoring Compounds						
43) Dibromofluoromethane	5.68	113	247631	9.51	PPB	0.00
Spiked Amount 10.000			Recovery =	95.10%		
47) 1,2-Dichloroethane-d4	6.10	65	237514	9.50	PPB	0.00
Spiked Amount 10.000			Recovery =	95.00%		
62) Toluene-d8	8.12	98	957753	10.07	PPB	0.00
Spiked Amount 10.000			Recovery =	100.70%		
84) 4-Bromofluorobenzene	10.79	95	338653	9.76	PPB	0.00
Spiked Amount 10.000			Recovery =	97.60%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.14	85	253855	8.84	PPB	100
3) Chloromethane	1.29	50	367226	11.62	PPB	99
4) Vinyl Chloride	1.38	62	287873	9.70	PPB	98
6) Bromomethane	1.67	96	250408	13.22	PPB	99
7) Chloroethane	1.76	64	163018	9.92	PPB	97
8) Dichlorofluoromethane	1.97	67	450280	10.26	PPB	97
9) Trichlorofluoromethane	1.96	101	340336	8.39	PPB	98
10) Ethyl Ether	2.27	59	164383	11.52	PPB	97
11) Acrolein	2.48	56	262814	193.03	PPB	100
12) Trichlorotrifluoroethane	2.47	151	168029	8.97	PPB	97
13) 1,1-Dichloroethene	2.50	96	167910	9.10	PPB	96
14) Acetone	2.65	43	603998	196.94	PPB	99
15) Iodomethane	2.68	142	603341	50.50	PPB	98
16) Carbon Disulfide	2.70	76	689170	10.00	PPB	98
17) 2-Propanol (Isopropyl Alco	2.82	45	299628	767.14	PPB	99
18) 3-Chloro-1-propene	2.96	76	135906	10.54	PPB	96
19) Methyl Acetate	3.02	43	116255	10.75	PPB	97
20) Acetonitrile	3.07	40	326618	462.87	PPB	97
21) Methylene Chloride	3.15	84	249524	10.58	PPB	99
22) tert-Butyl Alcohol	3.34	59	48825	63.17	PPB	98
23) Acrylonitrile	3.61	53	197340	45.67	PPB	96
24) Methyl tert-Butyl Ether	3.43	73	1058666	21.35	PPB	99
25) trans-1,2-Dichloroethene	3.45	96	230042	9.46	PPB	96
26) Hexane	3.75	57	295573	9.41	PPB	98
27) Diisopropyl Ether	4.20	45	751367	10.55	PPB	97
28) 1,1-Dichloroethane	4.17	63	442234	9.89	PPB	98
29) Vinyl Acetate	4.29	86	70532	21.65	PPB	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 09:41:17 2013 Quant Results File: 081213MS27_8260

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
30)	Chloroprene	4.24	53	1347741	39.83	PPB	99
31)	tert-Butyl Ethyl Ether	4.74	59	668177	10.44	PPB	97
32)	2,2-Dichloropropane	4.97	77	345443	9.35	PPB	99
33)	cis-1,2-Dichloroethene	5.03	96	261436	9.51	PPB	99
34)	2-Butanone	5.11	72	259920	210.54	PPB	98
35)	Ethyl Acetate	5.17	61	36800	20.83	PPB	99
36)	Propionitrile	5.30	54	71662	46.27	PPB	94
37)	Methacrylonitrile	5.43	67	249390	43.29	PPB	95
38)	Bromochloromethane	5.35	128	125716	10.00	PPB	99
39)	Tetrahydrofuran	5.36	71	17503	13.35	PPB	99
40)	Chloroform	5.47	83	449835	10.03	PPB	99
41)	Cyclohexane	5.56	56	335567	9.24	PPB	97
42)	1,1,1-Trichloroethane	5.60	97	353571	8.66	PPB	100
44)	Carbon Tetrachloride	5.75	117	283680	8.28	PPB	96
45)	1,1-Dichloropropene	5.82	75	285741	9.33	PPB	98
46)	Isobutyl Alcohol	6.14	43	171451	547.49	PPB	98
48)	Benzene	6.05	78	1007417	10.07	PPB	100
49)	1,2-Dichloroethane	6.19	62	309463	10.30	PPB	98
50)	tert-Amyl Methyl Ether	6.20	55	138583	10.53	PPB	98
51)	Trichloroethene	6.82	95	254305	9.43	PPB	98
52)	Methylcyclohexane	6.93	83	350048	9.30	PPB	99
53)	1,2-Dichloropropane	7.13	63	277180	11.10	PPB	96
54)	Dibromomethane	7.26	93	138186	10.62	PPB	95
55)	Methyl methacrylate	7.28	69	117090	11.05	PPB	97
56)	1,4-Dioxane	7.27	88	43656	596.18	PPB	95
57)	Bromodichloromethane	7.43	83	333383	10.03	PPB	100
58)	2-Nitropropane	7.77	41	189261	46.56	PPB	99
59)	2-Chloroethyl Vinyl Ether	7.80	63	122741	10.87	PPB	98
60)	cis-1,3-Dichloropropene	7.92	75	405150	10.58	PPB	98
61)	4-Methyl-2-pentanone (MIBK	8.09	58	971140	211.33	PPB	97
63)	Toluene	8.19	92	641598	10.33	PPB	98
65)	n-Octane	8.27	85	122776	8.88	PPB	98
66)	trans-1,3-Dichloropropene	8.53	75	330975	10.30	PPB	98
67)	Ethyl methacrylate	8.58	69	234516	10.82	PPB	99
68)	1,1,2-Trichloroethane	8.70	83	169308	10.49	PPB	96
69)	Tetrachloroethene	8.71	164	202454	8.46	PPB	98
70)	2-Hexanone	8.95	57	304732	203.85	PPB	99
71)	1,3-Dichloropropane	8.87	76	334622	10.69	PPB	99
72)	Dibromochloromethane	9.05	129	234014	9.71	PPB	98
73)	1,2-Dibromoethane (EDB)	9.16	107	186386	10.28	PPB	96
74)	1-Chlorohexane	9.61	91	303871	8.54	PPB	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 09:41:17 2013 Quant Results File: 081213MS27_8260

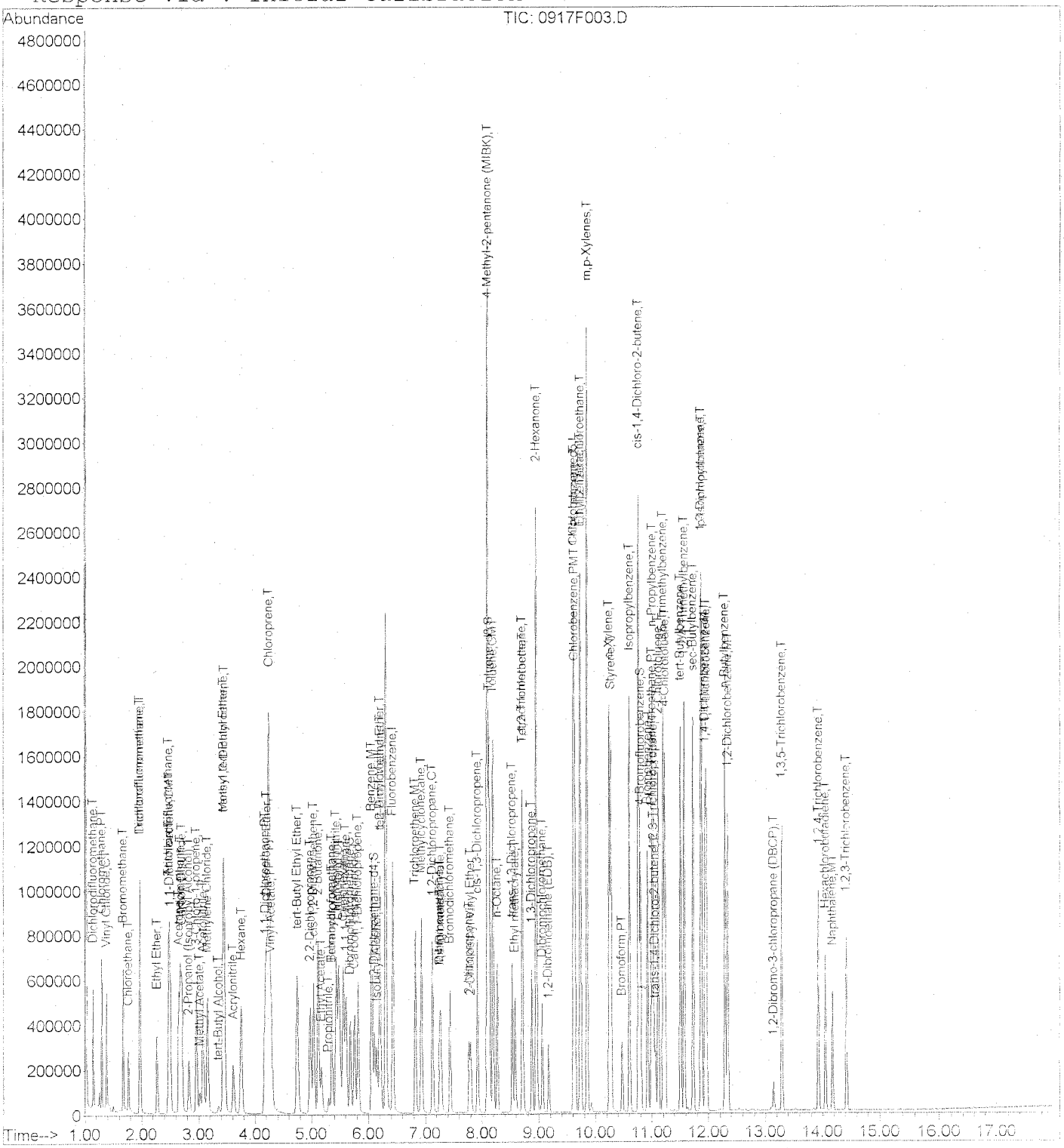
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
75)	Chlorobenzene	9.63	112	729004	10.30	PPB		97
76)	Ethylbenzene	9.72	106	368640	9.66	PPB		98
77)	1,1,1,2-Tetrachloroethane	9.73	131	251985	9.25	PPB		96
78)	m,p-Xylenes	9.85	106	907875	20.12	PPB		98
79)	o-Xylene	10.24	106	445628	9.84	PPB		95
80)	Styrene	10.27	103	368714m	10.39	PPB		
81)	Bromoform	10.47	173	134016	9.03	PPB		98
82)	Isopropylbenzene	10.60	105	1115001	9.59	PPB		100
83)	cis-1,4-Dichloro-2-butene	10.76	89	105154	42.05	PPB		95
86)	1,1,2,2-Tetrachloroethane	10.99	83	199921	11.10	PPB		96
87)	trans-1,4-Dichloro-2-buten	11.06	53	54676	11.60	PPB		95
88)	Bromobenzene	10.92	156	303896	10.11	PPB		98
89)	n-Propylbenzene	11.01	91	1333975	9.88	PPB		99
90)	1,2,3-Trichloropropane	11.03	110	58114	10.23	PPB		99
91)	2-Chlorotoluene	11.11	91	830021	10.23	PPB		98
92)	1,3,5-Trimethylbenzene	11.20	105	939795	9.90	PPB		100
93)	4-Chlorotoluene	11.23	91	903511m	10.67	PPB		
94)	tert-Butylbenzene	11.50	119	778889	9.59	PPB		99
95)	1,2,4-Trimethylbenzene	11.57	105	972198	10.30	PPB		99
96)	sec-Butylbenzene	11.72	105	1128515	9.55	PPB		99
97)	p-Isopropyltoluene	11.87	119	938105	9.75	PPB		99
98)	1,3-Dichlorobenzene	11.86	146	553148	10.31	PPB		98
99)	1,4-Dichlorobenzene	11.96	146	554649	10.25	PPB		100
100)	n-Butylbenzene	12.28	91	857746	10.66	PPB		99
101)	1,2-Dichlorobenzene	12.33	146	511061	10.99	PPB		99
102)	1,2-Dibromo-3-chloropropan	13.14	155	26667	10.13	PPB	#	79
103)	1,3,5-Trichlorobenzene	13.28	180	382728	10.21	PPB		99
104)	1,2,4-Trichlorobenzene	13.92	180	292524	10.58	PPB		98
105)	Hexachlorobutadiene	14.05	225	131219	8.32	PPB		97
106)	Naphthalene	14.17	128	386894	11.03	PPB		100
107)	1,2,3-Trichlorobenzene	14.42	180	230625	10.38	PPB		97

(#) = qualifier out of range (m) = manual integration

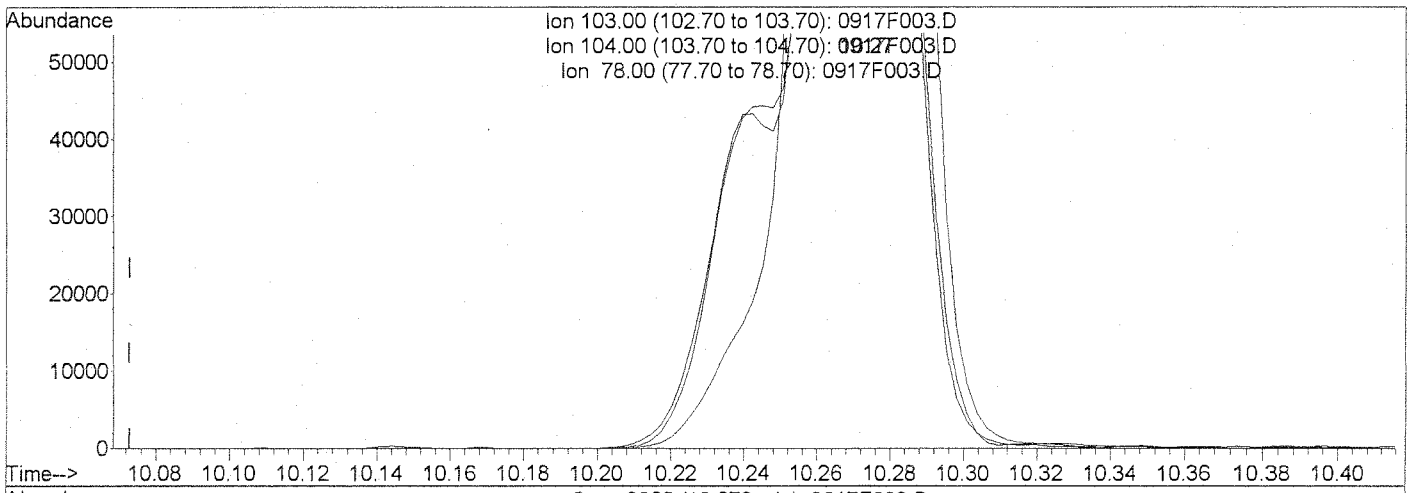
Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 9:47 2013 Quant Results File: 081213MS27_8

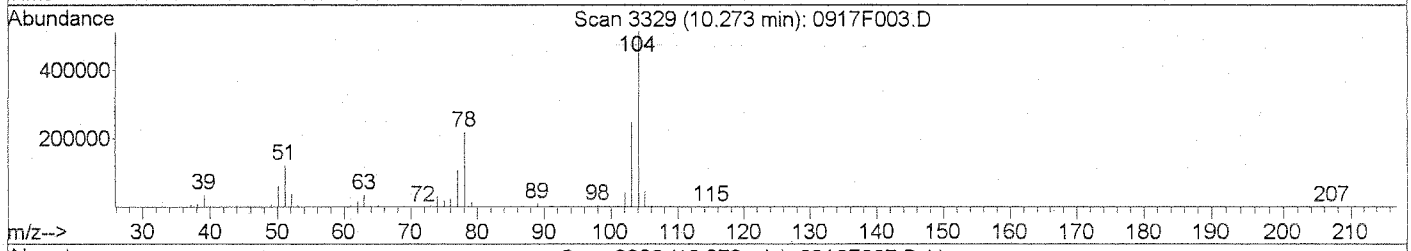
Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Sat Sep 14 17:39:03 2013
Response via : Initial Calibration

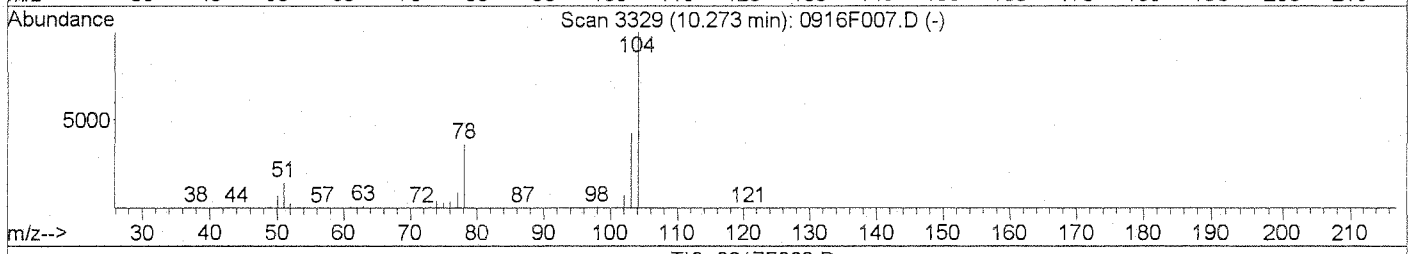


Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 9:44 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F003.D

(80) Styrene (T)

10.27min 11.87PPB

response 421162

Ion	Exp%	Act%
103.00	100	100
104.00	202.70	207.47
78.00	86.10	88.89
0.00	0.00	0.00

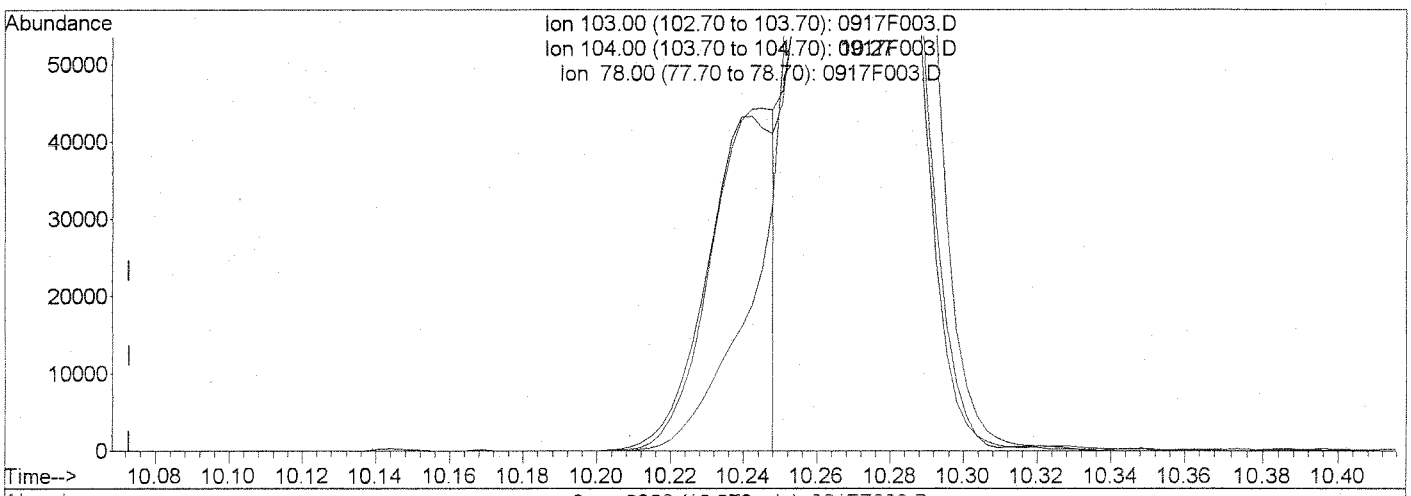
Manual Integration:

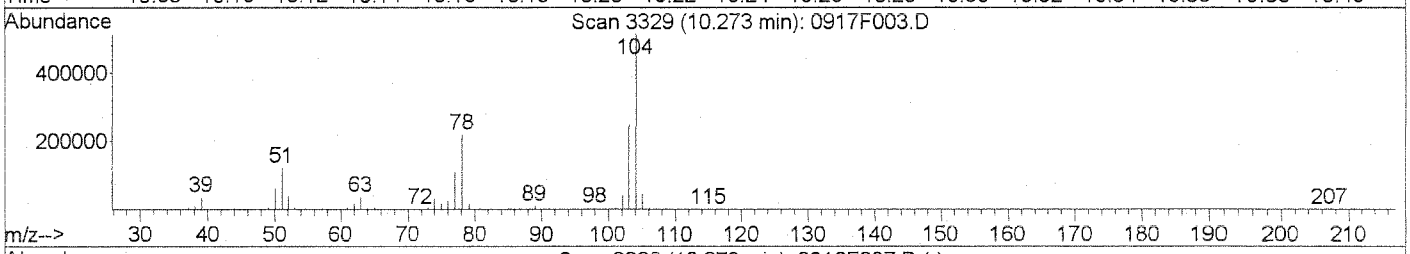
Before

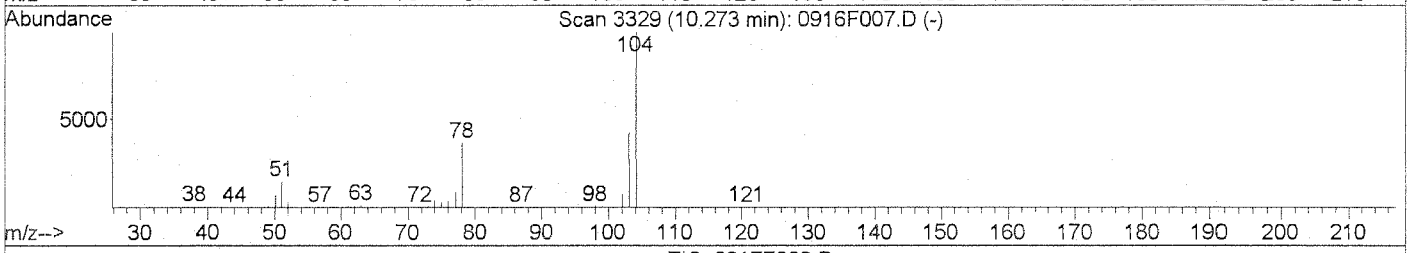
9.17.13
KS

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 9:46 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F003.D

(80) Styrene (T)

10.27min 10.39PPB m

response 368714

Ion	Exp%	Act%
103.00	100	100
104.00	202.70	207.47
78.00	86.10	88.89
0.00	0.00	0.00

Manual Integration:

After

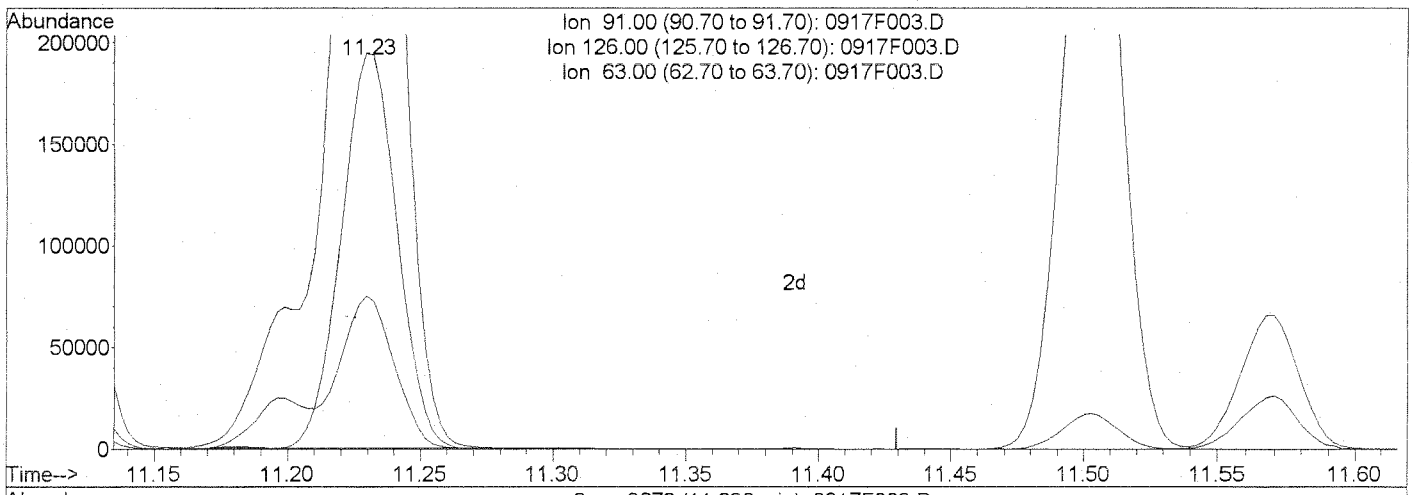
Shoulder KS

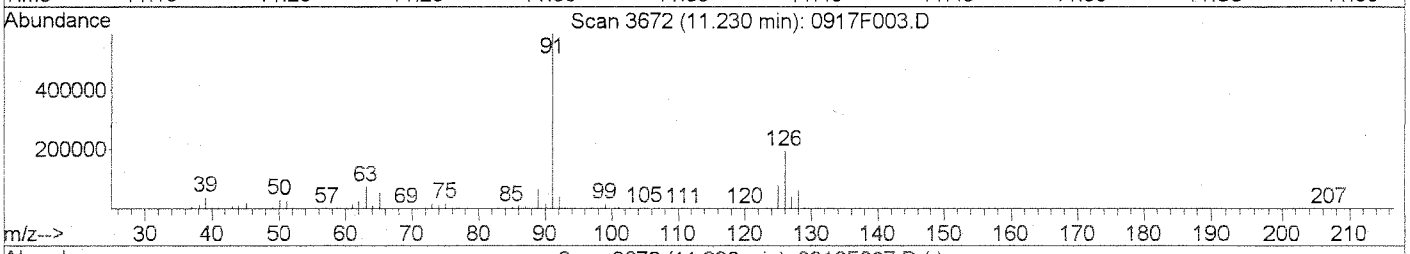
09/17/13

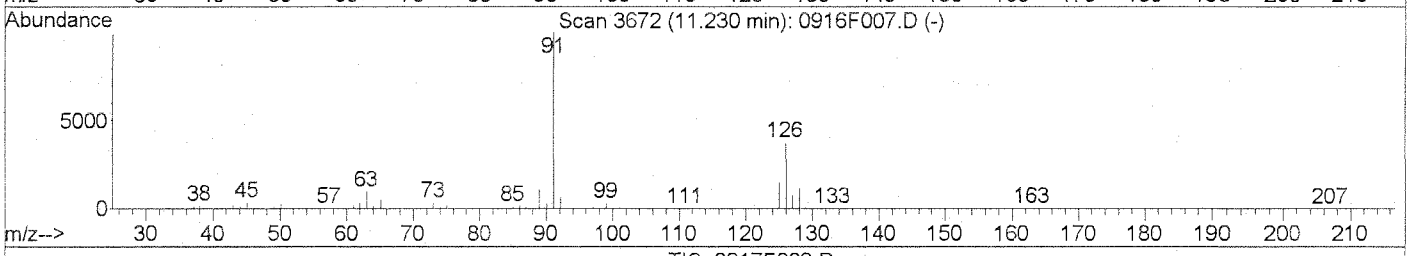
KS 9/17

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 9:46 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F003.D

(93) 4-Chlorotoluene (T)

11.23min 11.31PPB

response 957272

Ion	Exp%	Act%
91.00	100	100
126.00	34.10	32.95
63.00	12.60	12.74
0.00	0.00	0.00

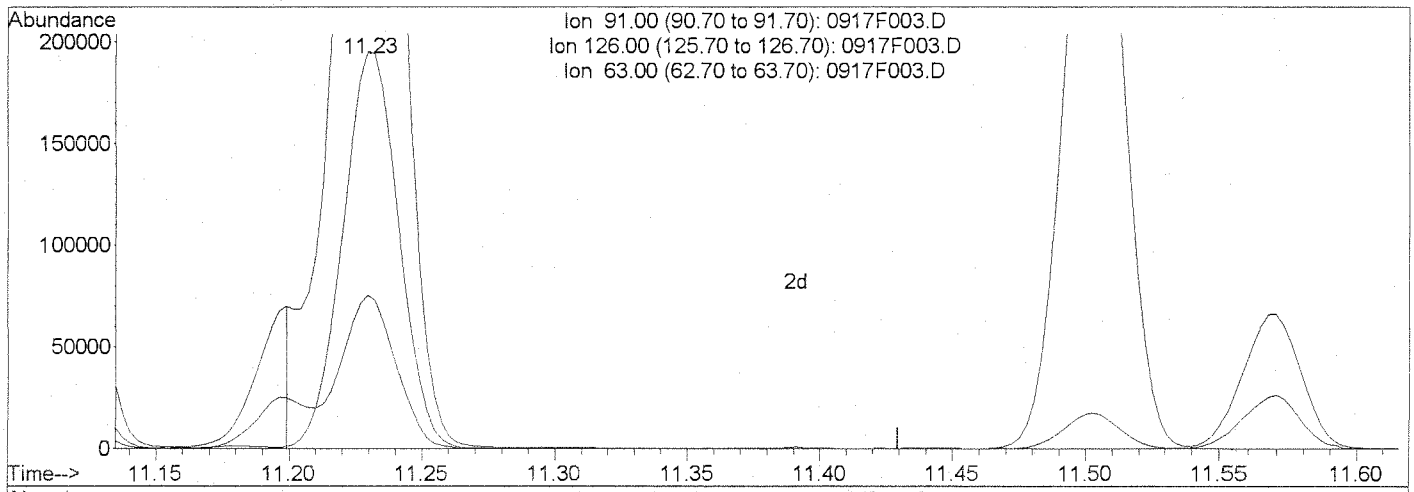
Manual Integration:

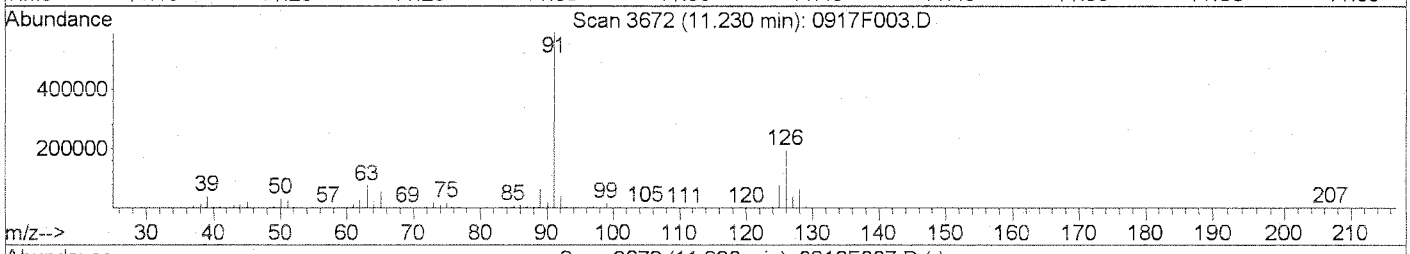
Before

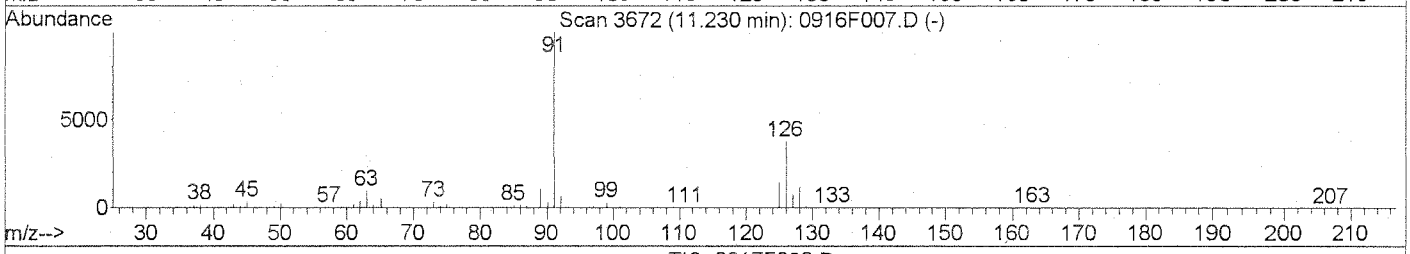
KS 9.17.13

Data File : J:\MS27\DATA\091713\0917F003.D Vial: 3
Acq On : 17 Sep 2013 9:20 am Operator: KS
Sample : 8260 CCV Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 9:47 2013 Quant Results File: temp.res

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Multiple Level Calibration







TIC: 0917F003.D

(93) 4-Chlorotoluene (T)

11.23min 10.67PPB m

response 903511

Ion	Exp%	Act%
91.00	100	100
126.00	34.10	32.95
63.00	12.60	12.72
0.00	0.00	0.00

Manual Integration:

After

Shoulder

09/17/13

Organic Analysis:
Volatile Organic Compounds

Validation Package

Sample Prep and Screen Data

u:\Stealth\Crystal.rpt\DividerF.rpt

Date: 9.17.13

By: KSchmid

Columbia Analytical Services, Inc.

Injection Log

MS27 - Agilent 5975C

Tune File: BFBtune.u

New Tune: No

Run: 358758

IS/SS Std. ID: 72V0A23C (9.24.13)

CCV Std ID: 72V0A01A (10.9.13) 49C (9.20.13)

ICAL Date: Cal 12737 8/12/13 Cal 12690 9.17.13

MS/DMS/LCS/ICV Std ID: 72V0A46A, 47B, 47C, 45B (9/17)

Second RV: KWG1310078A/8 P

BFB Std. ID: 72V0A13C (9.19.13)

LIMS ID:

KS EE

	Sample Name	File Name	Method	Dilution	pH<2	Comments
1	Primer	0917F001	~~8260_Beta_MD~~			
2	BFB 50ng	2		4.4 mL/50mL		
3	8260 CCV	3		10+5 mL/50mL		
4	LCS	4		10+5+5+7.5/mL 50mL		
5	K9439-3 MS	5		8.8+4.4+4.4+6.4 mL/~~50mL~~ 50	✓	
6	DMS	6			✓	
7	IB	7				
8	MDL	8		0.5+0.25 mL/50mL		
9	MB	9				
10	K1309439-3	10			✓	
11	IB	11				
12	K9438-~~*~~+3	12			6	51250 TB
13	6	13			6	51250 TB *
14	4 ~~4 5 9~~ *	14			6	~~51251 TB~~ * RE KS
15	5 ~~12~~ *	15			6	~~51251 TB~~ * 9.17.13
16	9 ~~+~~ *	16			6	51251 TB
17	12 ~~2~~ *	17			6	51251 TB
18	1 ~~4~~ *	18			6	
19	2 ~~5~~ *	19			6	
20	8	20			6	
21	10	21			6	
22	11	22			6	
23	K9283-19	23			✓	
24	IB	24				
25						
26						
27						

WO KS 9.17.13

Data File : J:\MS27\DATA\091713\0917F008.D Vial: 7
Acq On : 17 Sep 2013 12:30 pm Operator: KS
Sample : MRL Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:21:33 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

KS 9.18.13

9/19/13

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene	6.43	96	965006	10.00	PPB		0.00
64) Chlorobenzene-d5	9.60	82	386179	10.00	PPB		0.00
85) 1,4-Dichlorobenzene-d4	11.94	152	308844	10.00	PPB		0.00
System Monitoring Compounds							
43) Dibromofluoromethane	5.68	113	242805	9.33	PPB		0.00
Spiked Amount 10.000			Recovery =	93.30%			
47) 1,2-Dichloroethane-d4	6.10	65	236754	9.47	PPB		0.00
Spiked Amount 10.000			Recovery =	94.70%			
62) Toluene-d8	8.12	98	947517	9.96	PPB		0.00
Spiked Amount 10.000			Recovery =	99.60%			
84) 4-Bromofluorobenzene	10.79	95	327564	9.62	PPB		0.00
Spiked Amount 10.000			Recovery =	96.20%			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.14	85	11219	0.39	PPB		96
3) Chloromethane	1.29	50	18500	0.59	PPB		92
4) Vinyl Chloride	1.38	62	13386	0.45	PPB		98
6) Bromomethane	1.67	96	12263	0.65	PPB		96
7) Chloroethane	1.76	64	9305	0.57	PPB		89
8) Dichlorofluoromethane	1.97	67	21628	0.49	PPB		97
9) Trichlorofluoromethane	1.96	101	15891	0.39	PPB		100
10) Ethyl Ether	2.28	59	8872	0.62	PPB		90
11) Acrolein	2.48	56	21041	15.46	PPB		93
12) Trichlorotrifluoroethane	2.47	151	6989	0.37	PPB		86
13) 1,1-Dichloroethene	2.50	96	7920	0.43	PPB		93
14) Acetone	2.66	43	33603	10.96	PPB		94
15) Iodomethane	2.68	142	30839	2.70	PPB		98
16) Carbon Disulfide	2.70	76	33095	0.48	PPB		98
17) 2-Propanol (Isopropyl Alco	2.82	45	16194	41.47	PPB		91
18) 3-Chloro-1-propene	2.96	76	6654	0.52	PPB	#	61
19) Methyl Acetate	3.02	43	6080	0.56	PPB		87
20) Acetonitrile	3.08	40	16277	23.07	PPB		93
21) Methylene Chloride	3.15	84	14861	0.63	PPB		92
22) tert-Butyl Alcohol	3.34	59	1386	1.79	PPB		86
23) Acrylonitrile	3.61	53	10280	2.38	PPB		91
24) Methyl tert-Butyl Ether	3.44	73	57179	1.15	PPB		96
25) trans-1,2-Dichloroethene	3.45	96	11315	0.47	PPB		97
26) Hexane	3.74	57	15546	0.49	PPB		93
27) Diisopropyl Ether	4.20	45	38299	0.54	PPB		97
28) 1,1-Dichloroethane	4.17	63	21338	0.48	PPB		93
29) Vinyl Acetate	4.28	86	2206	0.68	PPB	#	28
30) Chloroprene	4.24	53	60636	1.79	PPB		93
31) tert-Butyl Ethyl Ether	4.75	59	34891	0.55	PPB		95
32) 2,2-Dichloropropane	4.97	77	16345	0.44	PPB		99
33) cis-1,2-Dichloroethene	5.03	96	13999	0.51	PPB		93
34) 2-Butanone	5.13	72	13148	10.65	PPB		97
35) Ethyl Acetate	5.17	61	666	0.38	PPB	#	65
36) Propionitrile	5.30	54	2115	1.37	PPB		64
37) Methacrylonitrile	5.44	67	13066	2.27	PPB		96
38) Bromochloromethane	5.36	128	6527	0.52	PPB		83
39) Tetrahydrofuran	5.38	71	2886	2.20	PPB	#	51

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F008.D Vial: 7
Acq On : 17 Sep 2013 12:30 pm Operator: KS
Sample : MRL Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:21:33 2013 Quant Results File: 081213MS27_8260.RES

Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
40)	Chloroform	5.47	83	22487	0.50	PPB		99
41)	Cyclohexane	5.56	56	13379	0.37	PPB		96
42)	1,1,1-Trichloroethane	5.61	97	15140	0.37	PPB		87
44)	Carbon Tetrachloride	5.76	117	12404	0.36	PPB		87
45)	1,1-Dichloropropene	5.82	75	12696	0.41	PPB		84
46)	Isobutyl Alcohol	6.15	43	6306	20.14	PPB		96
48)	Benzene	6.05	78	48025	0.48	PPB		96
49)	1,2-Dichloroethane	6.20	62	16647	0.55	PPB		94
50)	tert-Amyl Methyl Ether	6.20	55	8530	0.65	PPB	#	71
51)	Trichloroethene	6.82	95	12571	0.47	PPB		94
52)	Methylcyclohexane	6.93	83	14076	0.37	PPB		91
53)	1,2-Dichloropropane	7.12	63	14546	0.58	PPB		88
54)	Dibromomethane	7.26	93	7448	0.57	PPB		93
55)	Methyl methacrylate	7.28	69	6614	0.62	PPB		85
56)	1,4-Dioxane	7.27	88	2857	39.02	PPB		81
57)	Bromodichloromethane	7.43	83	16769	0.50	PPB		90
58)	2-Nitropropane	7.77	41	10476	2.58	PPB		93
59)	2-Chloroethyl Vinyl Ether	7.80	63	5951	0.53	PPB		86
60)	cis-1,3-Dichloropropene	7.92	75	20391	0.53	PPB		98
61)	4-Methyl-2-pentanone (MIBK	8.09	58	48828	10.63	PPB		95
63)	Toluene	8.19	92	31098	0.50	PPB		90
65)	n-Octane	8.27	85	5082	0.37	PPB		91
66)	trans-1,3-Dichloropropene	8.53	75	15728	0.50	PPB		96
67)	Ethyl methacrylate	8.58	69	12093	0.57	PPB		94
68)	1,1,2-Trichloroethane	8.70	83	9207	0.58	PPB		93
69)	Tetrachloroethene	8.71	164	9437	0.40	PPB		90
70)	2-Hexanone	8.95	57	12324	8.39	PPB		91
71)	1,3-Dichloropropane	8.87	76	18388	0.60	PPB		98
72)	Dibromochloromethane	9.05	129	10637	0.45	PPB		93
73)	1,2-Dibromoethane (EDB)	9.17	107	9756	0.55	PPB		93
74)	1-Chlorohexane	9.61	91	15251	0.44	PPB		97
75)	Chlorobenzene	9.63	112	36804	0.53	PPB		98
76)	Ethylbenzene	9.72	106	17741	0.47	PPB		91
77)	1,1,1,2-Tetrachloroethane	9.73	131	12905	0.48	PPB		97
78)	m,p-Xylenes	9.85	106	41649	0.94	PPB		99
79)	o-Xylene	10.24	106	21644	0.49	PPB		99
80)	Styrene	10.27	103	17433	0.50	PPB		95
81)	Bromoform	10.47	173	6524	0.45	PPB		91
82)	Isopropylbenzene	10.60	105	48945	0.43	PPB		100
83)	cis-1,4-Dichloro-2-butene	10.76	89	4937	2.01	PPB	#	79
86)	1,1,2,2-Tetrachloroethane	10.99	83	10464	0.63	PPB		95
87)	trans-1,4-Dichloro-2-buten	11.06	53	2796	0.64	PPB	#	67
88)	Bromobenzene	10.92	156	15892	0.57	PPB		85
89)	n-Propylbenzene	11.01	91	58513	0.47	PPB		97
90)	1,2,3-Trichloropropane	11.03	110	2851	0.54	PPB	#	82
91)	2-Chlorotoluene	11.11	91	39613	0.53	PPB		92
92)	1,3,5-Trimethylbenzene	11.20	105	41063	0.47	PPB		93
93)	4-Chlorotoluene	11.23	91	45997	0.59	PPB		92
94)	tert-Butylbenzene	11.50	119	34189	0.45	PPB		95
95)	1,2,4-Trimethylbenzene	11.57	105	42131	0.48	PPB		95
96)	sec-Butylbenzene	11.72	105	48443	0.44	PPB		98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F008.D Vial: 7
Acq On : 17 Sep 2013 12:30 pm Operator: KS
Sample : MRL Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:21:33 2013 Quant Results File: 081213MS27_8260.RES

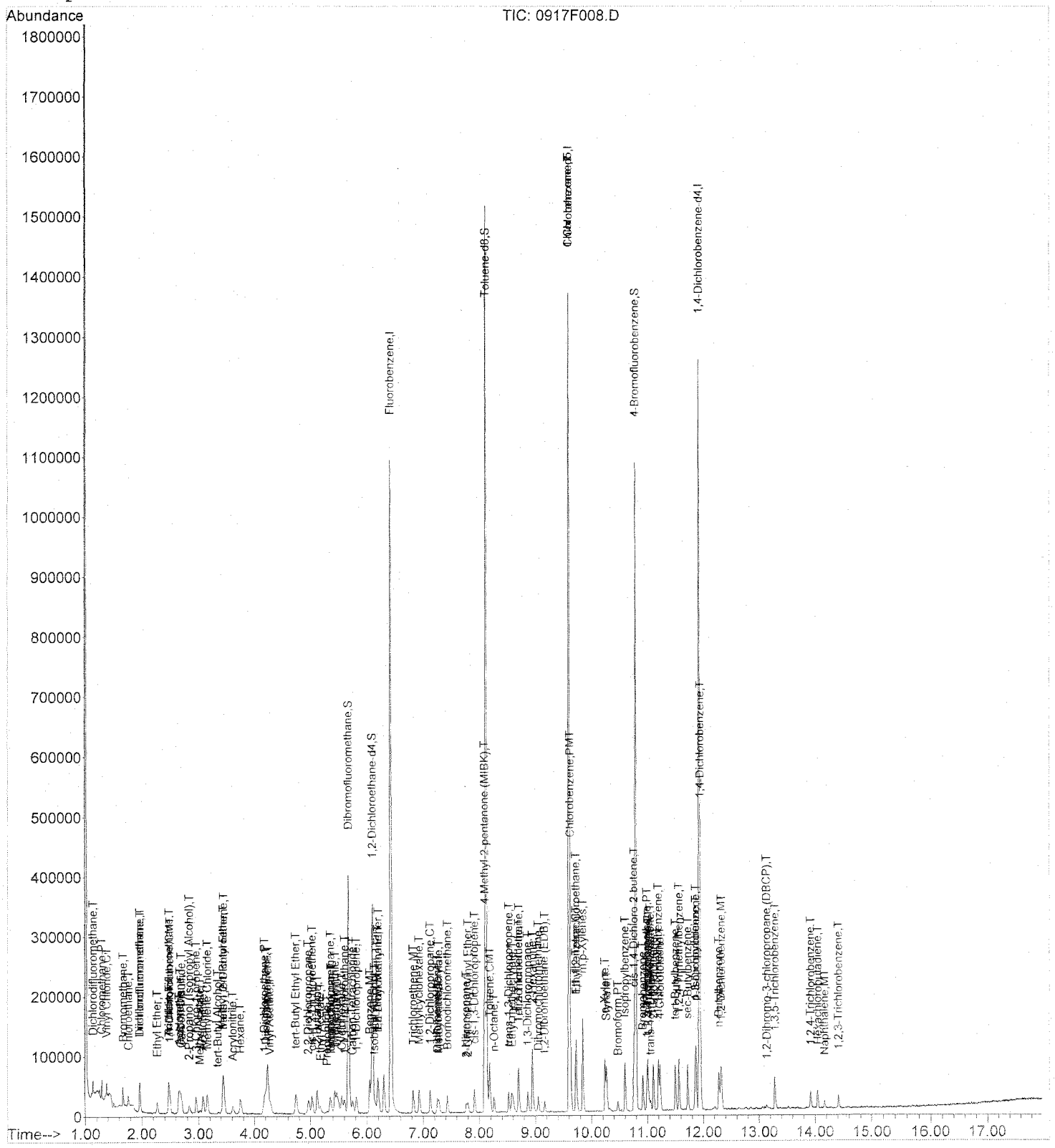
Quant Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration
DataAcq Meth : 8260_BETA_MD

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
97)	p-Isopropyltoluene	11.88	119	37756	0.42	PPB		97
98)	1,3-Dichlorobenzene	11.86	146	25891	0.52	PPB		99
99)	1,4-Dichlorobenzene	11.96	146	28389	0.57	PPB		98
100)	n-Butylbenzene	12.28	91	31601	0.42	PPB		98
101)	1,2-Dichlorobenzene	12.33	146	24412	0.57	PPB		99
102)	1,2-Dibromo-3-chloropropan	13.15	155	514	0.21	PPB	#	53
103)	1,3,5-Trichlorobenzene	13.28	180	15239	0.44	PPB		78
104)	1,2,4-Trichlorobenzene	13.93	180	7542	0.30	PPB		82
105)	Hexachlorobutadiene	14.05	225	5901	0.40	PPB		83
106)	Naphthalene	14.17	128	7904	2.19	PPB		93
107)	1,2,3-Trichlorobenzene	14.42	180	5918	2.10	PPB		92

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS27\DATA\091713\0917F008.D Vial: 7
Acq On : 17 Sep 2013 12:30 pm Operator: KS
Sample : MRL Inst : MS27
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Sep 17 16:25 2013 Quant Results File: 081213MS27_8260.RES

Method : J:\MS27\METHODS\081213MS27_8260.M (RTE Integrator)
Title : VOA MS27 EPA Method 8260B
Last Update : Tue Sep 17 09:41:03 2013
Response via : Initial Calibration



Organophosphorus Pesticides

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Validation Package

u:\Stealth\Crystal.rpt\DividerB.rpt

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Validation Package

QC Reports

u:\Stealth\Crystal.rpt\DividerC.rpt

QA/QC Report

Client: Environmental Planning Specialists **Service Request:** K1309638
Project: Drexel
Sample Matrix: Water

Surrogate Recovery Summary
Organophosphorus Pesticides by HRGC/MS/MS

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: GC/MS/MS **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
13254-BW-4	K1309638-001	43	81
13254-BW-2	K1309638-002	50	78
13253-BW-3	K1309638-004	53	105
13253-Well D	K1309638-005	48	103
13255-BW-1	K1309638-008	47	101
13255-DUP	K1309638-010	46	88
13255-Rinse	K1309638-011	51	98
Method Blank	KWG1310066-3	48	97
Lab Control Sample	KWG1310066-1	52	99
Duplicate Lab Control Sample	KWG1310066-2	46	101

Surrogate Recovery Control Limits (%)

Sur1	= Dichlorvos-d6	15-96
Sur2	= Chlorpyrifos-d10	39-124

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/10/2013
Time Analyzed: 14:45

Internal Standard Area and RT Summary
Organophosphorus Pesticides by HRGC/MS/MS

File ID: J:\MS21\DATA\101013\1010F014.D
Instrument ID: MS21
Analysis Method: GC/MS/MS

Lab Code: KWG1311302-1
Analysis Lot: KWG1311302

		Phenanthrene-d10		Fluoranthene-d10		Chrysene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	73,438	12.41	66,736	15.79	81,155	18.66
	Upper Limit ==>	146,877	12.91	133,472	16.29	162,311	19.16
	Lower Limit ==>	36,719	11.91	33,368	15.29	40,578	18.16
	ICAL Result ==>	77,056	12.41	67,992	15.79	83,637	18.67
Associated Analyses							
Method Blank	KWG1310066-3	90,399	12.41	71,113	15.79	85,629	18.66
Lab Control Sample	KWG1310066-1	94,113	12.40	67,499	15.79	80,392	18.66
Duplicate Lab Control Sample	KWG1310066-2	98,470	12.40	73,323	15.78	88,205	18.66
13254-BW-4	K1309638-001	102,472	12.40	70,380	15.78	79,279	18.66
13254-BW-2	K1309638-002	84,250	12.40	70,254	15.78	81,828	18.66
13253-BW-3	K1309638-004	98,946	12.40	69,945	15.78	80,308	18.66
13253-Well D	K1309638-005	98,463	12.40	68,598	15.78	75,627	18.66
13255-BW-1	K1309638-008	100,588	12.40	71,019	15.78	80,095	18.66
13255-DUP	K1309638-010	97,476	12.40	70,315	15.78	80,341	18.66
13255-Rinse	K1309638-011	98,778	12.40	74,688	15.78	87,207	18.65

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	10/10/2013

Lab Control Spike/Duplicate Lab Control Spike Summary
Organophosphorus Pesticides by HRGC/MS/MS

Extraction Method:	EPA 3535A	**Units:**	ng/L
Analysis Method:	GC/MS/MS	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1310066

	Lab Control Sample KWG1310066-1 Lab Control Spike			Duplicate Lab Control Sample KWG1310066-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Demeton-O,S	727	1000	73	573	1000	57 *	70-120	24	30
Naled (Dibrom)	673	1000	67 *	655	1000	65 *	70-120	3	30
Phorate	1040	1000	104	1000	1000	100	70-120	4	30
Monocrotophos	ND	1000	0 *	ND	1000	0 *	70-120	NC	30
Dimethoate	108	1000	11 *	94.6	1000	9 *	70-120	13	30
Ronnel	992	1000	99	1020	1000	102	70-120	2	30
Methyl Parathion	856	1000	86	855	1000	86	70-120	0	30
Malathion	858	1000	86	871	1000	87	70-120	2	30
Fenthion	909	1000	91	909	1000	91	70-120	0	30
Trichloronate	936	1000	94	968	1000	97	70-120	3	30
Ethyl Parathion	923	1000	92	901	1000	90	70-120	2	30
Merphos, Total	726	1000	73	759	1000	76	70-120	4	30
Tokuthion	929	1000	93	956	1000	96	70-120	3	30
Fensulfothion	295	1000	29 *	259	1000	26 *	70-120	13	30
Bolstar (Sulprofos)	904	1000	90	913	1000	91	70-120	1	30
EPN	922	1000	92	967	1000	97	70-120	5	30
Azinphos-methyl	576	1000	58 *	542	1000	54 *	70-120	6	30
Coumaphos	842	1000	84	849	1000	85	70-120	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	10/10/2013
		Time Analyzed:	15:15

Method Blank Summary
Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Method Blank	**Instrument ID:**	MS21
Lab Code:	KWG1310066-3	**File ID:**	J:\MS21\DATA\101013\1010F015.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS	**Extraction Lot:**	KWG1310066

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1310066-1	J:\MS21\DATA\101013\1010F016.D	10/10/13	15:39
Duplicate Lab Control Sample	KWG1310066-2	J:\MS21\DATA\101013\1010F017.D	10/10/13	16:05
13254-BW-4	K1309638-001	J:\MS21\DATA\101013\1010F018.D	10/10/13	16:32
13254-BW-2	K1309638-002	J:\MS21\DATA\101013\1010F019.D	10/10/13	16:58
13253-BW-3	K1309638-004	J:\MS21\DATA\101013\1010F020.D	10/10/13	17:24
13253-Well D	K1309638-005	J:\MS21\DATA\101013\1010F021.D	10/10/13	17:50
13255-BW-1	K1309638-008	J:\MS21\DATA\101013\1010F022.D	10/10/13	18:16
13255-DUP	K1309638-010	J:\MS21\DATA\101013\1010F023.D	10/10/13	18:43
13255-Rinse	K1309638-011	J:\MS21\DATA\101013\1010F024.D	10/10/13	19:09

QA/QC Report

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Extracted:**	09/17/2013
Sample Matrix:	Water	**Date Analyzed:**	10/10/2013
		Time Analyzed:	15:39

Lab Control Sample Summary
Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	MS21
Lab Code:	KWG1310066-1	**File ID:**	J:\MS21\DATA\101013\1010F016.D
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS	**Extraction Lot:**	KWG1310066

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1310066-3	J:\MS21\DATA\101013\1010F015.D	10/10/13	15:15
13254-BW-4	K1309638-001	J:\MS21\DATA\101013\1010F018.D	10/10/13	16:32
13254-BW-2	K1309638-002	J:\MS21\DATA\101013\1010F019.D	10/10/13	16:58
13253-BW-3	K1309638-004	J:\MS21\DATA\101013\1010F020.D	10/10/13	17:24
13253-Well D	K1309638-005	J:\MS21\DATA\101013\1010F021.D	10/10/13	17:50
13255-BW-1	K1309638-008	J:\MS21\DATA\101013\1010F022.D	10/10/13	18:16
13255-DUP	K1309638-010	J:\MS21\DATA\101013\1010F023.D	10/10/13	18:43
13255-Rinse	K1309638-011	J:\MS21\DATA\101013\1010F024.D	10/10/13	19:09

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Validation Package

Raw Data

u:\Stealth\Crystal.rpt\DividerD.rpt

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13254-BW-4	**Units:**	ng/L
Lab Code:	K1309638-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	43	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	81	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F018.D
Lab ID: K1309638-001
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 16:32
Date Quantitated: 10/10/2013 16:32
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total ok
	Merphos oxone	-36.3	NA	25	↓
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	dc see MB
	Chlorpyrifos-d10	951	39	124	↓
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	↓

Primary Review: 10/11/13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	Advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	
	Demeton-S	58	70	120	
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	✓
Std MRL Unsupported by ICAL	Merphos	99	50	NA	Total OK

Primary Review: 10.11.13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F018.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:32	**Quant Date:**	10/10/2013 16:32	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-001			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282466	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	102472	138.14	OK
0	Fluoranthene-d10	15.78	-0.01	70380	103.06	OK
0	Chrysene-d12	18.66	0.00	79279	95.29	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3472	43.35	43	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	36860	80.56	81	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F018.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:32	**Quant Date:**	10/10/2013 16:32	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

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MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

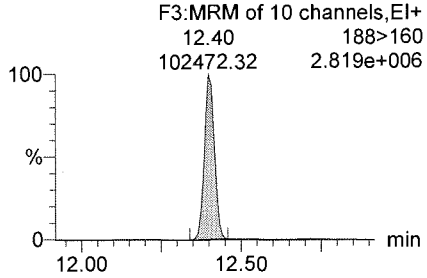
	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	102472.320		bb		138.14	38.1	3.634	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3471.947	102472.320	bb		43.35		1.701	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			102472.320	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			102472.320	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			102472.320	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			102472.320	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			102472.320	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			102472.320	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			102472.320	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			102472.320	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			102472.320	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	14536.175	102472.320	bb		69.47		1.526	1.545	NO
13	13	Diazinon|333-41-5	304>179			102472.320	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			102472.320	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			102472.320	MM-						
16	16	Ronnel|299-84-3	285>270			70379.523	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			70379.523	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			70379.523	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	36860.117	70379.523	bb		80.56		2.786	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			70379.523	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			70379.523	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			70379.523	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			70379.523	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			70379.523	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	70379.523		bb		103.06	3.1	3.978	3.973	NO
26	26	Stirophos|22248-79-9	329>109			70379.523	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			70379.523	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			70379.523	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			79278.711	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			79278.711	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			79278.711	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	79278.711		bb		95.29	-4.7	2.515	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			79278.711	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			79278.711	MM-				0.000	4.250	YES

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

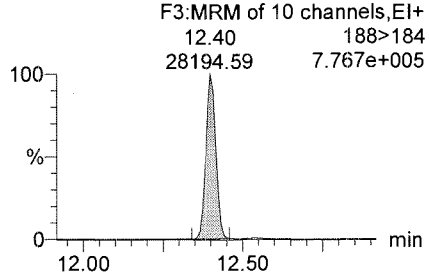
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

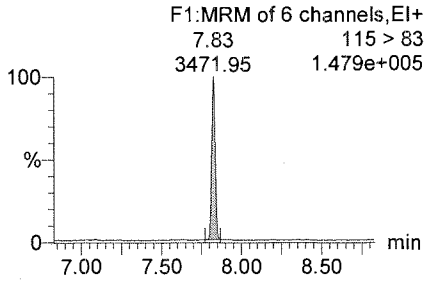
Phenanthrene-d10|1517-22-2



Phenanthrene-d10|1517-22-2



Dichlorvos-d6|203645-53-8



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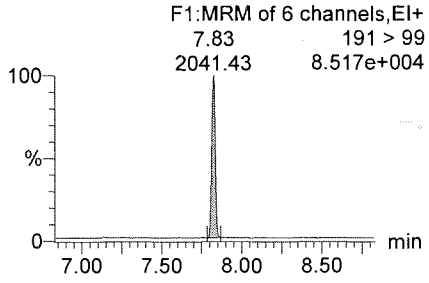
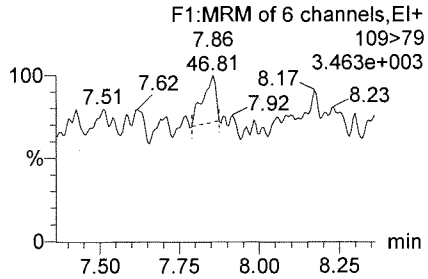


Dichlorvos|62-73-7



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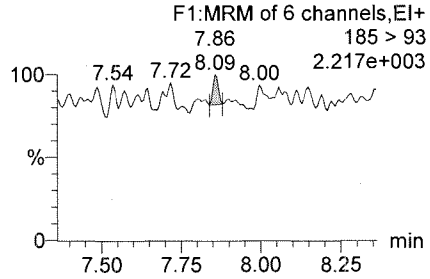
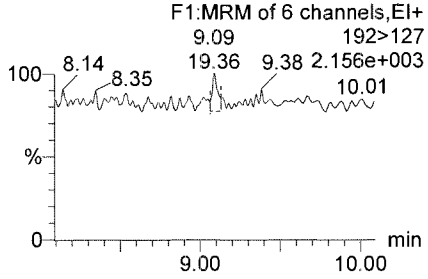
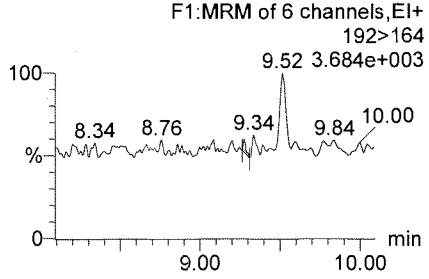


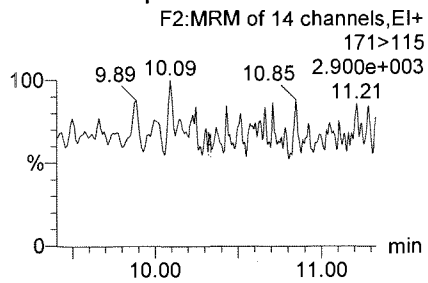
Mevinphos|7786-34-7



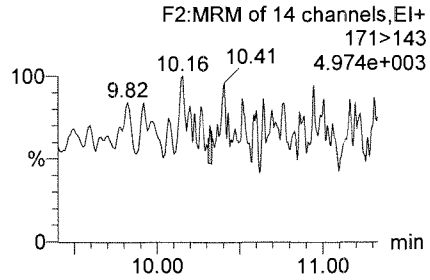
Mevinphos|7786-34-7



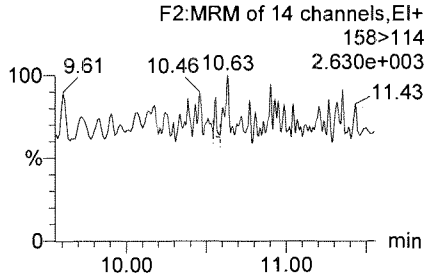
Demeton-O|298-03-3



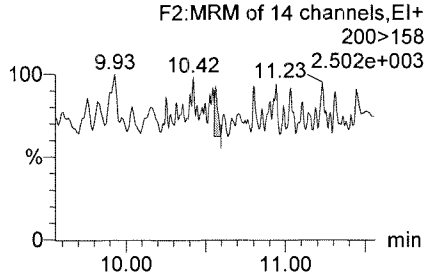
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



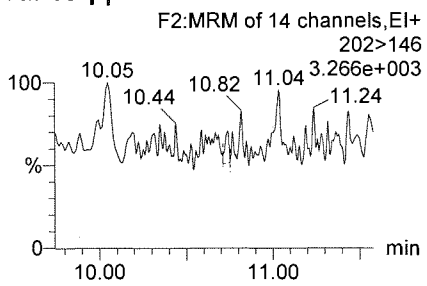
2093

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

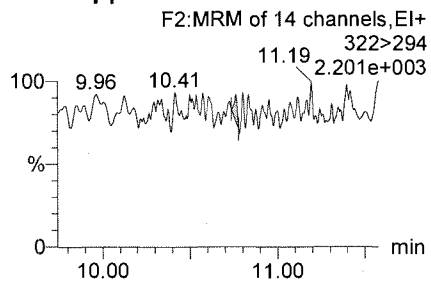
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

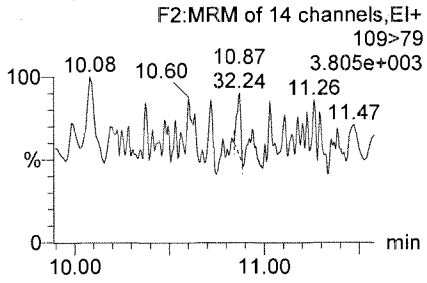
Sulfotep|3689-24-5



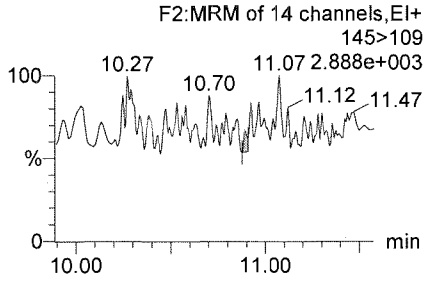
Sulfotep|3689-24-5



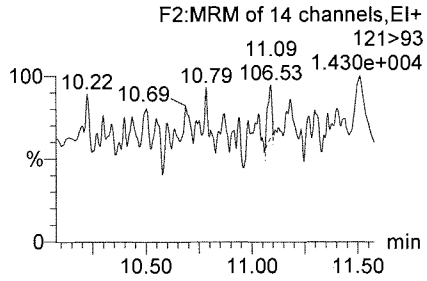
Naled|300-76-5



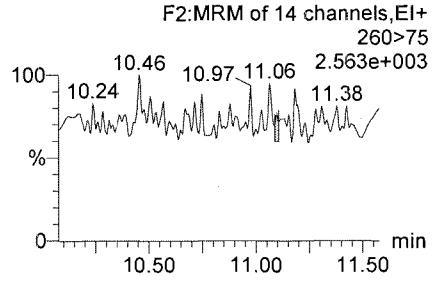
Naled|300-76-5



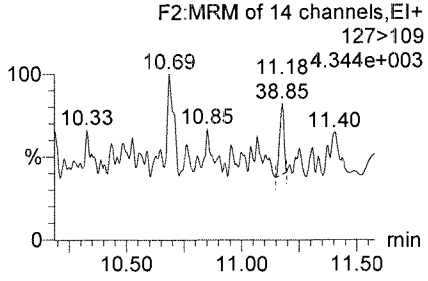
Phorate|298-02-2



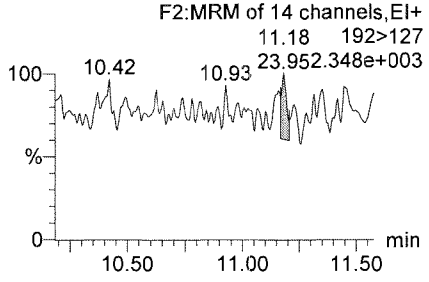
Phorate|298-02-2



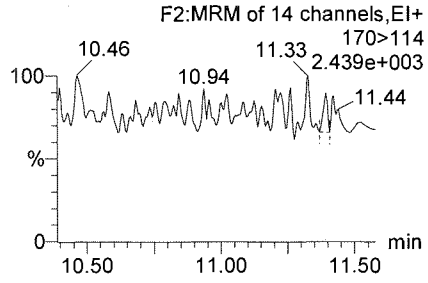
Monocrotophos|6923-22-4



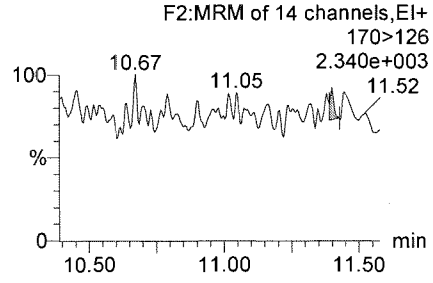
Monocrotophos|6923-22-4



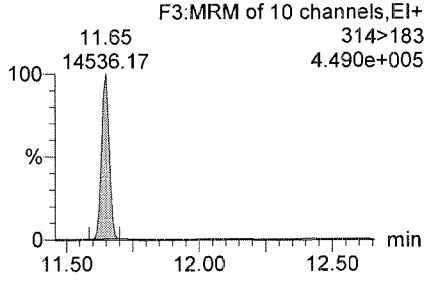
Demeton-S|126-75-0



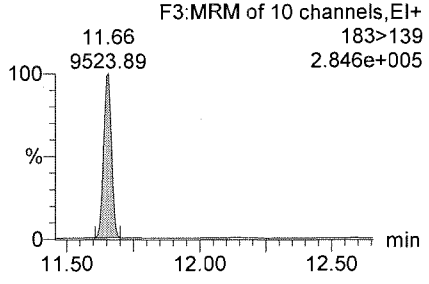
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



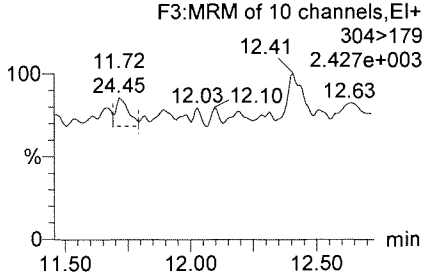
2094

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

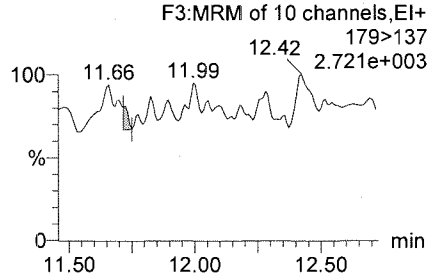
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

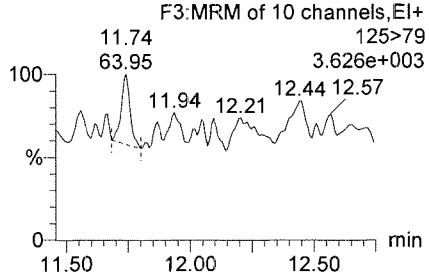
Diazinon|333-41-5



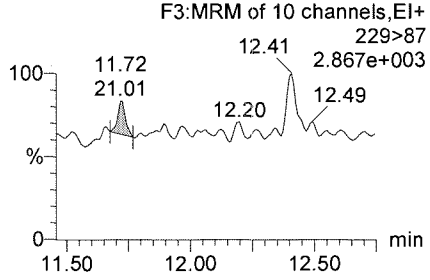
Diazinon|333-41-5



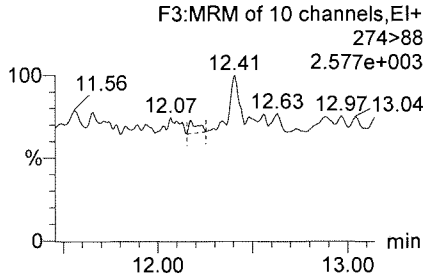
Dimethoate|60-51-5



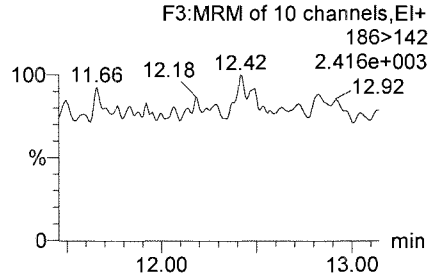
Dimethoate|60-51-5



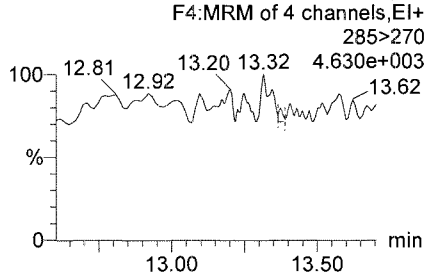
Disulfoton|298-04-4



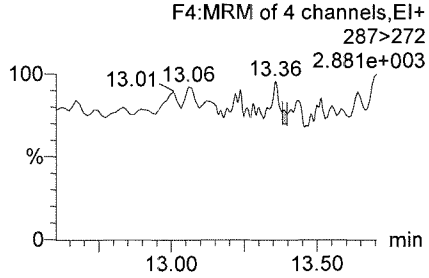
Disulfoton|298-04-4



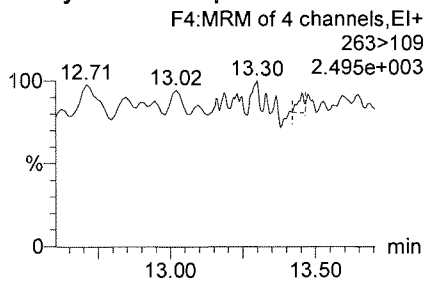
Ronnel|299-84-3



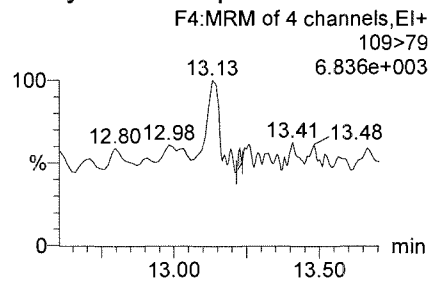
Ronnel|299-84-3



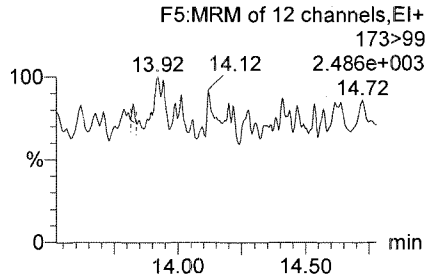
Methyl Parathion|298-00-0



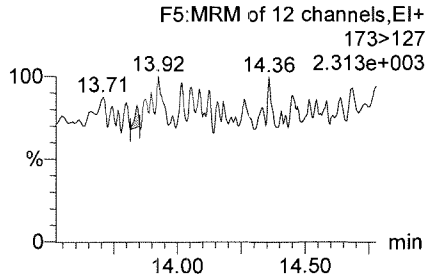
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



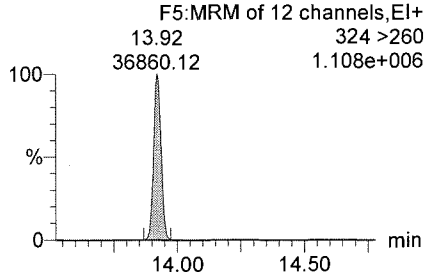
2095

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

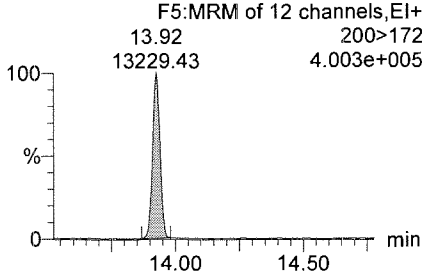
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

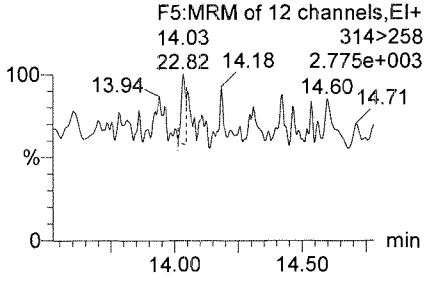
Chlorpyrifos-d10|CASID30732



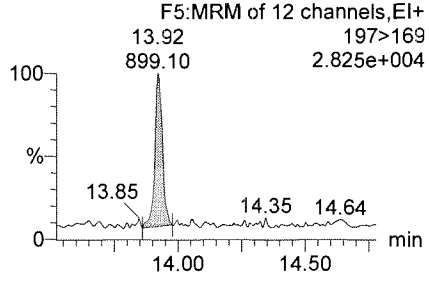
Chlorpyrifos-d10|CASID30732



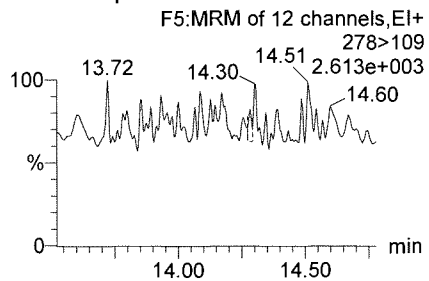
Chlorpyrifos|2921-88-2



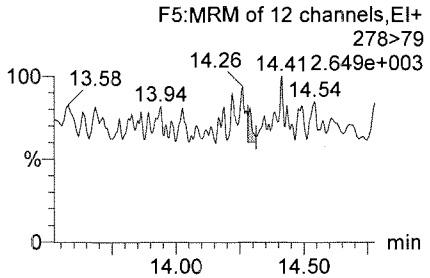
Chlorpyrifos|2921-88-2



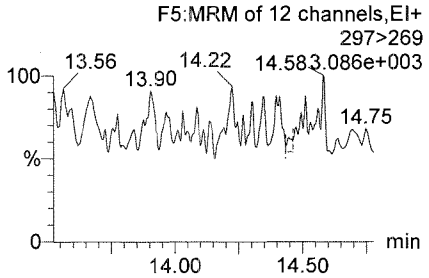
Fenthion|55-38-9



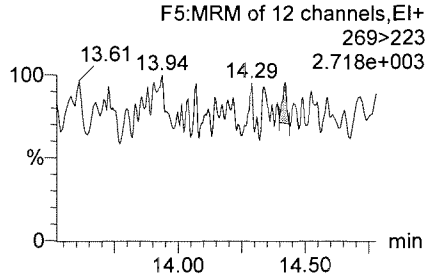
Fenthion|55-38-9



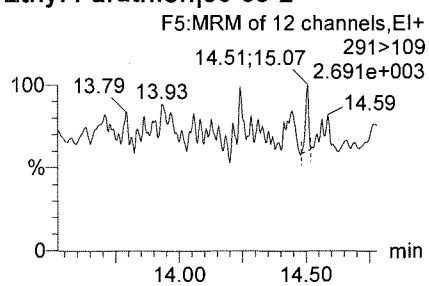
Trichloronate|327-98-0



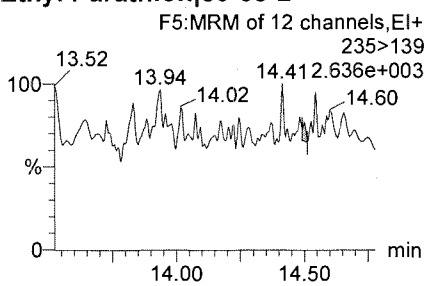
Trichloronate|327-98-0



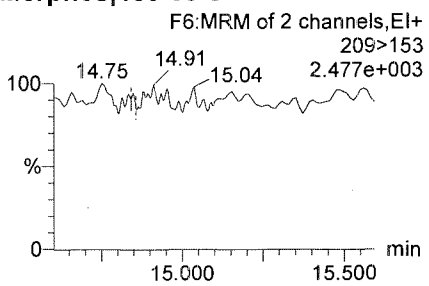
Ethyl Parathion|56-38-2



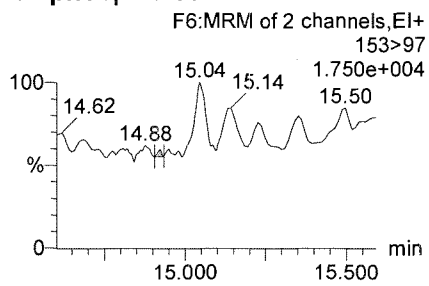
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



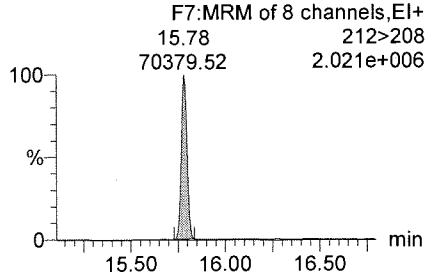
2096

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

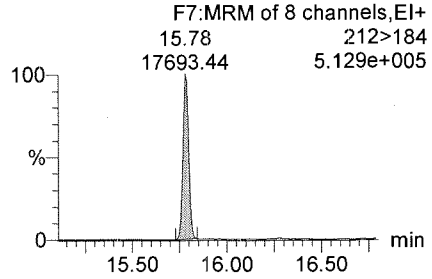
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

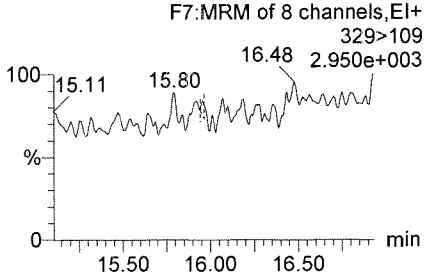
Fluoranthene-d10|93951-69-0



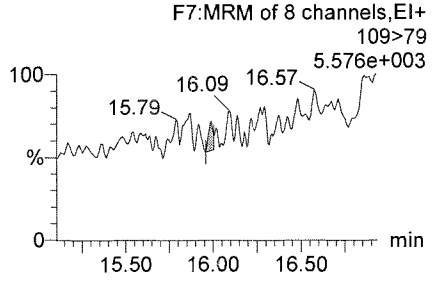
Fluoranthene-d10|93951-69-0



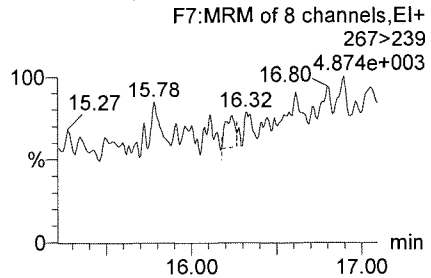
Stirophos|22248-79-9



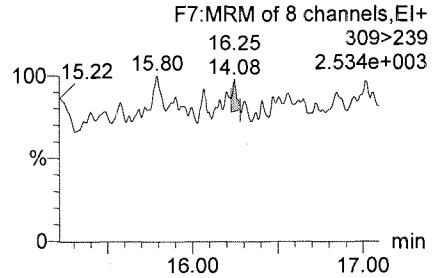
Stirophos|22248-79-9



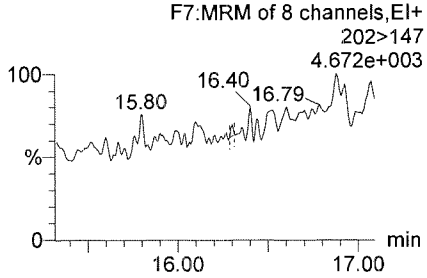
Tokuthion|34643-46-4



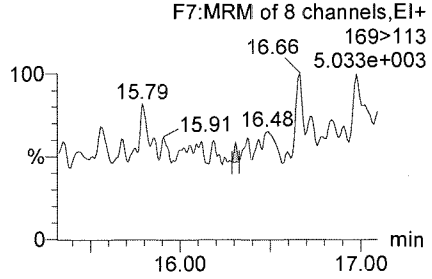
Tokuthion|34643-46-4



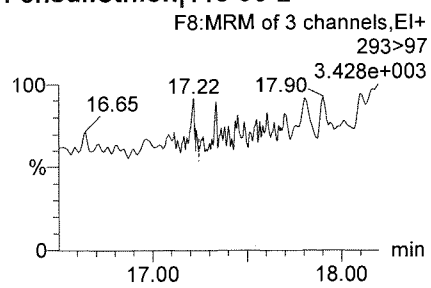
Merphos oxone|78-48-8



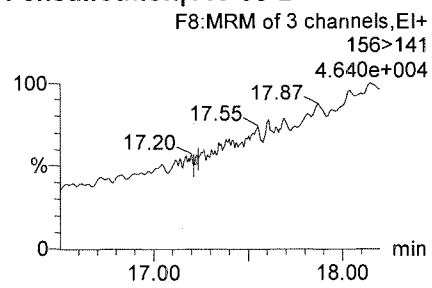
Merphos oxone|78-48-8



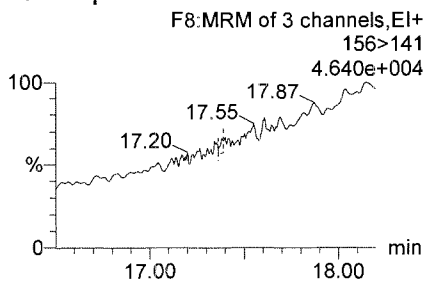
Fensulfothion|115-90-2



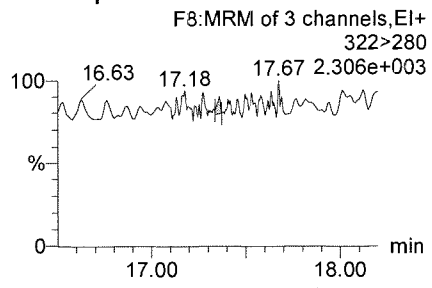
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



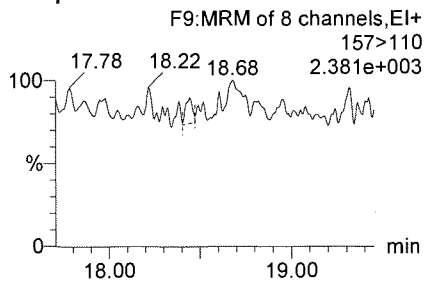
2097

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

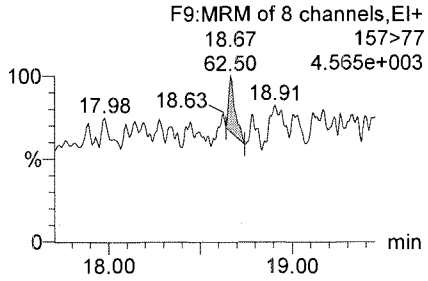
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F018, Date: 10-Oct-2013, Time: 16:32:04, ID: SMPL, Description: k1309638-001, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

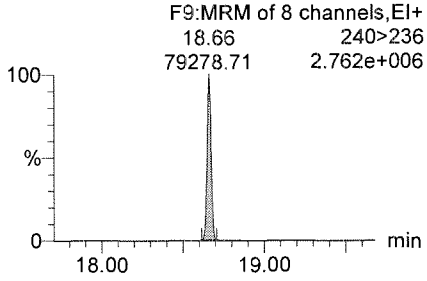
EPN|2104-64-5



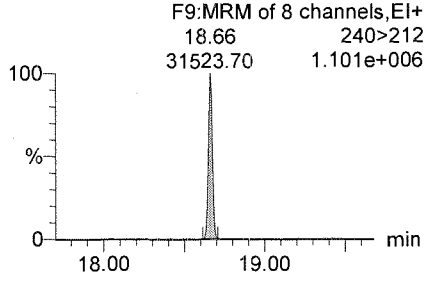
EPN|2104-64-5



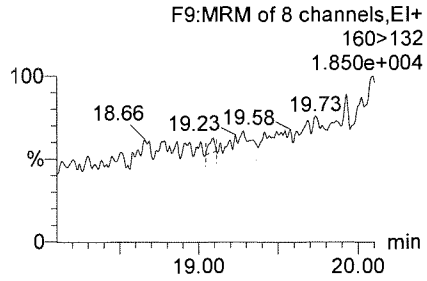
Chrysene-d12|1719-03-5



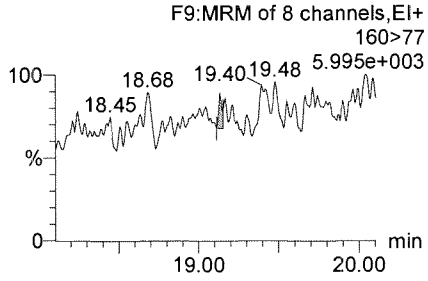
Chrysene-d12|1719-03-5



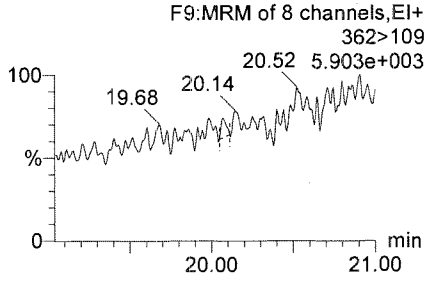
Azinphos methyl|86-50-0



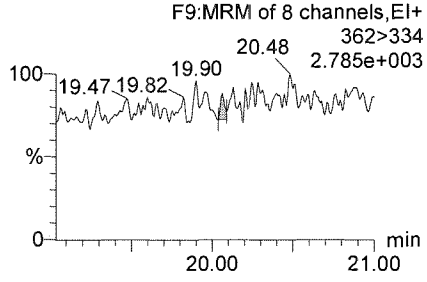
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



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Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/11/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13254-BW-2	**Units:**	ng/L
Lab Code:	K1309638-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	50	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	78	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F019.D
Lab ID: K1309638-002
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 16:58
Date Quantitated: 10/10/2013 16:58
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total ok
	Merphos oxone	-36.3	NA	25	↓
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	ok same MB
	Chlorpyrifos-d10	951	39	124	↓
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	↓

Primary Review: 10.11.13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	
	Demeton-S	58	70	120	
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	total 2

Primary Review: 10.11.13

Secondary Review: CJ 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F019.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:58	**Quant Date:**	10/10/2013 16:58	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-002			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/11/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282467	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	84250	113.57	OK
0	Fluoranthene-d10	15.78	-0.01	70254	102.88	OK
0	Chrysene-d12	18.66	0.00	81828	98.36	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3303	50.16	50	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	35684	78.13	78	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F019.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:58	**Quant Date:**	10/10/2013 16:58	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-002			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	84250.273		bb		113.57	13.6	3.614	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3303.389	84250.273	bb		50.16		1.741	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			84250.273	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			84250.273	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			84250.273	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			84250.273	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			84250.273	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			84250.273	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			84250.273	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			84250.273	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			84250.273	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	12649.061	84250.273	bb		73.52		1.497	1.545	NO
13	13	Diazinon|333-41-5	304>179			84250.273	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			84250.273	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			84250.273	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			70253.594	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			70253.594	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			70253.594	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	35684.309	70253.594	bb		78.13		2.837	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			70253.594	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			70253.594	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			70253.594	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			70253.594	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			70253.594	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	70253.594		bb		102.88	2.9	3.964	3.973	NO
26	26	Stirophos|22248-79-9	329>109			70253.594	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			70253.594	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			70253.594	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			81827.844	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			81827.844	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			81827.844	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	81827.844		bb		98.36	-1.6	2.483	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			81827.844	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			81827.844	MM-				0.000	4.250	YES

2104

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

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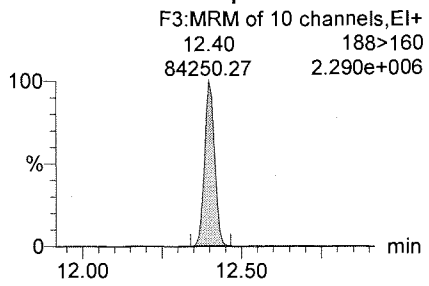
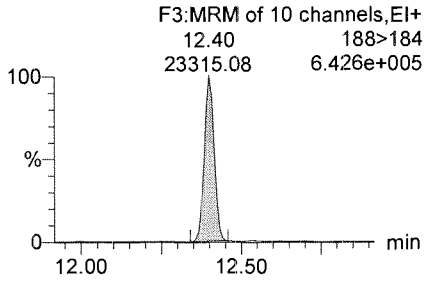
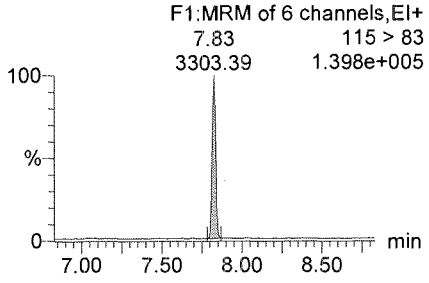
Phenanthrene-d10|1517-22-2



Phenanthrene-d10|1517-22-2



Dichlorvos-d6|203645-53-8



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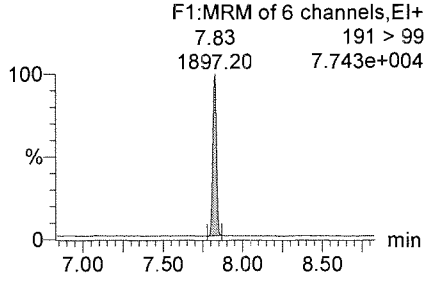
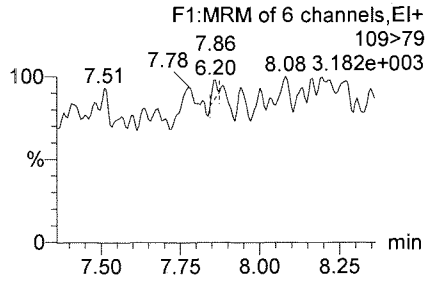


Dichlorvos|62-73-7



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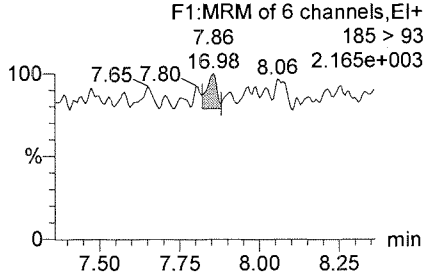
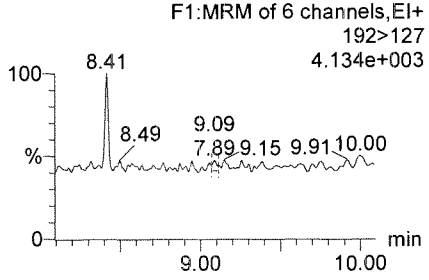


Mevinphos|7786-34-7



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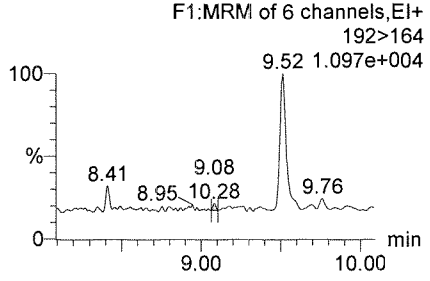
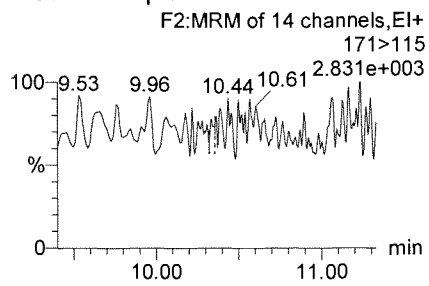


Demeton-O|298-03-3



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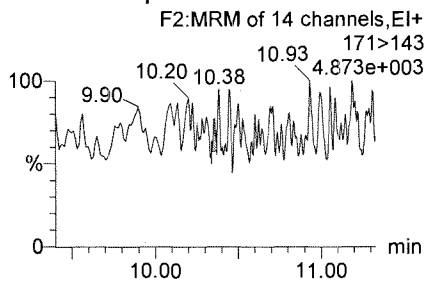
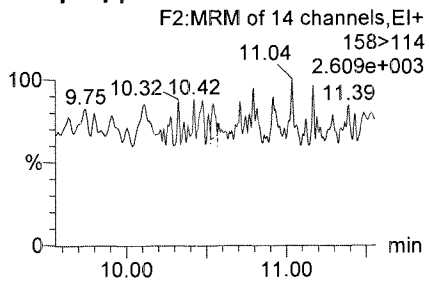
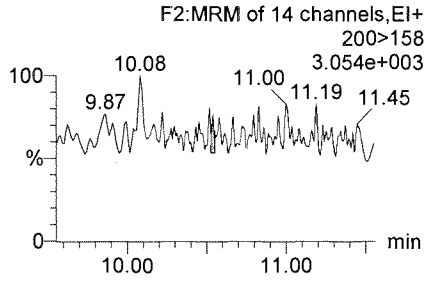


Ethoprop|13194-48-4



Ethoprop|13194-48-4



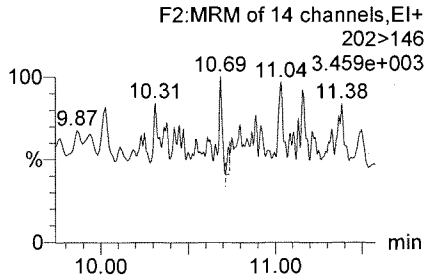
2105

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

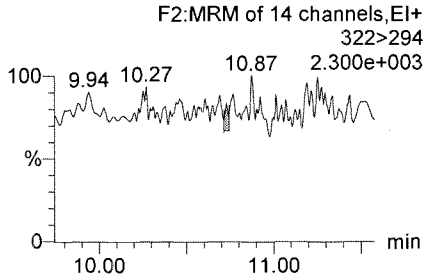
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

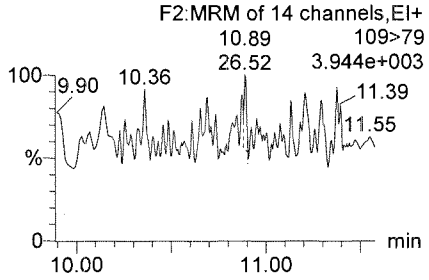
Sulfotep|3689-24-5



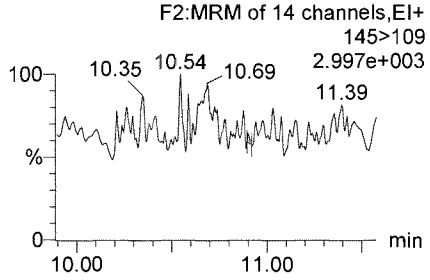
Sulfotep|3689-24-5



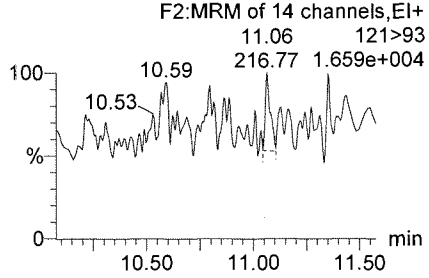
Naled|300-76-5



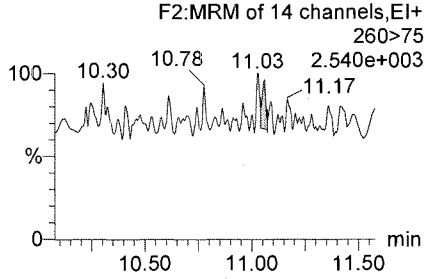
Naled|300-76-5



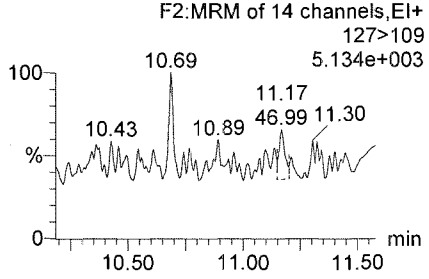
Phorate|298-02-2



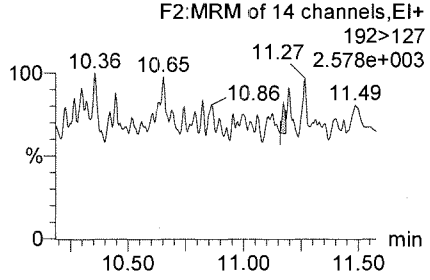
Phorate|298-02-2



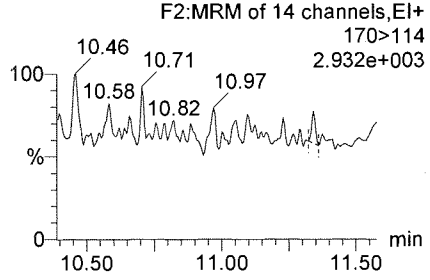
Monocrotophos|6923-22-4



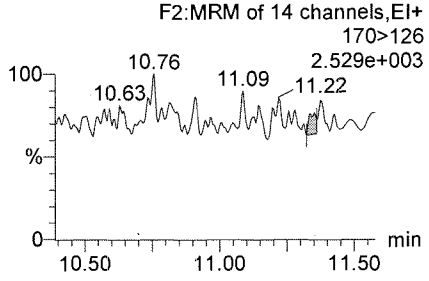
Monocrotophos|6923-22-4



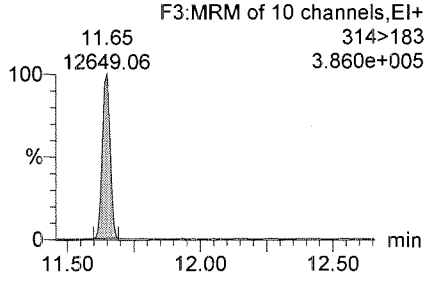
Demeton-S|126-75-0



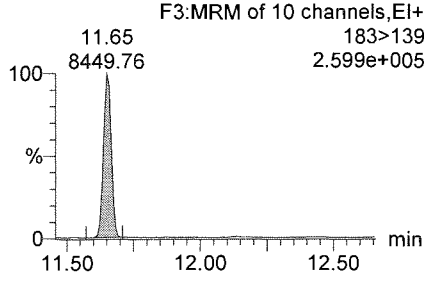
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



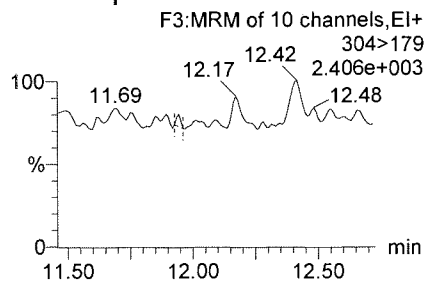
2106

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

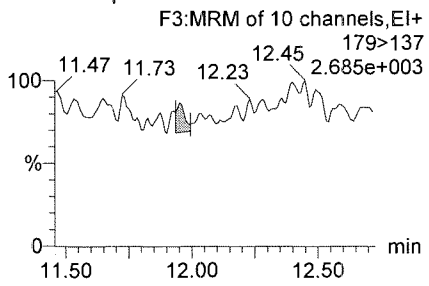
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

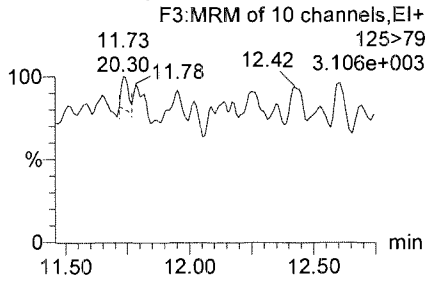
Diazinon|333-41-5



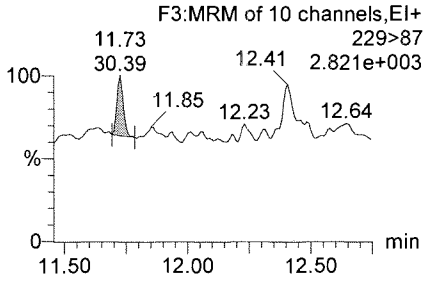
Diazinon|333-41-5



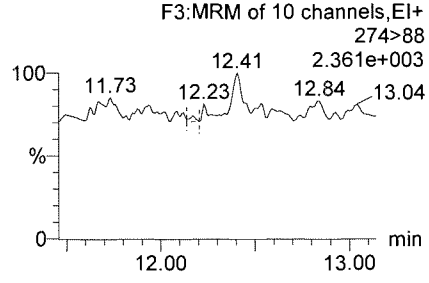
Dimethoate|60-51-5



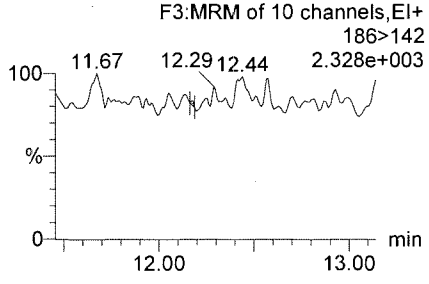
Dimethoate|60-51-5



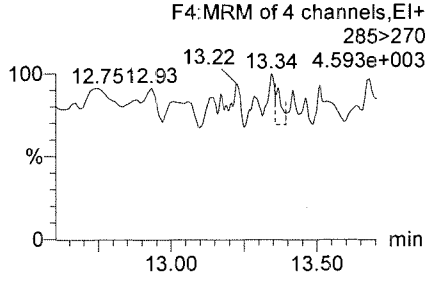
Disulfoton|298-04-4



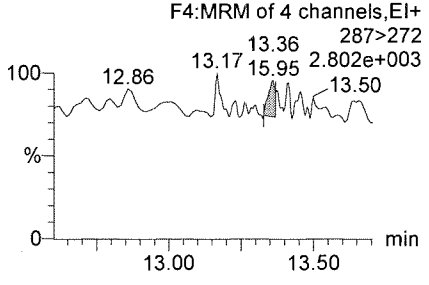
Disulfoton|298-04-4



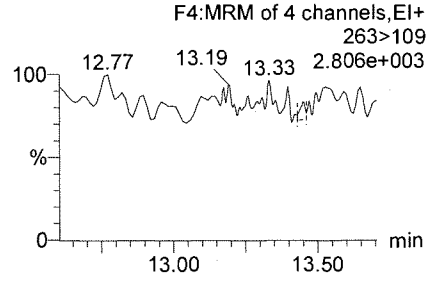
Ronnel|299-84-3



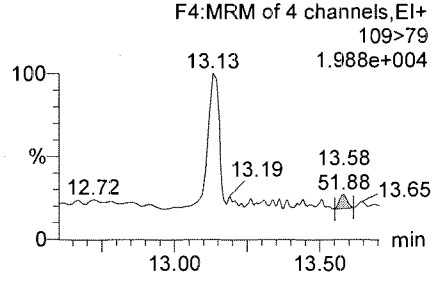
Ronnel|299-84-3



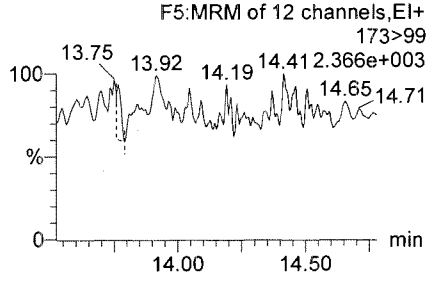
Methyl Parathion|298-00-0



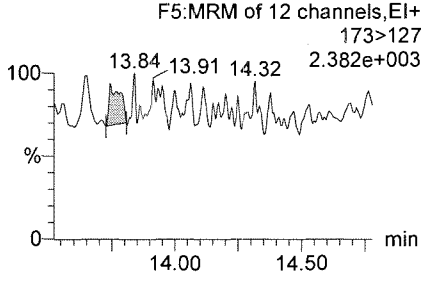
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



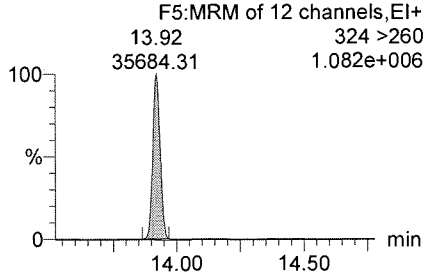
2107

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

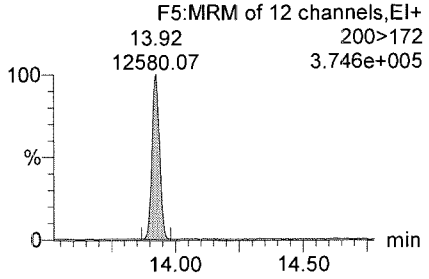
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

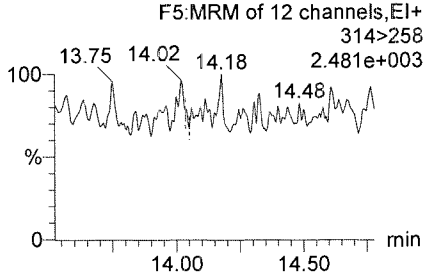
Chlorpyrifos-d10|CASID30732



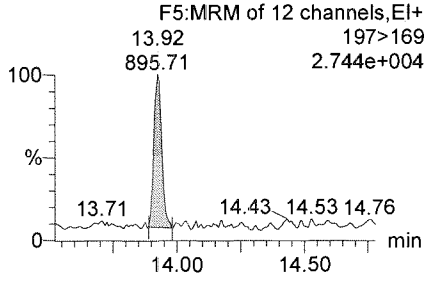
Chlorpyrifos-d10|CASID30732



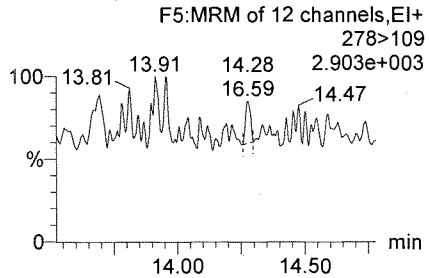
Chlorpyrifos|2921-88-2



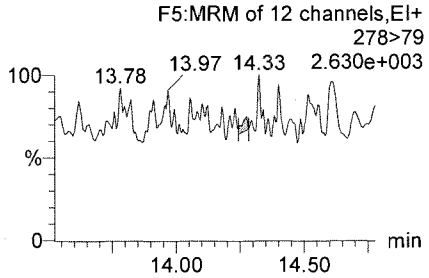
Chlorpyrifos|2921-88-2



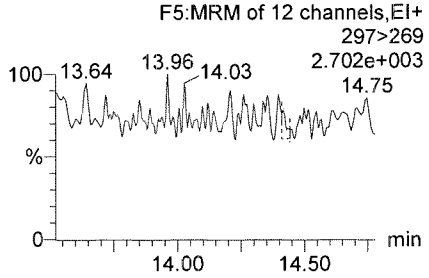
Fenthion|55-38-9



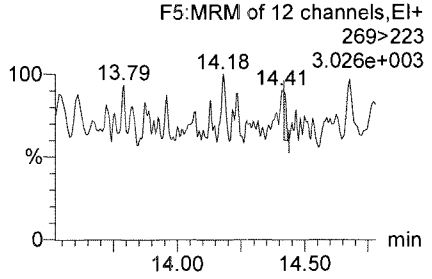
Fenthion|55-38-9



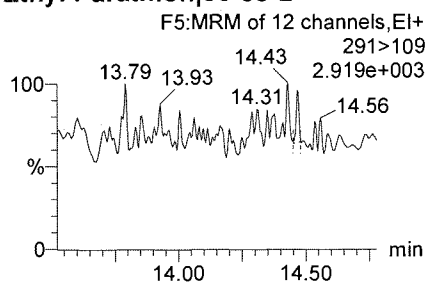
Trichloronate|327-98-0



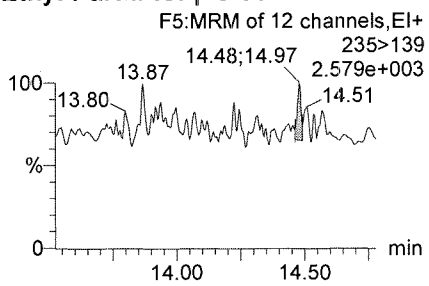
Trichloronate|327-98-0



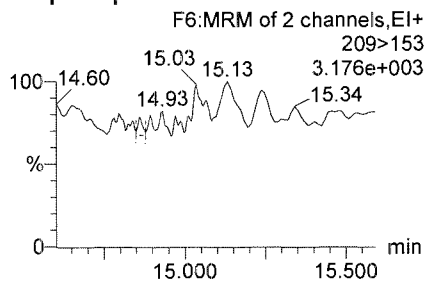
Ethyl Parathion|56-38-2



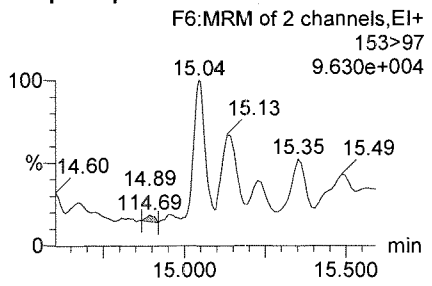
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



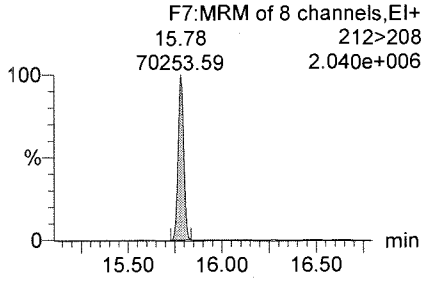
2108

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

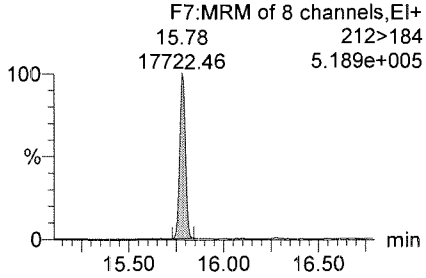
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

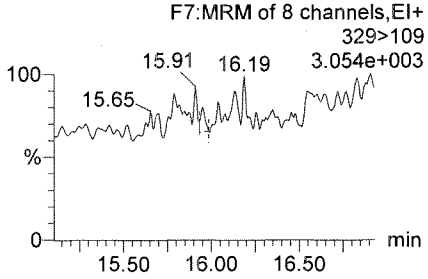
Fluoranthene-d10|93951-69-0



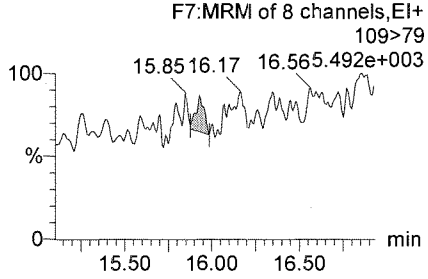
Fluoranthene-d10|93951-69-0



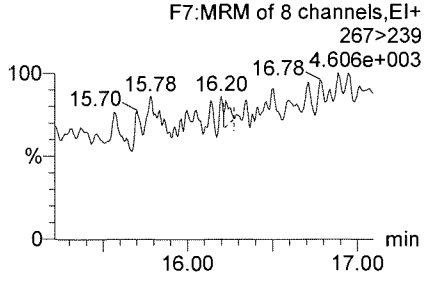
Stirophos|22248-79-9



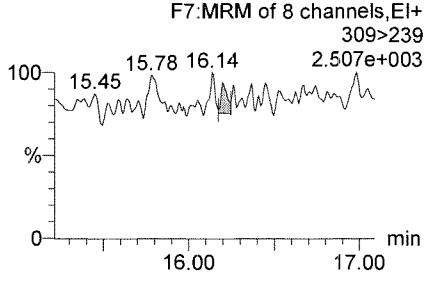
Stirophos|22248-79-9



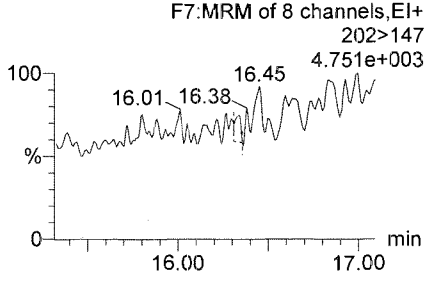
Tokuthion|34643-46-4



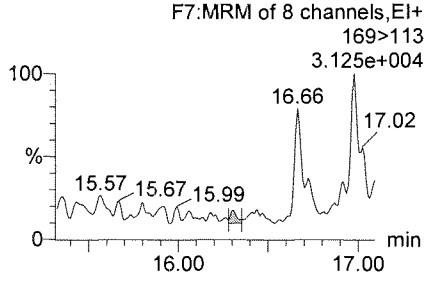
Tokuthion|34643-46-4



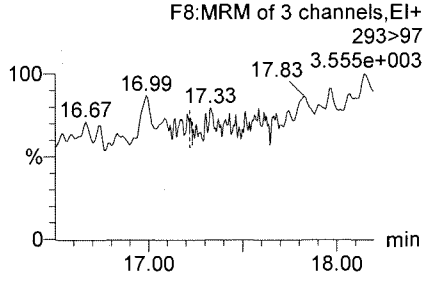
Merphos oxone|78-48-8



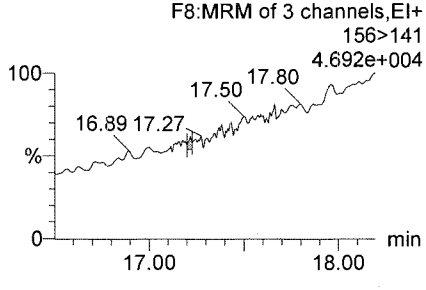
Merphos oxone|78-48-8



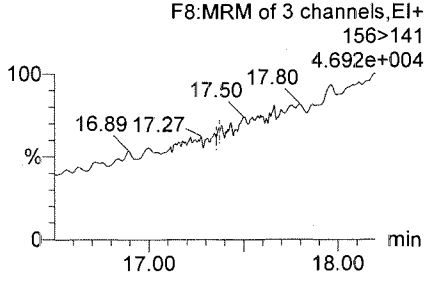
Fensulfothion|115-90-2



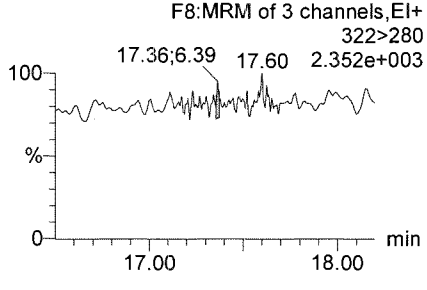
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



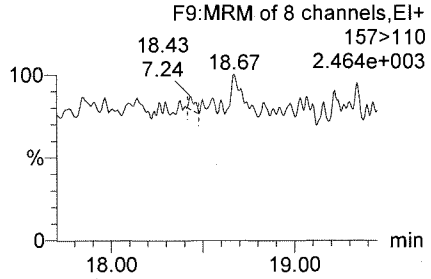
2109

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

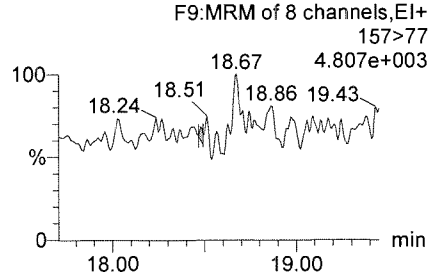
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F019, Date: 10-Oct-2013, Time: 16:58:15, ID: SMPL, Description: k1309638-002, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

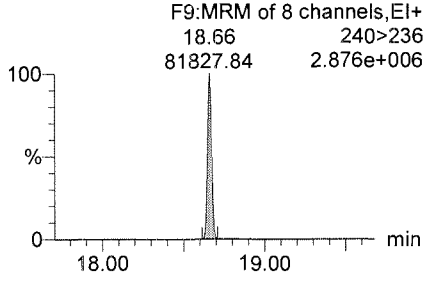
EPN|2104-64-5



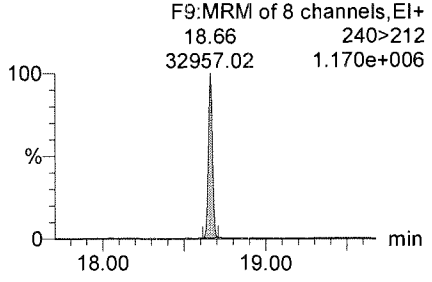
EPN|2104-64-5



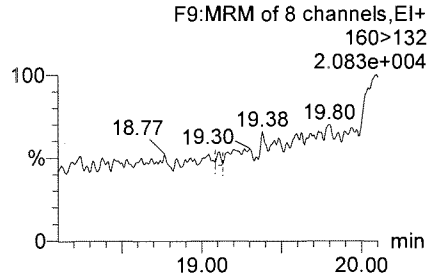
Chrysene-d12|1719-03-5



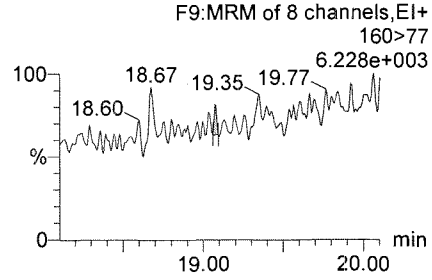
Chrysene-d12|1719-03-5



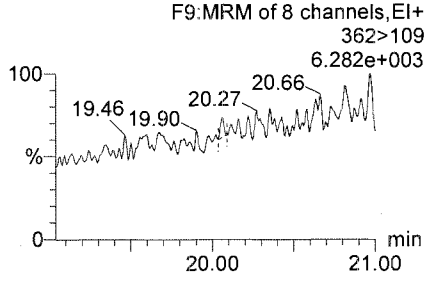
Azinphos methyl|86-50-0



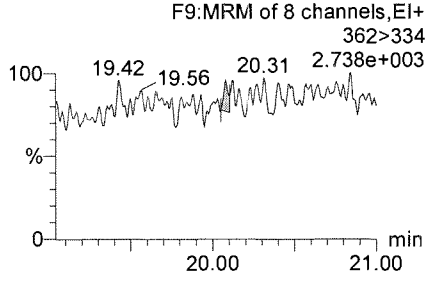
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



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ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/10/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13253-BW-3	**Units:**	ng/L
Lab Code:	K1309638-004	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	53	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	105	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F020.D
Lab ID: K1309638-004
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 17:24
Date Quantitated: 10/10/2013 17:24
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	bkg ok
	Merphos oxone	-36.3	NA	25	J
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	see MB ok
	Chlorpyrifos-d10	951	39	124	J
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	Narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	

Primary Review: 10.11.13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	Advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	
	Demeton-S	58	70	120	
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	Dtct Ok

Primary Review: 10-11-13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F020.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 17:24	**Quant Date:**	10/10/2013 17:24	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-004			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282468	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	98946	133.38	OK
0	Fluoranthene-d10	15.78	-0.01	69945	102.42	OK
0	Chrysene-d12	18.66	0.00	80308	96.53	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	4137	53.49	53	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	47544	104.56	105	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F020.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 17:24	**Quant Date:**	10/10/2013 17:24	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-004			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

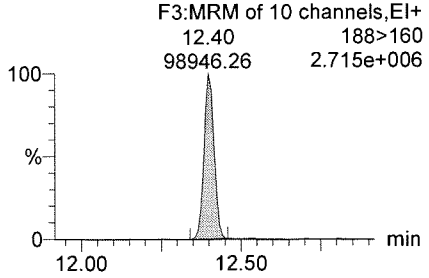
	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	98946.258		bb		133.38	33.4	3.648	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	4137.075	98946.258	bb		53.49		1.748	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			98946.258	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			98946.258	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			98946.258	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			98946.258	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			98946.258	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			98946.258	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			98946.258	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			98946.258	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			98946.258	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	18383.752	98946.258	bb		90.98		1.524	1.545	NO
13	13	Diazinon|333-41-5	304>179			98946.258	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			98946.258	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			98946.258	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			69945.125	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			69945.125	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			69945.125	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	47543.586	69945.125	bb		104.56		2.897	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			69945.125	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			69945.125	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			69945.125	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			69945.125	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			69945.125	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	69945.125		bb		102.42	2.4	3.978	3.973	NO
26	26	Stirophos|22248-79-9	329>109			69945.125	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			69945.125	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			69945.125	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			80308.273	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			80308.273	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			80308.273	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	80308.273		bb		96.53	-3.5	2.506	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			80308.273	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			80308.273	MM-				0.000	4.250	YES

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

Phenanthrene-d10|1517-22-2



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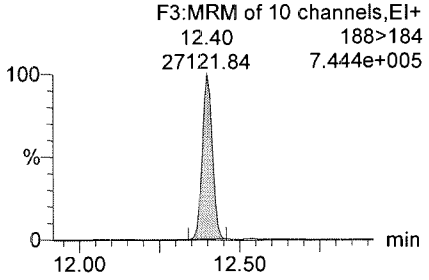
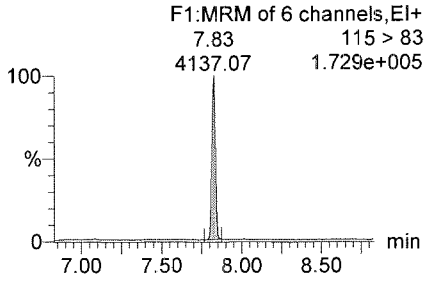


Dichlorvos-d6|203645-53-8



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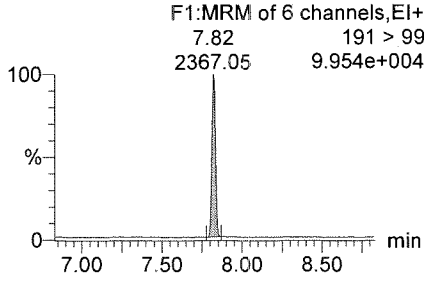
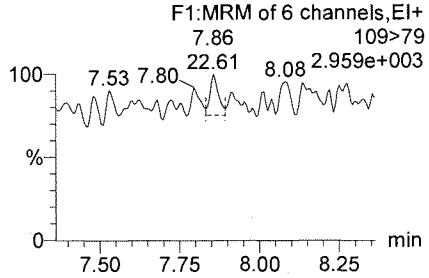
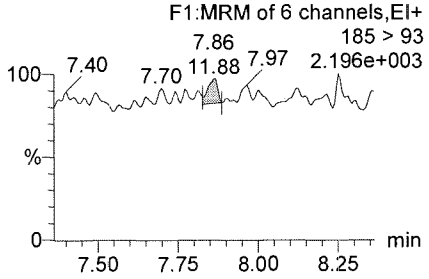


Dichlorvos|62-73-7



Dichlorvos|62-73-7



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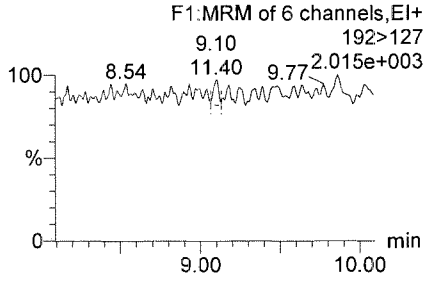
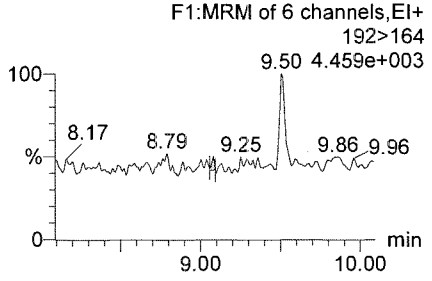
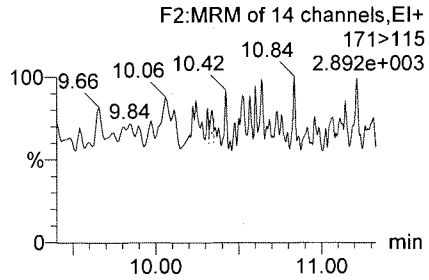


Mevinphos|7786-34-7



Demeton-O|298-03-3



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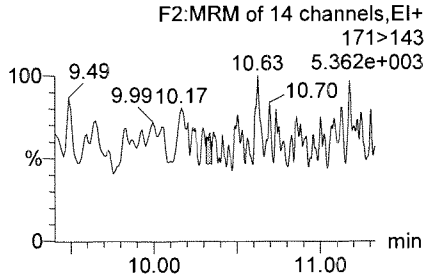
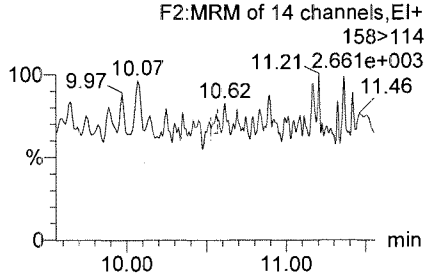
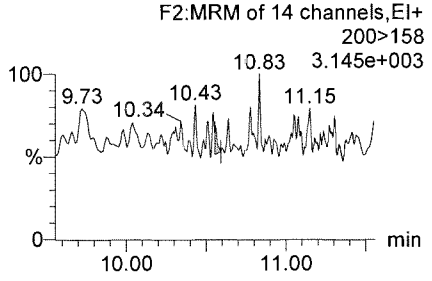


Ethoprop|13194-48-4



Ethoprop|13194-48-4



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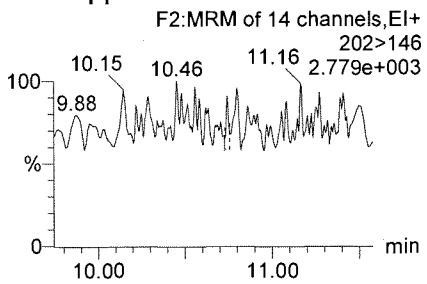
Dataset: C:\PESTEI.PRO\101013oppestdata.qld

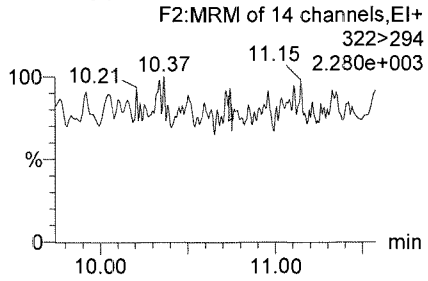
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

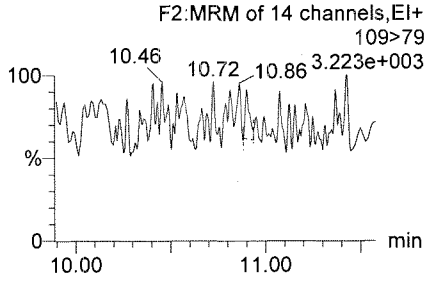
Sulfotep|3689-24-5



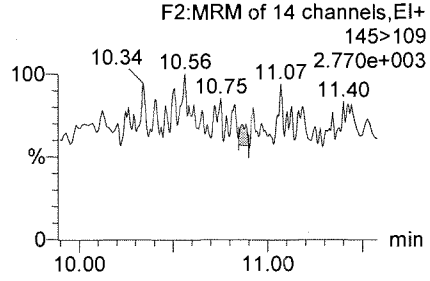
Sulfotep|3689-24-5



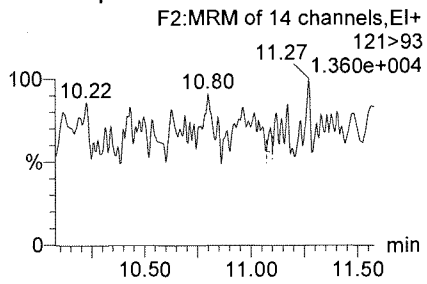
Naled|300-76-5



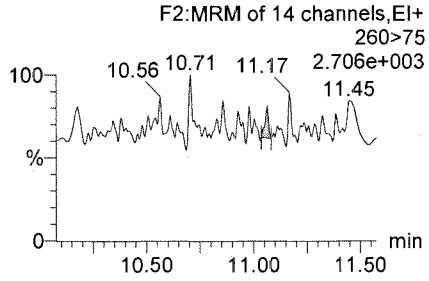
Naled|300-76-5



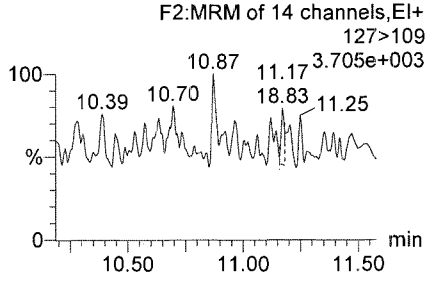
Phorate|298-02-2



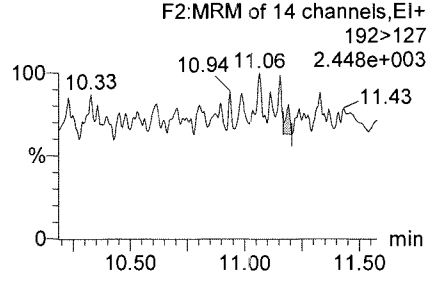
Phorate|298-02-2



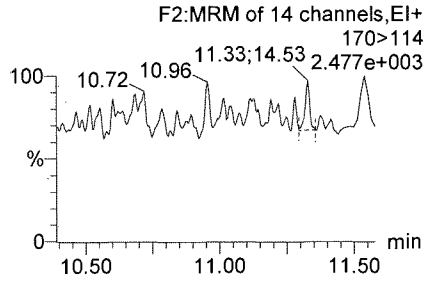
Monocrotophos|6923-22-4



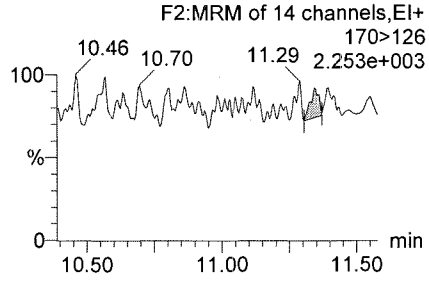
Monocrotophos|6923-22-4



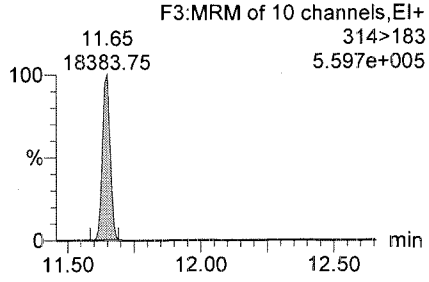
Demeton-S|126-75-0



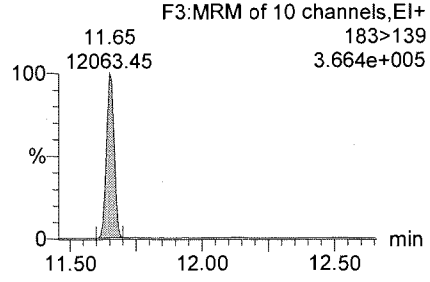
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



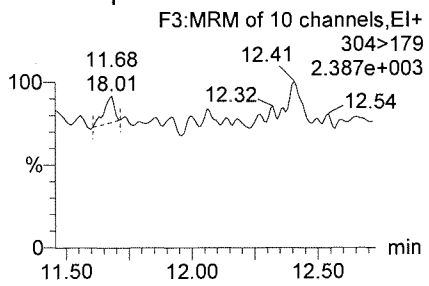
2118

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

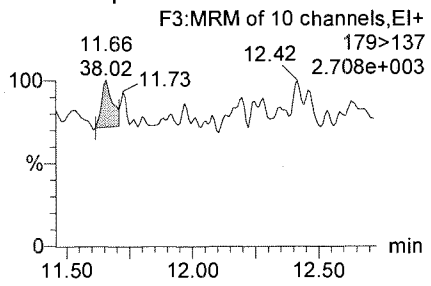
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

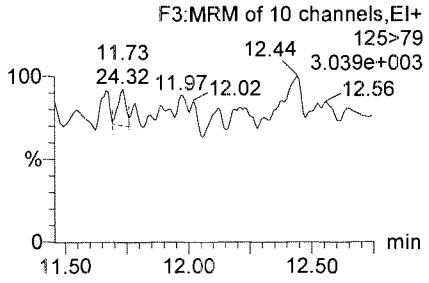
Diazinon|333-41-5



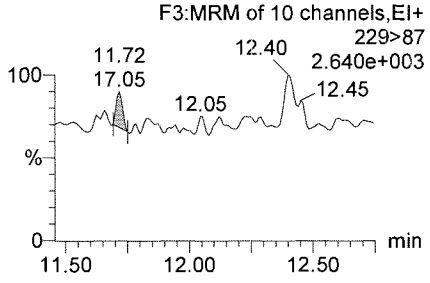
Diazinon|333-41-5



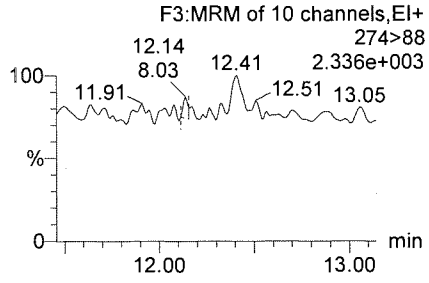
Dimethoate|60-51-5



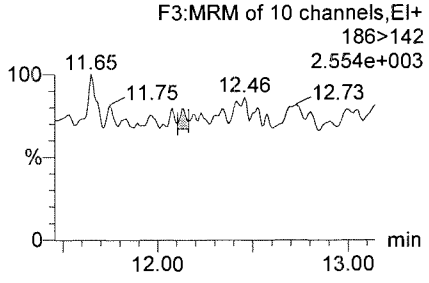
Dimethoate|60-51-5



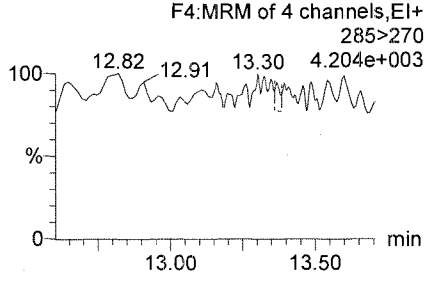
Disulfoton|298-04-4



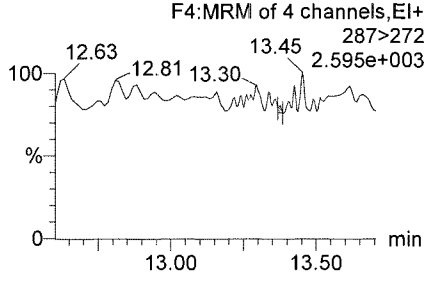
Disulfoton|298-04-4



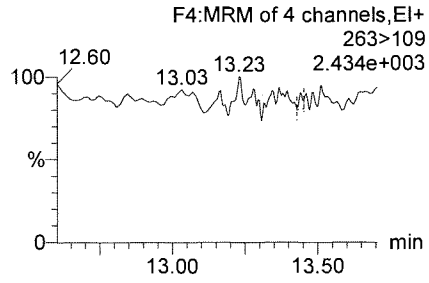
Ronnel|299-84-3



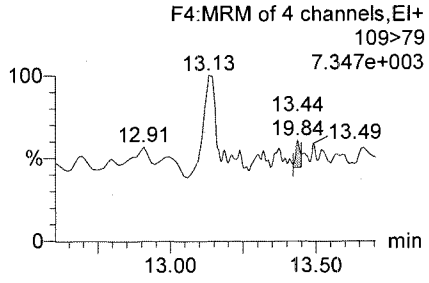
Ronnel|299-84-3



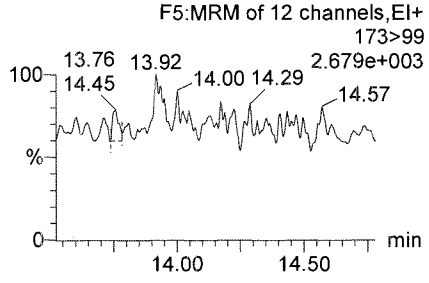
Methyl Parathion|298-00-0



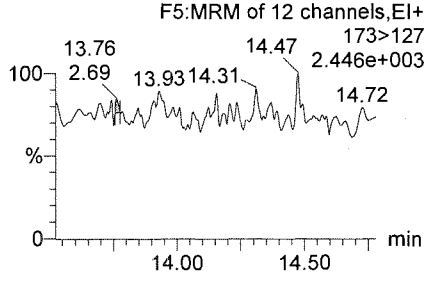
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



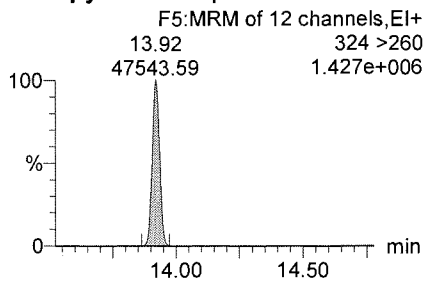
2119

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

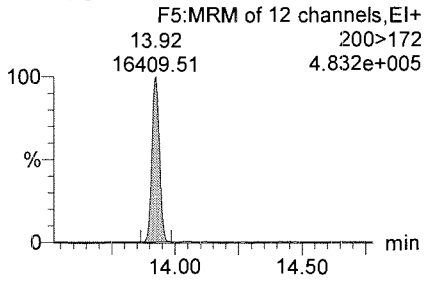
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

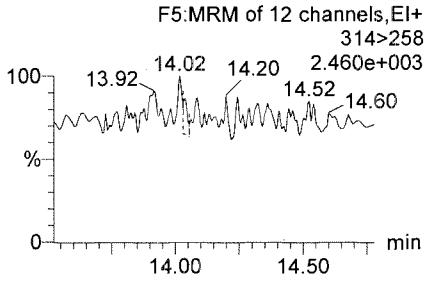
Chlorpyrifos-d10|CASID30732



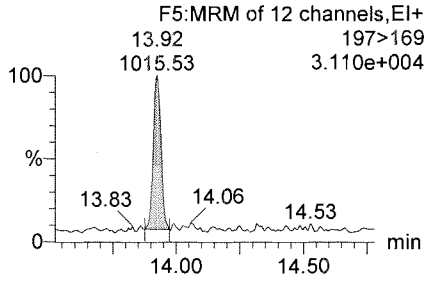
Chlorpyrifos-d10|CASID30732



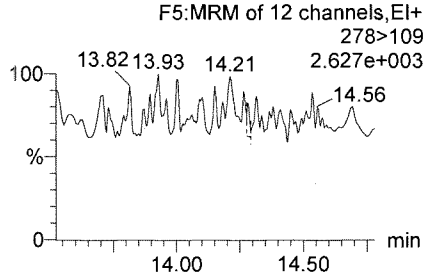
Chlorpyrifos|2921-88-2



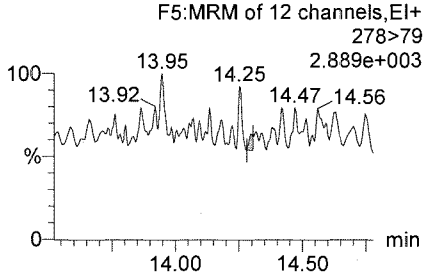
Chlorpyrifos|2921-88-2



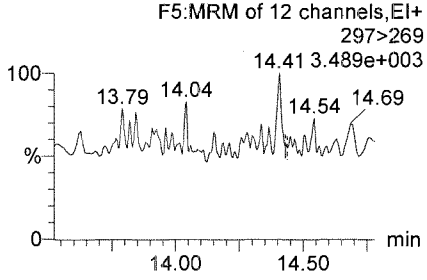
Fenthion|55-38-9



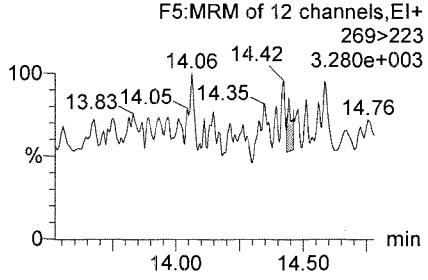
Fenthion|55-38-9



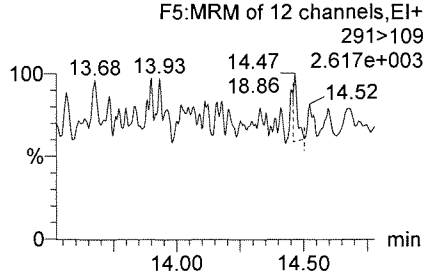
Trichloronate|327-98-0



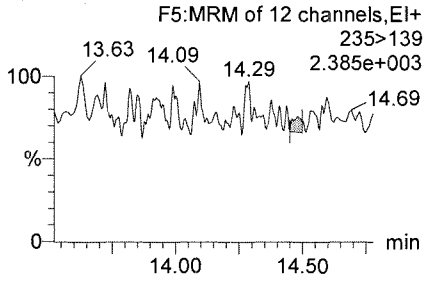
Trichloronate|327-98-0



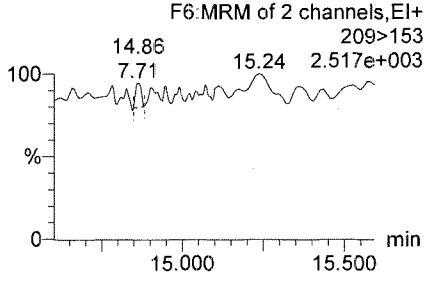
Ethyl Parathion|56-38-2



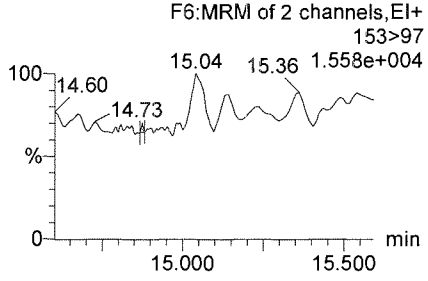
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



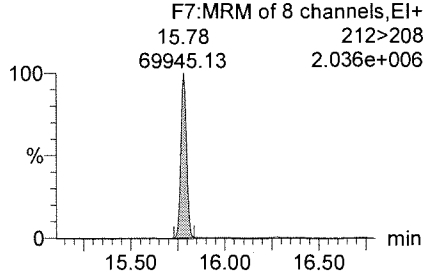
2120

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

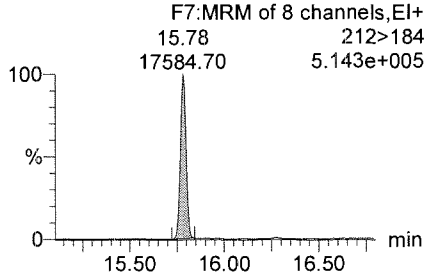
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

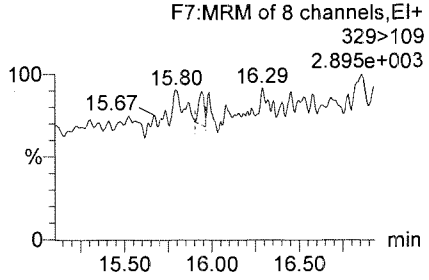
Fluoranthene-d10|93951-69-0



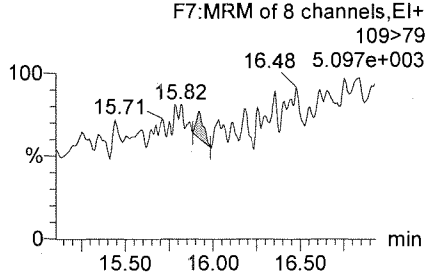
Fluoranthene-d10|93951-69-0



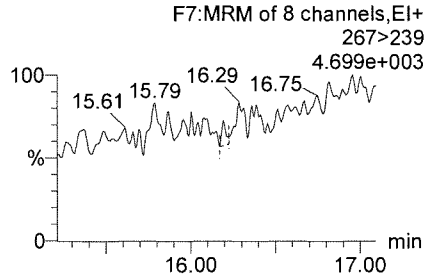
Stirophos|22248-79-9



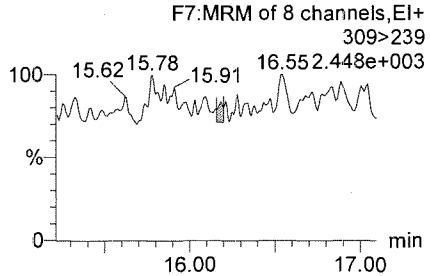
Stirophos|22248-79-9



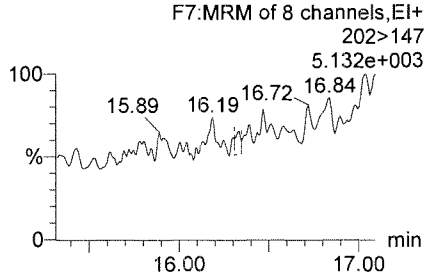
Tokuthion|34643-46-4



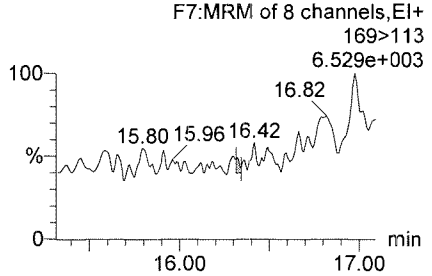
Tokuthion|34643-46-4



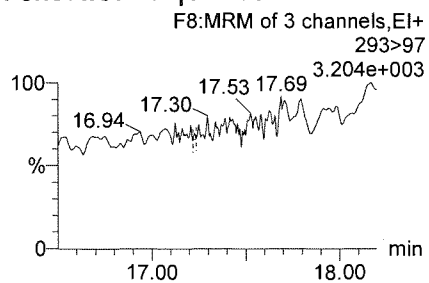
Merphos oxone|78-48-8



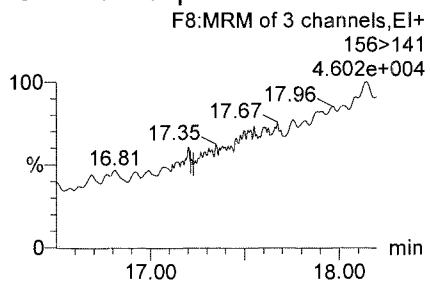
Merphos oxone|78-48-8



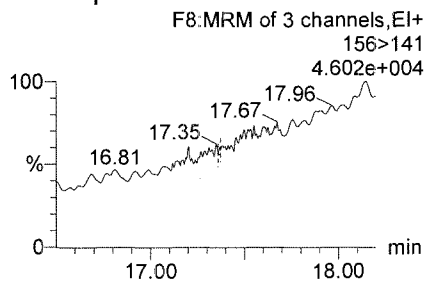
Fensulfothion|115-90-2



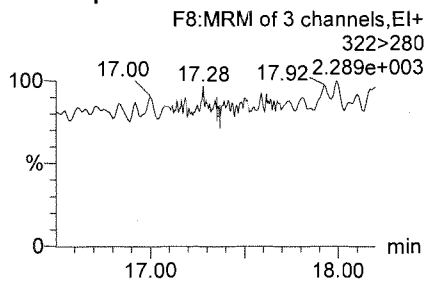
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



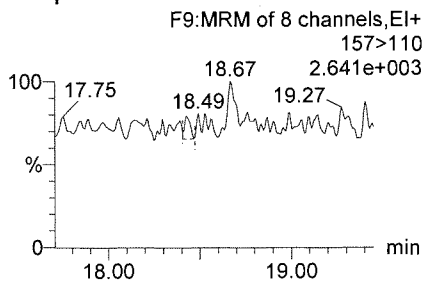
2121

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

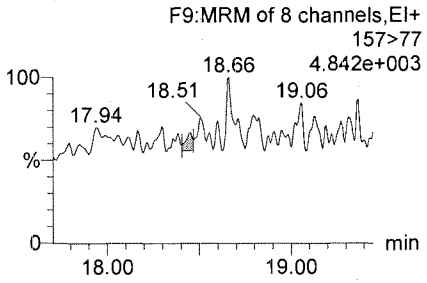
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F020, Date: 10-Oct-2013, Time: 17:24:26, ID: SMPL, Description: k1309638-004, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

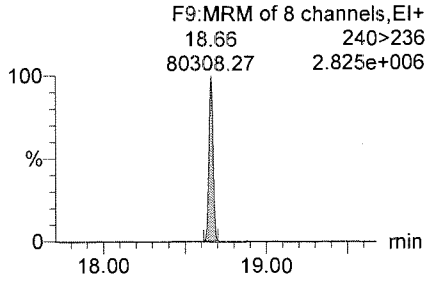
EPN|2104-64-5



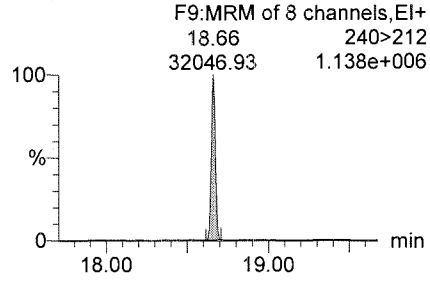
EPN|2104-64-5



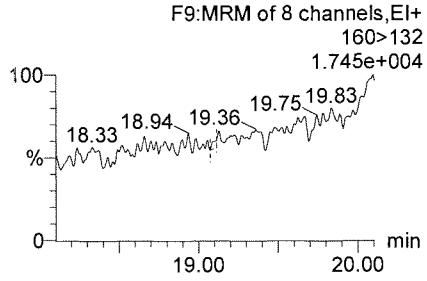
Chrysene-d12|1719-03-5



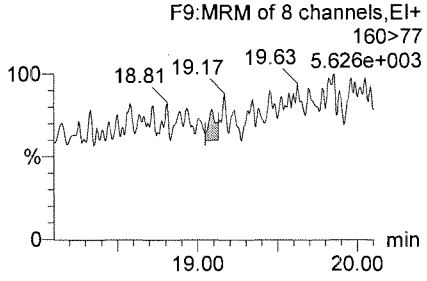
Chrysene-d12|1719-03-5



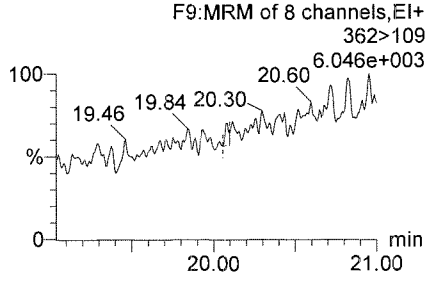
Azinphos methyl|86-50-0



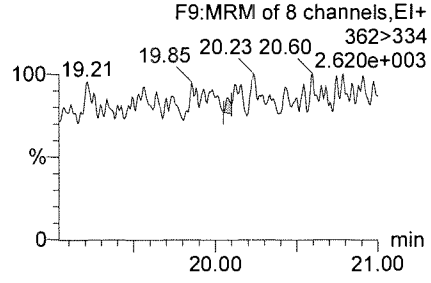
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2122

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/10/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13253-Well D	**Units:**	ng/L
Lab Code:	K1309638-005	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	48	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	103	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F021.D
Lab ID: K1309638-005
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 17:50
Date Quantitated: 10/10/2013 17:50
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Tolerable
	Merphos oxone	-36.3	NA	25	
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	ok see MB
	Chlorpyrifos-d10	951	39	124	
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	Narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	

Primary Review: Jason Retz 10-11-13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	Advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	Narrate
	Demeton-S	58	70	120	Advisory
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	Total ok

Primary Review: 10.11.13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F021.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 17:50	**Quant Date:**	10/10/2013 17:50	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-005			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/10/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282469	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	98463	132.73	OK
0	Fluoranthene-d10	15.78	-0.01	68598	100.45	OK
0	Chrysene-d12	18.66	0.00	75627	90.90	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3726	48.41	48	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	45709	102.50	103	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F021.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 17:50	**Quant Date:**	10/10/2013 17:50	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-005			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	98462.664		bb		132.73	32.7	3.556	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3725.814	98462.664	bb		48.41		1.744	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			98462.664	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			98462.664	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			98462.664	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			98462.664	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			98462.664	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			98462.664	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			98462.664	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			98462.664	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			98462.664	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	18431.854	98462.664	bb		91.67		1.537	1.545	NO
13	13	Diazinon|333-41-5	304>179			98462.664	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			98462.664	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			98462.664	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			68597.883	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			68597.883	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			68597.883	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	45708.871	68597.883	bb		102.50		2.845	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			68597.883	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			68597.883	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			68597.883	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			68597.883	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			68597.883	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	68597.883		bb		100.45	0.5	4.039	3.973	NO
26	26	Stirophos|22248-79-9	329>109			68597.883	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			68597.883	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			68597.883	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			75626.984	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			75626.984	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			75626.984	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	75626.984		bb		90.90	-9.1	2.499	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			75626.984	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			75626.984	MM-				0.000	4.250	YES

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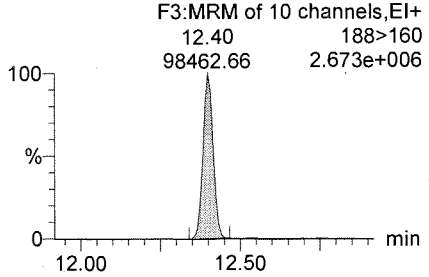
Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

Phenanthrene-d10|1517-22-2



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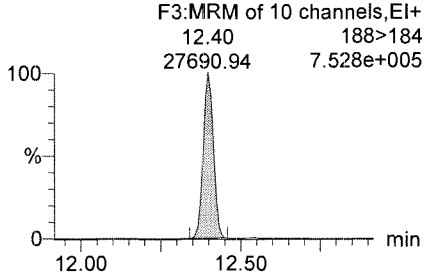
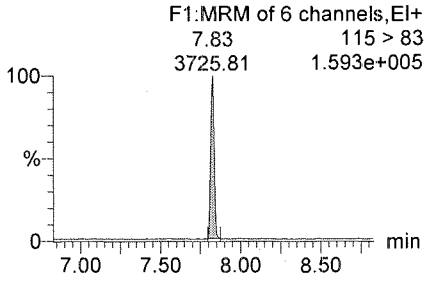


Dichlorvos-d6|203645-53-8



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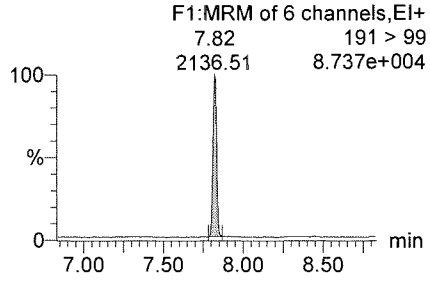
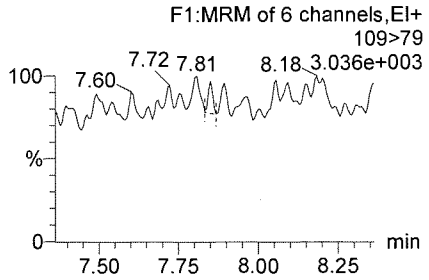


Dichlorvos|62-73-7



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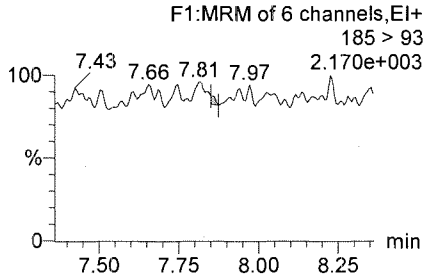

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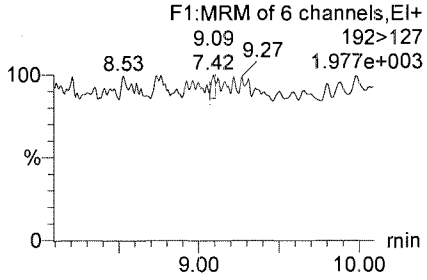

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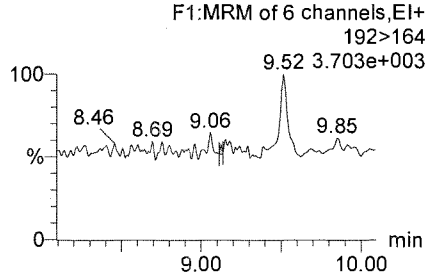
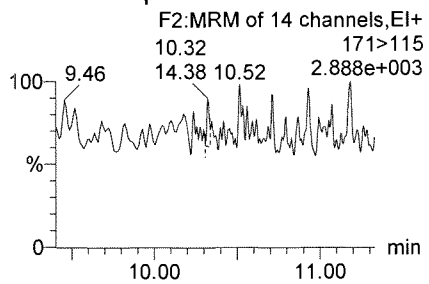


Demeton-O|298-03-3



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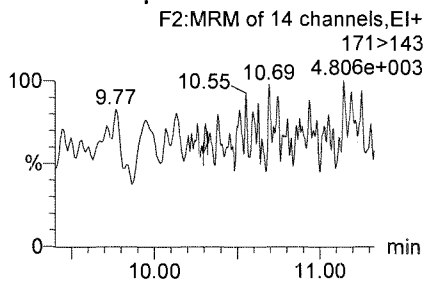
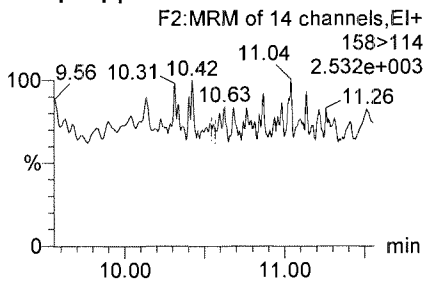
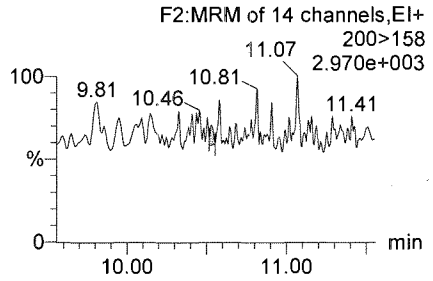


Ethoprop|13194-48-4



Ethoprop|13194-48-4



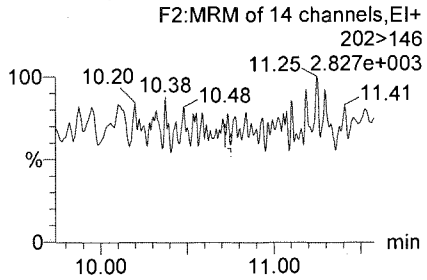
2129

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

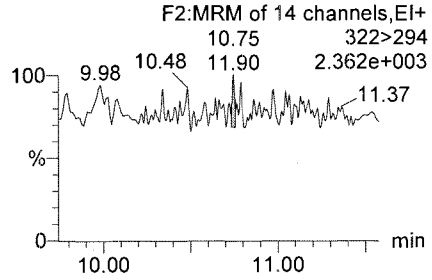
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

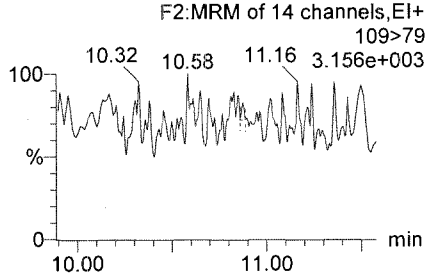
Sulfotep|3689-24-5



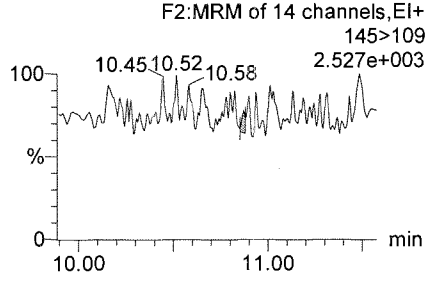
Sulfotep|3689-24-5



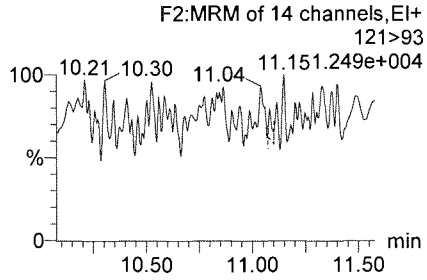
Naled|300-76-5



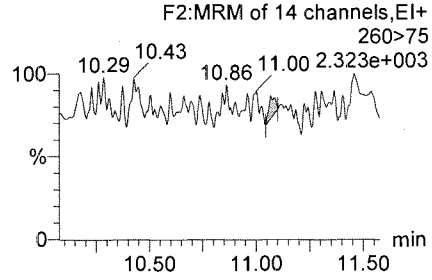
Naled|300-76-5



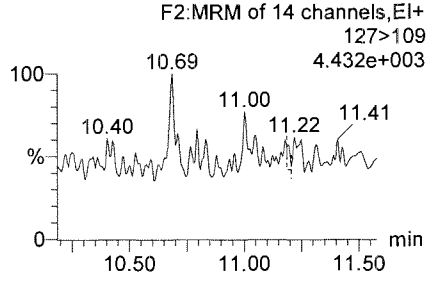
Phorate|298-02-2



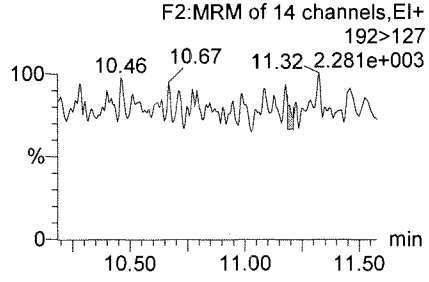
Phorate|298-02-2



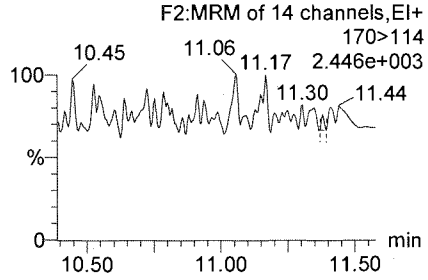
Monocrotophos|6923-22-4



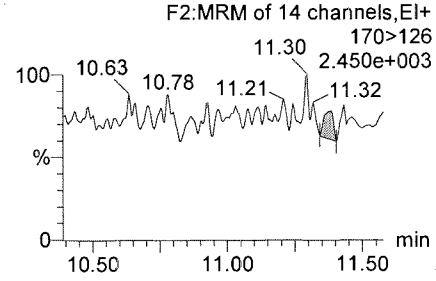
Monocrotophos|6923-22-4



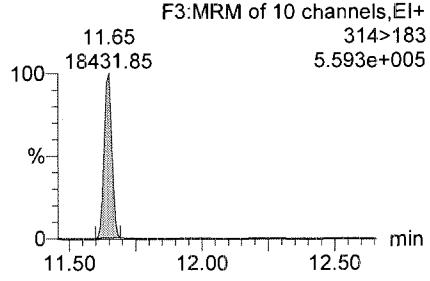
Demeton-S|126-75-0



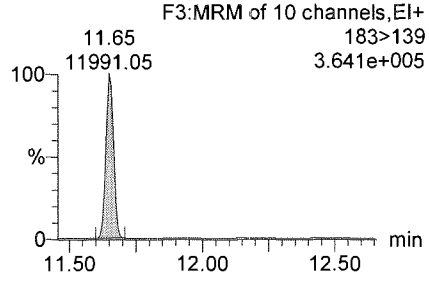
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



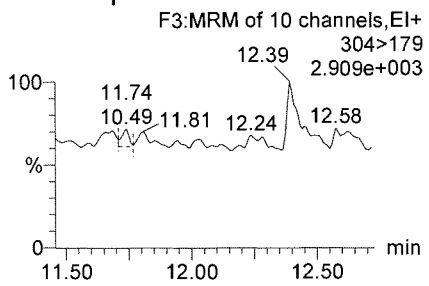
2130

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

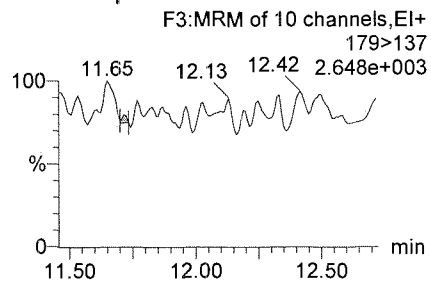
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

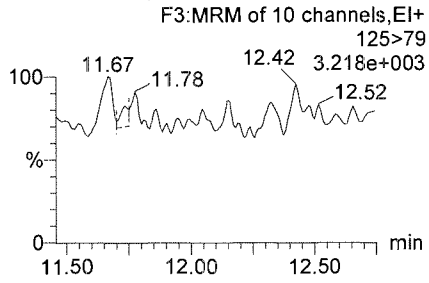
Diazinon|333-41-5



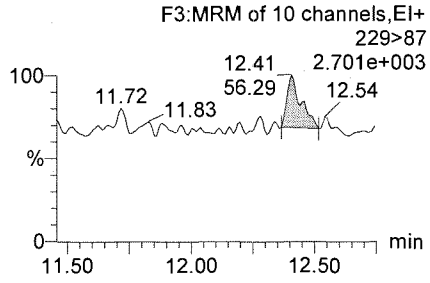
Diazinon|333-41-5



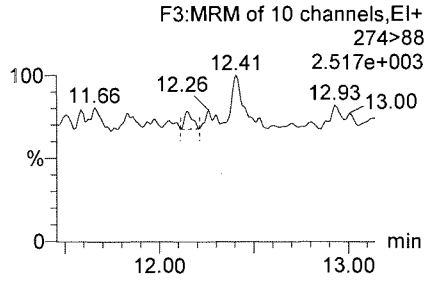
Dimethoate|60-51-5



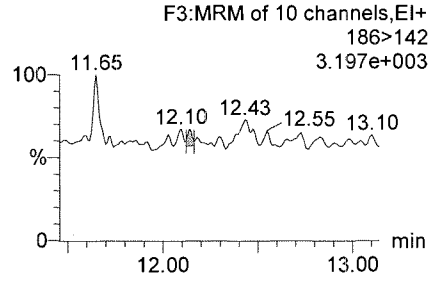
Dimethoate|60-51-5



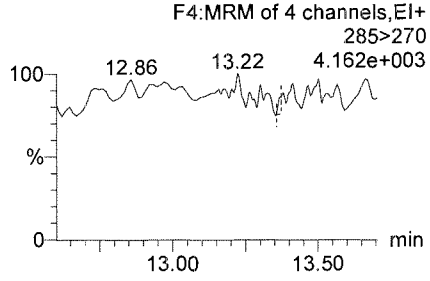
Disulfoton|298-04-4



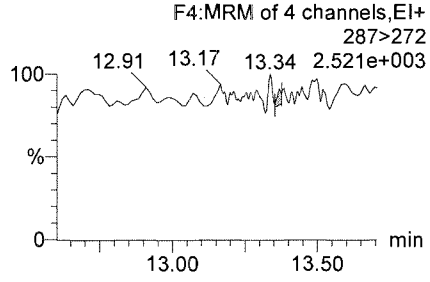
Disulfoton|298-04-4



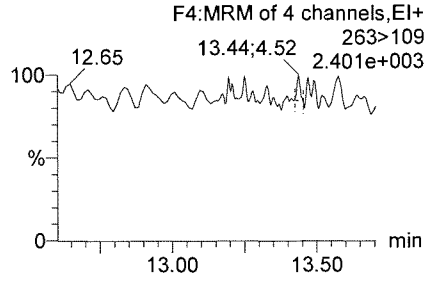
Ronnel|299-84-3



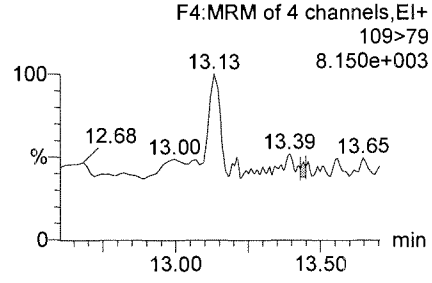
Ronnel|299-84-3



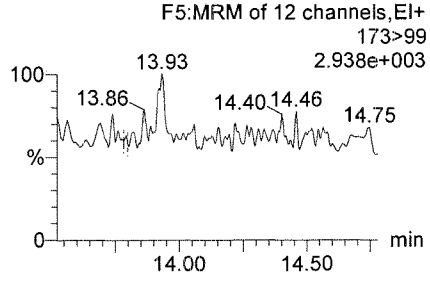
Methyl Parathion|298-00-0



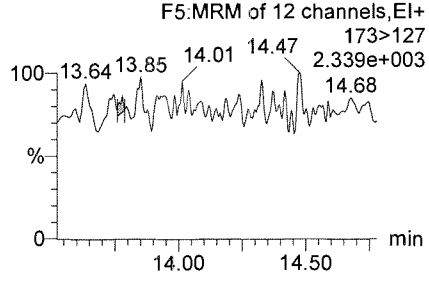
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



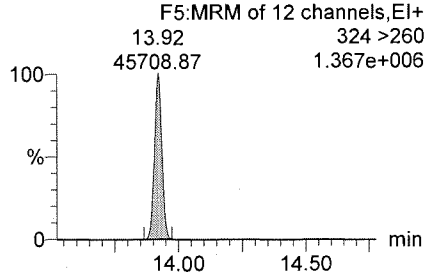
2131

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

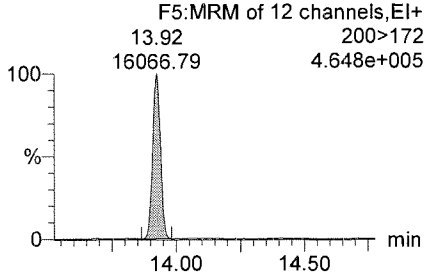
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

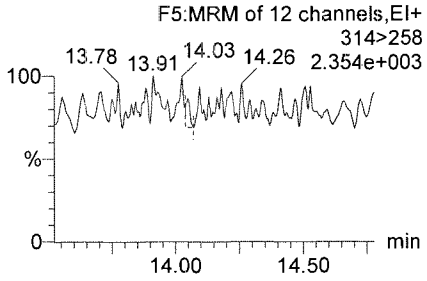
Chlorpyrifos-d10|CASID30732



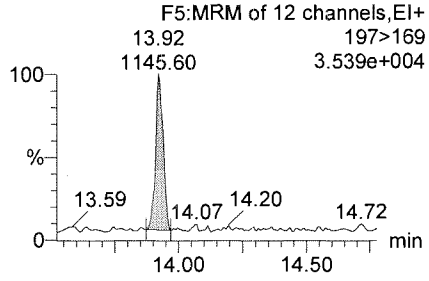
Chlorpyrifos-d10|CASID30732



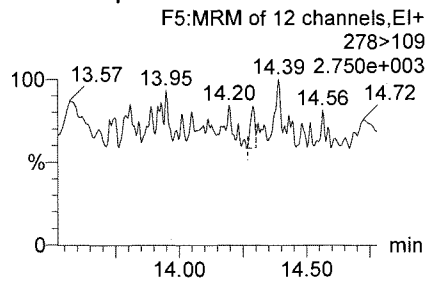
Chlorpyrifos|2921-88-2



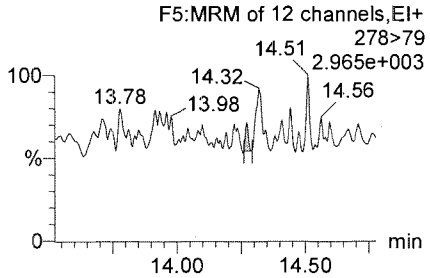
Chlorpyrifos|2921-88-2



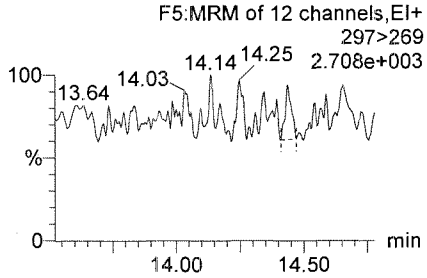
Fenthion|55-38-9



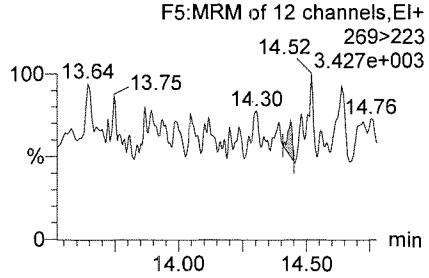
Fenthion|55-38-9



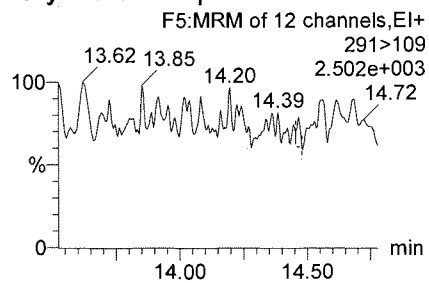
Trichloronate|327-98-0



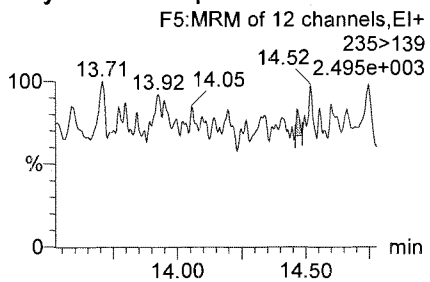
Trichloronate|327-98-0



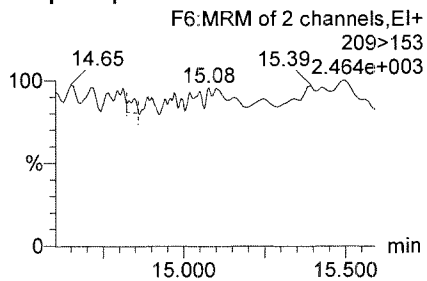
Ethyl Parathion|56-38-2



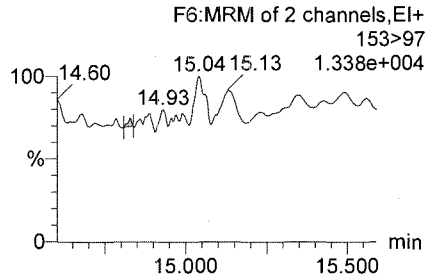
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



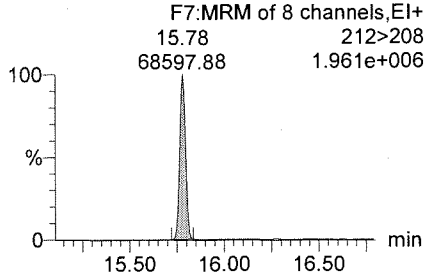
2132

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

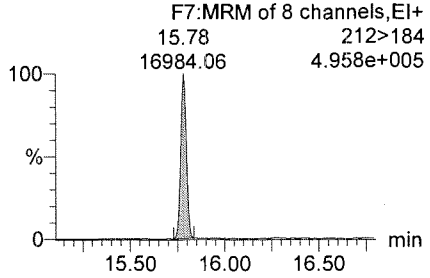
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

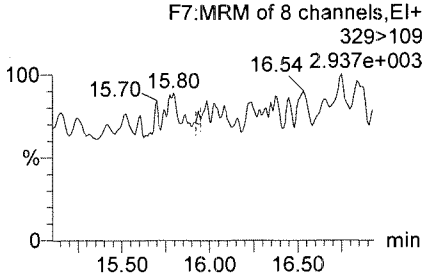
Fluoranthene-d10|93951-69-0



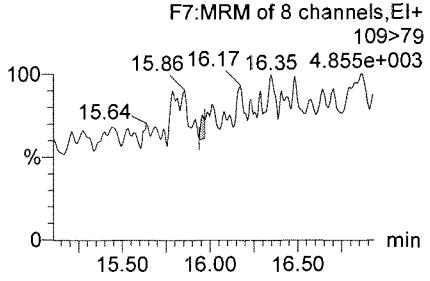
Fluoranthene-d10|93951-69-0



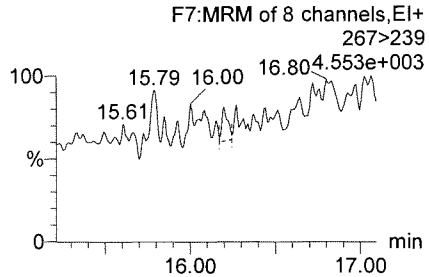
Stirophos|22248-79-9



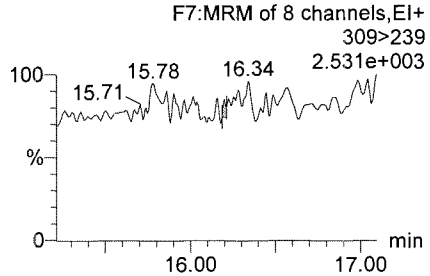
Stirophos|22248-79-9



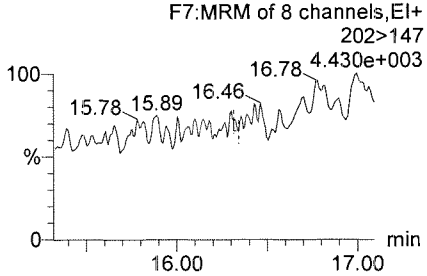
Tokuthion|34643-46-4



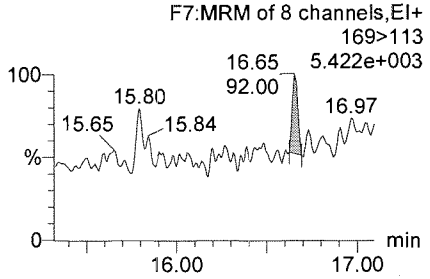
Tokuthion|34643-46-4



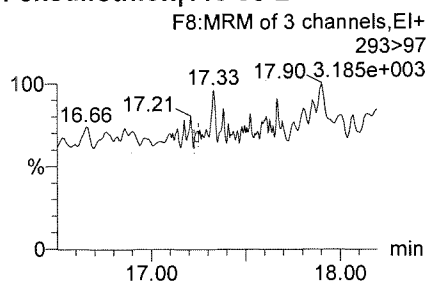
Merphos oxone|78-48-8



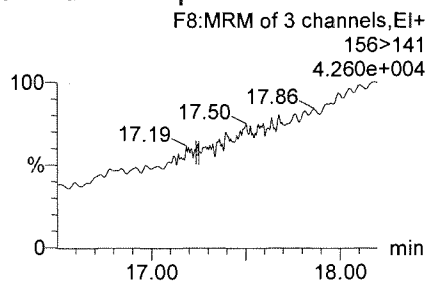
Merphos oxone|78-48-8



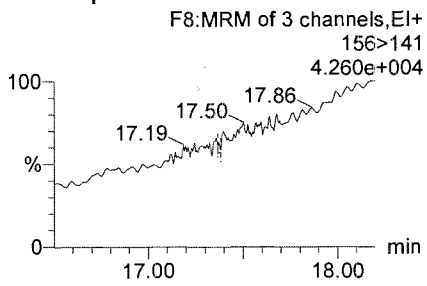
Fensulfothion|115-90-2



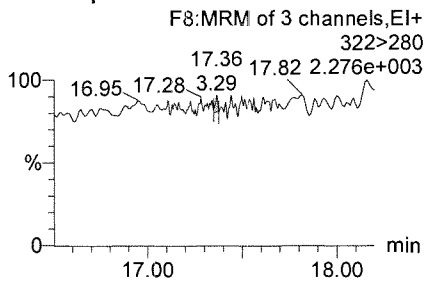
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2133

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
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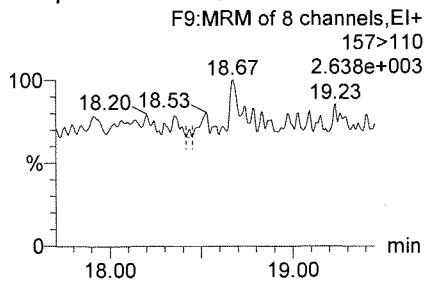
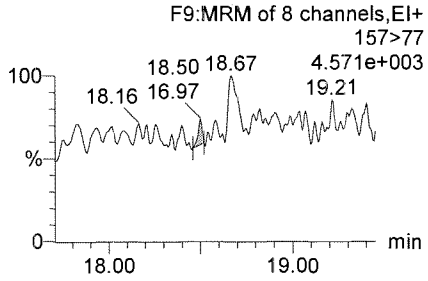
Name: 1010F021, Date: 10-Oct-2013, Time: 17:50:38, ID: SMPL, Description: k1309638-005, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

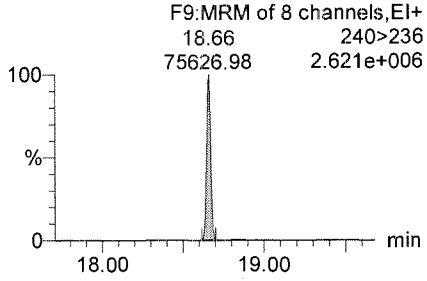
EPN|2104-64-5



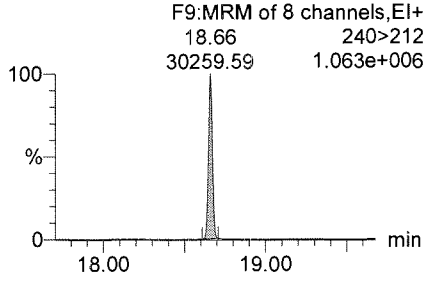
EPN|2104-64-5



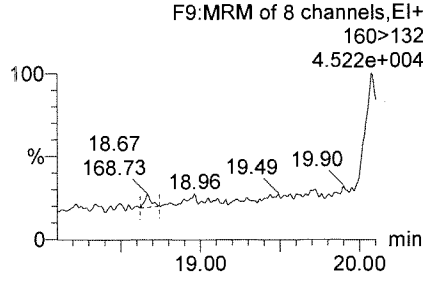
Chrysene-d12|1719-03-5



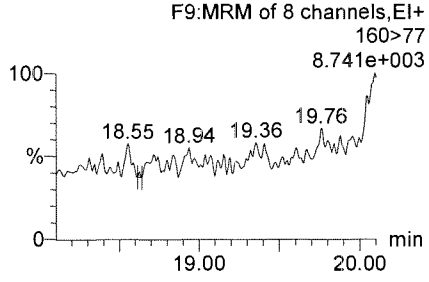
Chrysene-d12|1719-03-5



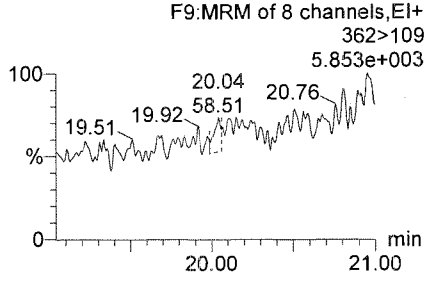
Azinphos methyl|86-50-0



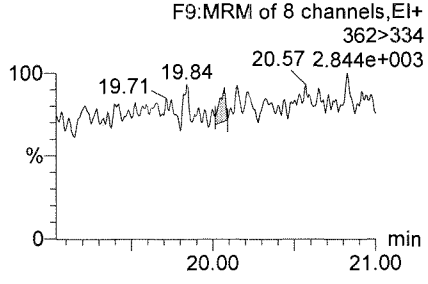
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2134

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/12/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13255-BW-1	**Units:**	ng/L
Lab Code:	K1309638-008	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	47	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	101	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F022.D
Lab ID: K1309638-008
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 18:16
Date Quantitated: 10/10/2013 18:16
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Tox OK
	Merphos oxone	-36.3	NA	25	
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	MB OK
	Chlorpyrifos-d10	951	39	124	
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	Nonsolute
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	

Primary Review: 10-11-13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	adjpf
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	Narrate
	Demeton-S	58	70	120	Advisors
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	Total OK

Primary Review: 10.11.13

Secondary Review: _____

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F022.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 18:16	**Quant Date:**	10/10/2013 18:16	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-008			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282470	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	100588	135.60	OK
0	Fluoranthene-d10	15.78	-0.01	71019	104.00	OK
0	Chrysene-d12	18.66	0.00	80095	96.27	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3682	46.83	47	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	46612	100.96	101	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F022.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 18:16	**Quant Date:**	10/10/2013 18:16	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

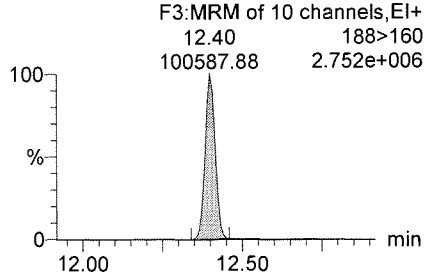
	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	100587.875		bb		135.60	35.6	3.628	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3681.823	100587.875	bb		46.83		1.875	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			100587.875	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			100587.875	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			100587.875	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			100587.875	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			100587.875	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			100587.875	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			100587.875	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			100587.875	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			100587.875	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	18400.771	100587.875	bb		89.58		1.562	1.545	NO
13	13	Diazinon|333-41-5	304>179			100587.875	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			100587.875	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			100587.875	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			71019.102	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			71019.102	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			71019.102	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	46612.305	71019.102	bb		100.96		2.928	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			71019.102	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			71019.102	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			71019.102	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			71019.102	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			71019.102							
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	71019.102		bb		104.00	4.0	4.019	3.973	NO
26	26	Stirophos|22248-79-9	329>109			71019.102	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			71019.102	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			71019.102	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			80095.250	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			80095.250	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			80095.250	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	80095.250		bb		96.27	-3.7	2.497	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			80095.250	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			80095.250	MM-				0.000	4.250	YES

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

Phenanthrene-d10|1517-22-2



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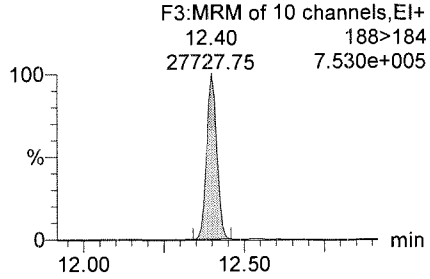
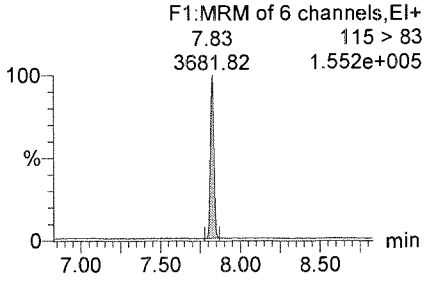


Dichlorvos-d6|203645-53-8



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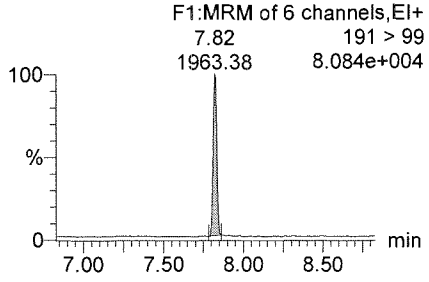

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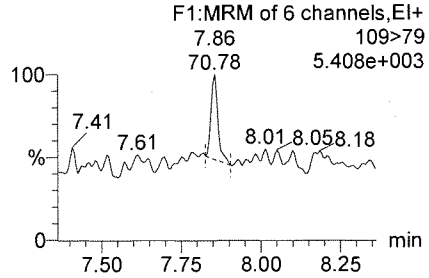

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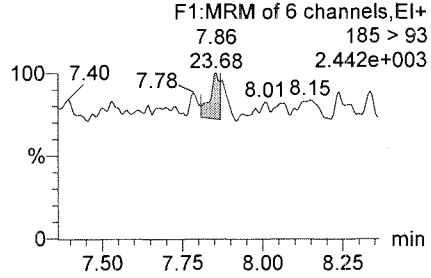

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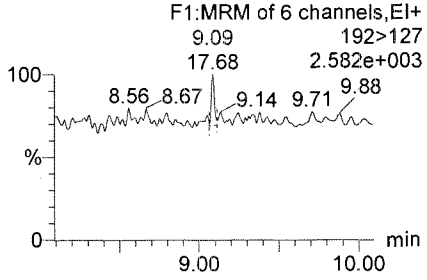
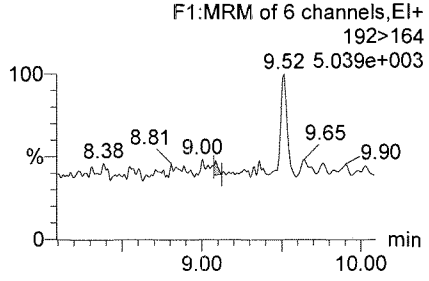
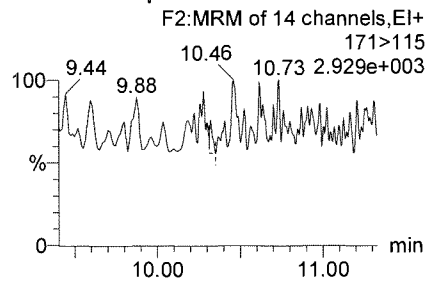


Mevinphos|7786-34-7



Demeton-O|298-03-3



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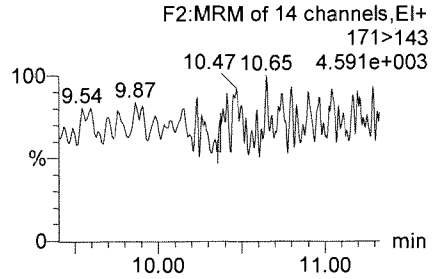
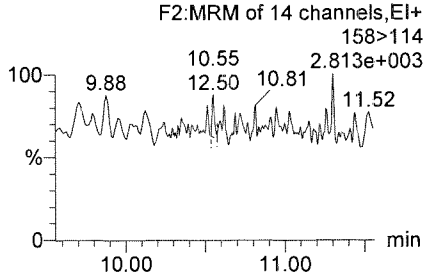
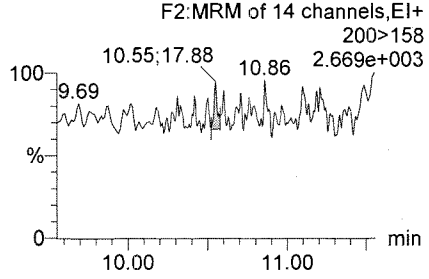


Ethoprop|13194-48-4



Ethoprop|13194-48-4



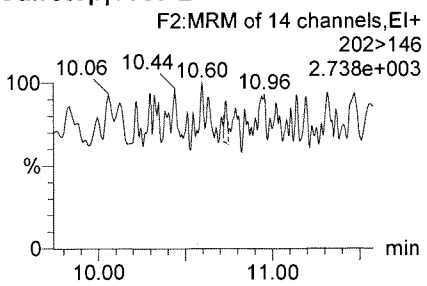
2141

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

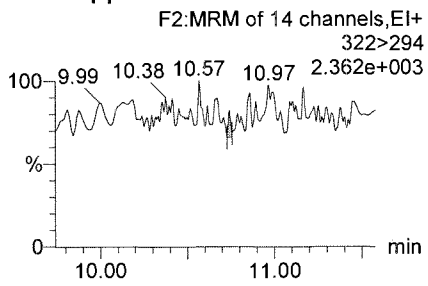
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

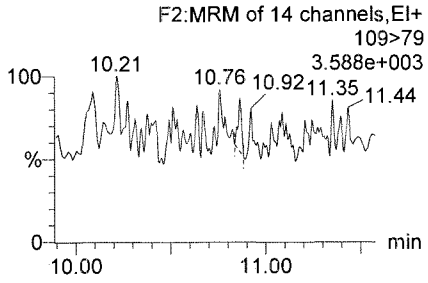
Sulfotep|3689-24-5



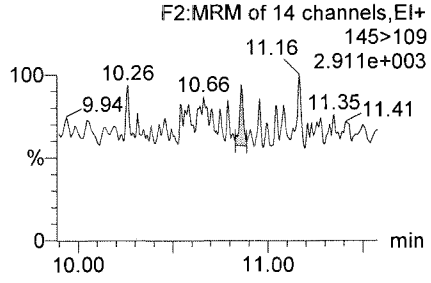
Sulfotep|3689-24-5



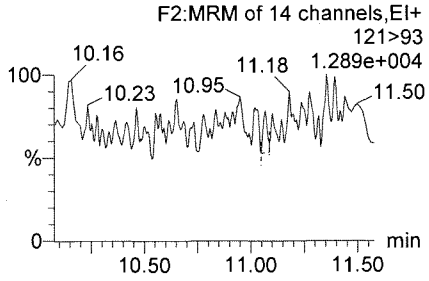
Naled|300-76-5



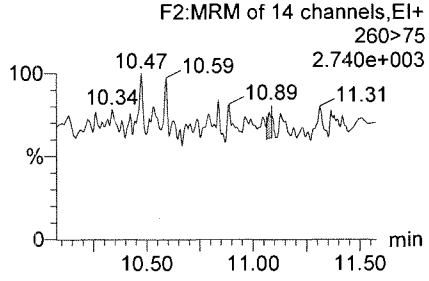
Naled|300-76-5



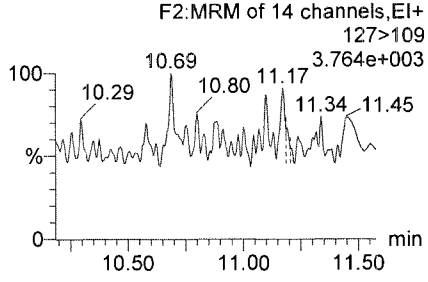
Phorate|298-02-2



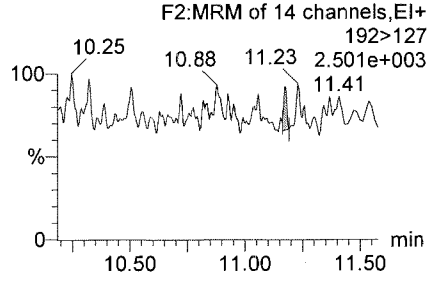
Phorate|298-02-2



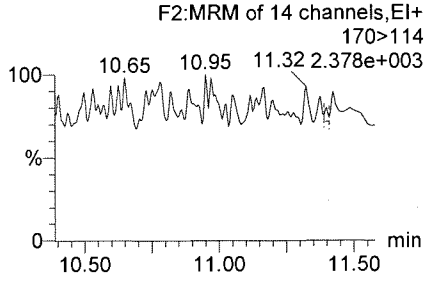
Monocrotophos|6923-22-4



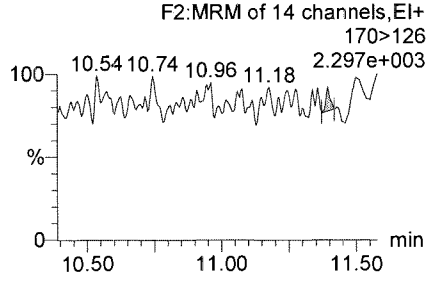
Monocrotophos|6923-22-4



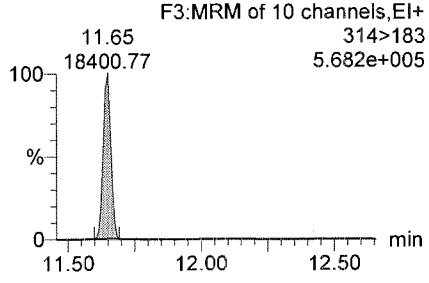
Demeton-S|126-75-0



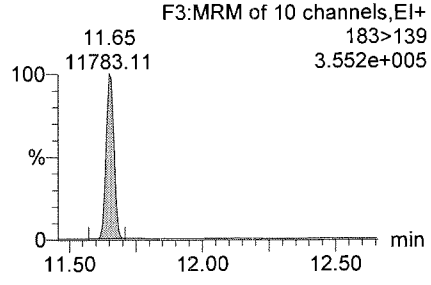
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



2142

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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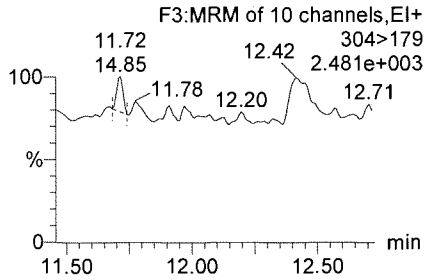
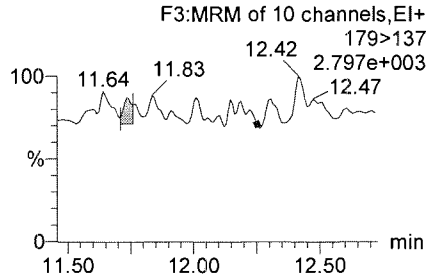
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

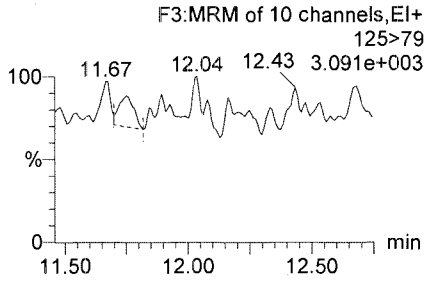
Diazinon|333-41-5



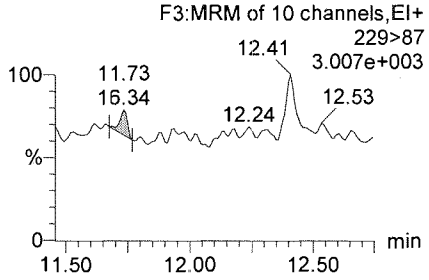
Diazinon|333-41-5



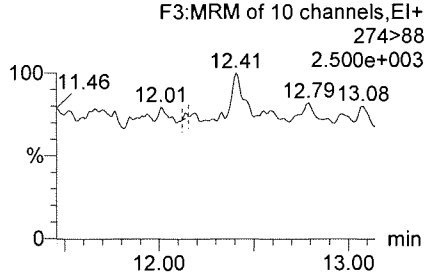
Dimethoate|60-51-5



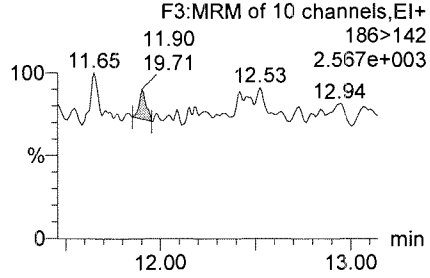
Dimethoate|60-51-5



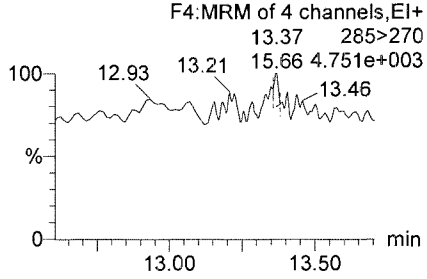
Disulfoton|298-04-4



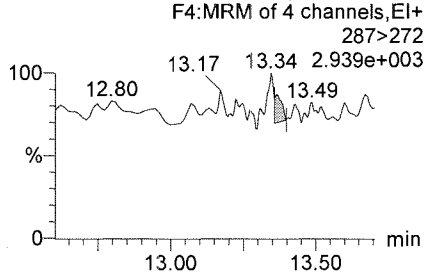
Disulfoton|298-04-4



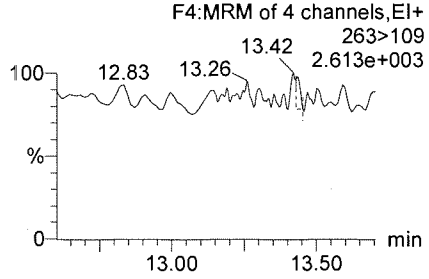
Ronnel|299-84-3



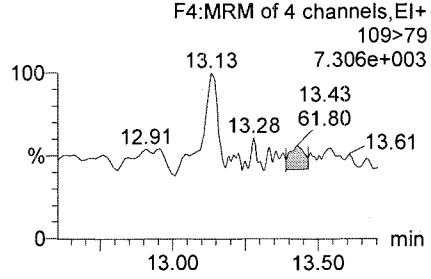
Ronnel|299-84-3



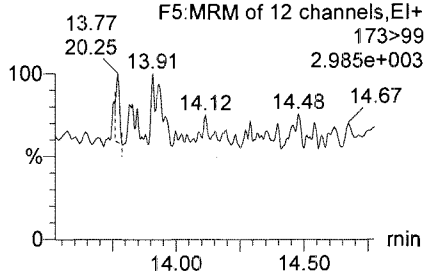
Methyl Parathion|298-00-0



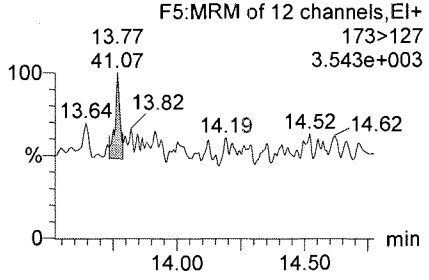
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



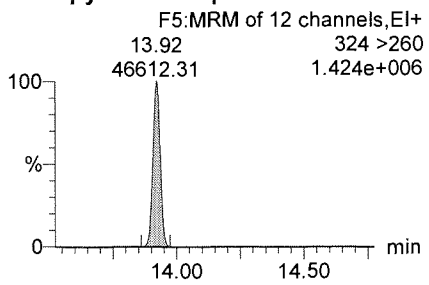
2143

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

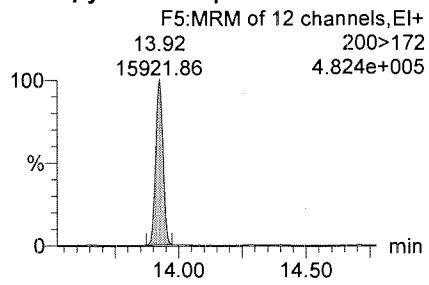
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

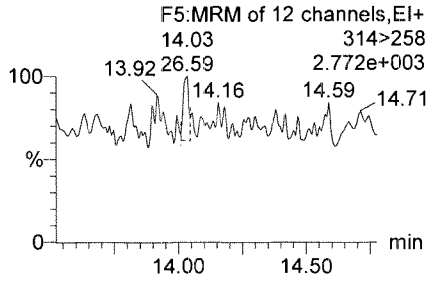
Chlorpyrifos-d10|CASID30732



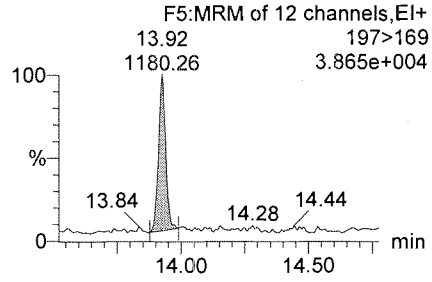
Chlorpyrifos-d10|CASID30732



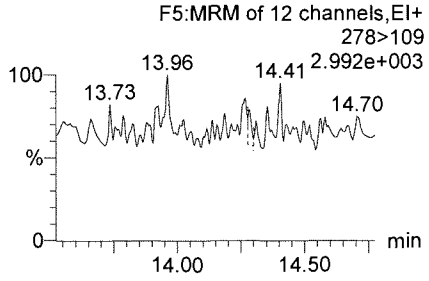
Chlorpyrifos|2921-88-2



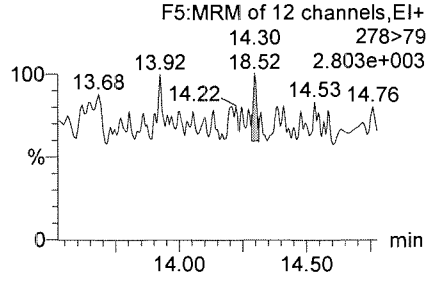
Chlorpyrifos|2921-88-2



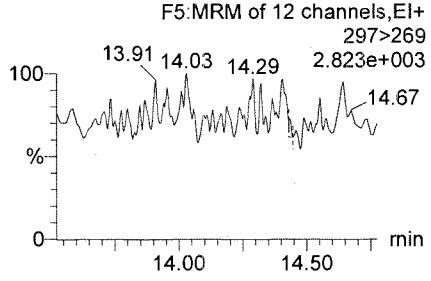
Fenthion|55-38-9



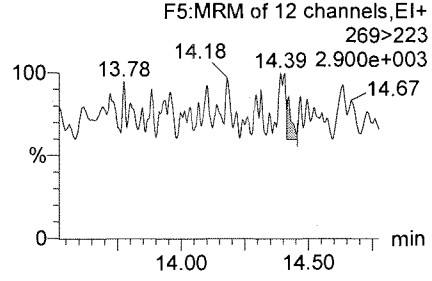
Fenthion|55-38-9



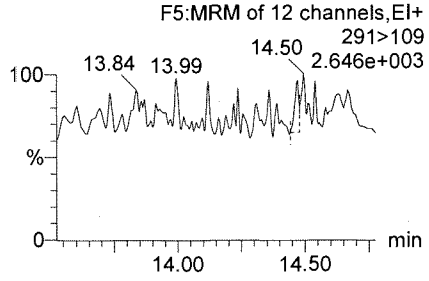
Trichloronate|327-98-0



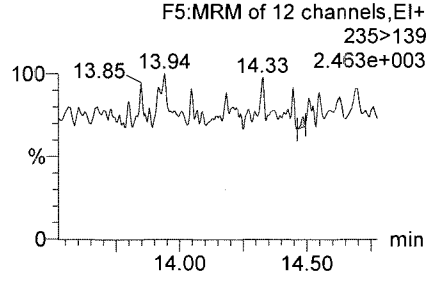
Trichloronate|327-98-0



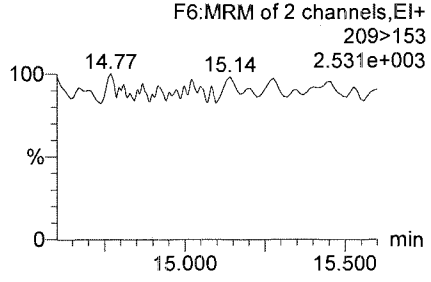
Ethyl Parathion|56-38-2



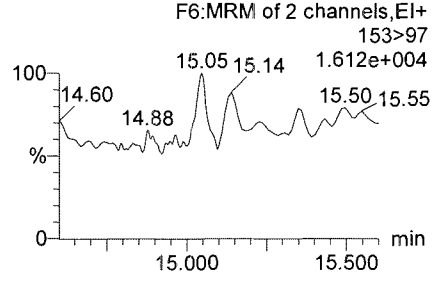
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



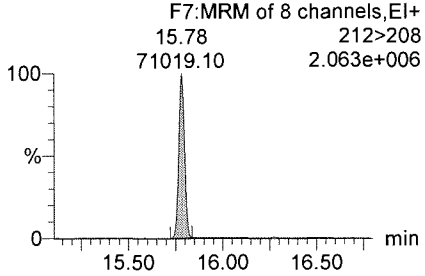
2144

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

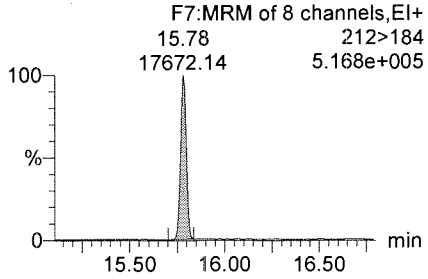
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

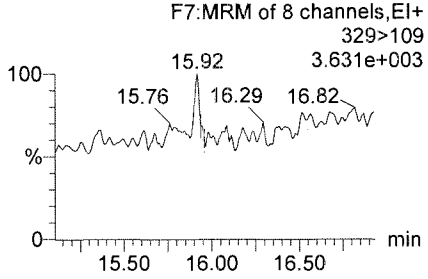
Fluoranthene-d10|93951-69-0



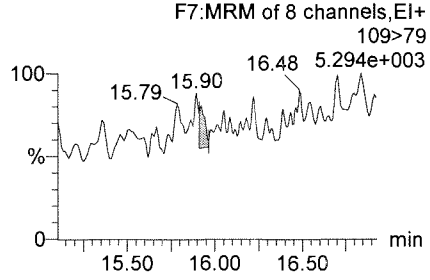
Fluoranthene-d10|93951-69-0



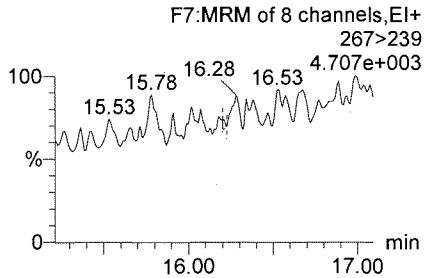
Stirophos|22248-79-9



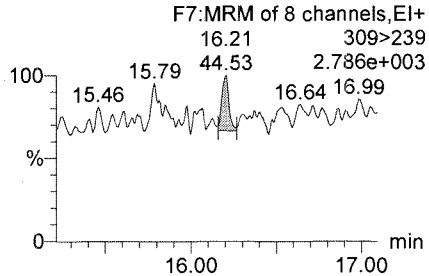
Stirophos|22248-79-9



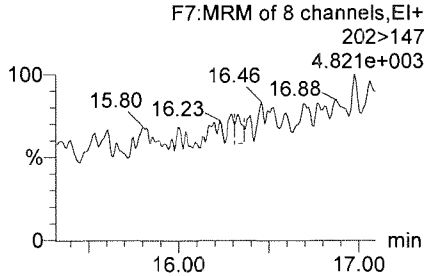
Tokuthion|34643-46-4



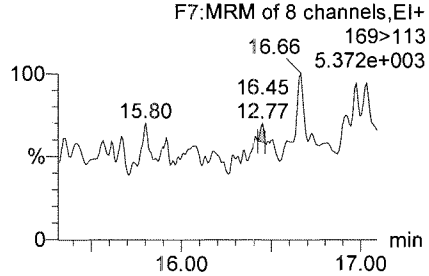
Tokuthion|34643-46-4



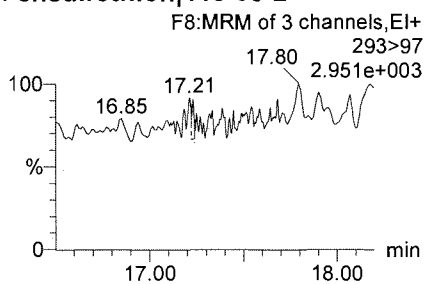
Merphos oxone|78-48-8



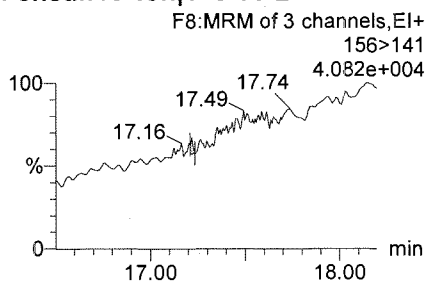
Merphos oxone|78-48-8



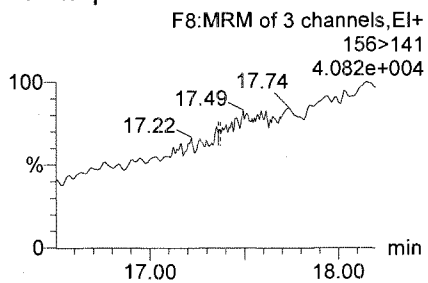
Fensulfothion|115-90-2



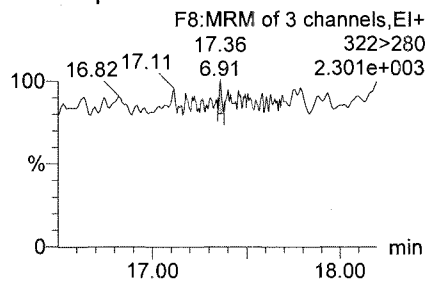
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2145

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
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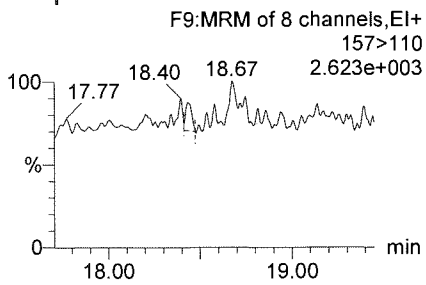
Name: 1010F022, Date: 10-Oct-2013, Time: 18:16:44, ID: SMPL, Description: k1309638-008, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

EPN|2104-64-5



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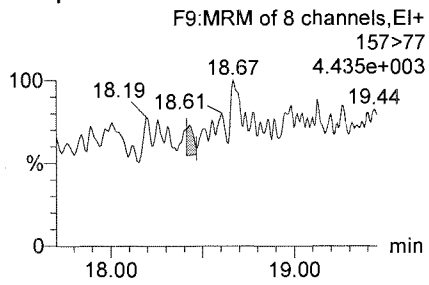
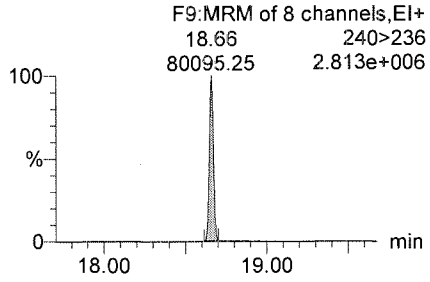
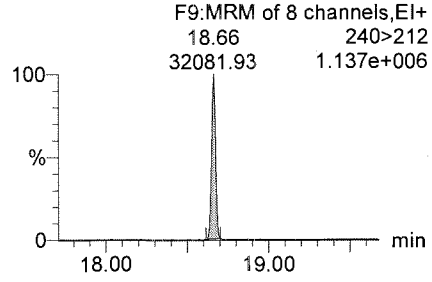


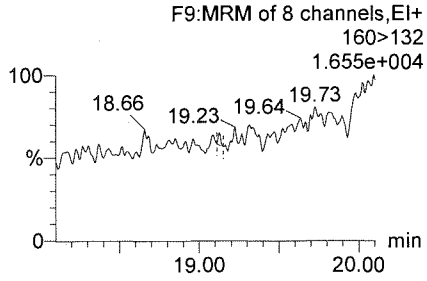
Chrysene-d12|1719-03-5



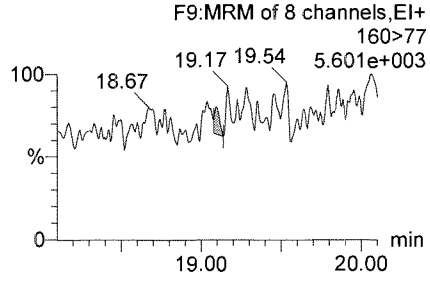
Chrysene-d12|1719-03-5



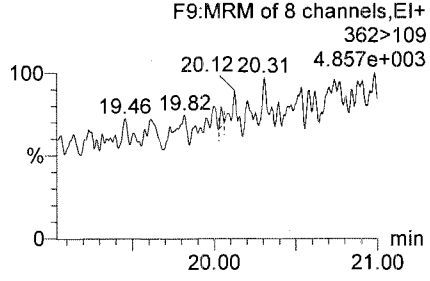
Azinphos methyl|86-50-0



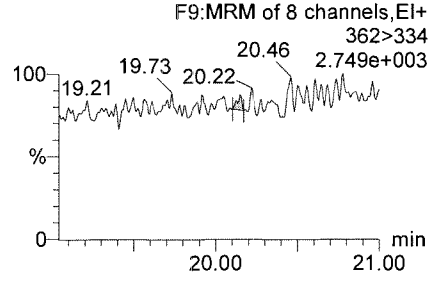
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2146

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/12/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13255-DUP	**Units:**	ng/L
Lab Code:	K1309638-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	100	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	100	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	100	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	100	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	100	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	46	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	88	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F023.D
Lab ID: K1309638-010
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 18:43
Date Quantitated: 10/10/2013 18:43
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total Ob
	Merphos oxone	-36.3	NA	25	
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	d2 see MB
	Chlorpyrifos-d10	951	39	124	
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	Narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	

Primary Review: 10-11-13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	Advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	Narrate
	Demeton-S	58	70	120	Advisory
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	100	50	NA	Tox OK

Primary Review: 10.11.13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F023.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 18:43	**Quant Date:**	10/10/2013 18:43	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-010			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282471	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	97476	131.40	OK
0	Fluoranthene-d10	15.78	-0.01	70315	102.96	OK
0	Chrysene-d12	18.66	0.00	80341	96.57	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3471	45.55	46	15-96	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	40293	88.15	88	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F023.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 18:43	**Quant Date:**	10/10/2013 18:43	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-010			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	97475.813		bb		131.40	31.4	3.632	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3470.811	97475.813	bb		45.55		1.788	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			97475.813	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			97475.813	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			97475.813	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			97475.813	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			97475.813	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			97475.813	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			97475.813	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			97475.813	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			97475.813	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	14597.686	97475.813	bb		73.34		1.516	1.545	NO
13	13	Diazinon|333-41-5	304>179			97475.813	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			97475.813	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			97475.813	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			70314.586	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			70314.586	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			70314.586	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	40293.102	70314.586	bb		88.15		2.856	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			70314.586	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			70314.586	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			70314.586	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			70314.586	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			70314.586	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	70314.586		bb		102.96	3.0	4.022	3.973	NO
26	26	Stirophos|22248-79-9	329>109			70314.586	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			70314.586	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			70314.586	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			80340.781	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			80340.781	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			80340.781	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.66	80340.781		bb		96.57	-3.4	2.512	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			80340.781	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			80340.781	MM-				0.000	4.250	YES

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Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

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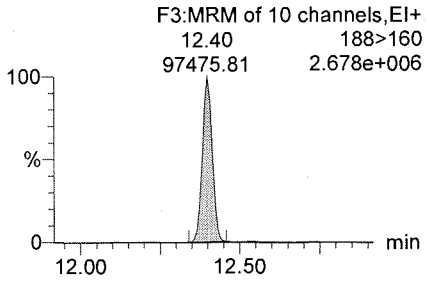
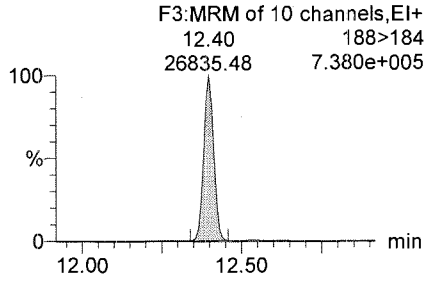
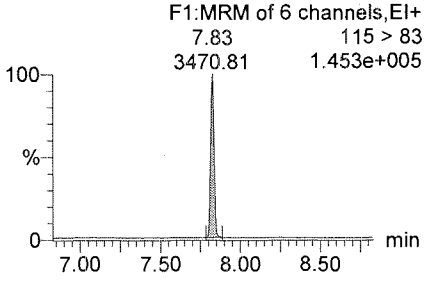


Phenanthrene-d10|1517-22-2



Dichlorvos-d6|203645-53-8



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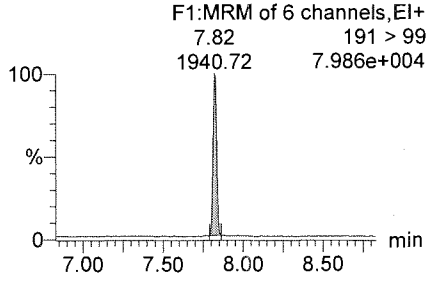
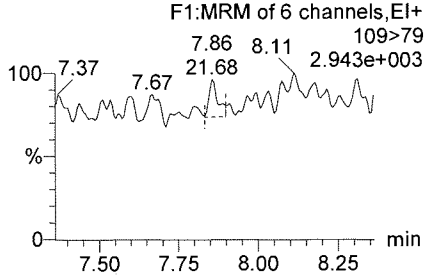


Dichlorvos|62-73-7



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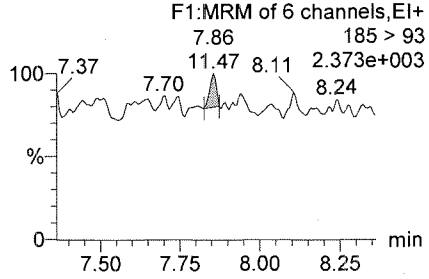
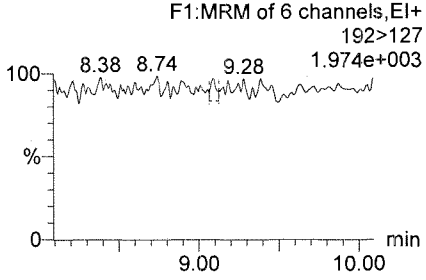


Mevinphos|7786-34-7



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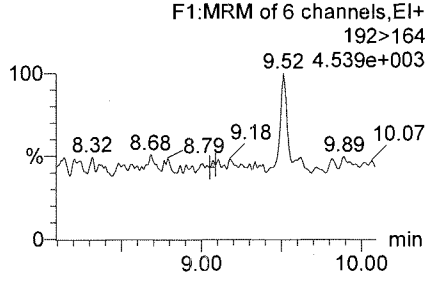
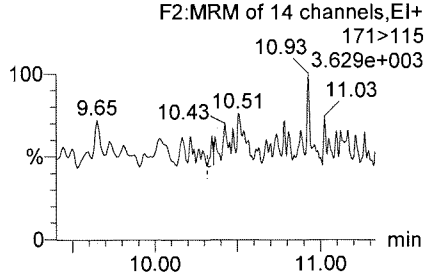


Demeton-O|298-03-3



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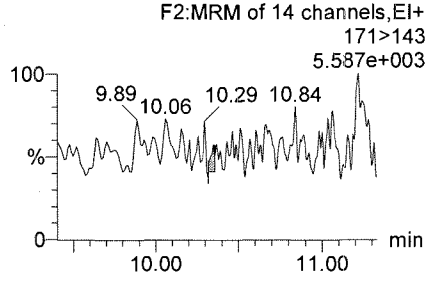
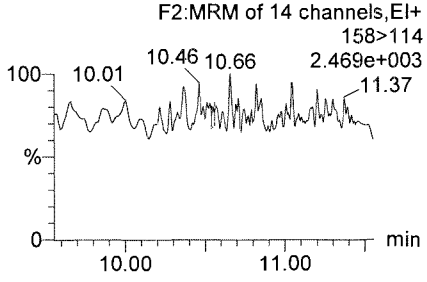
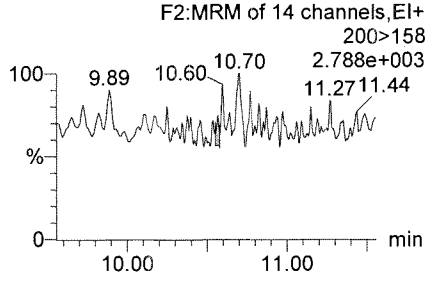


Ethoprop|13194-48-4



Ethoprop|13194-48-4



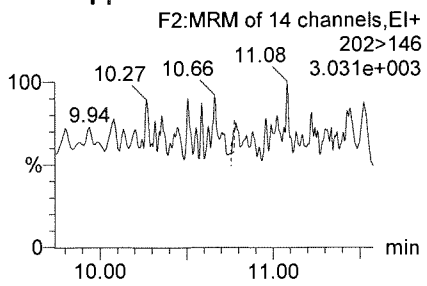
2153

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

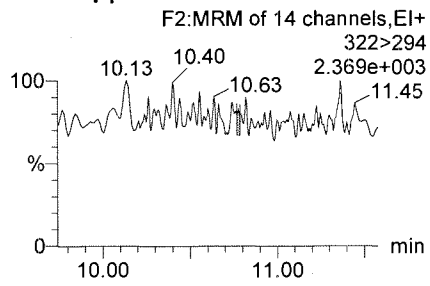
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

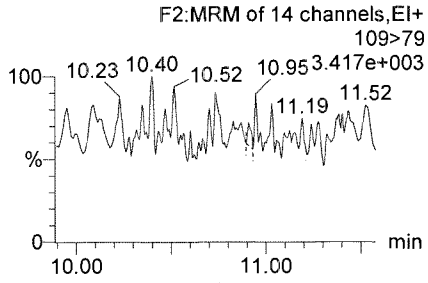
Sulfotep|3689-24-5



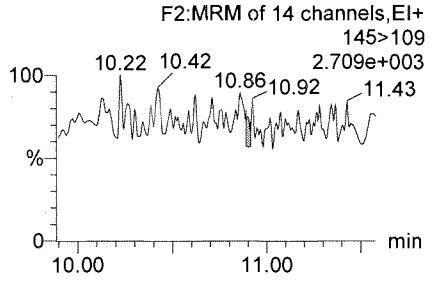
Sulfotep|3689-24-5



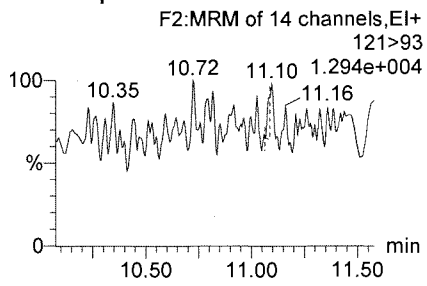
Naled|300-76-5



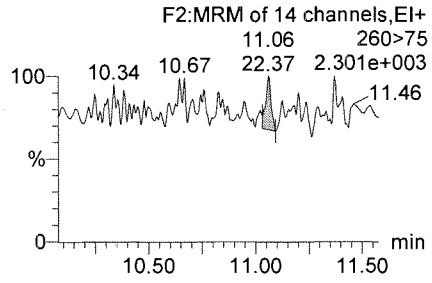
Naled|300-76-5



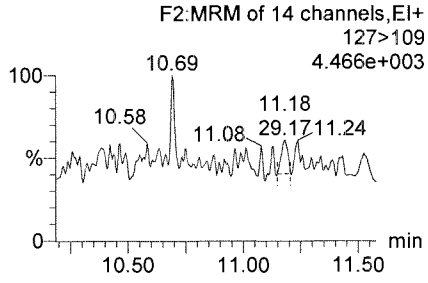
Phorate|298-02-2



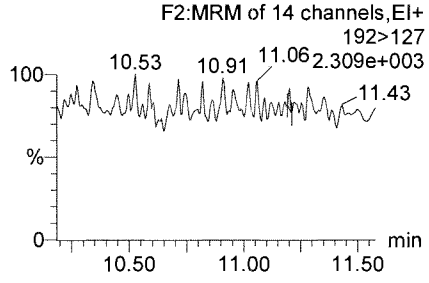
Phorate|298-02-2



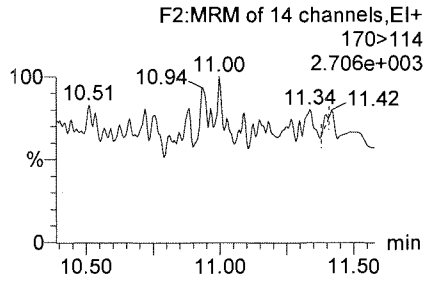
Monocrotophos|6923-22-4



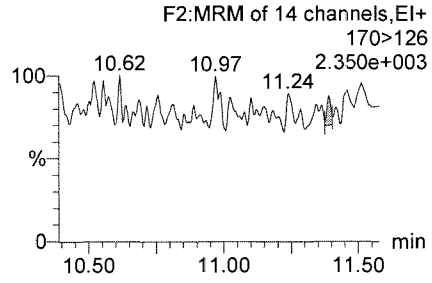
Monocrotophos|6923-22-4



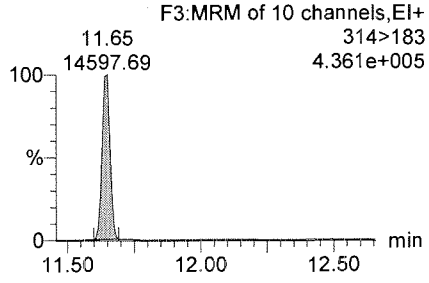
Demeton-S|126-75-0



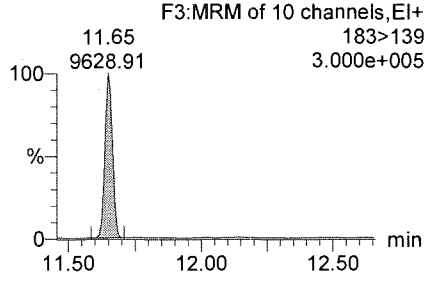
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



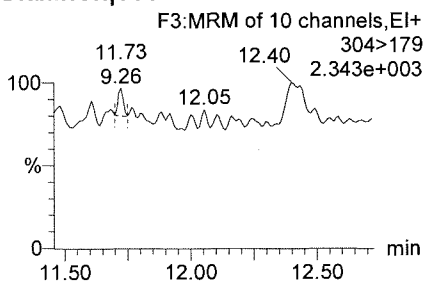
2154

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

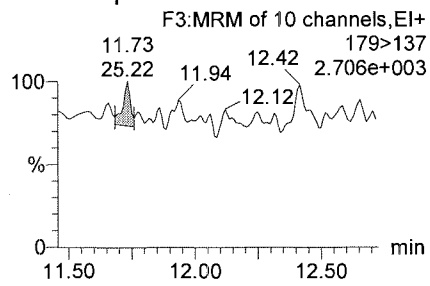
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

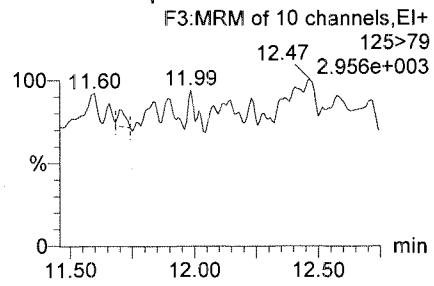
Diazinon|333-41-5



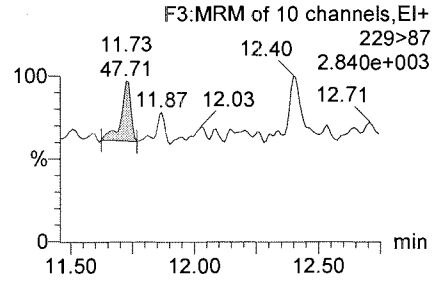
Diazinon|333-41-5



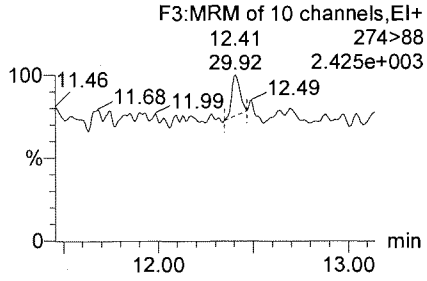
Dimethoate|60-51-5



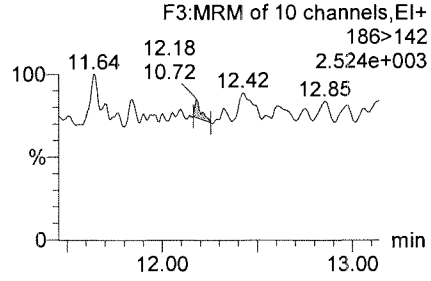
Dimethoate|60-51-5



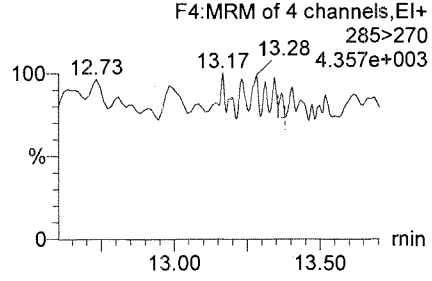
Disulfoton|298-04-4



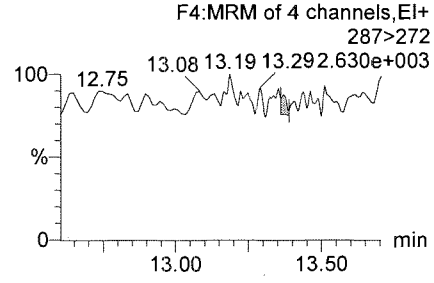
Disulfoton|298-04-4



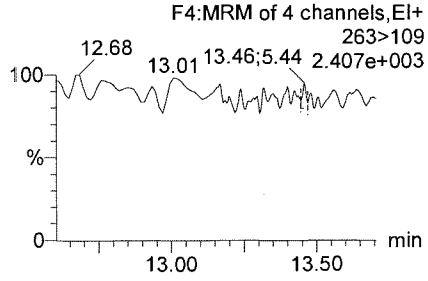
Ronnel|299-84-3



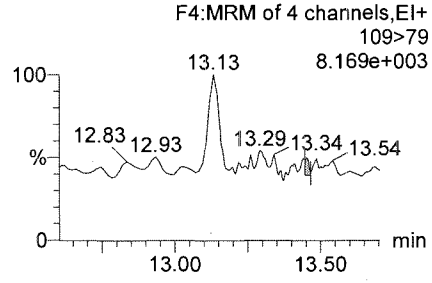
Ronnel|299-84-3



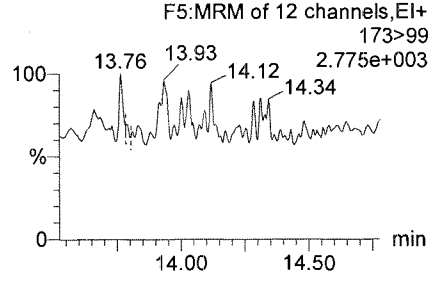
Methyl Parathion|298-00-0



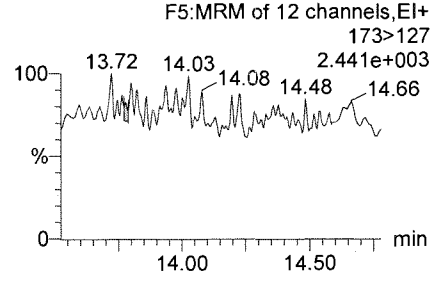
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



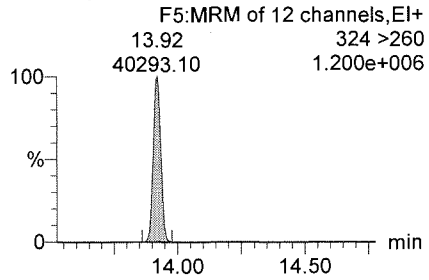
2155

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

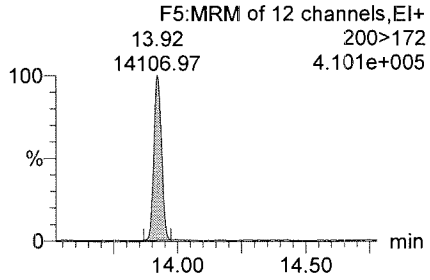
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

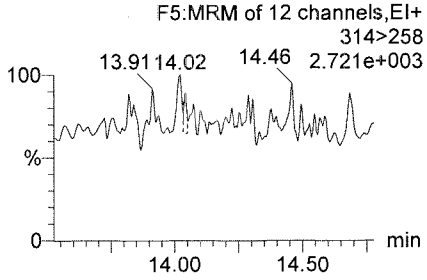
Chlorpyrifos-d10|CASID30732



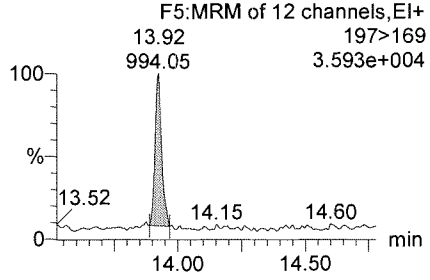
Chlorpyrifos-d10|CASID30732



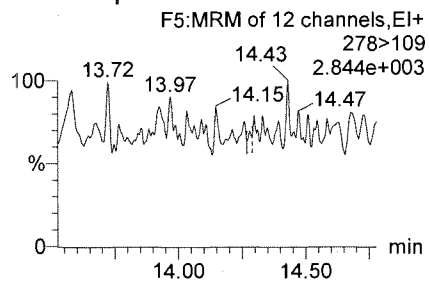
Chlorpyrifos|2921-88-2



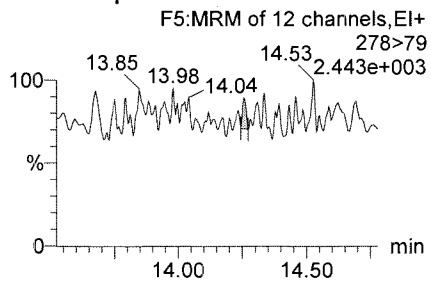
Chlorpyrifos|2921-88-2



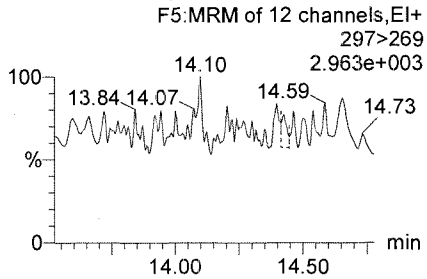
Fenthion|55-38-9



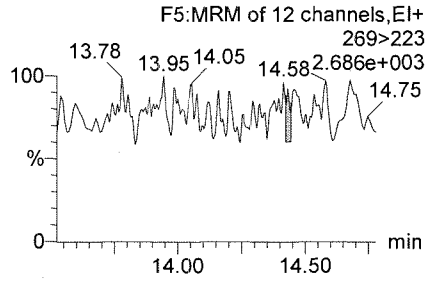
Fenthion|55-38-9



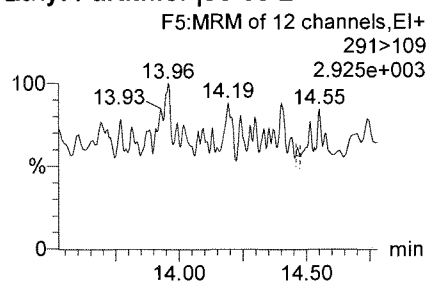
Trichloronate|327-98-0



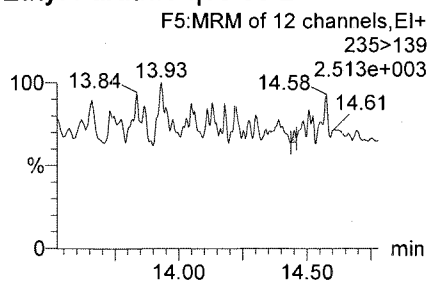
Trichloronate|327-98-0



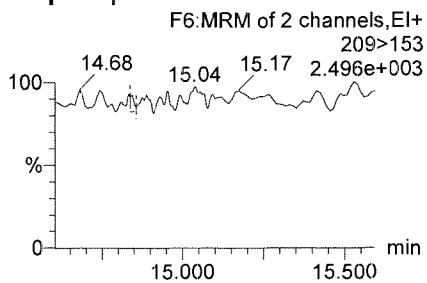
Ethyl Parathion|56-38-2



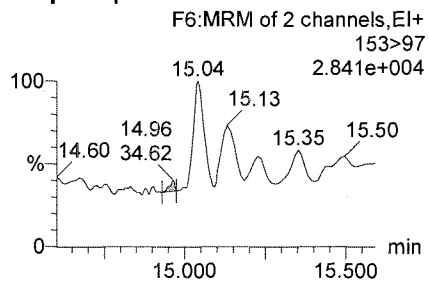
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



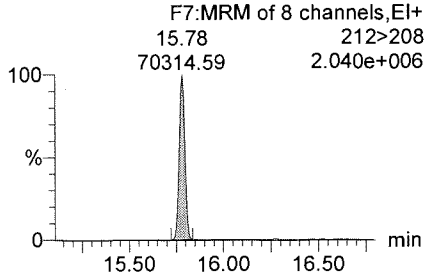
2156

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

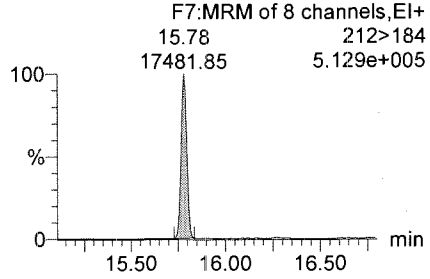
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

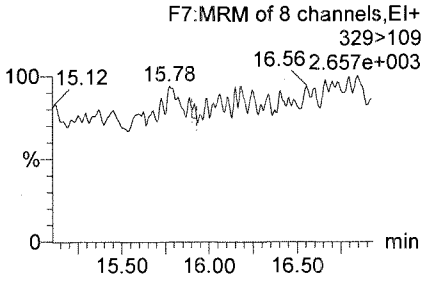
Fluoranthene-d10|93951-69-0



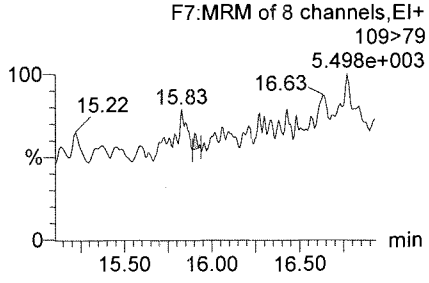
Fluoranthene-d10|93951-69-0



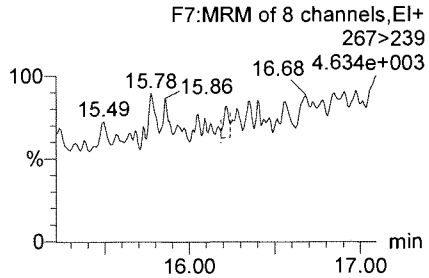
Stirophos|22248-79-9



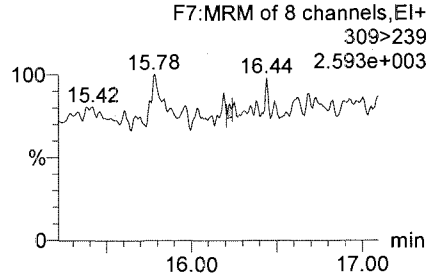
Stirophos|22248-79-9



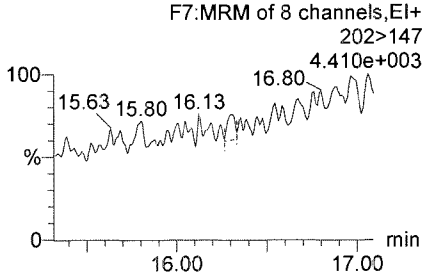
Tokuthion|34643-46-4



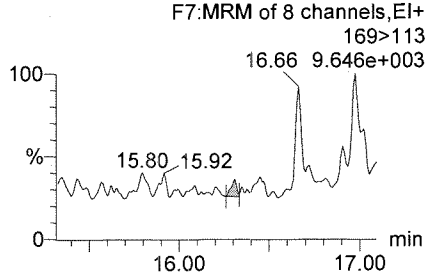
Tokuthion|34643-46-4



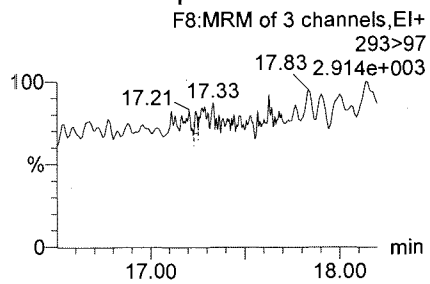
Merphos oxone|78-48-8



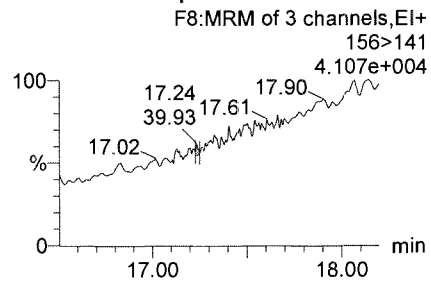
Merphos oxone|78-48-8



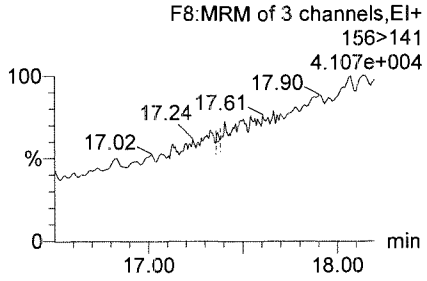
Fensulfothion|115-90-2



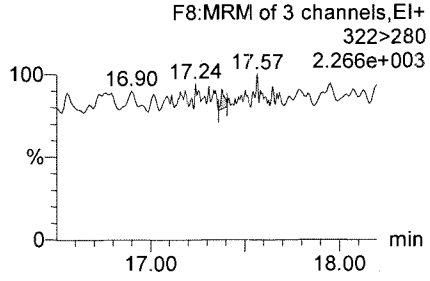
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



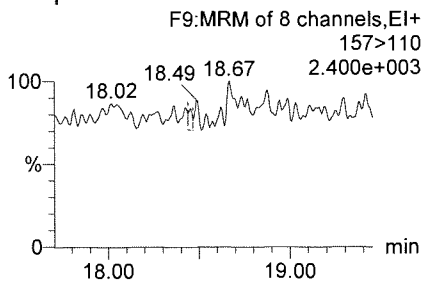
2157

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F023, Date: 10-Oct-2013, Time: 18:43:29, ID: SMPL, Description: k1309638-010, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

EPN|2104-64-5



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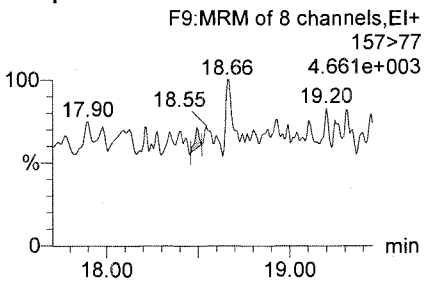
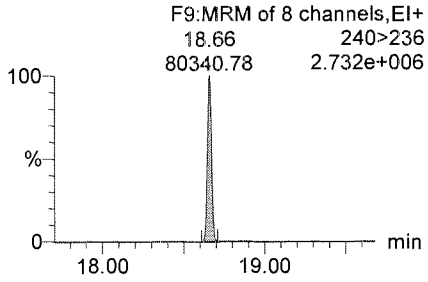
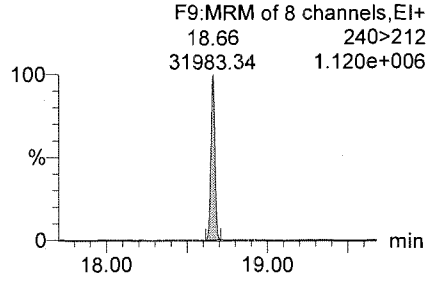


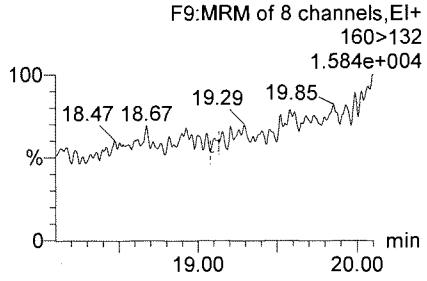
Chrysene-d12|1719-03-5



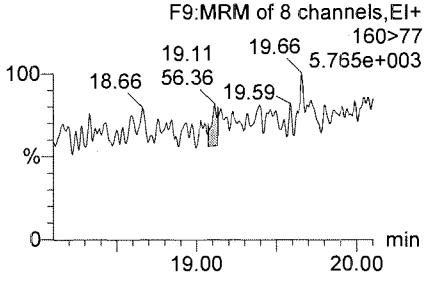
Chrysene-d12|1719-03-5



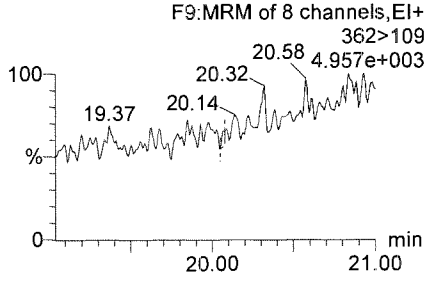
Azinphos methyl|86-50-0



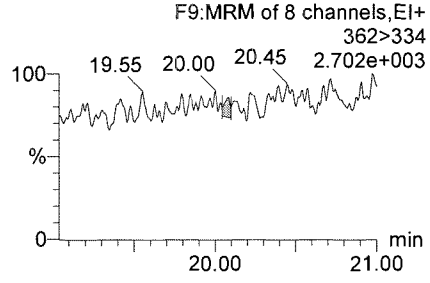
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2158

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	09/12/2013
Sample Matrix:	Water	**Date Received:**	09/14/2013

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	13255-Rinse	**Units:**	ng/L
Lab Code:	K1309638-011	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	51	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	98	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F024.D
Lab ID: K1309638-011
RunType: SMPL
Matrix: WATER

Date Acquired: 10/10/2013 19:09
Date Quantitated: 10/10/2013 19:09
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
ListJoinID: LJ13063

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA		x
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Tox OK
	Merphos oxone	-36.3	NA	25	
MB Surrogate Recovery	Dichlorvos-d6	471	15	96	OK for MB
	Chlorpyrifos-d10	951	39	124	
Lab Control Spike	Naled (Dibrom)	67	70	120	Advisory
	Monocrotophos	1	70	120	Narrative
	Demeton-S	59	70	120	Advisory
	Dimethoate	11	70	120	
	Merphos	13	70	120	
	Merphos oxone	132	70	120	
	Fensulfothion	29	70	120	

Primary Review: 10.11.13

Secondary Review: 10/15/13

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Azinphos-methyl	58	70	120	advisory
Duplicate Lab Control Spike	Demeton-O	57	70	120	
	Demeton-O,S	57	70	120	
	Naled (Dibrom)	65	70	120	
	Monocrotophos	0	70	120	Do not use
	Demeton-S	58	70	120	Advisory
	Dimethoate	9	70	120	
	Merphos	15	70	120	
	Merphos oxone	137	70	120	
	Fensulfothion	26	70	120	
	Azinphos-methyl	54	70	120	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	Total ok

Primary Review: 10.11.13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F024.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 19:09	**Quant Date:**	10/10/2013 19:09	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-011			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**	09/12/2013	**Receive Date:**	09/14/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	K1309638
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282465	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:	Organophosphorus Pesticides by HRGC/MS/MS	**Report List ID:**	LJ13063
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	98778	133.16	OK
0	Fluoranthene-d10	15.78	-0.01	74688	109.37	OK
0	Chrysene-d12	18.65	-0.01	87207	104.82	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3943	51.07	51	15-96	OK	
25	Chlorpyrifos-d10	13.92	-0.01	0.00	47447	97.72	98	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Dimethoate				0		4.7	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	
25	Malathion				0		5.1	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F024.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 19:09	**Quant Date:**	10/10/2013 19:09	**Vial:**	
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K1309638-011			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.40	98777.656		bb		133.16	33.2	3.596	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	3943.446	98777.656	bb		51.07		1.802	1.766	NO
3	3	Dichlorvos|62-73-7	109>79			98777.656	MM-				0.000	3.268	YES
4	4	Mevinphos|7786-34-7	192>127			98777.656	MM-				0.000	2.725	YES
5	5	Demeton-O|298-03-3	171>115			98777.656	MM-				0.000	2.144	YES
6	6	Ethoprop|13194-48-4	158>114			98777.656	MM-				0.000	1.746	YES
7	7	Sulfotep|3689-24-5	202>146			98777.656	MM-				0.000	2.195	YES
8	8	Naled|300-76-5	109>79			98777.656	MM-				0.000	3.352	YES
9	9	Phorate|298-02-2	121>93			98777.656	MM-				0.000	2.631	YES
10	10	Monocrotophos|6923-22-4	127>109			98777.656	MM-				0.000	4.455	YES
11	11	Demeton-S|126-75-0	170>114			98777.656	MM-				0.000	1.541	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	17719.863	98777.656	bb		87.85		1.564	1.545	NO
13	13	Diazinon|333-41-5	304>179			98777.656	MM-				0.000	1.325	YES
14	14	Dimethoate|60-51-5	125>79			98777.656	MM-				0.000	3.113	YES
15	15	Disulfoton|298-04-4	274>88			98777.656	MM-				0.000	1.941	YES
16	16	Ronnel|299-84-3	285>270			74687.453	MM-				0.000	1.469	YES
17	17	Methyl Parathion|298-00-0	263>109			74687.453	MM-				0.000	0.844	YES
18	18	Malathion|121-75-5	173>99			74687.453	MM-				0.000	1.464	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	47446.668	74687.453	bb		97.72		2.888	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258			74687.453	MM-				0.000	2.179	YES
21	21	Fenthion|55-38-9	278>109			74687.453	MM-				0.000	2.452	YES
22	22	Trichloronate|327-98-0	297>269			74687.453	MM-				0.000	2.040	YES
23	23	Ethyl Parathion|56-38-2	291>109			74687.453	MM-				0.000	4.912	YES
24	24	Merphos|150-50-5	209>153			74687.453	MM-				0.000	2.393	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.78	74687.453		bb		109.37	9.4	4.016	3.973	NO
26	26	Stirophos|22248-79-9	329>109			74687.453	MM-				0.000	1.508	YES
27	27	Tokuthion|34643-46-4	267>239			74687.453	MM-				0.000	0.939	YES
28	28	Merphos oxone|78-48-8	202>147			74687.453	MM-				0.000	2.340	YES
29	29	Fensulfothion|115-90-2	293>97			87206.750	MM-				0.000	1.220	YES
30	30	Bolstar|35400-43-2	156>141			87206.750	MM-				0.000	6.221	YES
31	31	EPN|2104-64-5	157>110			87206.750	MM-				0.000	1.110	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.65	87206.750		bb		104.82	4.8	2.498	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132			87206.750	MM-				0.000	1.294	YES
34	34	Coumaphos|56-72-4	362>109			87206.750	MM-				0.000	4.250	YES

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Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

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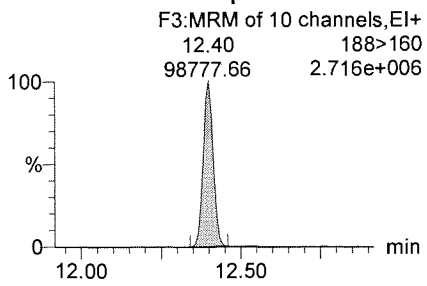

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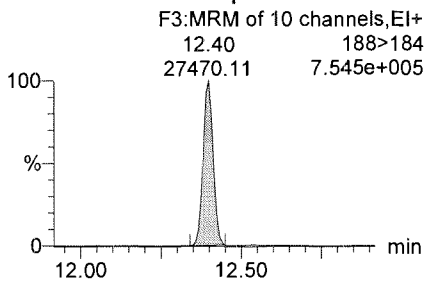
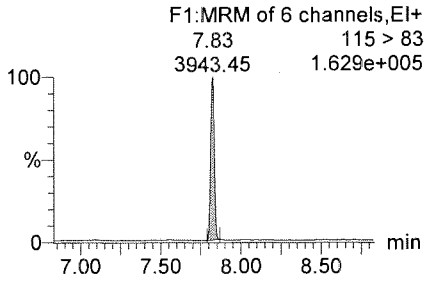


Dichlorvos-d6|203645-53-8



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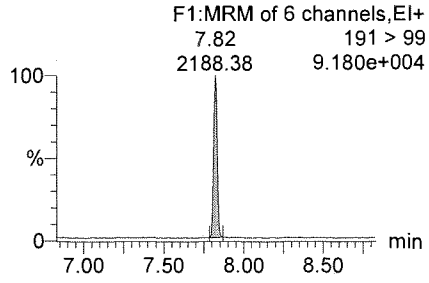
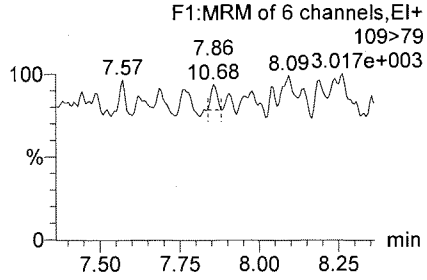


Dichlorvos|62-73-7



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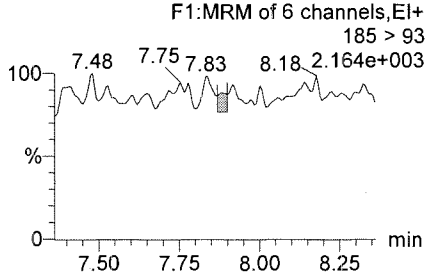
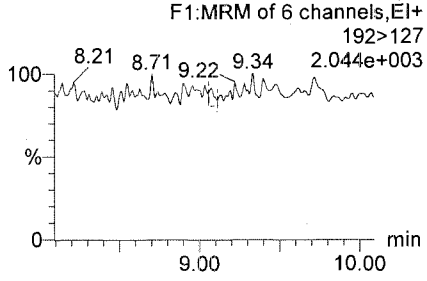


Mevinphos|7786-34-7



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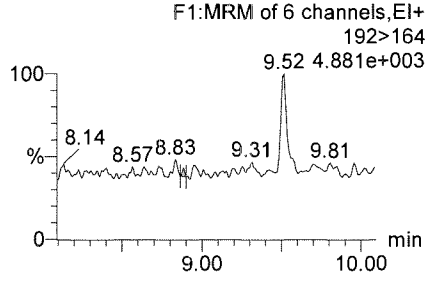
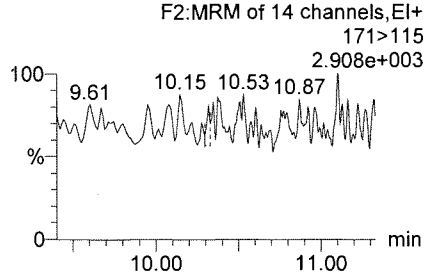
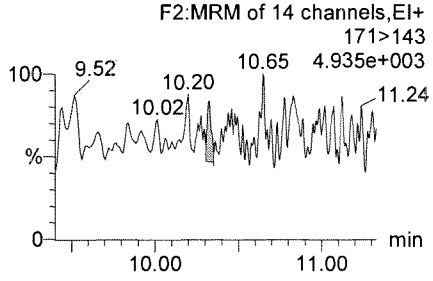


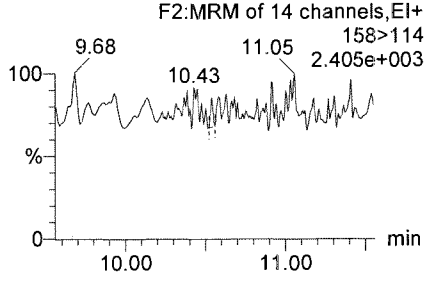
Demeton-O|298-03-3



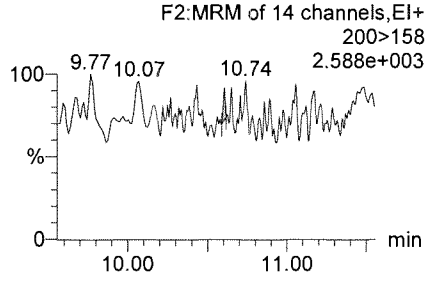
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



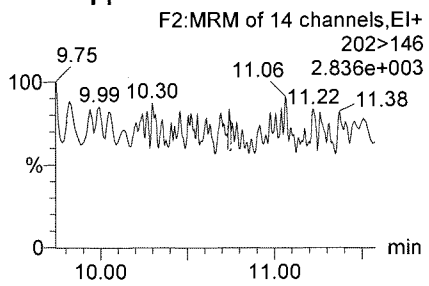
2165

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

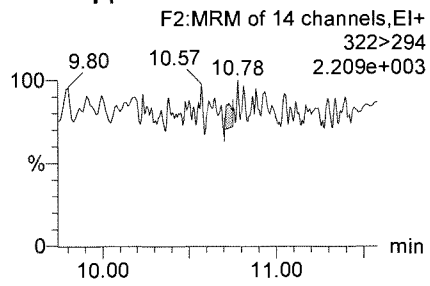
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

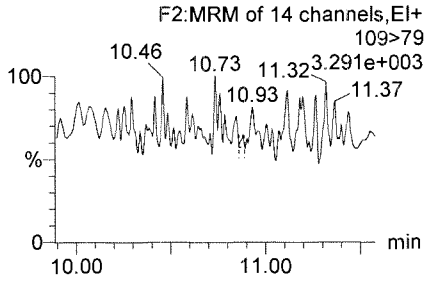
Sulfotep|3689-24-5



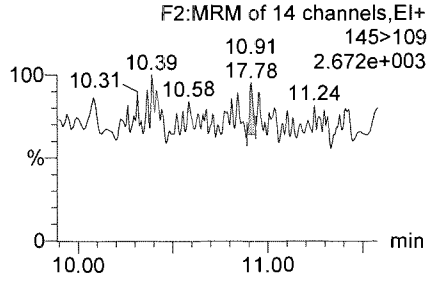
Sulfotep|3689-24-5



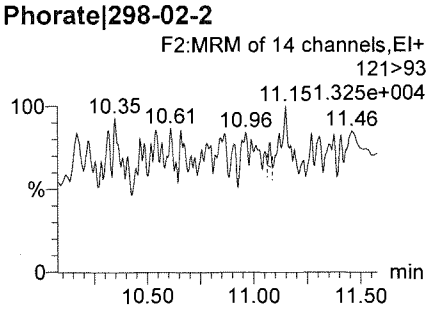
Naled|300-76-5



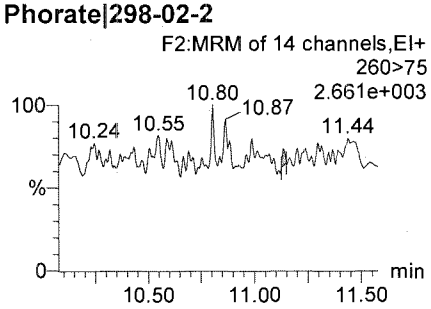
Naled|300-76-5



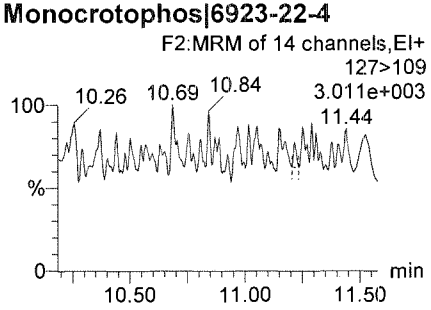
Phorate|298-02-2



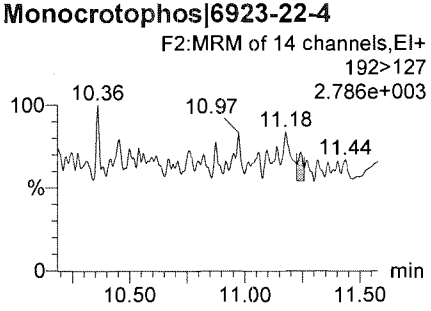
Phorate|298-02-2



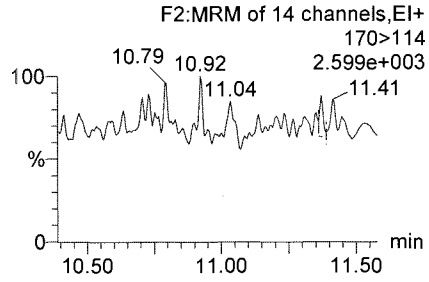
Monocrotophos|6923-22-4



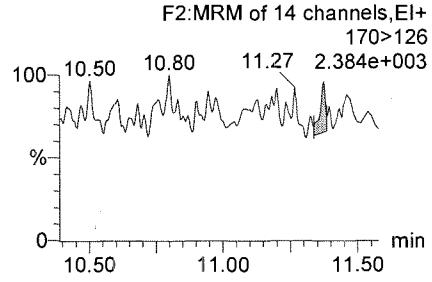
Monocrotophos|6923-22-4



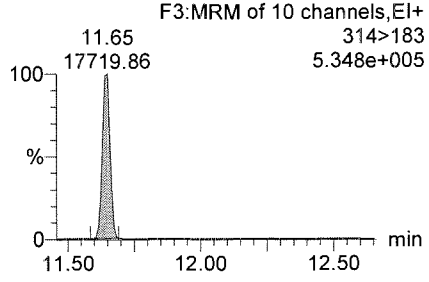
Demeton-S|126-75-0



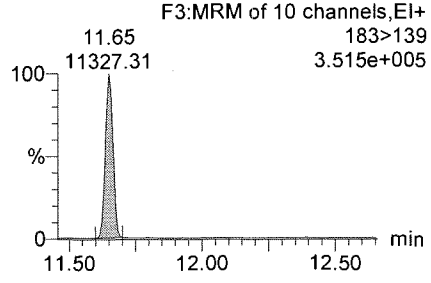
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



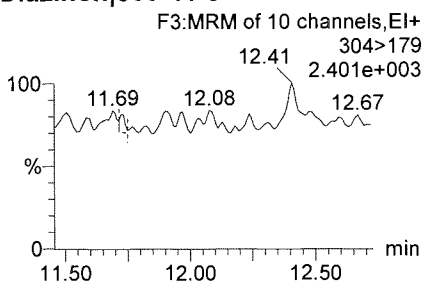
2166

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

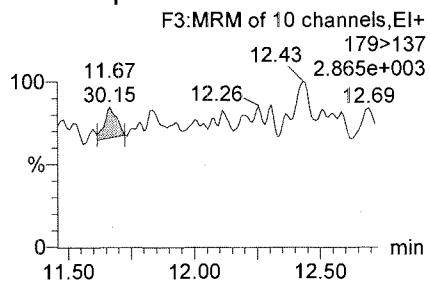
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

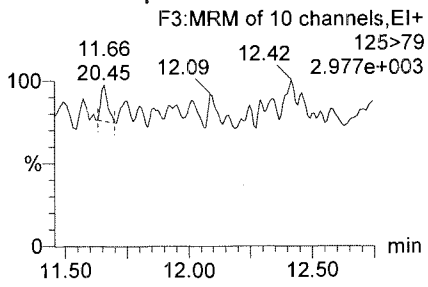
Diazinon|333-41-5



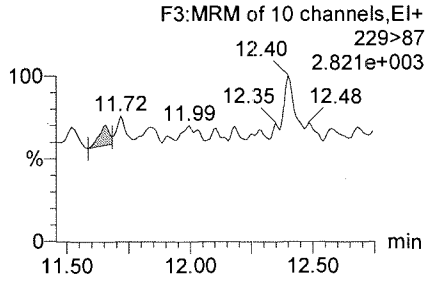
Diazinon|333-41-5



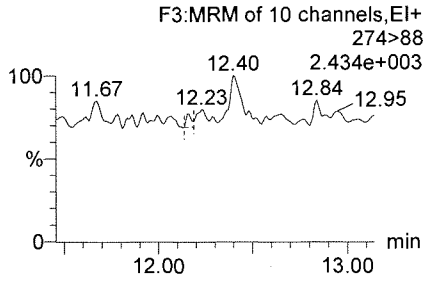
Dimethoate|60-51-5



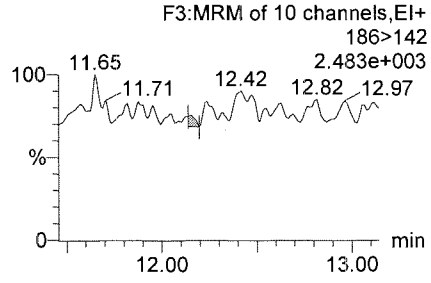
Dimethoate|60-51-5



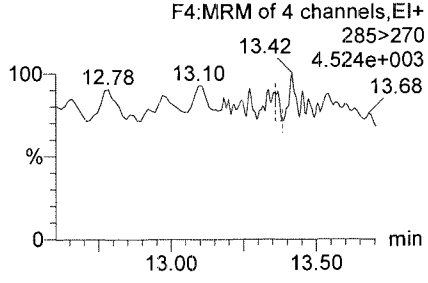
Disulfoton|298-04-4



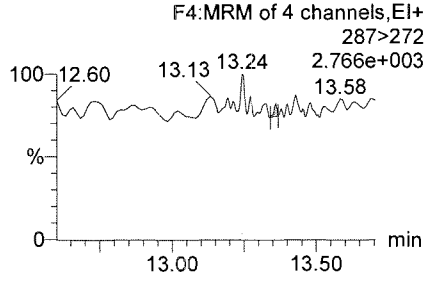
Disulfoton|298-04-4



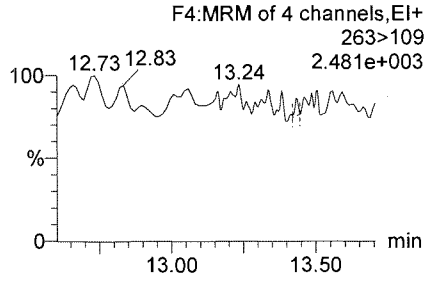
Ronnel|299-84-3



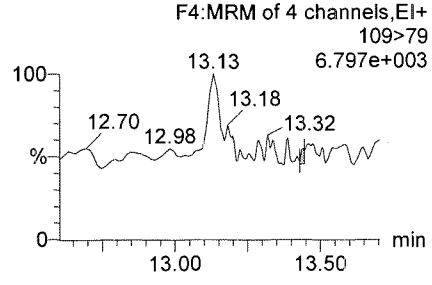
Ronnel|299-84-3



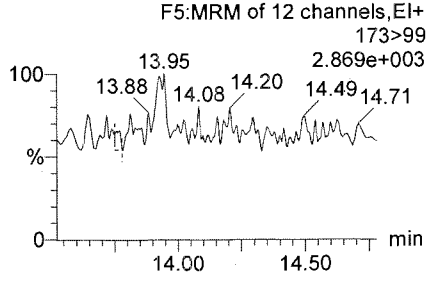
Methyl Parathion|298-00-0



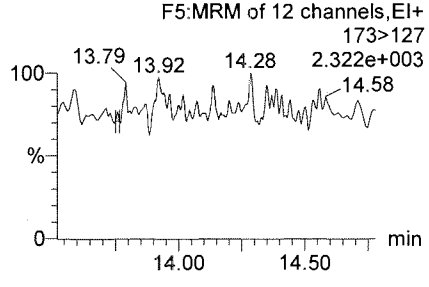
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



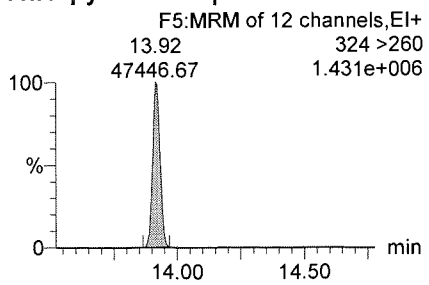
2167

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

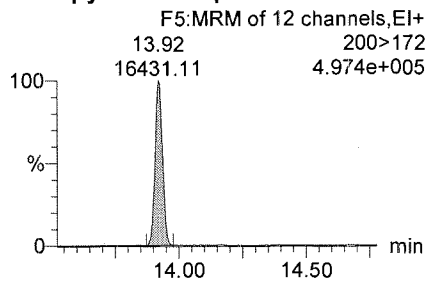
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

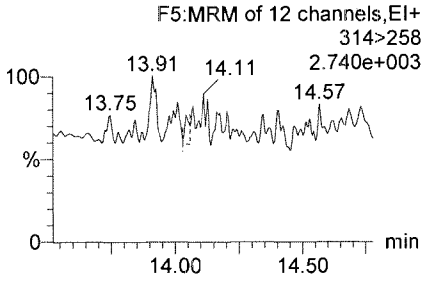
Chlorpyrifos-d10|CASID30732



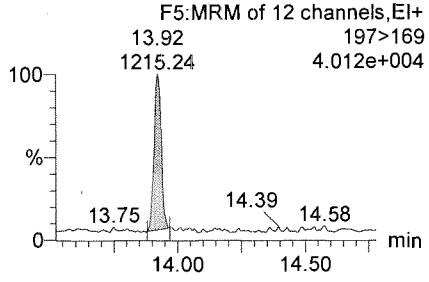
Chlorpyrifos-d10|CASID30732



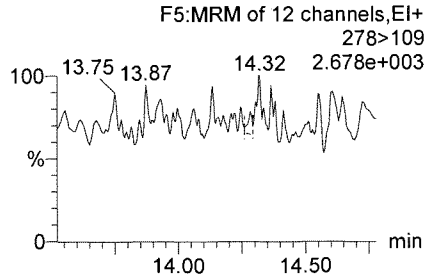
Chlorpyrifos|2921-88-2



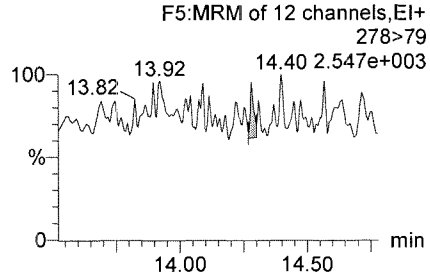
Chlorpyrifos|2921-88-2



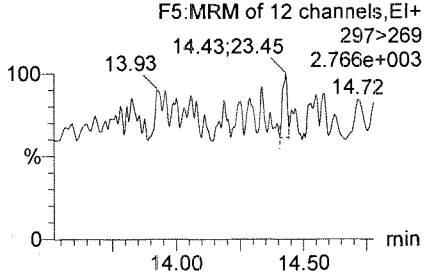
Fenthion|55-38-9



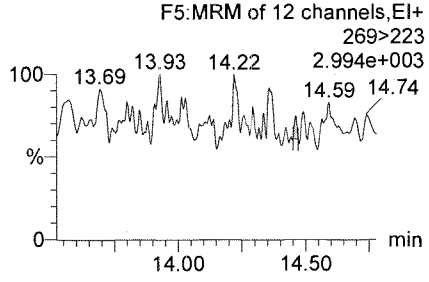
Fenthion|55-38-9



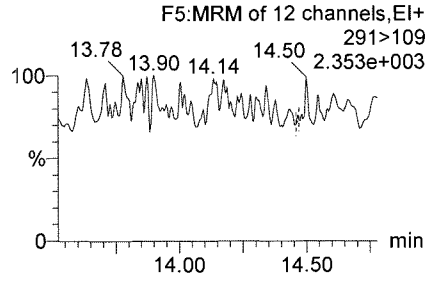
Trichloronate|327-98-0



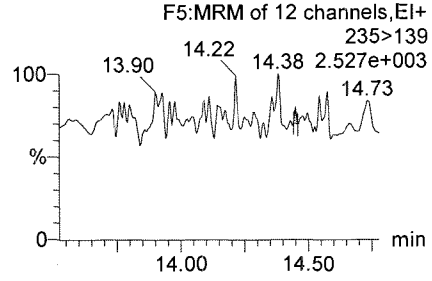
Trichloronate|327-98-0



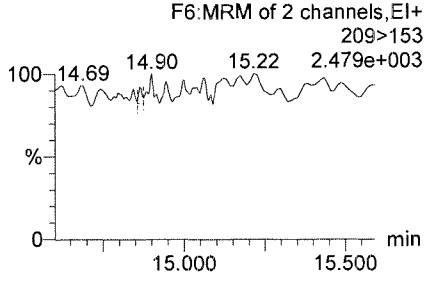
Ethyl Parathion|56-38-2



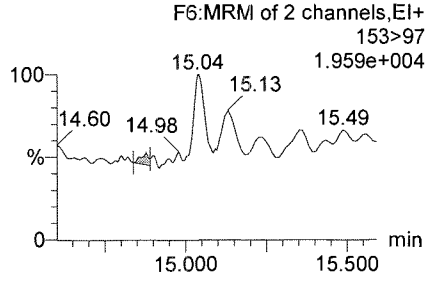
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



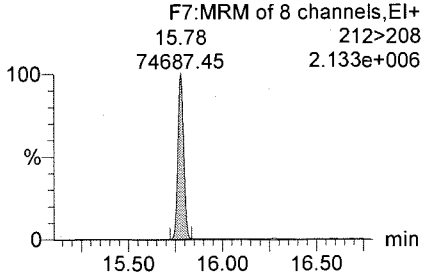
2168

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

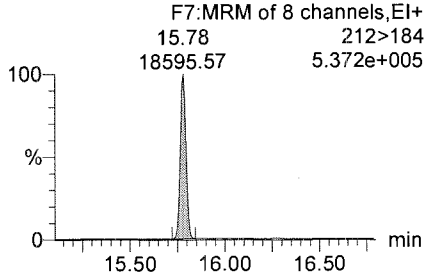
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

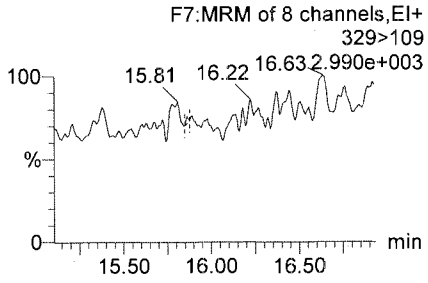
Fluoranthene-d10|93951-69-0



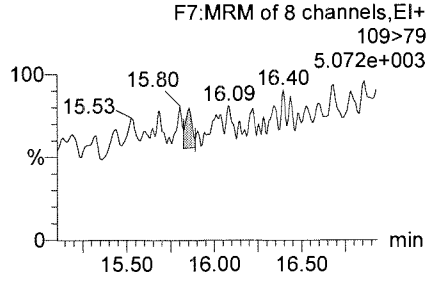
Fluoranthene-d10|93951-69-0



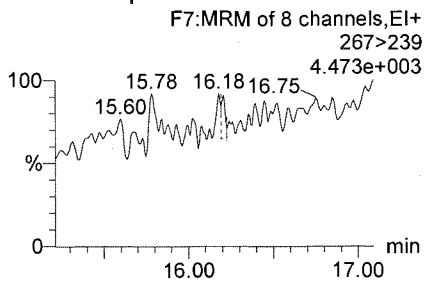
Stirophos|22248-79-9



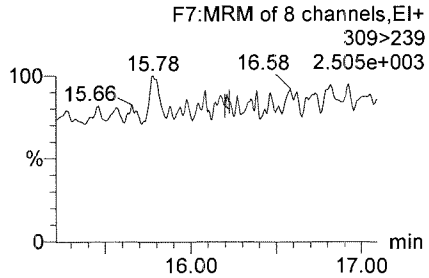
Stirophos|22248-79-9



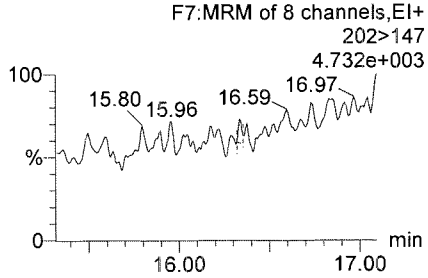
Tokuthion|34643-46-4



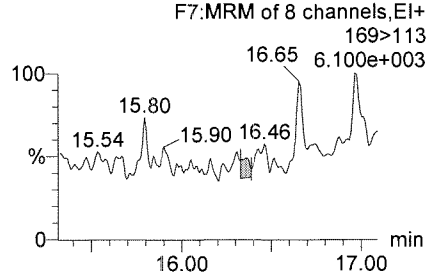
Tokuthion|34643-46-4



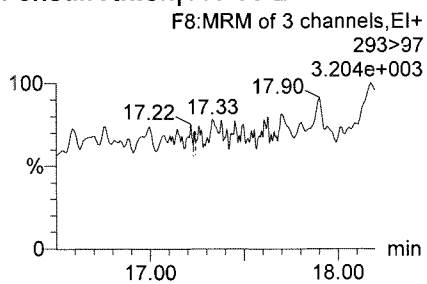
Merphos oxone|78-48-8



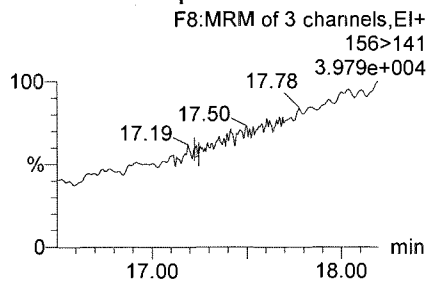
Merphos oxone|78-48-8



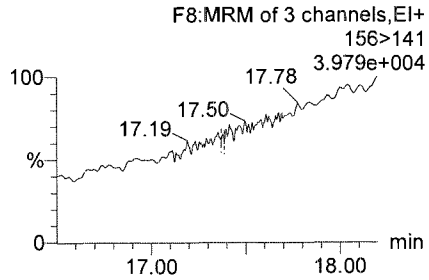
Fensulfothion|115-90-2



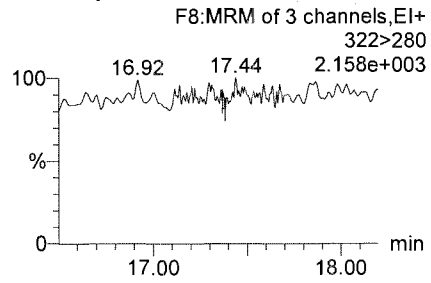
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



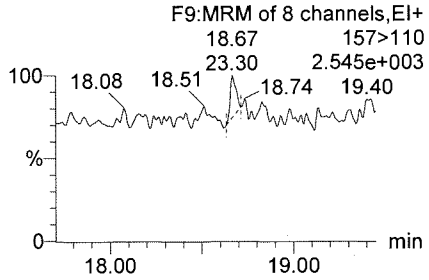
2169

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F024, Date: 10-Oct-2013, Time: 19:09:40, ID: SMPL, Description: k1309638-011, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

EPN|2104-64-5



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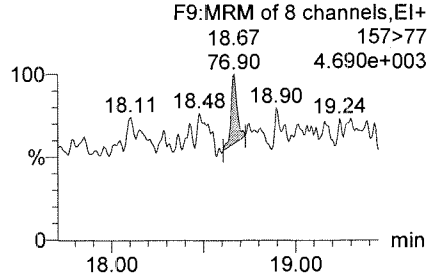
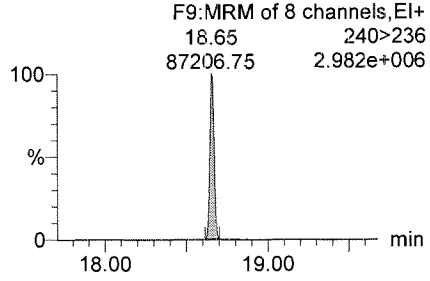
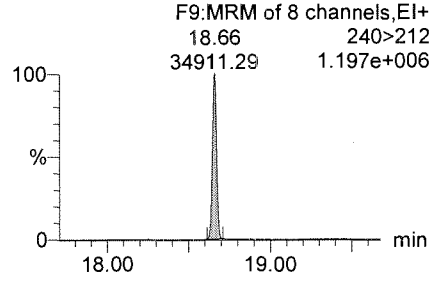


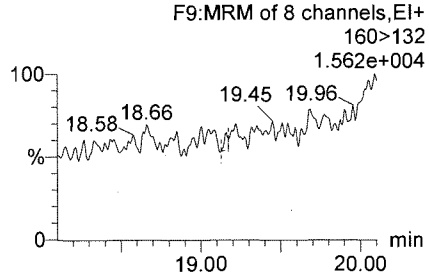
Chrysene-d12|1719-03-5



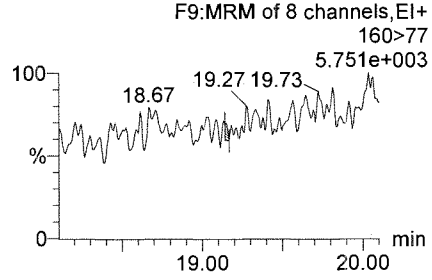
Chrysene-d12|1719-03-5



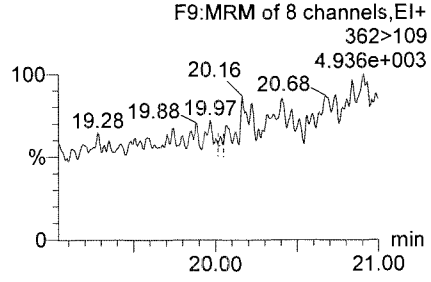
Azinphos methyl|86-50-0



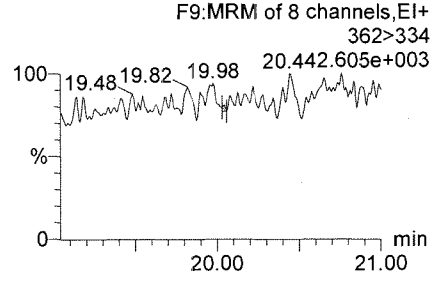
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2170

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Method Blank	**Units:**	ng/L
Lab Code:	KWG1310066-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	99	42	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	ND	U	99	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	ND	U	99	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	ND	U	50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	ND	U	50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	ND	U	50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	ND	U	50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	ND	U	50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	ND	U	50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	ND	U	50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	ND	U	50	6.1	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	ND	U	50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	ND	U	50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	ND	U	50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	ND	U	50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	ND	U	99	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	ND	U	50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	48	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	97	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F015.D
Lab ID: KWG1310066-3
RunType: MB
Matrix: WATER

Date Acquired: 10/10/2013 15:15
Date Quantitated: 10/10/2013 15:15
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
MethodJoinID: MJ1040

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

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Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total ok
	Merphos oxone	-36.3	NA	25	
Std MRL Unsupported by ICAL	Merphos	99	50	NA	ok

Primary Review: 10.11.K

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F015.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 15:15	**Quant Date:**	10/10/2013 15:15	**Vial:**	
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310066-3			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282474	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:		**Method ID:**	MJ1040
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.41	0.00	90399	121.86	OK
0	Fluoranthene-d10	15.79	0.00	71113	104.13	OK
0	Chrysene-d12	18.66	0.00	85629	102.93	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3393	48.02	48	15-96	OK	
1	Diazinon-d10	11.65	0.00	0.00	17158	92.95	93	44-125	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	44845	97.01	97	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorvos				0		35	U	
1	Mevinphos				0		5.7	U	
1	Demeton-O				0		42	U	
	Demeton-O,S				0		42.0	U	
1	Ethoprop (Prophos)				0		16	U	
1	Sulfotep				0		21	U	
1	Naled (Dibrom)				0		20	U	
1	Phorate				0		33	U	
1	Monocrotophos				0		200	U	
1	Demeton-S				0		42	U	
1	Diazinon				0		13	U	
1	Dimethoate				0		4.7	U	
1	Disulfoton				0		19	U	
25	Ronnel				0		4.4	U	
25	Methyl Parathion				0		6.7	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F015.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 15:15	**Quant Date:**	10/10/2013 15:15	**Vial:**	
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG1310066-3			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Malathion				0		5.1	U	
25	Chlorpyrifos				0		5.2	U	
25	Fenthion				0		4.0	U	
25	Trichloronate				0		5.7	U	
25	Ethyl Parathion				0		6.9	U	
25	Merphos				0		6.1	U	
	Merphos, Total				0		6.10	U	
25	Stirophos				0		8.1	U	
25	Tokuthion				0		6.5	U	
25	Merphos oxone				0		6.1	U	
32	Fensulfothion				0		12	U	
32	Bolstar (Sulprofos)				0		7.3	U	
32	EPN				0		9.5	U	
32	Azinphos-methyl				0		27	U	
32	Coumaphos				0		7.7	U	

Prep Amount:	1020 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

uantify Sample Report **MassLynx 4.1**

ataset: C:\PESTEI.PRO\101013oppestdata.qld

ast Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
rinted: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

lame: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21,
IS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	# Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
	1 Phenanthrene-d10|1517-2...	188>160	12.41	90398.945		bb		121.86	21.9	3.590	3.562	NO
	2 Dichlorvos-d6|203645-53-8	115 > 83	7.83	3393.107	90398.945	bb		48.02		1.780	1.766	NO
	3 Dichlorvos|62-73-7	109>79			90398.945	MM-				0.000	3.268	YES
	4 Mevinphos|7786-34-7	192>127			90398.945	MM-				0.000	2.725	YES
	5 Demeton-O|298-03-3	171>115			90398.945	MM-				0.000	2.144	YES
	6 Ethoprop|13194-48-4	158>114			90398.945	MM-				0.000	1.746	YES
	7 Sulfotep|3689-24-5	202>146			90398.945	MM-				0.000	2.195	YES
	8 Naled|300-76-5	109>79			90398.945	MM-				0.000	3.352	YES
	9 Phorate|298-02-2	121>93			90398.945	MM-				0.000	2.631	YES
0	10 Monocrotophos|6923-22-4	127>109			90398.945	MM-				0.000	4.455	YES
1	11 Demeton-S|126-75-0	170>114			90398.945	MM-				0.000	1.541	YES
2	12 Diazinon-d10|CASID39254	314>183	11.65	17157.768	90398.945	bb		92.95		1.562	1.545	NO
3	13 Diazinon|333-41-5	304>179			90398.945	MM-				0.000	1.325	YES
4	14 Dimethoate|60-51-5	125>79			90398.945	MM-				0.000	3.113	YES
5	15 Disulfoton|298-04-4	274>88			90398.945	MM-				0.000	1.941	YES
6	16 Ronnel|299-84-3	285>270			71112.852	MM-				0.000	1.469	YES
7	17 Methyl Parathion|298-00-0	263>109			71112.852	MM-				0.000	0.844	YES
8	18 Malathion|121-75-5	173>99			71112.852	MM-				0.000	1.464	YES
9	19 Chlorpyrifos-d10|CASID30...	324 >260	13.92	44845.301	71112.852	bb		97.01		2.792	2.879	NO
0	20 Chlorpyrifos|2921-88-2	314>258			71112.852	MM-				0.000	2.179	YES
1	21 Fenthion|55-38-9	278>109			71112.852	MM-				0.000	2.452	YES
2	22 Trichloronate|327-98-0	297>269			71112.852	MM-				0.000	2.040	YES
3	23 Ethyl Parathion|56-38-2	291>109			71112.852	MM-				0.000	4.912	YES
4	24 Merphos|150-50-5	209>153			71112.852	MM-				0.000	2.393	YES
5	25 Fluoranthene-d10|93951-6...	212>208	15.79	71112.852		bb		104.13	4.1	4.016	3.973	NO
6	26 Stirophos|22248-79-9	329>109			71112.852	MM-				0.000	1.508	YES
7	27 Tokuthion|34643-46-4	267>239			71112.852	MM-				0.000	0.939	YES
8	28 Merphos oxone|78-48-8	202>147			71112.852	MM-				0.000	2.340	YES
9	29 Fensulfothion|115-90-2	293>97			85628.531	MM-				0.000	1.220	YES
0	30 Bolstar|35400-43-2	156>141			85628.531	MM-				0.000	6.221	YES
1	31 EPN|2104-64-5	157>110			85628.531	MM-				0.000	1.110	YES
2	32 Chrysene-d12|1719-03-5	240>236	18.66	85628.531		bb		102.93	2.9	2.518	2.504	NO
3	33 Azinphos methyl|86-50-0	160>132			85628.531	MM-				0.000	1.294	YES
4	34 Coumaphos|56-72-4	362>109			85628.531	MM-				0.000	4.250	YES

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Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

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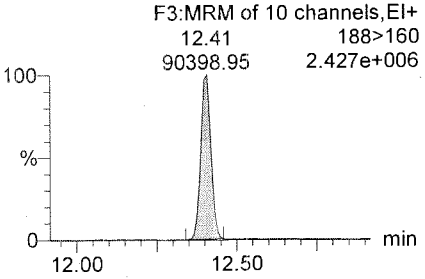

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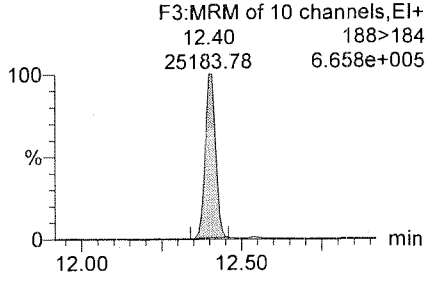
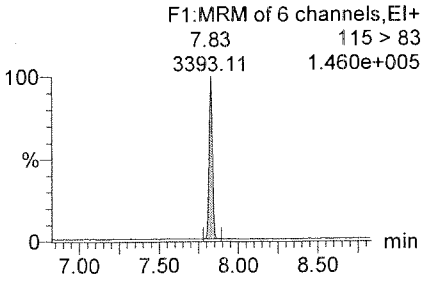
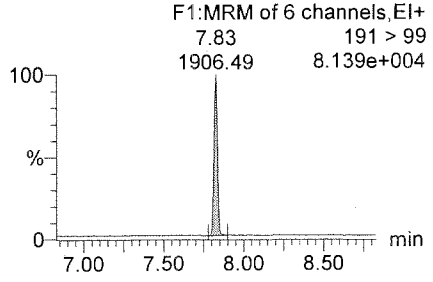


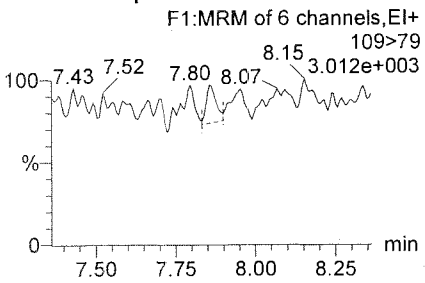
Dichlorvos-d6|203645-53-8



Dichlorvos-d6|203645-53-8



Dichlorvos|62-73-7



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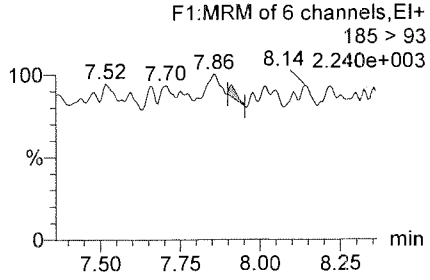
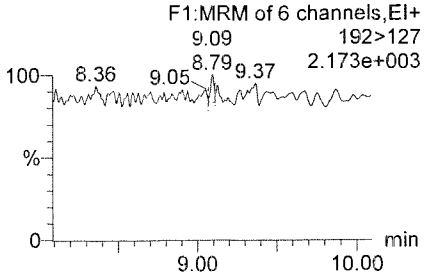
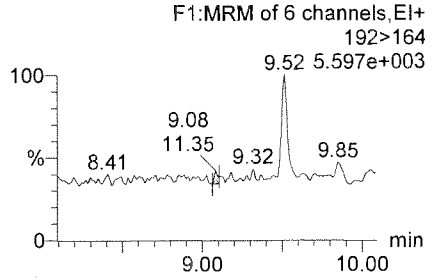


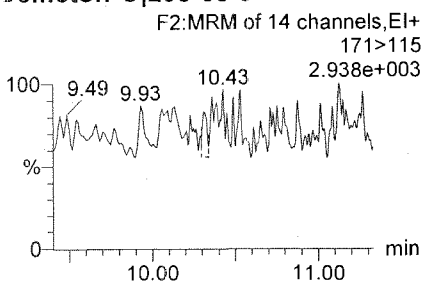
Mevinphos|7786-34-7



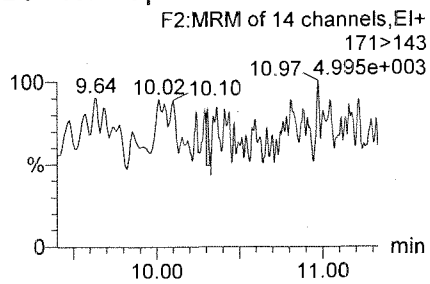
Mevinphos|7786-34-7



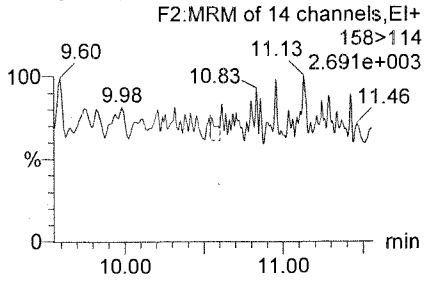
Demeton-O|298-03-3



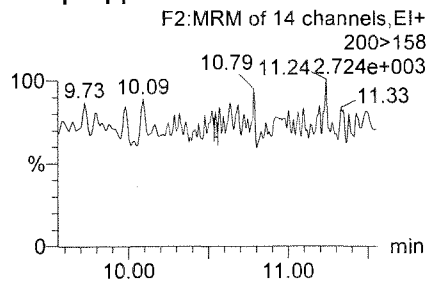
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



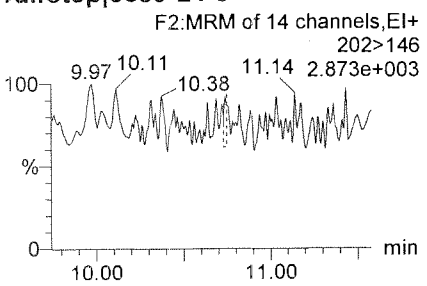
2176

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

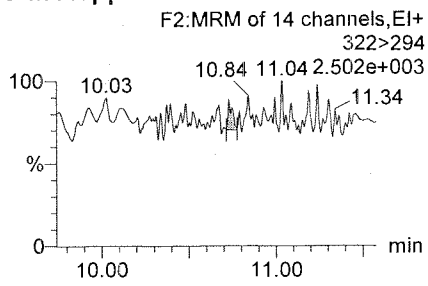
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

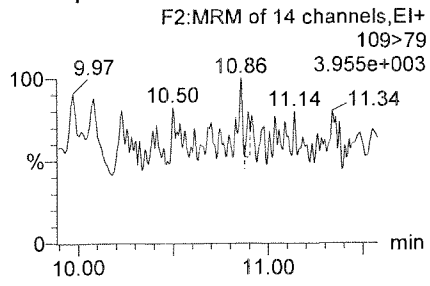
Sulfotep|3689-24-5



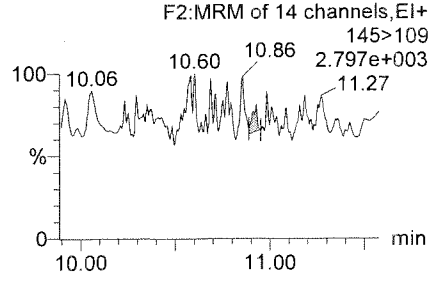
Sulfotep|3689-24-5



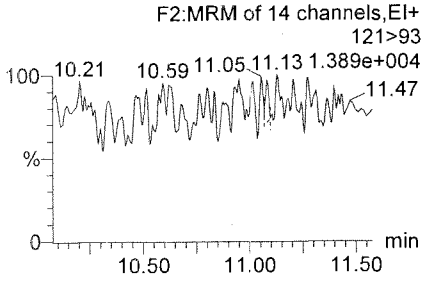
Naled|300-76-5



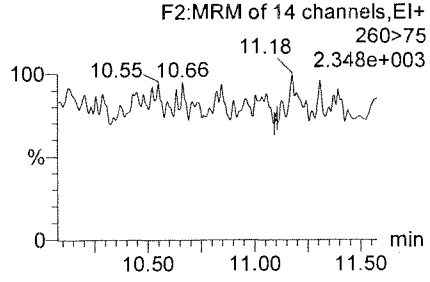
Naled|300-76-5



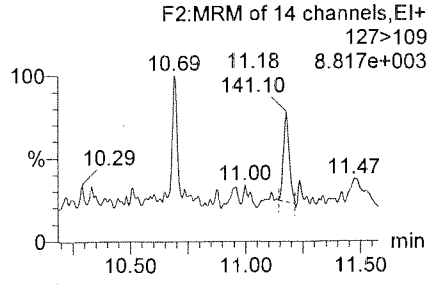
Phorate|298-02-2



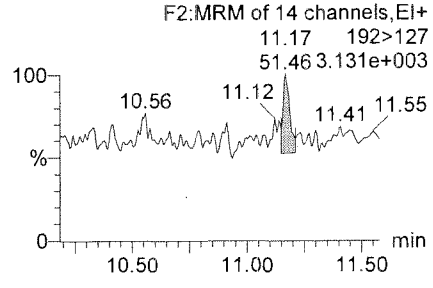
Phorate|298-02-2



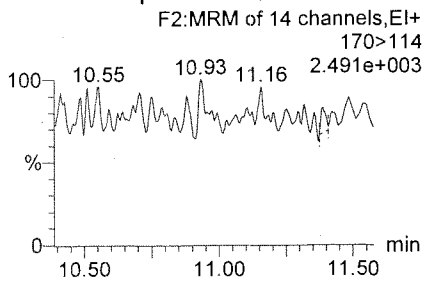
Monocrotophos|6923-22-4



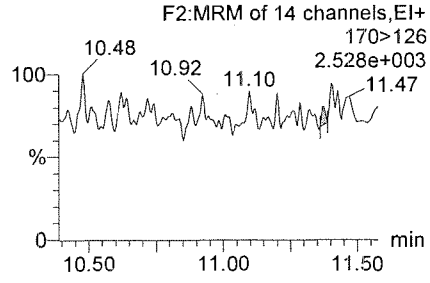
Monocrotophos|6923-22-4



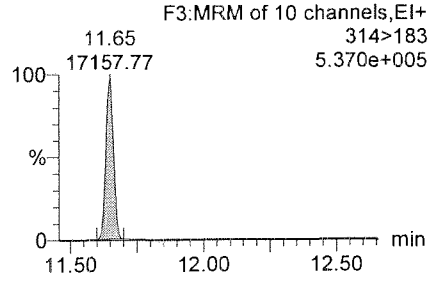
Demeton-S|126-75-0



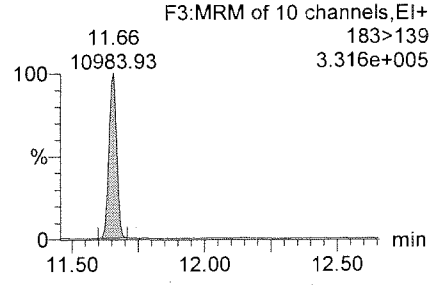
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



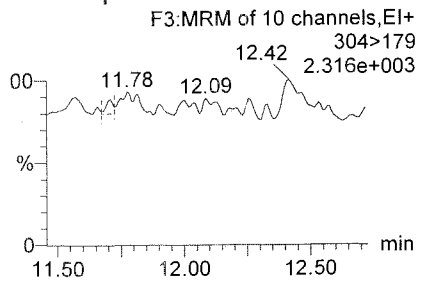
2177

ataset: C:\PESTEI.PRO\101013oppestdata.qld

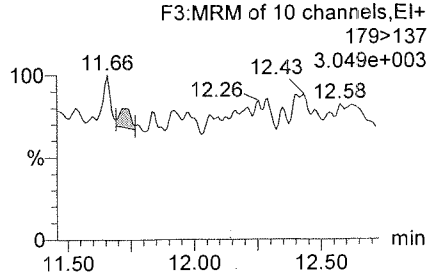
ast Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
rinted: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

lame: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21,
IS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

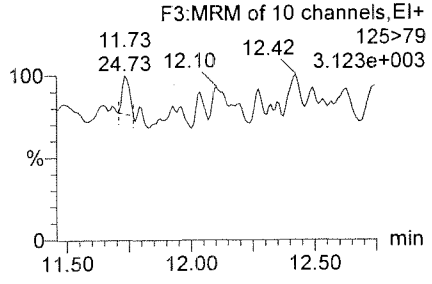
iazinon|333-41-5



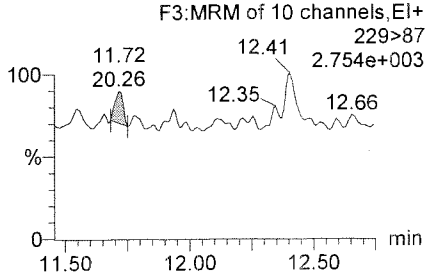
Diazinon|333-41-5



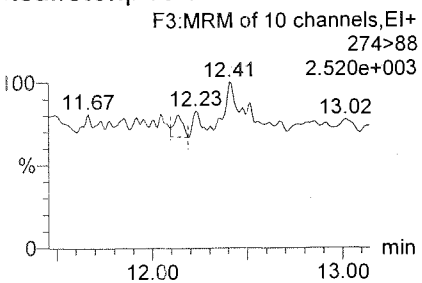
Dimethoate|60-51-5



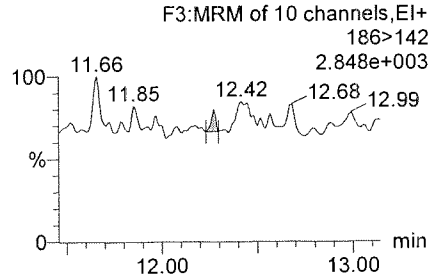
Dimethoate|60-51-5



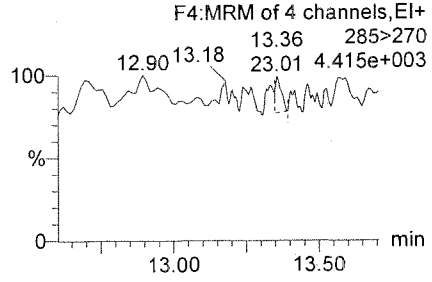
isulfoton|298-04-4



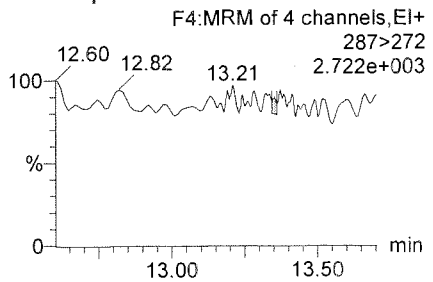
Disulfoton|298-04-4



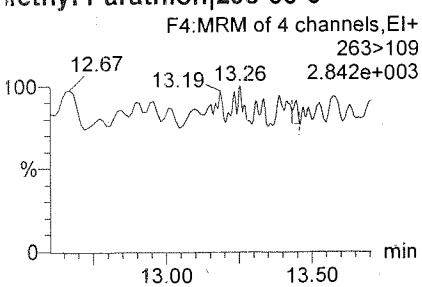
Ronnel|299-84-3



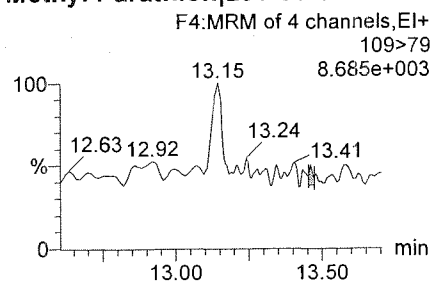
Ronnel|299-84-3



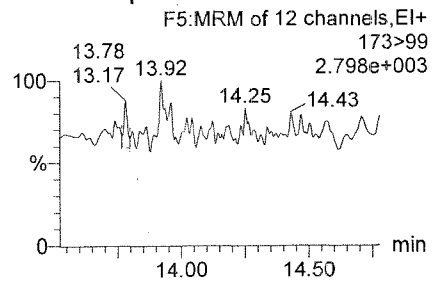
Methyl Parathion|298-00-0



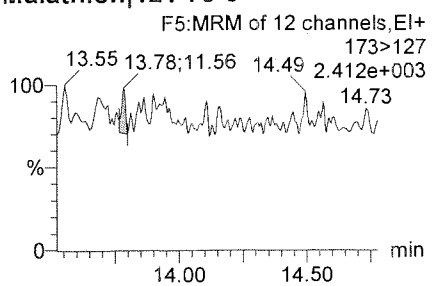
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



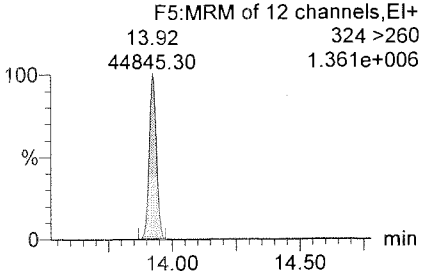
2178

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

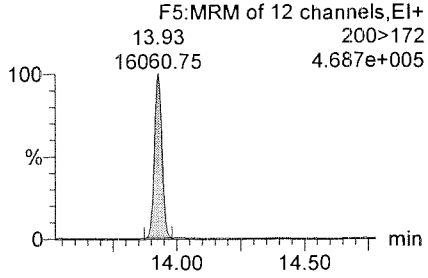
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

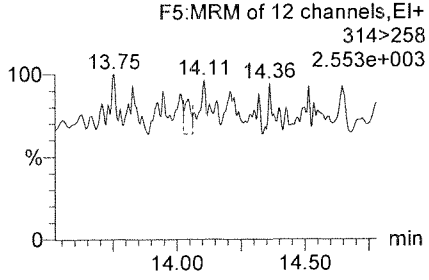
Chlorpyrifos-d10|CASID30732



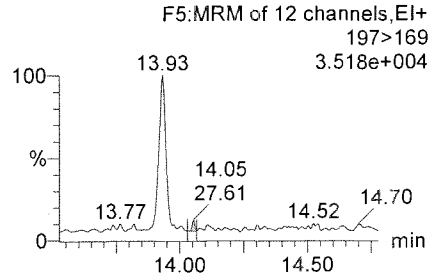
Chlorpyrifos-d10|CASID30732



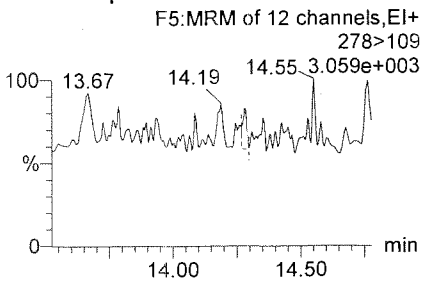
Chlorpyrifos|2921-88-2



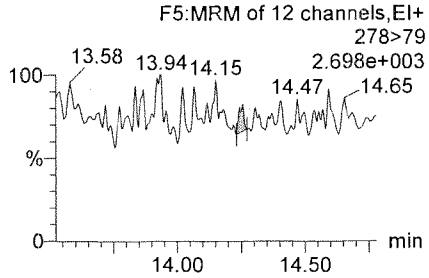
Chlorpyrifos|2921-88-2



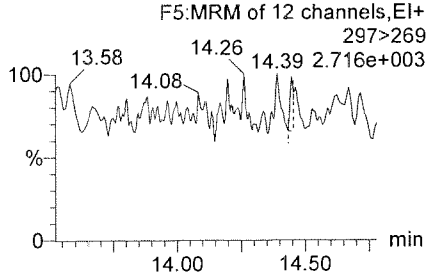
Fenthion|55-38-9



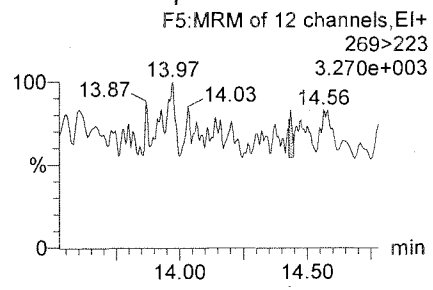
Fenthion|55-38-9



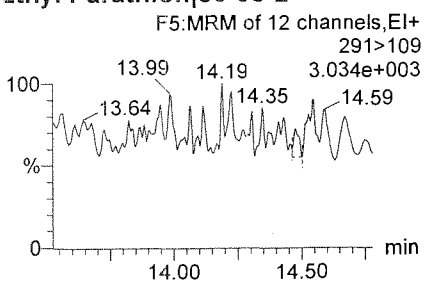
Trichloronate|327-98-0



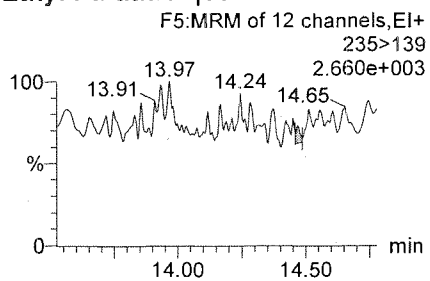
Trichloronate|327-98-0



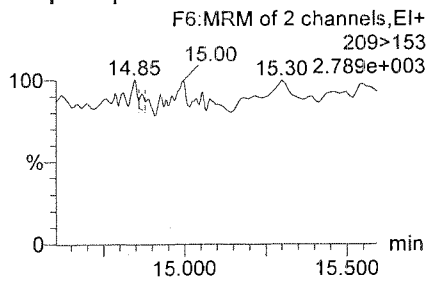
Ethyl Parathion|56-38-2



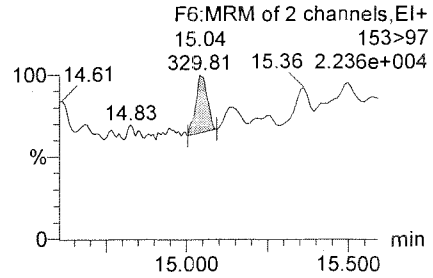
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



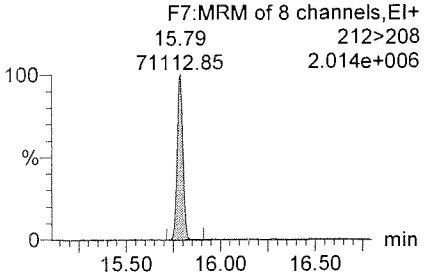
2179

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

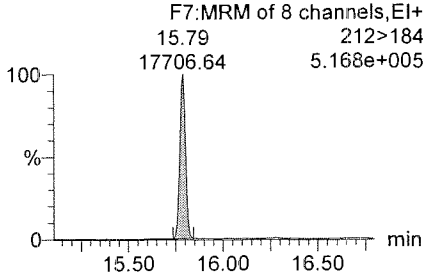
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

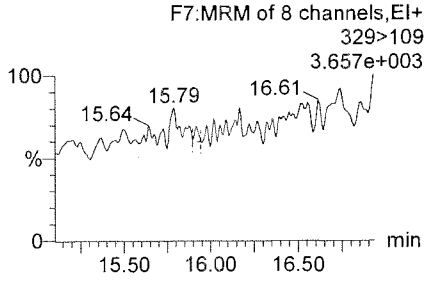
Fluoranthene-d10|93951-69-0



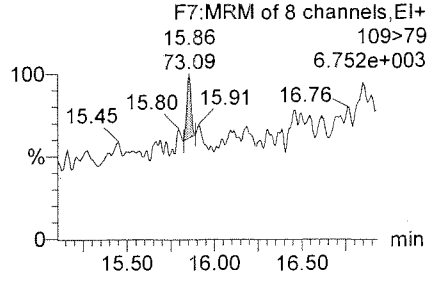
Fluoranthene-d10|93951-69-0



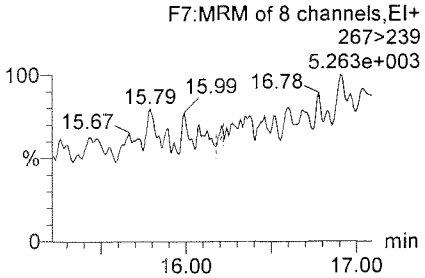
Stirophos|22248-79-9



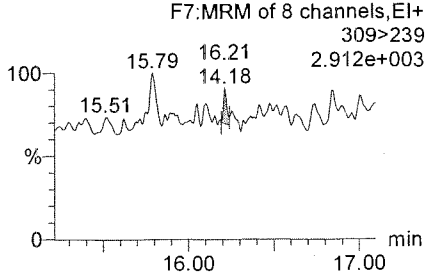
Stirophos|22248-79-9



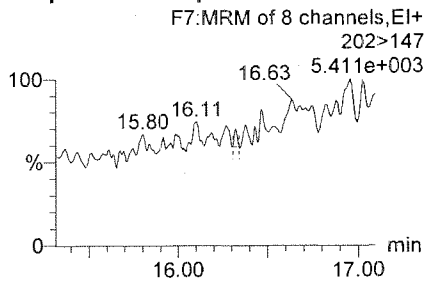
Tokuthion|34643-46-4



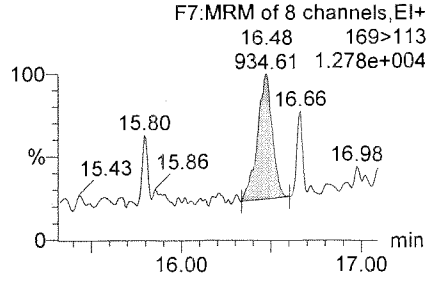
Tokuthion|34643-46-4



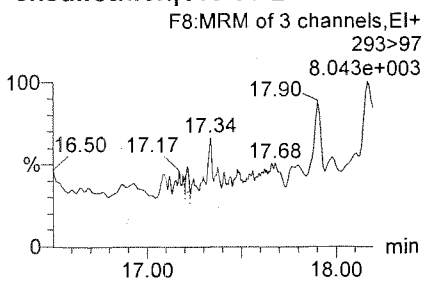
Merphos oxone|78-48-8



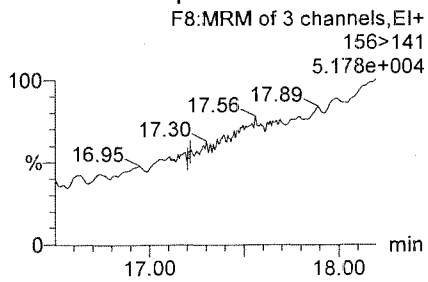
Merphos oxone|78-48-8



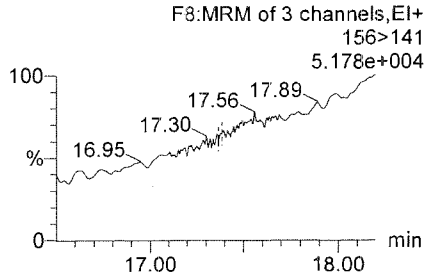
Fensulfothion|115-90-2



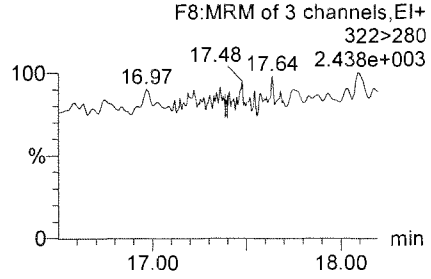
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2180

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
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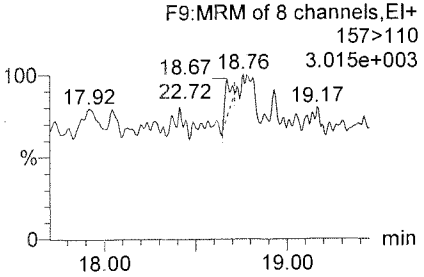
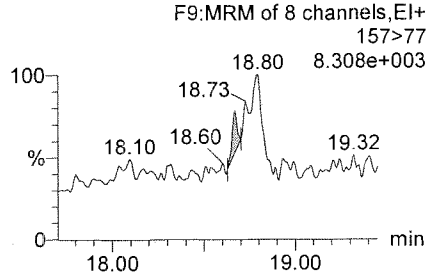
Name: 1010F015, Date: 10-Oct-2013, Time: 15:15:15, ID: MB, Description: kwg1310066-3 mb water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

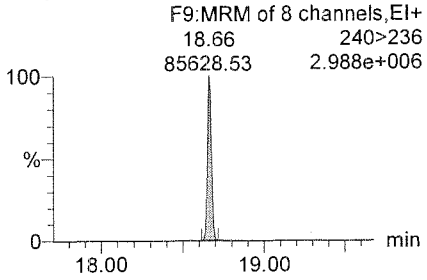
EPN|2104-64-5



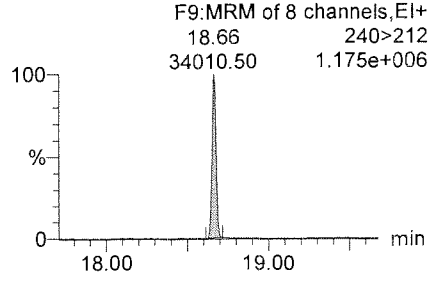
EPN|2104-64-5



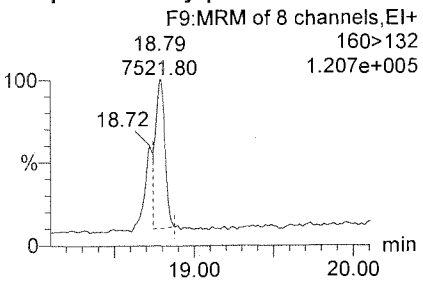
Chrysene-d12|1719-03-5



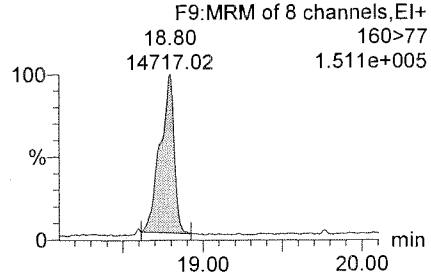
Chrysene-d12|1719-03-5



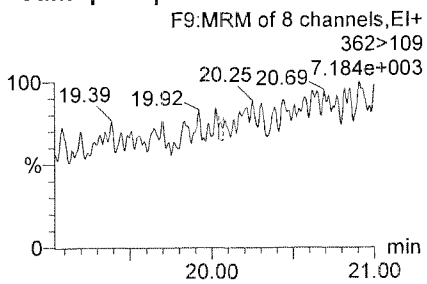
Azinphos methyl|86-50-0



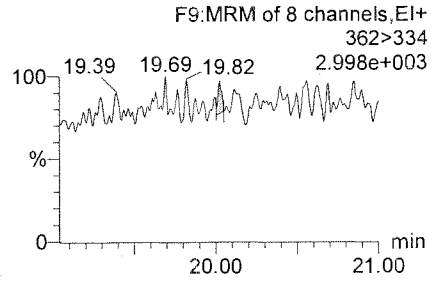
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



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ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Lab Control Sample	**Units:**	ng/L
Lab Code:	KWG1310066-1	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	**727**		100	42.0	1	09/17/13	10/10/13	KWG1310066	
Naled (Dibrom)	**673**		100	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	**1040**		100	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	**108**		50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	**992**		50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	**856**		50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	**858**		50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	**909**		50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	**936**		50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	**923**		50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	**726**		100	6.10	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	**929**		50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	**295**		50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	**904**		50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	**922**		50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	**576**		100	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	**842**		50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	52	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	99	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F016.D
Lab ID: KWG1310066-1
RunType: LCS
Matrix: WATER

Date Acquired: 10/10/2013 15:39
Date Quantitated: 10/10/2013 15:39
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
MethodJoinID: MJ1040

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

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Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	total ok
	Merphos oxone	-36.3	NA	25	1
Std MRL Unsupported by ICAL	Merphos	100	50	NA	1

Primary Review: 10.11.13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F016.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 15:39	**Quant Date:**	10/10/2013 15:39	**Vial:**	
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310066-1			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282472	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:			
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	94113	126.87	OK
0	Fluoranthene-d10	15.79	0.00	67499	98.84	OK
0	Chrysene-d12	18.66	0.00	80392	96.63	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3800	51.66	52	15-96	OK	
1	Diazinon-d10	11.65	0.00	0.00	16076	83.65	84	44-125	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	43477	99.08	99	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorvos	7.86		0.00	45192	52.96	530		
1	Mevinphos	9.09	-0.01	0.00	11273	26.84	268		
1	Demeton-O	10.33	0.00	0.00	1725	86.24	862		
	Demeton-O,S				0	72.72	727		
1	Ethoprop (Prophos)	10.55	0.00	0.00	12863	81.43	814		
1	Sulfotep	10.74		0.00	18603	90.90	909		
1	Naled (Dibrom)	10.88	0.00	0.00	840	67.31	673		
1	Phorate	11.07		0.00	11678	103.98	1040		
1	Monocrotophos	11.17	0.00	0.00	545	0.9811	200	U	
1	Demeton-S	11.39		0.00	1965	59.19	592		
1	Diazinon	11.72	-0.01	0.00	18616	80.09	801		
1	Dimethoate	11.74		0.00	1853	10.79	108		
1	Disulfoton	12.14		0.00	6094	86.91	869		
25	Ronnel	13.36		0.00	54260	99.16	992		
25	Methyl Parathion	13.43	0.00	0.00	15608	85.64	856		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F016.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 15:39	**Quant Date:**	10/10/2013 15:39	**Vial:**	
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG1310066-1			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Malathion	13.77	0.00	0.00	29620	85.76	858		
25	Chlorpyrifos	14.03	0.00	0.00	31694	99.42	994		
25	Fenthion	14.27	0.00	0.00	29801	90.89	909		
25	Trichloronate	14.41	0.00	0.00	52451	93.64	936		
25	Ethyl Parathion	14.46		0.00	10727	92.31	923		
25	Merphos	14.85		0.00	499	13.20	132		
	Merphos, Total				0	72.65	726		
25	Stirophos	15.92		0.00	45083	79.64	796		
25	Tokuthion	16.21		0.00	38677	92.86	929		
25	Merphos oxone	16.30		0.00	24343	132.10	1320		
32	Fensulfothion	17.22	0.00	0.00	6608	29.49	295		
32	Bolstar (Sulprofos)	17.36	0.00	0.00	52873	90.35	904		
32	EPN	18.44	0.00	0.00	17560	92.24	922		
32	Azinphos-methyl	19.09	-0.01	0.00	18774	57.61	576		
32	Coumaphos	20.02	-0.01	0.00	14177	84.25	842		

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantify Sample Report MassLynx 4.1

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	# Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
	1 Phenanthrene-d10|1517-2...	188>160	12.40	94113.313		bb		126.87	26.9	3.588	3.562	NO
2	2 Dichlorvos-d6|203645-53-8	115 > 83	7.83	3799.983	94113.313	bb		51.66		1.716	1.766	NO
3	3 Dichlorvos|62-73-7	109>79	7.86	45192.156	94113.313	bb		52.96		3.157	3.268	NO
4	4 Mevinphos|7786-34-7	192>127	9.09	11273.022	94113.313	bd		26.84		2.686	2.725	NO
5	5 Demeton-O|298-03-3	171>115	10.33	1724.714	94113.313	bb		86.24		2.238	2.144	NO
6	6 Ethoprop|13194-48-4	158>114	10.55	12863.111	94113.313	bb		81.43		1.671	1.746	NO
7	7 Sulfotep|3689-24-5	202>146	10.74	18602.838	94113.313	bb		90.90		2.228	2.195	NO
8	8 Naled|300-76-5	109>79	10.88	839.789	94113.313	db		67.31		5.221	3.352	YES
9	9 Phorate|298-02-2	121>93	11.07	11678.090	94113.313	bb		103.98		2.821	2.631	NO
10	10 Monocrotophos|6923-22-4	127>109	11.17	544.569	94113.313	bb		0.98		4.238	4.455	NO
11	11 Demeton-S|126-75-0	170>114	11.39	1965.161	94113.313	bb		59.19		1.747	1.541	NO
12	12 Diazinon-d10|CASID39254	314>183	11.65	16076.163	94113.313	bb		83.65		1.551	1.545	NO
13	13 Diazinon|333-41-5	304>179	11.72	18615.855	94113.313	bb		80.09		1.338	1.325	NO
14	14 Dimethoate|60-51-5	125>79	11.74	1852.594	94113.313	bb		10.79		3.190	3.113	NO
15	15 Disulfoton|298-04-4	274>88	12.14	6093.878	94113.313	bb		86.91		1.963	1.941	NO
16	16 Ronnel|299-84-3	285>270	13.36	54260.410	67499.414	bb		99.16		1.488	1.469	NO
17	17 Methyl Parathion|298-00-0	263>109	13.43	15608.070	67499.414	bb		85.64		0.845	0.844	NO
18	18 Malathion|121-75-5	173>99	13.77	29619.830	67499.414	bb		85.76		1.480	1.464	NO
19	19 Chlorpyrifos-d10|CASID30...	324 >260	13.92	43477.301	67499.414	bb		99.08		2.914	2.879	NO
20	20 Chlorpyrifos|2921-88-2	314>258	14.03	31694.090	67499.414	bb		99.42		2.180	2.179	NO
21	21 Fenthion|55-38-9	278>109	14.27	29800.602	67499.414	bb		90.89		2.525	2.452	NO
22	22 Trichloronate|327-98-0	297>269	14.41	52451.191	67499.414	bb		93.64		2.024	2.040	NO
23	23 Ethyl Parathion|56-38-2	291>109	14.46	10726.519	67499.414	bb		92.31		5.012	4.912	NO
24	24 Merphos|150-50-5	209>153	14.85	499.225	67499.414	bb		13.20		2.438	2.393	NO
25	25 Fluoranthene-d10|93951-6...	212>208	15.79	67499.414		bb		98.84	-1.2	4.006	3.973	NO
26	26 Stirophos|22248-79-9	329>109	15.92	45082.695	67499.414	bb		79.64		1.541	1.508	NO
27	27 Tokuthion|34643-46-4	267>239	16.21	38676.547	67499.414	bb		92.86		0.918	0.939	NO
28	28 Merphos oxone|78-48-8	202>147	16.30	24342.787	67499.414	bb		132.10		2.377	2.340	NO
29	29 Fensulfothion|115-90-2	293>97	17.22	6607.552	80392.406	bb		29.49		1.192	1.220	NO
30	30 Bolstar|35400-43-2	156>141	17.36	52873.234	80392.406	bb		90.35		6.240	6.221	NO
31	31 EPN|2104-64-5	157>110	18.44	17560.314	80392.406	bb		92.24		1.070	1.110	NO
32	32 Chrysene-d12|1719-03-5	240>236	18.66	80392.406		bb		96.63	-3.4	2.506	2.504	NO
33	33 Azinphos methyl|86-50-0	160>132	19.09	18773.568	80392.406	bb		57.61		1.240	1.294	NO
34	34 Coumaphos|56-72-4	362>109	20.02	14177.084	80392.406	bb		84.25		4.190	4.250	NO

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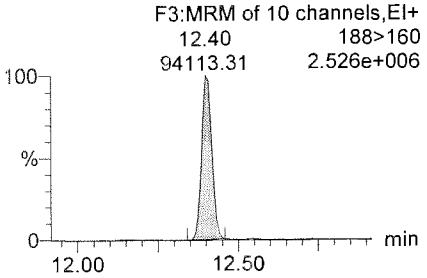
Dataset: C:\PESTEI.PRO\101013oppestdata.qld

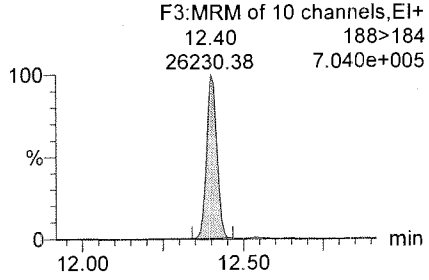
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

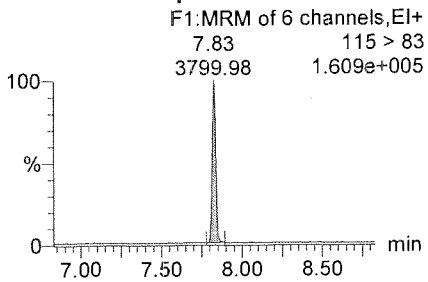
Phenanthrene-d10|1517-22-2



Phenanthrene-d10|1517-22-2



Dichlorvos-d6|203645-53-8



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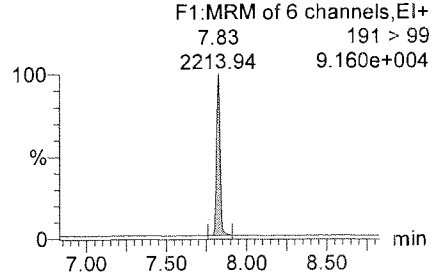
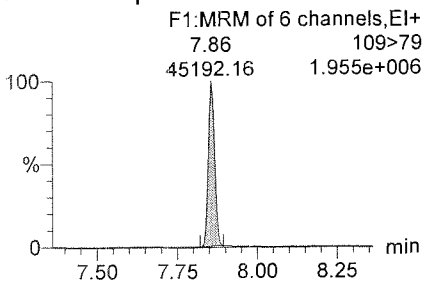
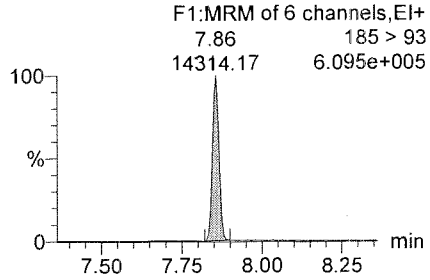


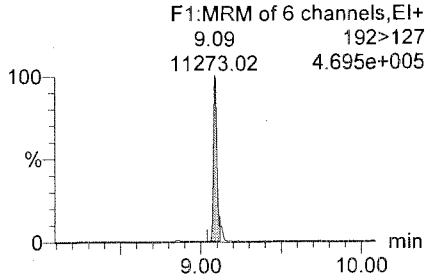
Dichlorvos|62-73-7



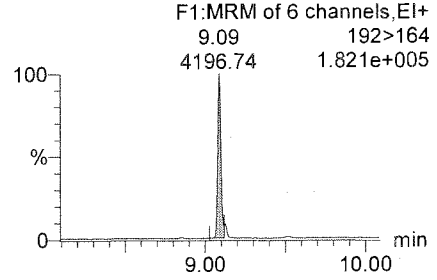
Dichlorvos|62-73-7



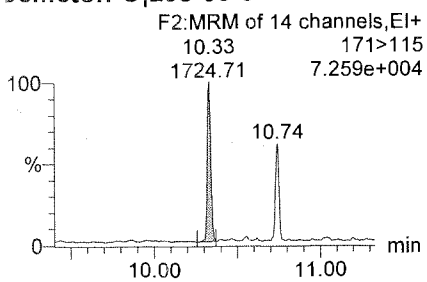
Mevinphos|7786-34-7



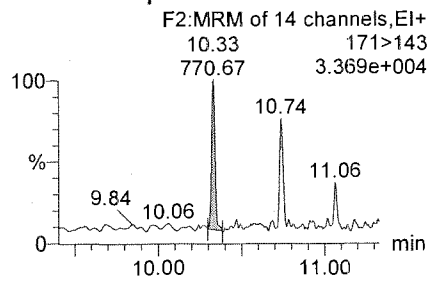
Mevinphos|7786-34-7



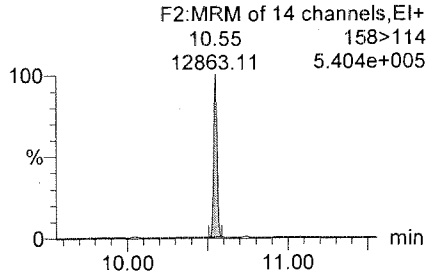
Demeton-O|298-03-3



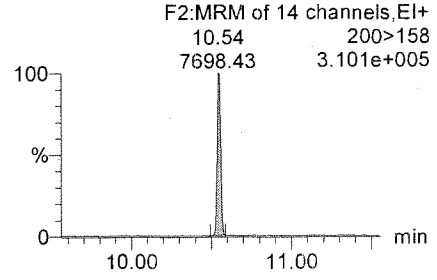
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



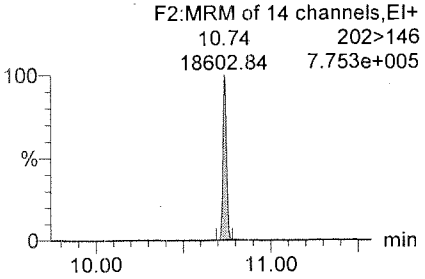
2187

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

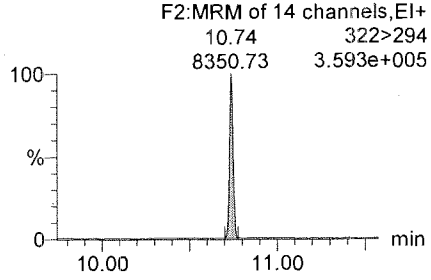
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

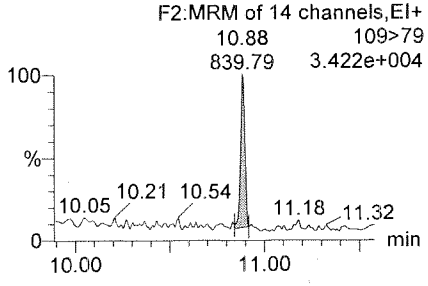
Sulfotep|3689-24-5



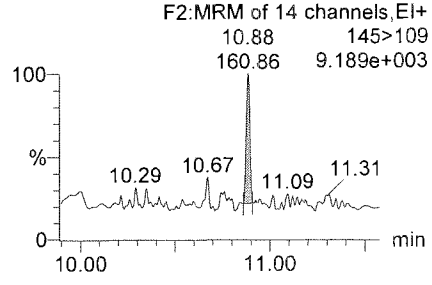
Sulfotep|3689-24-5



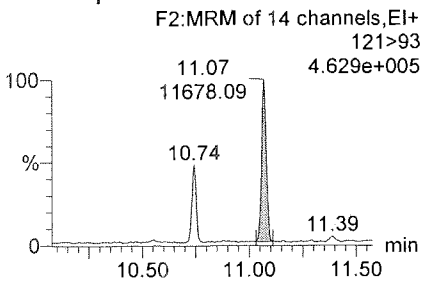
Naled|300-76-5



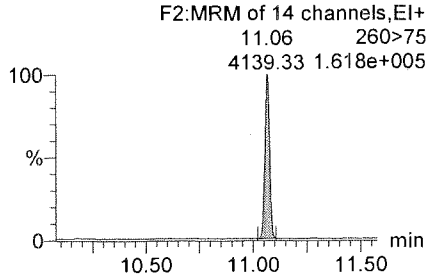
Naled|300-76-5



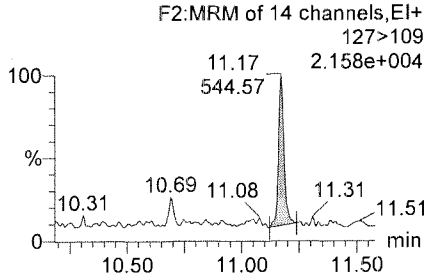
Phorate|298-02-2



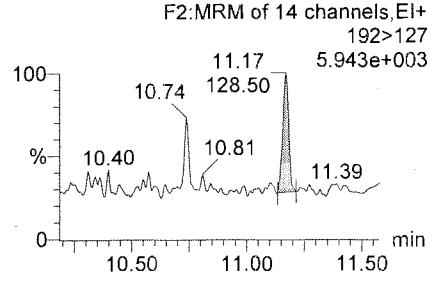
Phorate|298-02-2



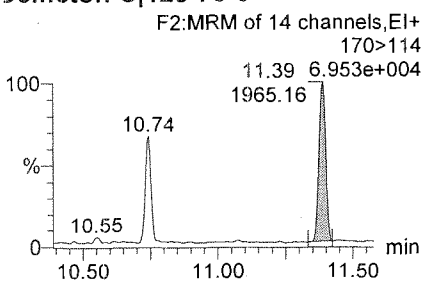
Monocrotophos|6923-22-4



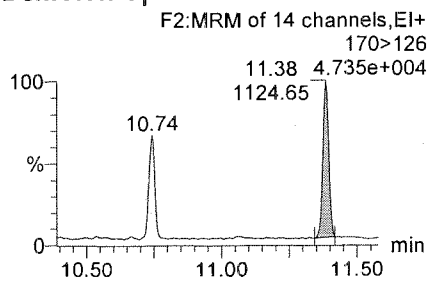
Monocrotophos|6923-22-4



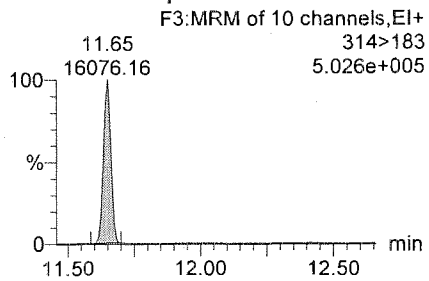
Demeton-S|126-75-0



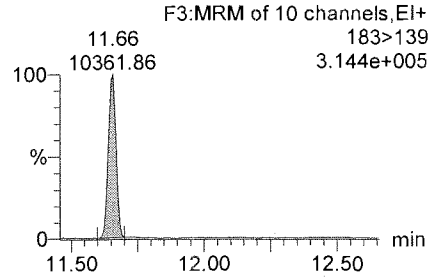
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



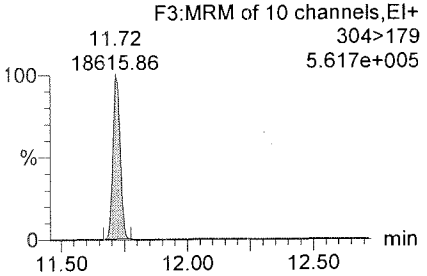
2188

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

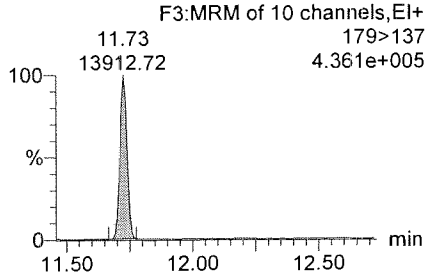
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

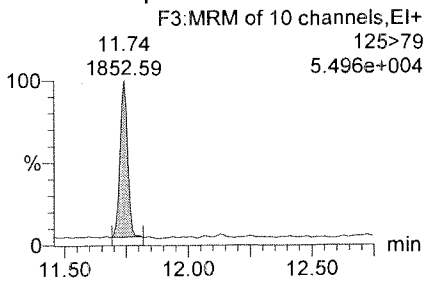
Diazinon|333-41-5



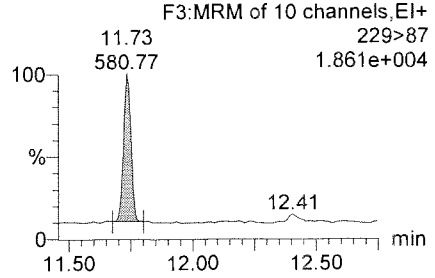
Diazinon|333-41-5



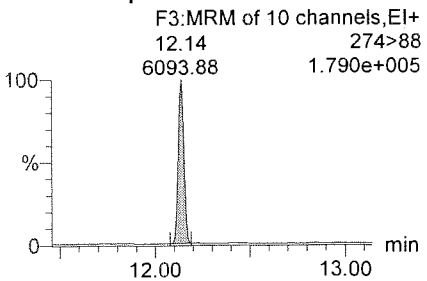
Dimethoate|60-51-5



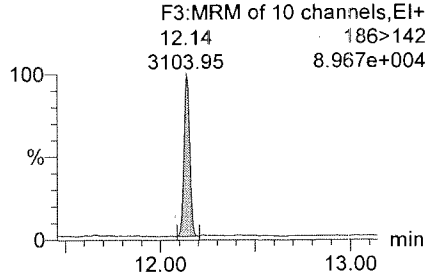
Dimethoate|60-51-5



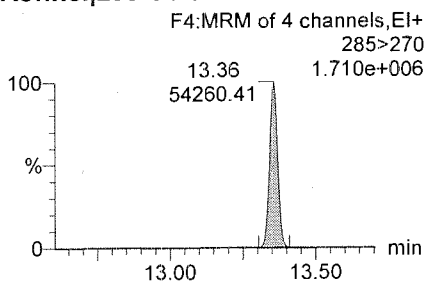
Disulfoton|298-04-4



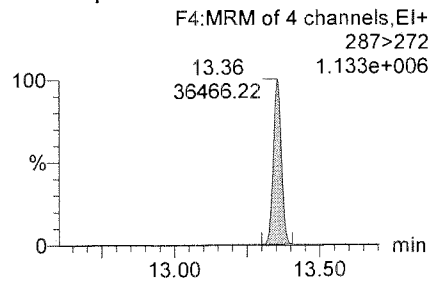
Disulfoton|298-04-4



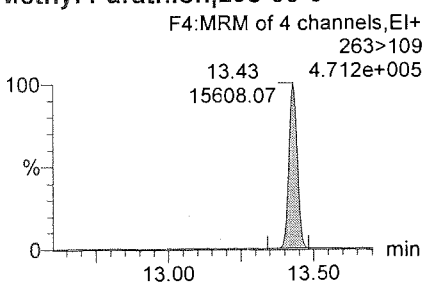
Ronnel|299-84-3



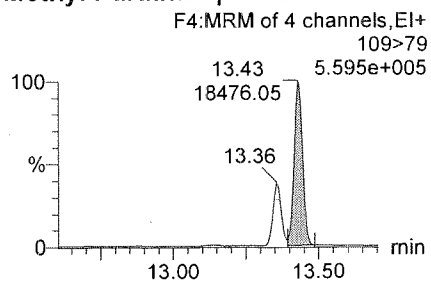
Ronnel|299-84-3



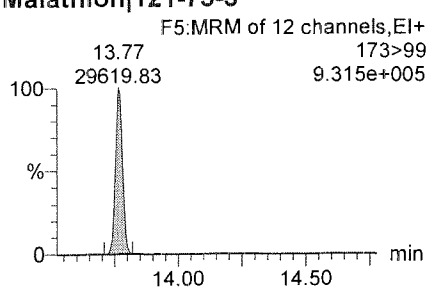
Methyl Parathion|298-00-0



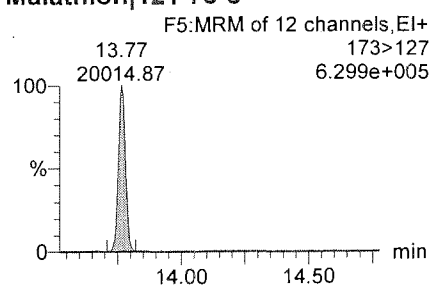
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



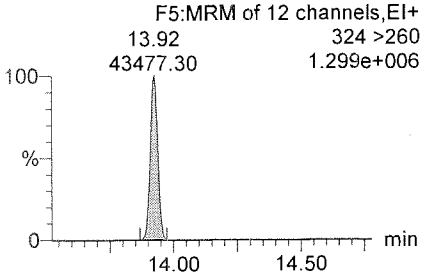
2189

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

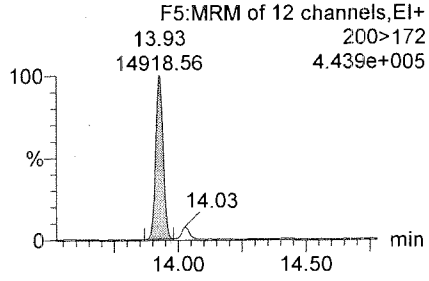
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

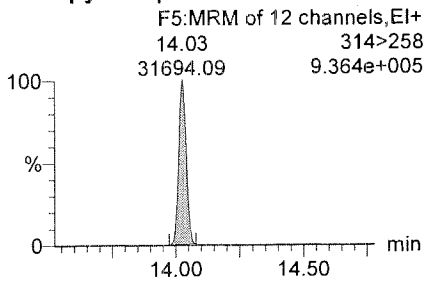
Chlorpyrifos-d10|CASID30732



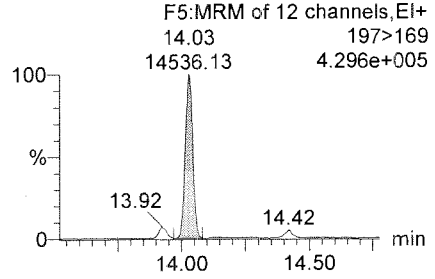
Chlorpyrifos-d10|CASID30732



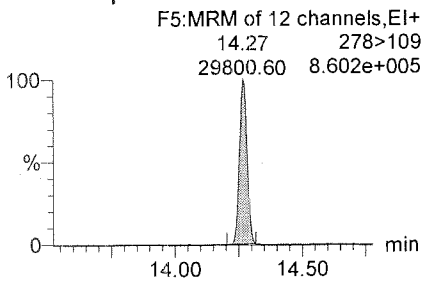
Chlorpyrifos|2921-88-2



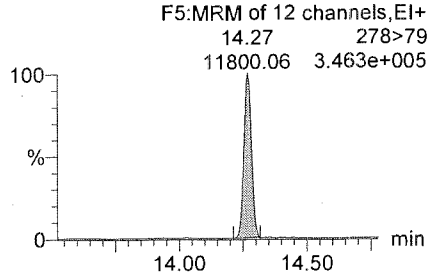
Chlorpyrifos|2921-88-2



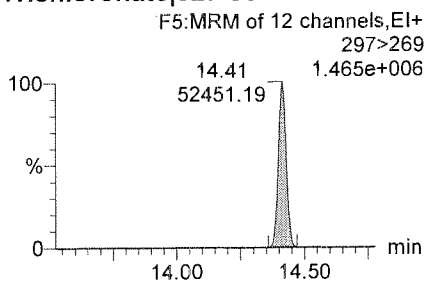
Fenthion|55-38-9



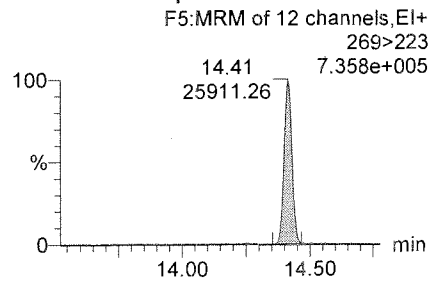
Fenthion|55-38-9



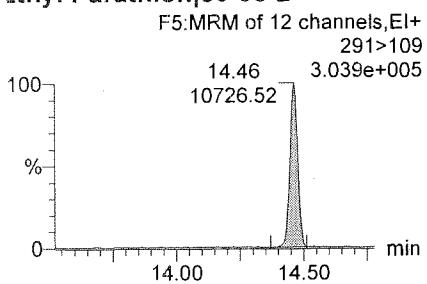
Trichloronate|327-98-0



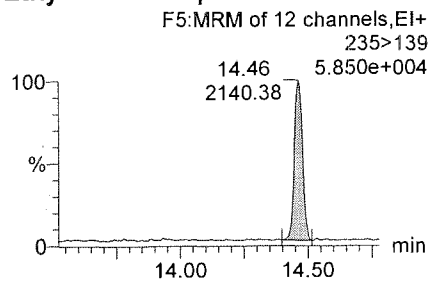
Trichloronate|327-98-0



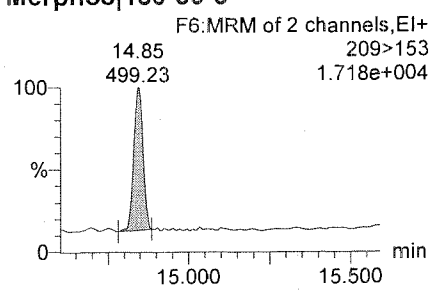
Ethyl Parathion|56-38-2



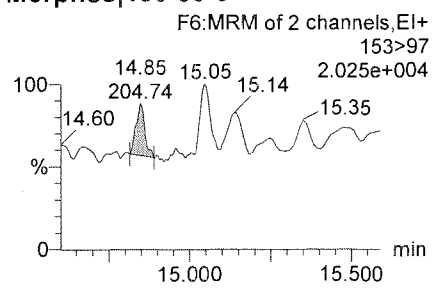
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



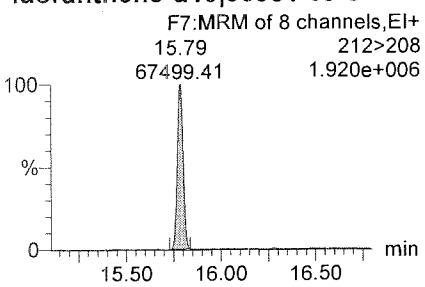
2190

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

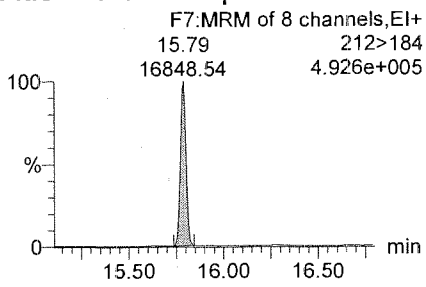
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

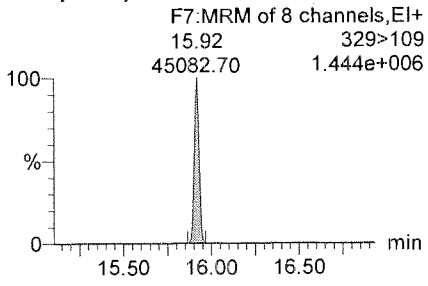
Fluoranthene-d10|93951-69-0



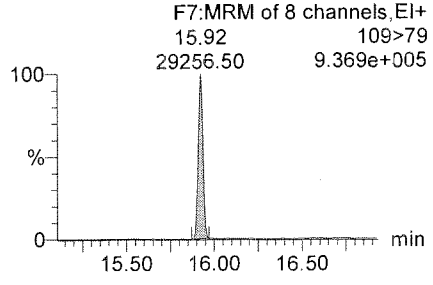
Fluoranthene-d10|93951-69-0



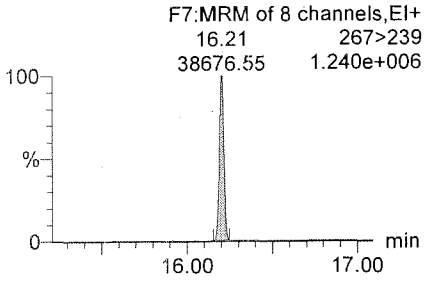
Stirophos|22248-79-9



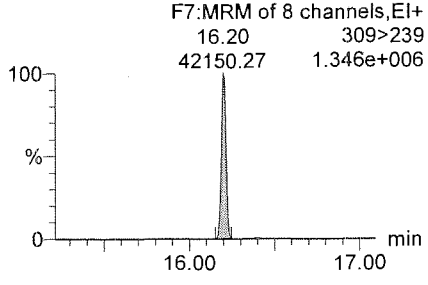
Stirophos|22248-79-9



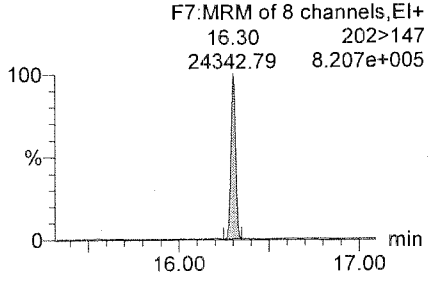
Tokuthion|34643-46-4



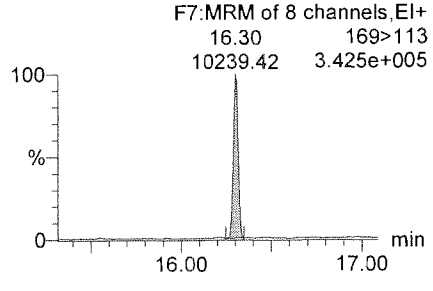
Tokuthion|34643-46-4



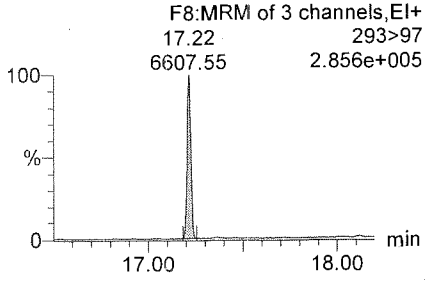
Merphos oxone|78-48-8



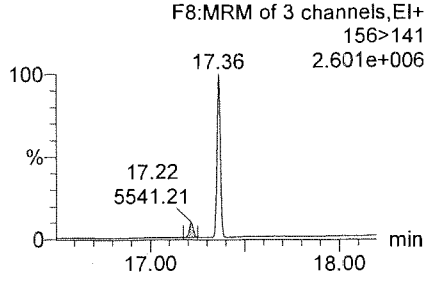
Merphos oxone|78-48-8



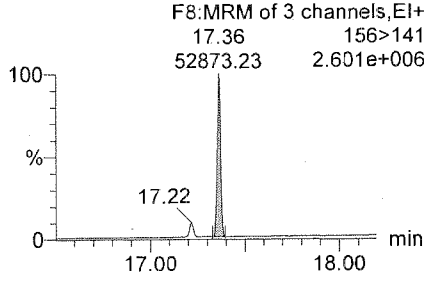
Fensulfothion|115-90-2



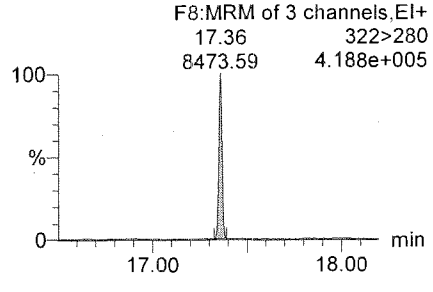
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2191

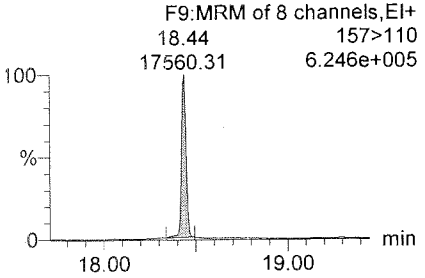
Quantify Sample Report MassLynx 4.1

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F016, Date: 10-Oct-2013, Time: 15:39:35, ID: LCS, Description: kwg1310066-1 lcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

EPN|2104-64-5



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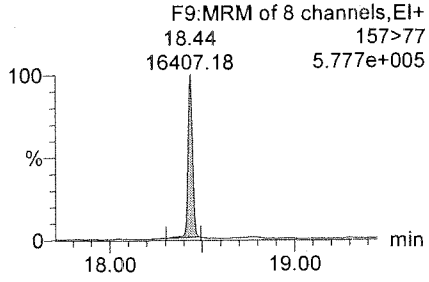
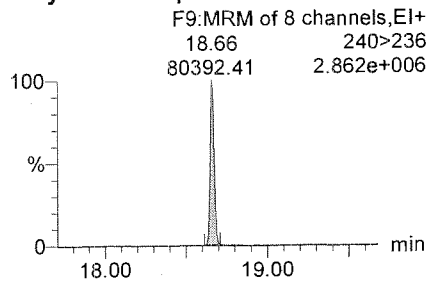
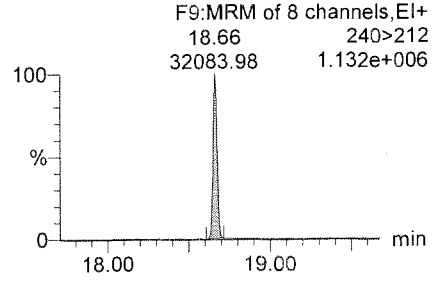


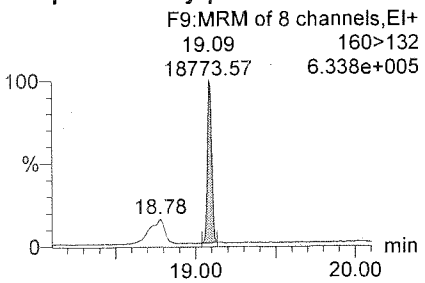
Chrysene-d12|1719-03-5



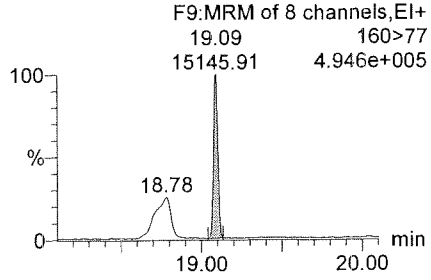
Chrysene-d12|1719-03-5



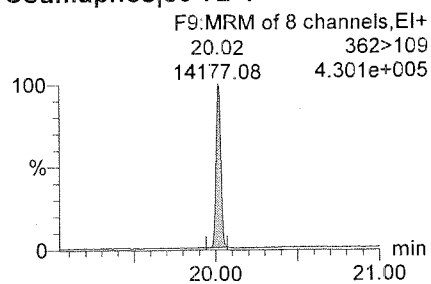
Azinphos methyl|86-50-0



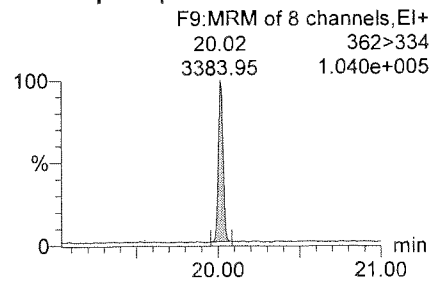
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



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ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Environmental Planning Specialists	**Service Request:**	K1309638
Project:	Drexel	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides by HRGC/MS/MS

Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/L
Lab Code:	KWG1310066-2	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	GC/MS/MS		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	**573**		100	42.0	1	09/17/13	10/10/13	KWG1310066	*
Naled (Dibrom)	**655**		100	20	1	09/17/13	10/10/13	KWG1310066	*
Phorate	**1000**		100	33	1	09/17/13	10/10/13	KWG1310066	
Monocrotophos	ND	U	200	200	1	09/17/13	10/10/13	KWG1310066	*
Dimethoate	**94.6**		50	4.7	1	09/17/13	10/10/13	KWG1310066	*
Ronnel	**1020**		50	4.4	1	09/17/13	10/10/13	KWG1310066	
Methyl Parathion	**855**		50	6.7	1	09/17/13	10/10/13	KWG1310066	
Malathion	**871**		50	5.1	1	09/17/13	10/10/13	KWG1310066	
Fenthion	**909**		50	4.0	1	09/17/13	10/10/13	KWG1310066	
Trichloronate	**968**		50	5.7	1	09/17/13	10/10/13	KWG1310066	
Ethyl Parathion	**901**		50	6.9	1	09/17/13	10/10/13	KWG1310066	
Merphos, Total	**759**		100	6.10	1	09/17/13	10/10/13	KWG1310066	
Tokuthion	**956**		50	6.5	1	09/17/13	10/10/13	KWG1310066	
Fensulfothion	**259**		50	12	1	09/17/13	10/10/13	KWG1310066	*
Bolstar (Sulprofos)	**913**		50	7.3	1	09/17/13	10/10/13	KWG1310066	
EPN	**967**		50	9.5	1	09/17/13	10/10/13	KWG1310066	
Azinphos-methyl	**542**		100	27	1	09/17/13	10/10/13	KWG1310066	*
Coumaphos	**849**		50	7.7	1	09/17/13	10/10/13	KWG1310066	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dichlorvos-d6	46	15-96	10/10/13	Acceptable
Chlorpyrifos-d10	101	39-124	10/10/13	Acceptable

Comments:

Exception Report

Data File: J:\MS21\DATA\101013\1010F017.D
Lab ID: KWG1310066-2
RunType: DLCS
Matrix: WATER

Date Acquired: 10/10/2013 16:05
Date Quantitated: 10/10/2013 16:05
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
MethodJoinID: MJ1040

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

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Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total ok
	Merphos oxone	-36.3	NA	25	
Std MRL Unsupported by ICAL	Merphos	100	50	NA	ok

Primary Review: 10.11.13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F017.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:05	**Quant Date:**	10/10/2013 16:05	**Vial:**	
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1310066-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D Pest OP	**Collect Date:**		**Receive Date:**	09/17/2013

Analysis Lot:	KWG1311302	**Prep Lot:**	KWG1310066	**Report Group:**	
Analysis Method:	GC/MS/MS	**Prep Method:**	EPA 3535A		
Prep Ref:	1282473	**Prep Date:**	09/17/2013		

Quant Method:		**Calibration ID:**	CAL12837
Title:			
		Method ID:	MJ1040
MB Ref:	J:\MS21\DATA\101013\1010F015.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.40	-0.01	98470	132.74	OK
0	Fluoranthene-d10	15.78	-0.01	73323	107.37	OK
0	Chrysene-d12	18.66	0.00	88205	106.02	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83	0.00	0.00	3517	45.70	46	15-96	OK	
1	Diazinon-d10	11.65	0.00	0.00	17935	89.19	89	44-125	OK	
25	Chlorpyrifos-d10	13.92	0.00	0.00	48364	101.47	101	39-124	OK	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorvos	7.86		0.00	43166	48.35	483		
1	Mevinphos	9.09	-0.01	0.00	11028	25.09	251		
1	Demeton-O	10.33		0.00	1186	56.67	567		
	Demeton-O,S				0	57.33	573		
1	Ethoprop (Prophos)	10.55		0.00	12840	77.69	777		
1	Sulfotep	10.74		0.00	19029	89.03	890		
1	Naled (Dibrom)	10.88	0.00	0.00	851	65.49	655		
1	Phorate	11.07		0.00	11790	100.33	1000		
1	Monocrotophos	11.18		0.00	171	0.2951	200	U	
1	Demeton-S	11.38	0.00	0.00	2015	57.99	580		
1	Diazinon	11.72	-0.01	0.00	20930	86.06	861		
1	Dimethoate	11.74		0.00	1699	9.46	94.6		
1	Disulfoton	12.14		0.00	6555	89.35	893		
25	Ronnel	13.36		0.00	60417	101.64	1020		
25	Methyl Parathion	13.43	0.00	0.00	16928	85.51	855		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F017.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 16:05	**Quant Date:**	10/10/2013 16:05	**Vial:**	
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG1310066-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Malathion	13.77	0.00	0.00	32681	87.11	871		
25	Chlorpyrifos	14.03	0.00	0.00	34146	98.61	986		
25	Fenthion	14.27	0.00	0.00	32384	90.92	909		
25	Trichloronate	14.41	-0.01	0.00	58876	96.76	968		
25	Ethyl Parathion	14.46		0.00	11368	90.06	901		
25	Merphos	14.84	0.00	0.00	866	14.82	148		
	Merphos, Total				0	75.92	759		
25	Stirophos	15.92		0.00	49576	80.62	806		
25	Tokuthion	16.20	-0.01	0.00	43265	95.63	956		
25	Merphos oxone	16.30		0.00	27430	137.03	1370		
32	Fensulfothion	17.21	0.00	0.00	6367	25.90	259		
32	Bolstar (Sulprofos)	17.36	-0.01	0.00	58605	91.28	913		
32	EPN	18.43	-0.01	0.00	20208	96.74	967		
32	Azinphos-methyl	19.09	-0.01	0.00	19394	54.24	542		
32	Coumaphos	20.02	-0.01	0.00	15673	84.89	849		

Prep Amount:	1000 ml	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1000

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	# Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
	1 Phenanthrene-d10|1517-2...	188>160	12.40	98470.016		bb		132.74	32.7	3.555	3.562	NO
	2 Dichlorvos-d6|203645-53-8	115 > 83	7.83	3517.442	98470.016	bb		45.70		1.730	1.766	NO
	3 Dichlorvos|62-73-7	109>79	7.86	43165.535	98470.016	bb		48.35		3.167	3.268	NO
	4 Mevinphos|7786-34-7	192>127	9.09	11027.838	98470.016	bd		25.09		2.731	2.725	NO
	5 Demeton-O|298-03-3	171>115	10.33	1185.845	98470.016	bb		56.67		2.334	2.144	NO
	6 Ethoprop|13194-48-4	158>114	10.55	12839.972	98470.016	bb		77.69		1.599	1.746	NO
	7 Sulfotep|3689-24-5	202>146	10.74	19028.607	98470.016	bb		89.03		2.057	2.195	NO
	8 Naled|300-76-5	109>79	10.88	851.001	98470.016	db		65.49		3.101	3.352	NO
	9 Phorate|298-02-2	121>93	11.07	11790.264	98470.016	bb		100.33		2.854	2.631	NO
10	10 Monocrotophos|6923-22-4	127>109	11.18	171.363	98470.016	bd		0.30		2.892	4.455	YES
11	11 Demeton-S|126-75-0	170>114	11.38	2014.571	98470.016	bb		57.99		1.726	1.541	NO
12	12 Diazinon-d10|CASID39254	314>183	11.65	17934.549	98470.016	bb		89.19		1.529	1.545	NO
13	13 Diazinon|333-41-5	304>179	11.72	20930.291	98470.016	bb		86.06		1.352	1.325	NO
14	14 Dimethoate|60-51-5	125>79	11.74	1698.674	98470.016	bb		9.46		3.143	3.113	NO
15	15 Disulfoton|298-04-4	274>88	12.14	6554.941	98470.016	bb		89.35		2.000	1.941	NO
16	16 Ronnel|299-84-3	285>270	13.36	60416.730	73322.813	bb		101.64		1.495	1.469	NO
17	17 Methyl Parathion|298-00-0	263>109	13.43	16927.885	73322.813	bb		85.51		0.849	0.844	NO
18	18 Malathion|121-75-5	173>99	13.77	32680.523	73322.813	bb		87.11		1.487	1.464	NO
19	19 Chlorpyrifos-d10|CASID30...	324 >260	13.92	48363.906	73322.813	bb		101.46		2.852	2.879	NO
20	20 Chlorpyrifos|2921-88-2	314>258	14.03	34146.281	73322.813	bb		98.61		2.160	2.179	NO
21	21 Fenthion|55-38-9	278>109	14.27	32384.307	73322.813	bb		90.92		2.467	2.452	NO
22	22 Trichloronate|327-98-0	297>269	14.41	58875.707	73322.813	bb		96.76		2.026	2.040	NO
23	23 Ethyl Parathion|56-38-2	291>109	14.46	11367.486	73322.813	bb		90.06		4.933	4.912	NO
24	24 Merphos|150-50-5	209>153	14.84	865.716	73322.813	bb		14.82		1.925	2.393	NO
25	25 Fluoranthene-d10|93951-6...	212>208	15.78	73322.813		bb		107.37	7.4	3.931	3.973	NO
26	26 Stirophos|22248-79-9	329>109	15.92	49575.930	73322.813	bb		80.62		1.560	1.508	NO
27	27 Tokuthion|34643-46-4	267>239	16.20	43264.762	73322.813	bb		95.63		0.950	0.939	NO
28	28 Merphos oxone|78-48-8	202>147	16.30	27430.266	73322.813	bb		137.03		2.394	2.340	NO
29	29 Fensulfothion|115-90-2	293>97	17.21	6367.095	88204.484	bb		25.90		1.166	1.220	NO
30	30 Bolstar|35400-43-2	156>141	17.36	58605.250	88204.484	bb		91.28		6.213	6.221	NO
31	31 EPN|2104-64-5	157>110	18.43	20207.461	88204.484	bb		96.74		1.116	1.110	NO
32	32 Chrysene-d12|1719-03-5	240>236	18.66	88204.484		bb		106.02	6.0	2.543	2.504	NO
33	33 Azinphos methyl|86-50-0	160>132	19.09	19393.963	88204.484	bb		54.24		1.275	1.294	NO
34	34 Coumaphos|56-72-4	362>109	20.02	15673.397	88204.484	bb		84.89		4.273	4.250	NO

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Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

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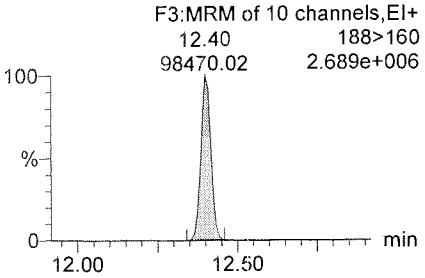
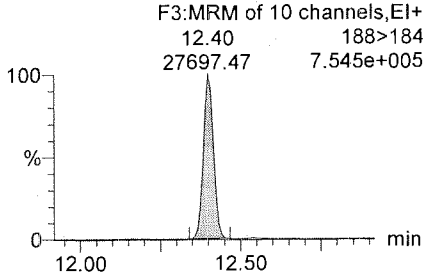
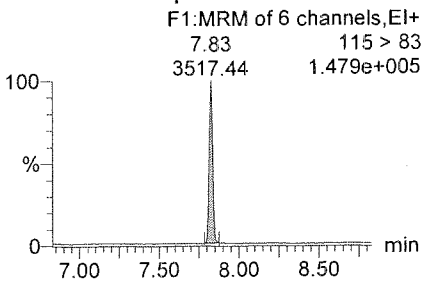


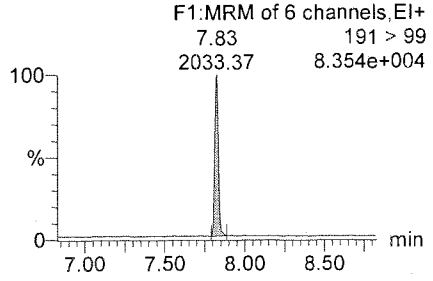
Phenanthrene-d10|1517-22-2



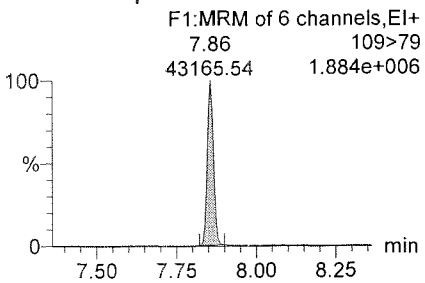
Dichlorvos-d6|203645-53-8



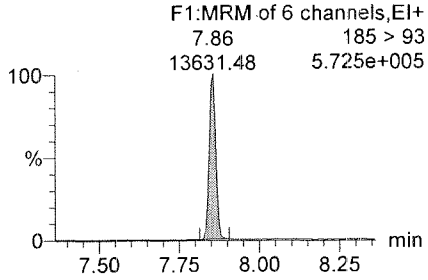
Dichlorvos-d6|203645-53-8



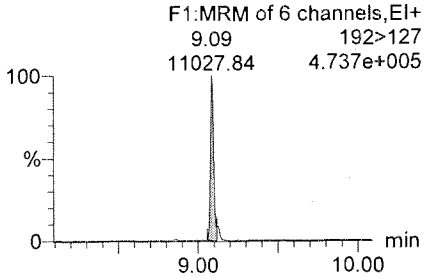
Dichlorvos|62-73-7



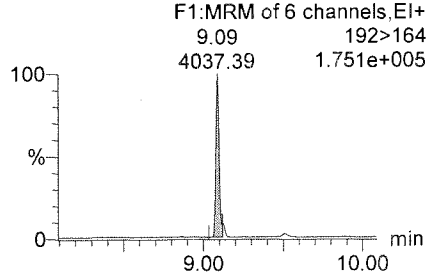
Dichlorvos|62-73-7



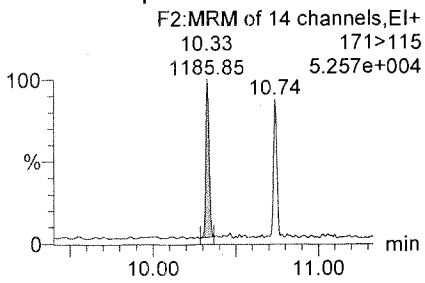
Mevinphos|7786-34-7



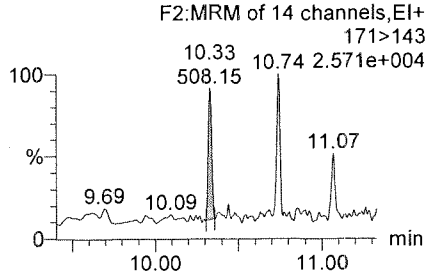
Mevinphos|7786-34-7



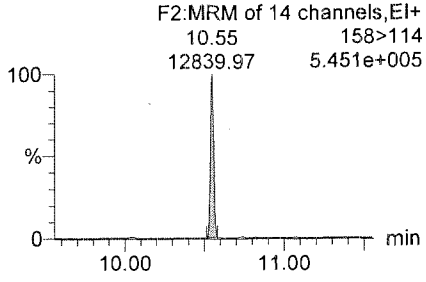
Demeton-O|298-03-3



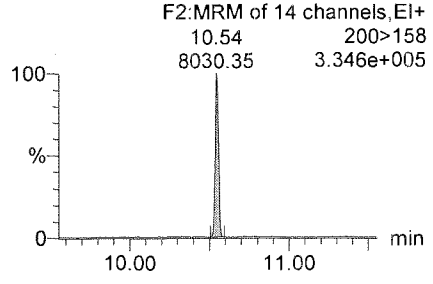
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



2198

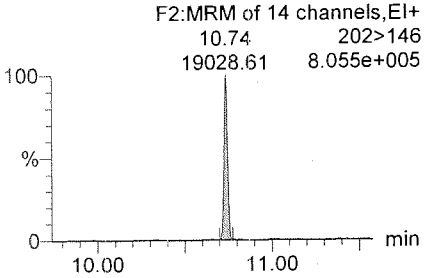
Quantify Sample Report MassLynx 4.1

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

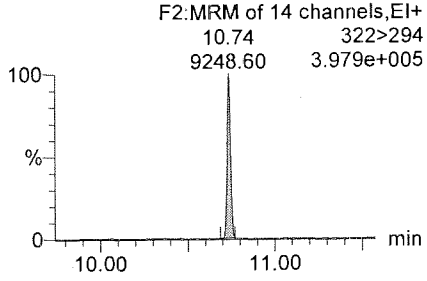
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

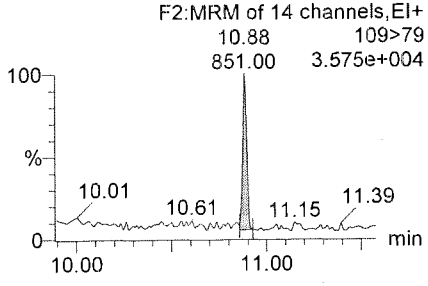
Sulfotep|3689-24-5



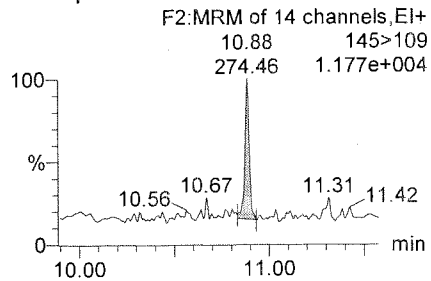
Sulfotep|3689-24-5



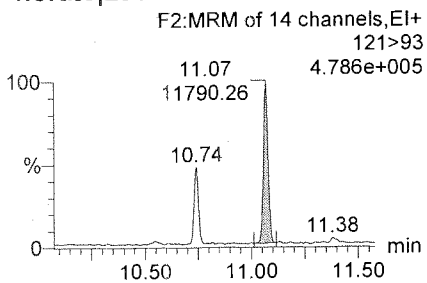
Naled|300-76-5



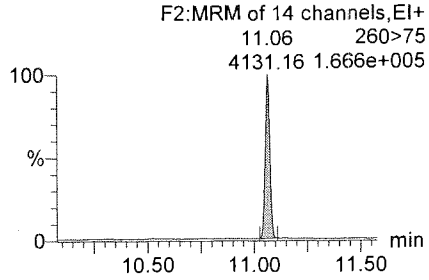
Naled|300-76-5



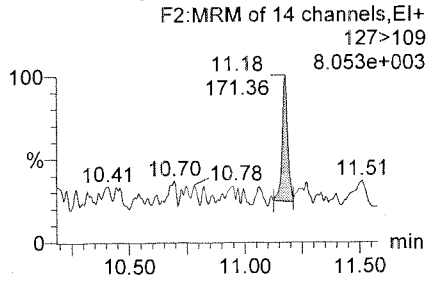
Phorate|298-02-2



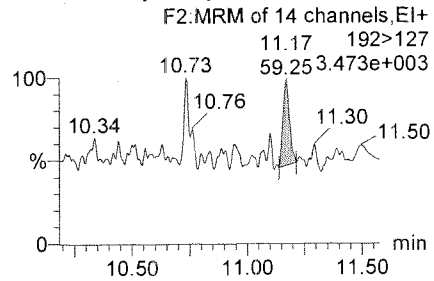
Phorate|298-02-2



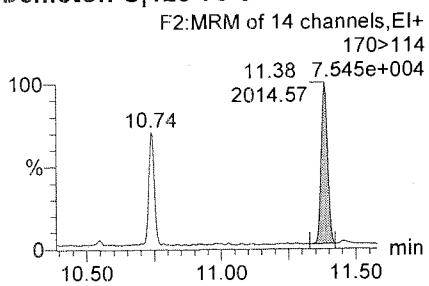
Monocrotophos|6923-22-4



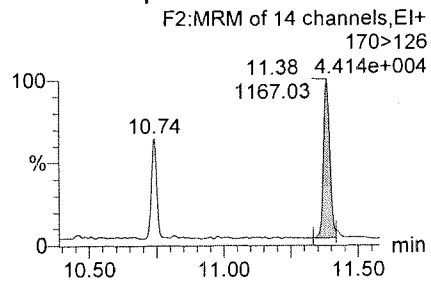
Monocrotophos|6923-22-4



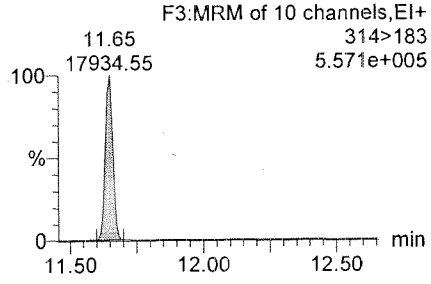
Demeton-S|126-75-0



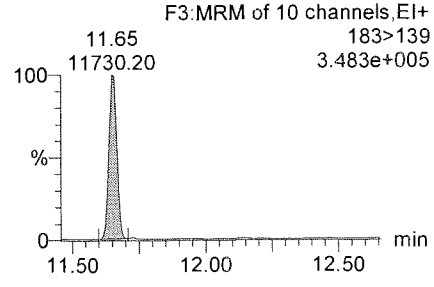
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



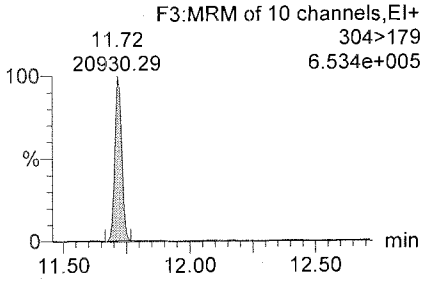
2199

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

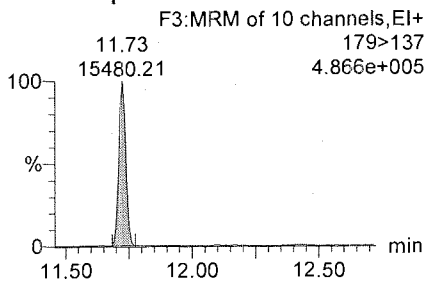
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

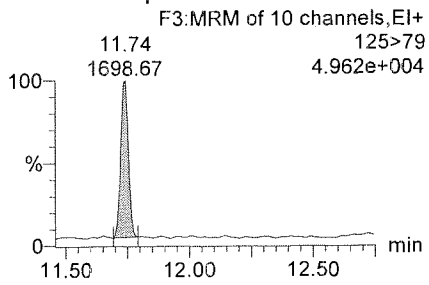
Diazinon|333-41-5



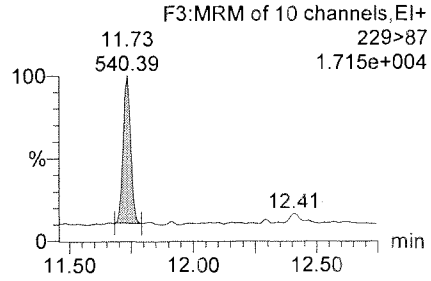
Diazinon|333-41-5



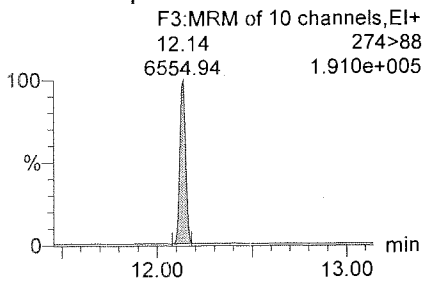
Dimethoate|60-51-5



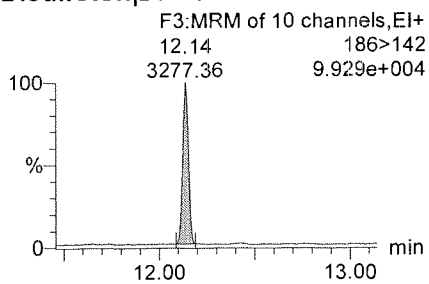
Dimethoate|60-51-5



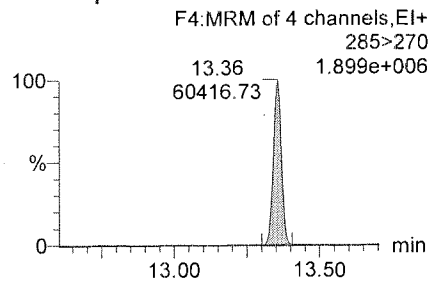
Disulfoton|298-04-4



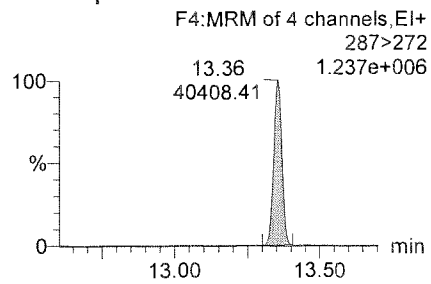
Disulfoton|298-04-4



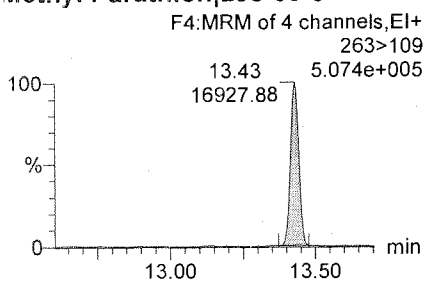
Ronnel|299-84-3



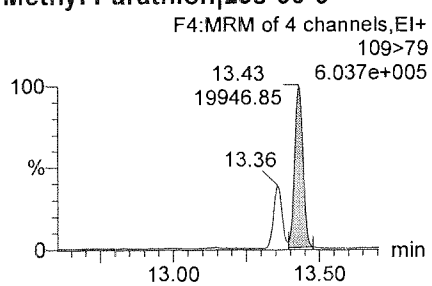
Ronnel|299-84-3



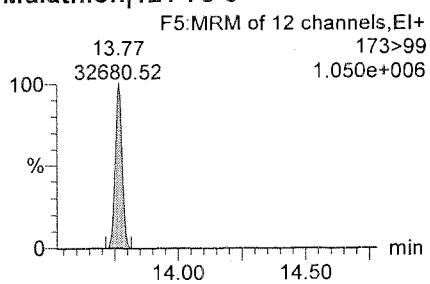
Methyl Parathion|298-00-0



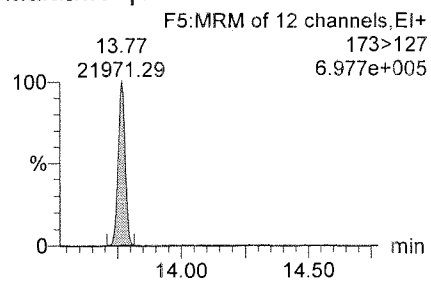
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



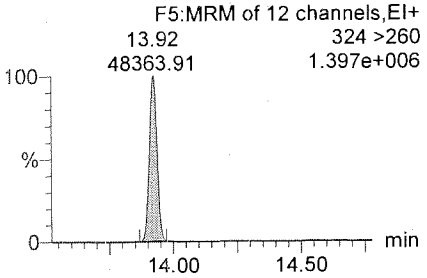
2200

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

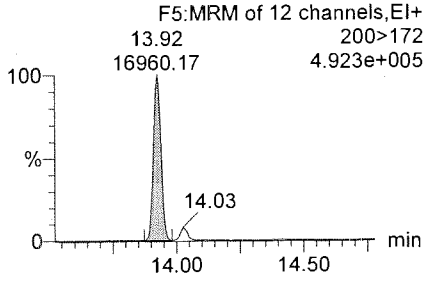
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

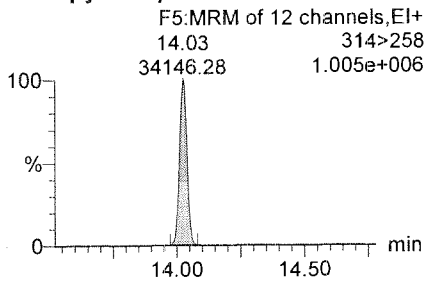
Chlorpyrifos-d10|CASID30732



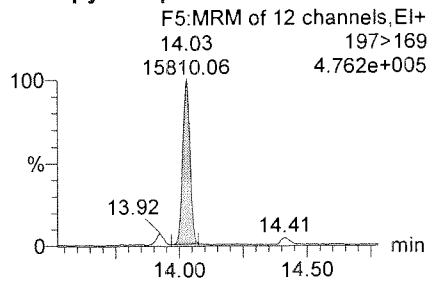
Chlorpyrifos-d10|CASID30732



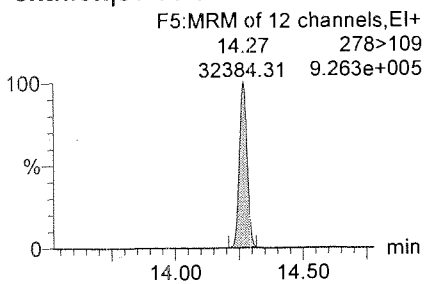
Chlorpyrifos|2921-88-2



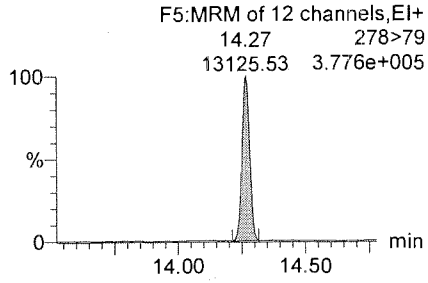
Chlorpyrifos|2921-88-2



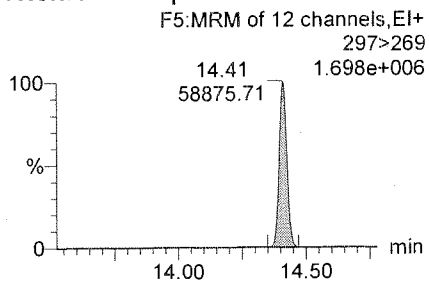
Fenthion|55-38-9



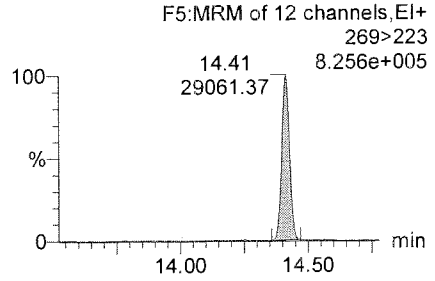
Fenthion|55-38-9



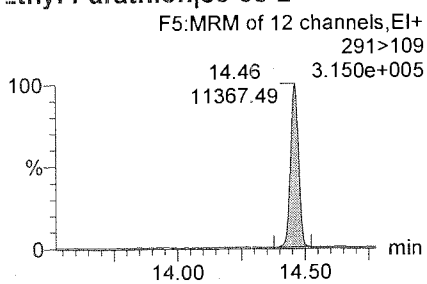
Trichloronate|327-98-0



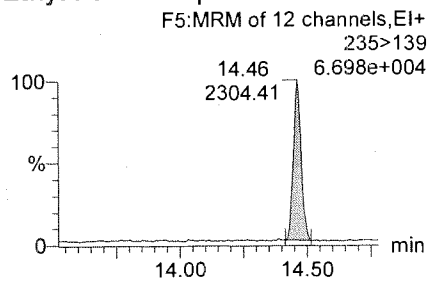
Trichloronate|327-98-0



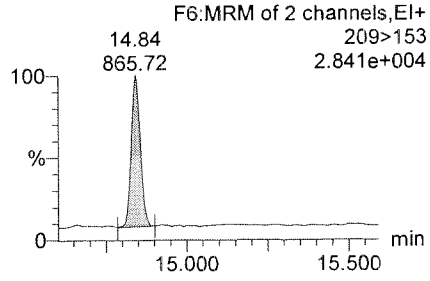
Ethyl Parathion|56-38-2



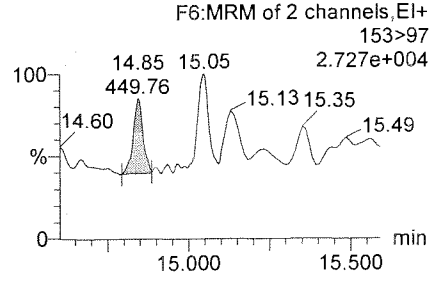
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



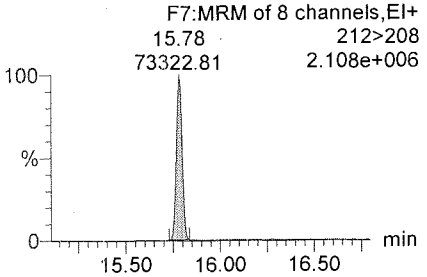
2201

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

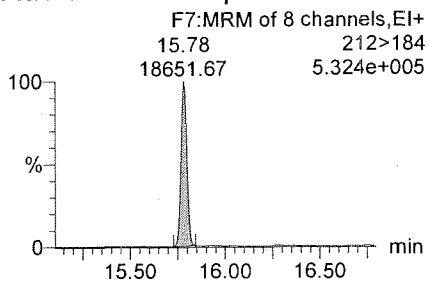
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

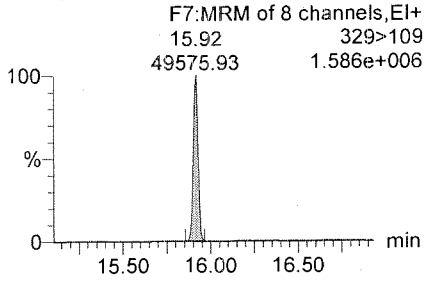
Fluoranthene-d10|93951-69-0



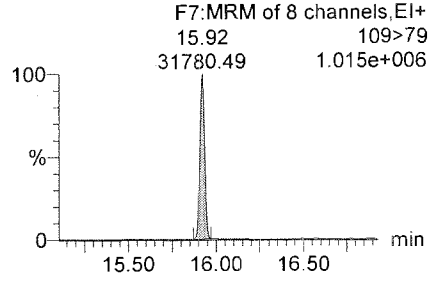
Fluoranthene-d10|93951-69-0



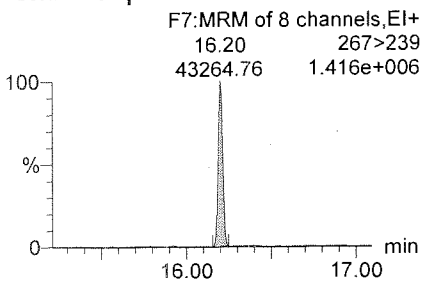
Stirophos|22248-79-9



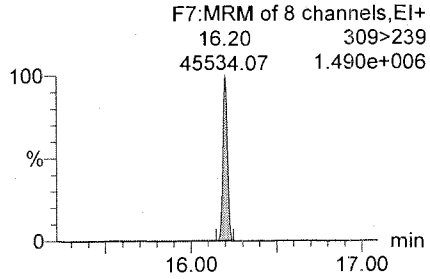
Stirophos|22248-79-9



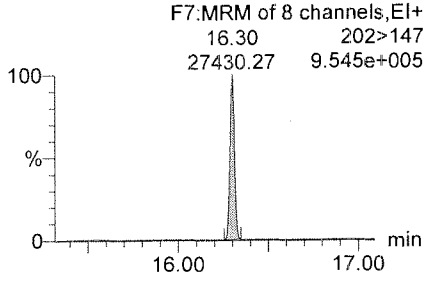
Tokuthion|34643-46-4



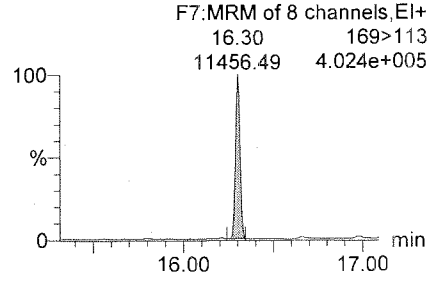
Tokuthion|34643-46-4



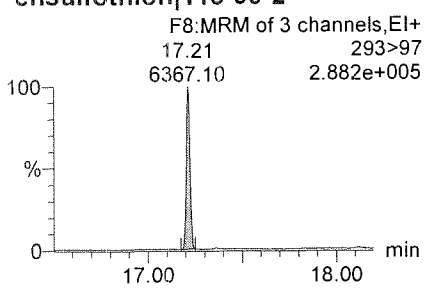
Merphos oxone|78-48-8



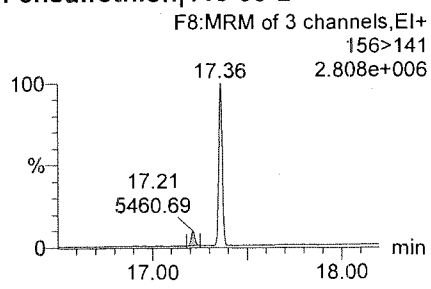
Merphos oxone|78-48-8



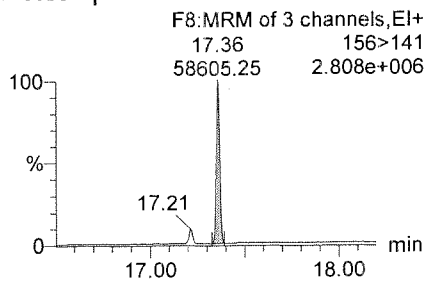
Fensulfothion|115-90-2



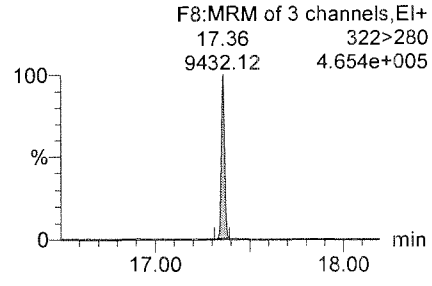
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2202

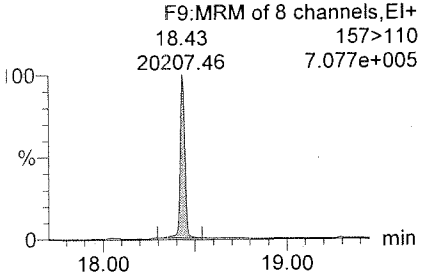
Quantify Sample Report **MassLynx 4.1**

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

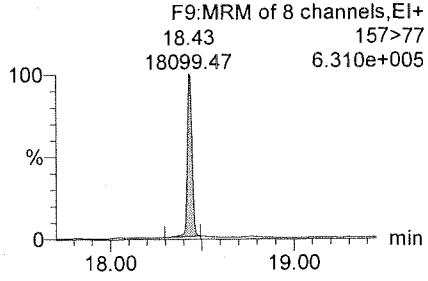
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F017, Date: 10-Oct-2013, Time: 16:05:53, ID: DLCS, Description: kwg1310066-2 dlcs water, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

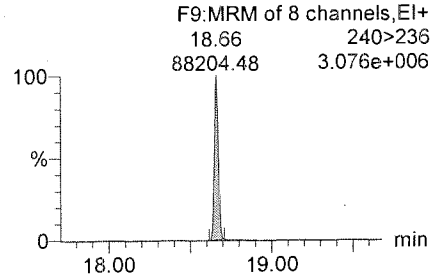
EPN|2104-64-5



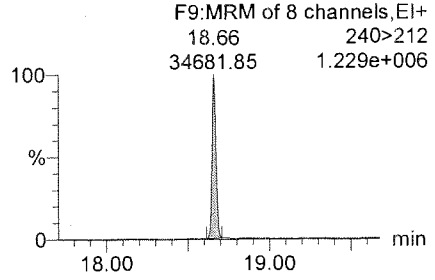
EPN|2104-64-5



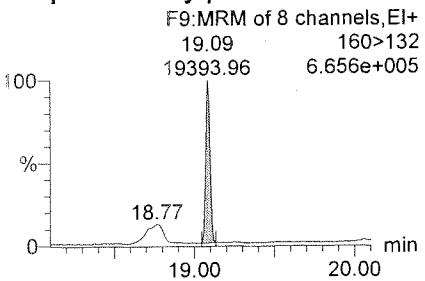
Chrysene-d12|1719-03-5



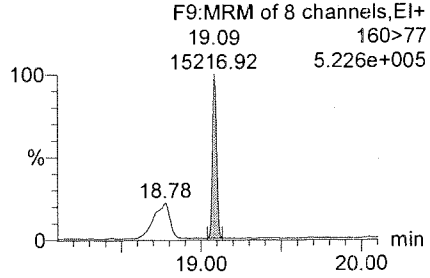
Chrysene-d12|1719-03-5



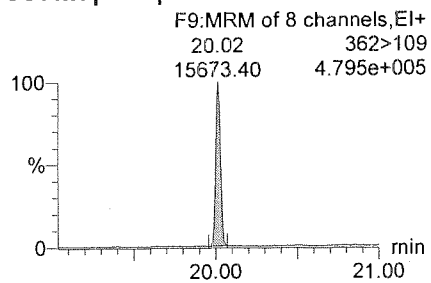
Azinphos methyl|86-50-0



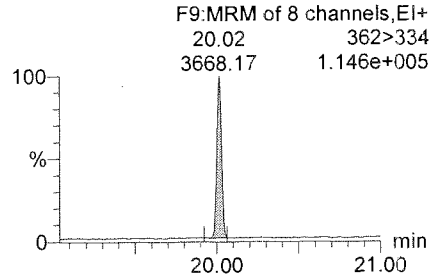
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2203

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Validation Package

Standards Data

u:\Stealth\Crystal.rpt\DividerE.rpt

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel
Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21
Column: MS

Level ID	File ID
A	J:\MS21\Data\101013\1010F003.D
B	J:\MS21\Data\101013\1010F004.D
C	J:\MS21\Data\101013\1010F005.D
D	J:\MS21\Data\101013\1010F006.D
E	J:\MS21\Data\101013\1010F007.D
F	J:\MS21\Data\101013\1010F008.D
G	J:\MS21\Data\101013\1010F009.D
H	J:\MS21\Data\101013\1010F010.D
I	J:\MS21\Data\101013\1010F011.D
J	J:\MS21\Data\101013\1010F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Demeton-O	A	5.0	0.0203	B	10	0.0199	C	20	0.0241	D	50	0.0206	E	80	0.0223
	F	100	0.0210	G	120	0.0206	H	160	0.0206	I	200	0.0222	J	300	0.0209
Demeton-S	A	5.0	0.0419	B	10	0.0373	C	20	0.0339	D	50	0.0362	E	80	0.0364
	F	100	0.0330	G	120	0.0328	H	160	0.0335	I	200	0.0323	J	300	0.0356
Naled (Dibrom)	A	5.0	0.00367	B	10	0.00983	C	20	0.00981	D	50	0.0121	E	80	0.0138
	F	100	0.0150	G	120	0.0146	H	160	0.0147	I	200	0.0173	J	300	0.0189
Phorate	A	5.0	0.106	B	10	0.114	C	20	0.124	D	50	0.109	E	80	0.118
	F	100	0.123	G	120	0.118	H	160	0.121	I	200	0.126	J	300	0.135
Monocrotophos	A	5.0	0.567	B	10	0.564	C	20	0.546	D	50	0.598	E	80	0.553
	F	100	0.561	G	120	0.553	H	160	0.603	I	200	0.619	J	300	0.734
Dimethoate	A	5.0	0.179	B	10	0.181	C	20	0.187	D	50	0.186	E	80	0.178
	F	100	0.182	G	120	0.175	H	160	0.179	I	200	0.182	J	300	0.195
Ronnel	A	5.0	0.728	B	10	0.747	C	20	0.758	D	50	0.800	E	80	0.813
	F	100	0.830	G	120	0.812	H	160	0.825	I	200	0.862	J	300	0.931
Methyl Parathion	A	5.0	0.278	B	10	0.271	C	20	0.286	D	50	0.272	E	80	0.265
	F	100	0.268	G	120	0.259	H	160	0.259	I	200	0.265	J	300	0.276
Malathion	A	5.0	0.481	B	10	0.506	C	20	0.499	D	50	0.519	E	80	0.525
	F	100	0.528	G	120	0.500	H	160	0.503	I	200	0.517	J	300	0.540
Fenthion	A	5.0	0.494	B	10	0.464	C	20	0.478	D	50	0.498	E	80	0.493
	F	100	0.500	G	120	0.475	H	160	0.473	I	200	0.482	J	300	0.501
Trichloronate	A	5.0	0.833	B	10	0.797	C	20	0.842	D	50	0.858	E	80	0.864
	F	100	0.868	G	120	0.810	H	160	0.802	I	200	0.795	J	300	0.829
Ethyl Parathion	A	5.0	0.158	B	10	0.173	C	20	0.180	D	50	0.176	E	80	0.177
	F	100	0.175	G	120	0.167	H	160	0.169	I	200	0.168	J	300	0.179
Merphos				B	10	0.0545	C	20	0.0853	D	50	0.223	E	80	0.255
	F	100	0.264	G	120	0.270	H	160	0.292	I	200	0.302	J	300	0.334
Tokuthion	A	5.0	0.580	B	10	0.573	C	20	0.595	D	50	0.621	E	80	0.622
	F	100	0.626	G	120	0.612	H	160	0.624	I	200	0.628	J	300	0.688

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Merphos oxone	A	5.0	0.264	B	10	0.258	C	20	0.267	D	50	0.276	E	80	0.278
	F	100	0.280	G	120	0.267	H	160	0.268	I	200	0.275	J	300	0.296
Fensulfothion	A	5.0	0.266	B	10	0.260	C	20	0.255	D	50	0.260	E	80	0.268
	F	100	0.272	G	120	0.272	H	160	0.288	I	200	0.304	J	300	0.342
Bolstar (Sulprofos)	A	5.0	0.655	B	10	0.663	C	20	0.643	D	50	0.694	E	80	0.718
	F	100	0.734	G	120	0.730	H	160	0.766	I	200	0.799	J	300	0.879
EPN	A	5.0	0.224	B	10	0.211	C	20	0.223	D	50	0.237	E	80	0.227
	F	100	0.234	G	120	0.229	H	160	0.243	I	200	0.259	J	300	0.281
Azinphos-methyl	A	5.0	0.350	B	10	0.385	C	20	0.361	D	50	0.384	E	80	0.386
	F	100	0.399	G	120	0.393	H	160	0.424	I	200	0.452	J	300	0.520
Coumaphos	A	5.0	0.214	B	10	0.196	C	20	0.199	D	50	0.207	E	80	0.212
	F	100	0.208	G	120	0.202	H	160	0.209	I	200	0.216	J	300	0.229
Dichlorvos-d6	A	5.0	0.0781	B	10	0.0699	C	20	0.0784	D	50	0.0774	E	80	0.0797
	F	100	0.0750	G	120	0.0753	H	160	0.0806	I	200	0.0802	J	300	0.0870
Chlorpyrifos-d10	A	5.0	0.649	B	10	0.619	C	20	0.629	D	50	0.669	E	80	0.673
	F	100	0.670	G	120	0.647	H	160	0.642	I	200	0.640	J	300	0.663

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013

Initial Calibration Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration ID: CAL12837
Instrument ID: MS21

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Demeton-O	MULTI	AverageRF	% RSD	5.9		≤ 20	0.0212		0.01
Demeton-S	MULTI	AverageRF	% RSD	8.2		≤ 20	0.0353		0.01
Naled (Dibrom)	MS	Quadratic	COD	0.998		≥ 0.990	0.0130		0.01
Phorate	MS	AverageRF	% RSD	7.2		≤ 20	0.119		0.01
Monocrotophos	MS	AverageRF	% RSD	9.5		≤ 20	0.590		0.01
Dimethoate	MS	AverageRF	% RSD	3.2		≤ 20	0.182		0.01
Ronnel	MS	AverageRF	% RSD	7.3		≤ 20	0.811		0.01
Methyl Parathion	MS	AverageRF	% RSD	3.1		≤ 20	0.270		0.01
Malathion	MS	AverageRF	% RSD	3.4		≤ 20	0.512		0.01
Fenthion	MS	AverageRF	% RSD	2.7		≤ 20	0.486		0.01
Trichloronate	MS	AverageRF	% RSD	3.4		≤ 20	0.830		0.01
Ethyl Parathion	MS	AverageRF	% RSD	3.9		≤ 20	0.172		0.01
Merphos	MULTI	Quadratic	COD	1.000		≥ 0.990	0.231		0.01
Tokuthion	MS	AverageRF	% RSD	5.2		≤ 20	0.617		0.01
Merphos oxone	MULTI	AverageRF	% RSD	3.9		≤ 20	0.273		0.01
Fensulfothion	MS	AverageRF	% RSD	9.5		≤ 20	0.279		0.01
Bolstar (Sulprofos)	MS	AverageRF	% RSD	10.0		≤ 20	0.728		0.01
EPN	MS	AverageRF	% RSD	8.5		≤ 20	0.237		0.01
Azinphos-methyl	MS	AverageRF	% RSD	12.3		≤ 20	0.405		0.01
Coumaphos	MS	AverageRF	% RSD	4.6		≤ 20	0.209		0.01
Dichlorvos-d6	SURR	AverageRF	% RSD	5.7		≤ 20	0.0782		0.01
Chlorpyrifos-d10	SURR	AverageRF	% RSD	2.9		≤ 20	0.650		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Calibration Date: 10/10/2013
Date Analyzed: 10/10/2013

Second Source Calibration Verification
Organophosphorus Pesticides by HRGC/MS/MS

Calibration Type: Internal Standard
Analysis Method: GC/MS/MS

Calibration ID: CAL12837
Units: ng/ml

File ID: J:\MS21\Data\101013\1010F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D		%Drift		Criteria	Curve Fit
Demeton-O	100	110	0.0212	0.0226	6		NA		± 25 %	AverageRF
Demeton-S	100	98	0.0353	0.0347	-2		NA		± 25 %	AverageRF
Demeton-O,S	100	100	NA	NA	NA		2		± 25 %	NA
Naled (Dibrom)	100	110	0.0130	0.0158	NA		9		± 25 %	Quadratic
Phorate	100	110	0.119	0.130	9		NA		± 25 %	AverageRF
Monocrotophos	100	100	0.590	0.592	0		NA		± 25 %	AverageRF
Dimethoate	100	97	0.182	0.176	-3		NA		± 25 %	AverageRF
Ronnel	100	100	0.811	0.812	0		NA		± 25 %	AverageRF
Methyl Parathion	100	97	0.270	0.263	-3		NA		± 25 %	AverageRF
Malathion	100	99	0.512	0.507	-1		NA		± 25 %	AverageRF
Fenthion	100	87	0.486	0.425	-13		NA		± 25 %	AverageRF
Trichloronate	100	100	0.830	0.841	1		NA		± 25 %	AverageRF
Ethyl Parathion	100	100	0.172	0.178	3		NA		± 25 %	AverageRF
Merphos	100	180	0.231	0.521	NA		77	*	± 25 %	Quadratic
Merphos, Total	100	120	NA	NA	NA		20		± 25 %	NA
Tokuthion	100	99	0.617	0.608	-1		NA		± 25 %	AverageRF
Merphos oxone	100	64	0.273	0.174	-36	*	NA		± 25 %	AverageRF
Fensulfothion	100	85	0.279	0.238	-15		NA		± 25 %	AverageRF
Bolstar (Sulprofos)	100	100	0.728	0.732	1		NA		± 25 %	AverageRF
EPN	100	99	0.237	0.234	-1		NA		± 25 %	AverageRF
Azinphos-methyl	100	96	0.405	0.389	-4		NA		± 25 %	AverageRF
Coumaphos	100	99	0.209	0.207	-1		NA		± 25 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10-10-13

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.42	74676.914		bb		100.67	0.7	3.591	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83			74676.914	MM-				0.000	1.809	YES
3	3	Dichlorvos|62-73-7	109>79			74676.914	MM-				0.000	3.310	YES
4	4	Mevinphos|7786-34-7	192>127			74676.914	MM-				0.000	2.593	YES
5	5	Demeton-O|298-03-3	171>115			74676.914	MM-				0.000	2.462	YES
6	6	Ethoprop|13194-48-4	158>114			74676.914	MM-				0.000	1.680	YES
7	7	Sulfotep|3689-24-5	202>146			74676.914	MM-				0.000	2.104	YES
8	8	Naled|300-76-5	109>79			74676.914	MM-				0.000	3.714	YES
9	9	Phorate|298-02-2	121>93			74676.914	MM-				0.000	2.719	YES
10	10	Monocrotophos|6923-22-4	127>109			74676.914	MM-				0.000	4.172	YES
11	11	Demeton-S|126-75-0	170>114			74676.914	MM-				0.000	1.597	YES
12	12	Diazinon-d10|CASID39254	314>183			74676.914	MM-				0.000	1.548	YES
13	13	Diazinon|333-41-5	304>179			74676.914	MM-				0.000	1.304	YES
14	14	Dimethoate|60-51-5	125>79			74676.914	MM-				0.000	3.279	YES
15	15	Disulfoton|298-04-4	274>88			74676.914	MM-				0.000	1.928	YES
16	16	Ronnel|299-84-3	285>270			72108.602	MM-				0.000	1.478	YES
17	17	Methyl Parathion|298-00-0	263>109			72108.602	MM-				0.000	0.860	YES
18	18	Malathion|121-75-5	173>99			72108.602	MM-				0.000	1.476	YES
19	19	Chlorpyrifos-d10|CASID30...	324 >260			72108.602	MM-				0.000	2.898	YES
20	20	Chlorpyrifos|2921-88-2	314>258			72108.602	MM-				0.000	2.145	YES
21	21	Fenthion|55-38-9	278>109			72108.602	MM-				0.000	2.558	YES
22	22	Trichloronate|327-98-0	297>269			72108.602	MM-				0.000	2.135	YES
23	23	Ethyl Parathion|56-38-2	291>109			72108.602	MM-				0.000	5.154	YES
24	24	Merphos|150-50-5	209>153			72108.602	MM-				0.000	2.363	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.80	72108.602		bb		105.59	5.6	3.996	3.924	NO
26	26	Stirophos|22248-79-9	329>109			72108.602	MM-				0.000	1.525	YES
27	27	Tokuthion|34643-46-4	267>239			72108.602	MM-				0.000	0.927	YES
28	28	Merphos oxone|78-48-8	202>147			72108.602	MM-				0.000	2.427	YES
29	29	Fensulfothion|115-90-2	293>97			87503.750	MM-				0.000	1.319	YES
30	30	Bolstar|35400-43-2	156>141			87503.750	MM-				0.000	6.079	YES
31	31	EPN|2104-64-5	157>110			87503.750	MM-				0.000	1.105	YES
32	32	Chrysene-d12|1719-03-5	240>236	18.67	87503.750		bb		105.18	5.2	2.531	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132			87503.750	MM-				0.000	1.317	YES
34	34	Coumaphos|56-72-4	362>109			87503.750	MM-				0.000	3.830	YES

10/10/13
9

2209

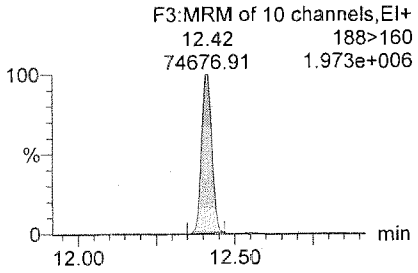
Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

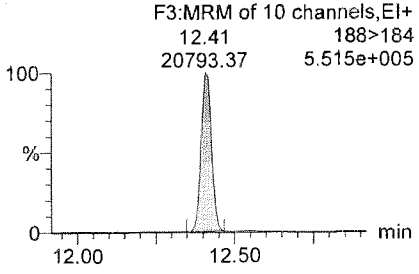
Method: C:\PESTEI.PRO\MethDB\nppestc.mdb 10 Oct 2013 13:35:41
Calibration: C:\PESTEI.PRO\CurveDB\101013oppest.cdb 10 Oct 2013 14:58:09

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

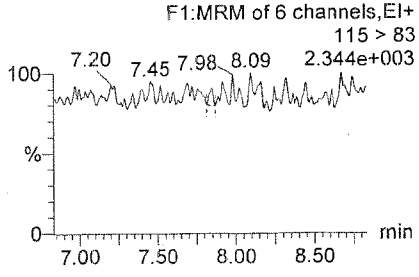
Phenanthrene-d10|1517-22-2



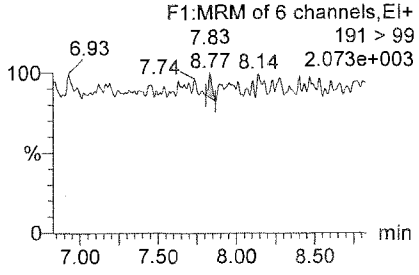
Phenanthrene-d10|1517-22-2



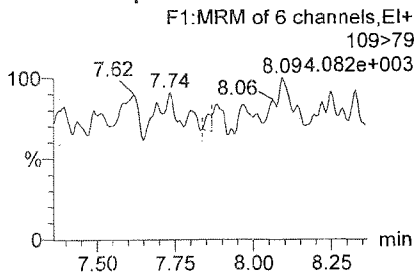
Dichlorvos-d6|203645-53-8



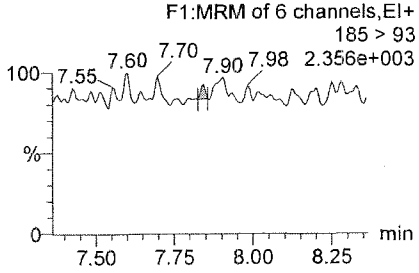
Dichlorvos-d6|203645-53-8



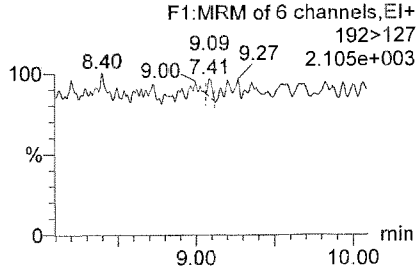
Dichlorvos|62-73-7



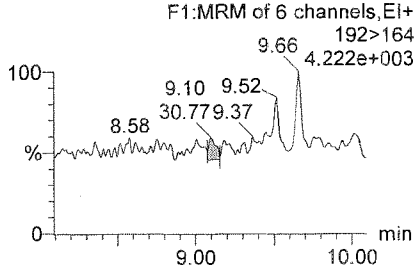
Dichlorvos|62-73-7



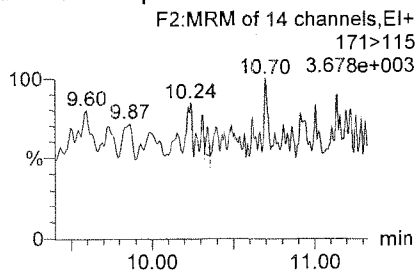
Mevinphos|7786-34-7



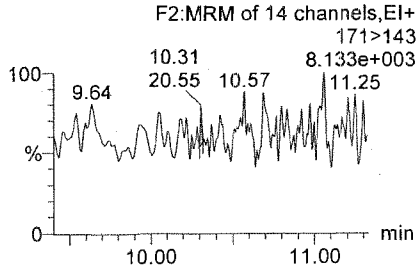
Mevinphos|7786-34-7



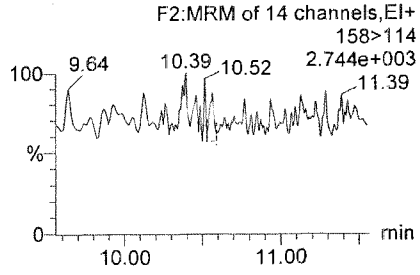
Demeton-O|298-03-3



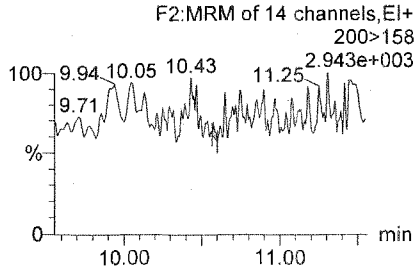
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



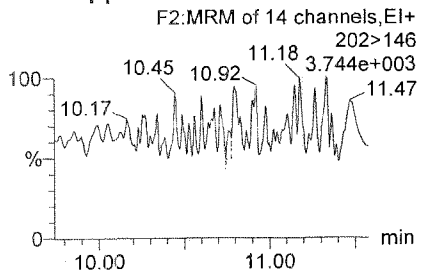
2210

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

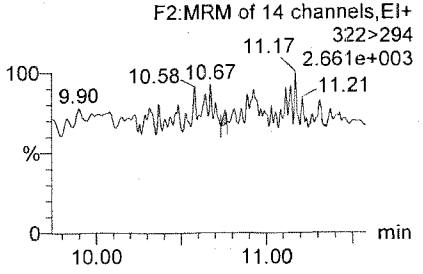
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

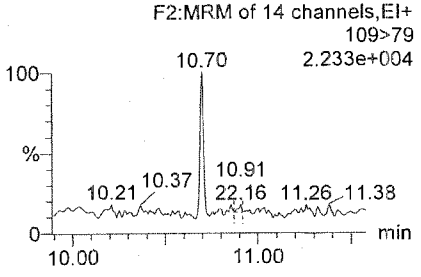
Sulfotep|3689-24-5



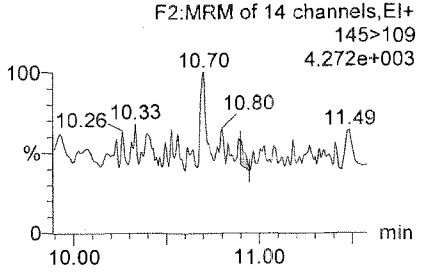
Sulfotep|3689-24-5



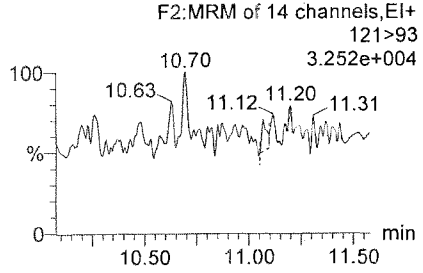
Naled|300-76-5



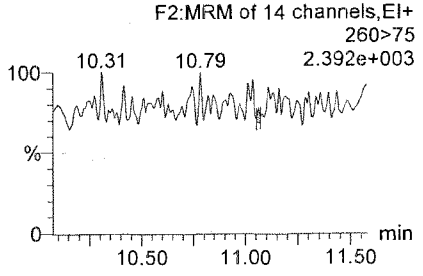
Naled|300-76-5



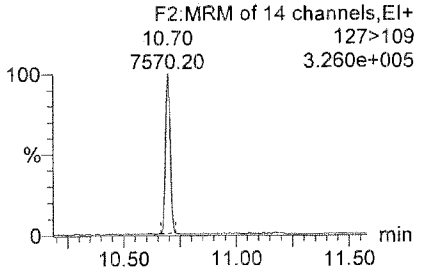
Phorate|298-02-2



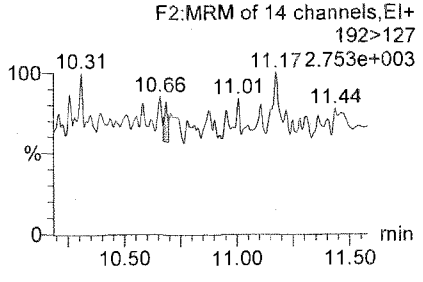
Phorate|298-02-2



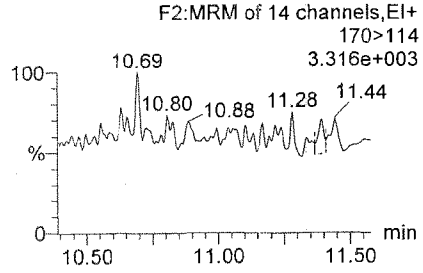
Monocrotophos|6923-22-4



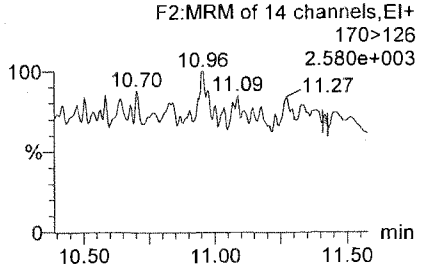
Monocrotophos|6923-22-4



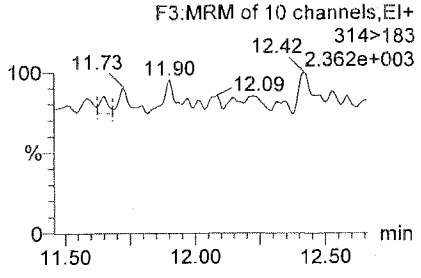
Demeton-S|126-75-0



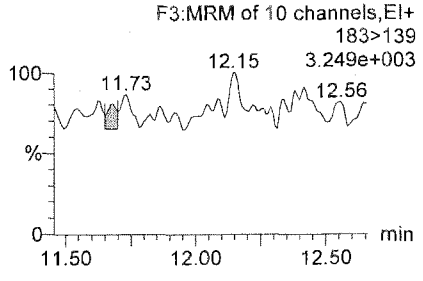
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



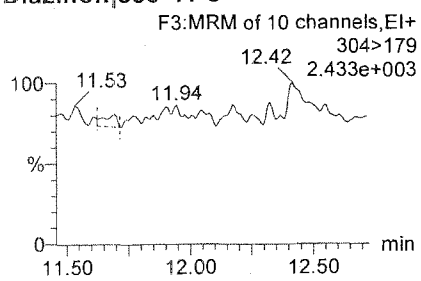
2211

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

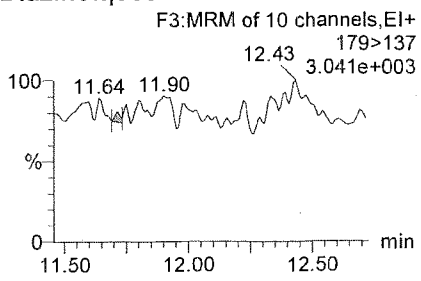
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

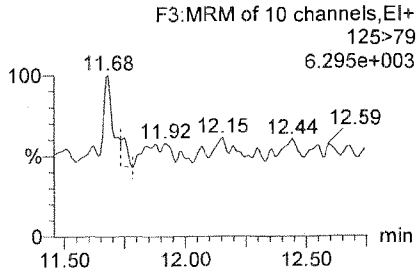
Diazinon|333-41-5



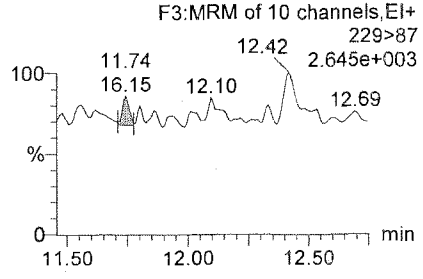
Diazinon|333-41-5



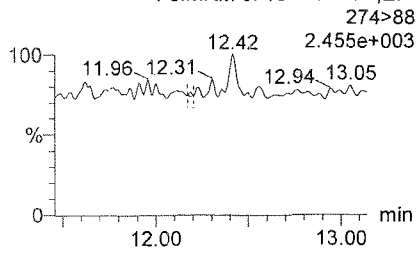
Dimethoate|60-51-5



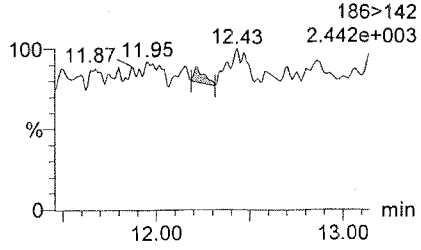
Dimethoate|60-51-5



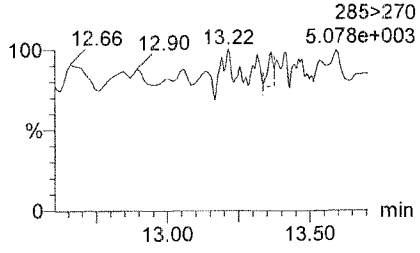
Disulfoton|298-04-4



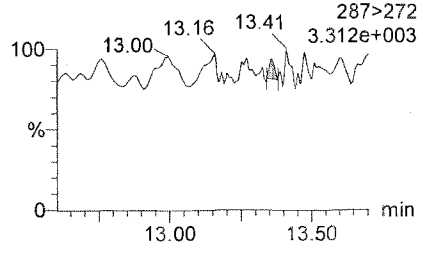
Disulfoton|298-04-4



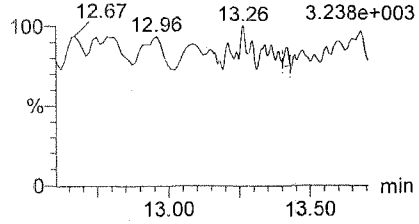
Ronnel|299-84-3



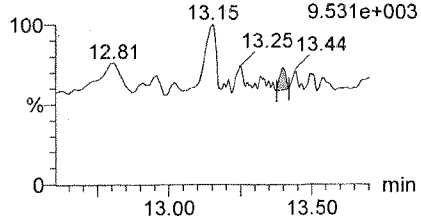
Ronnel|299-84-3



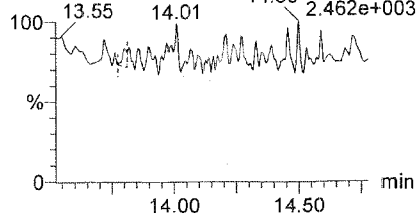
Methyl Parathion|298-00-0



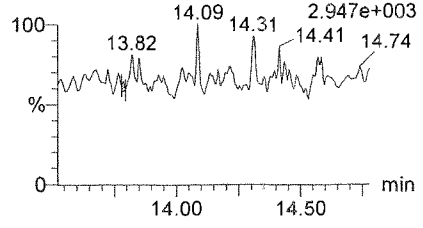
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



2212

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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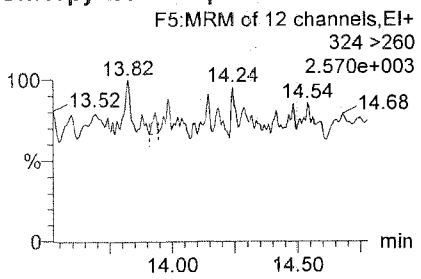
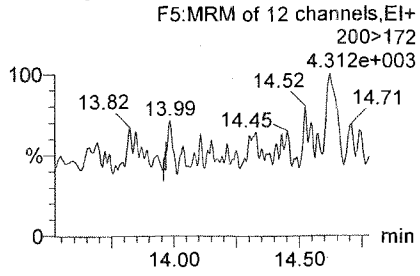
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

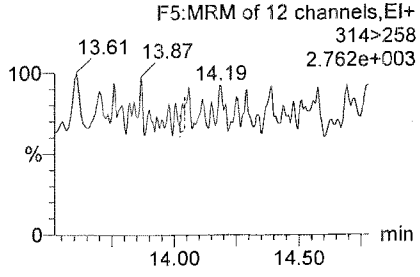
Chlorpyrifos-d10|CASID30732



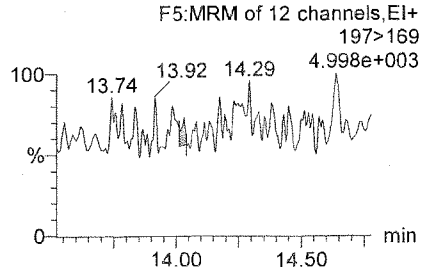
Chlorpyrifos-d10|CASID30732



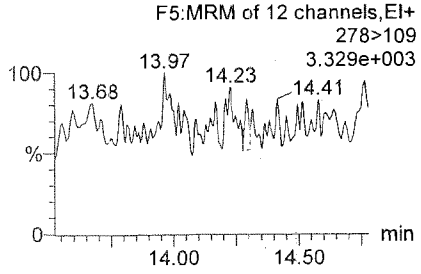
Chlorpyrifos|2921-88-2



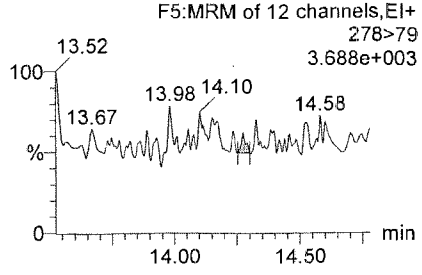
Chlorpyrifos|2921-88-2



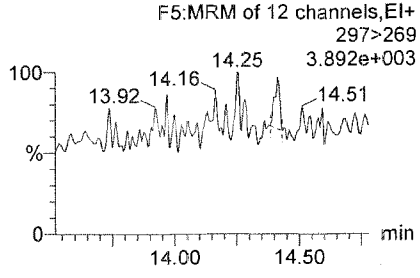
Fenthion|55-38-9



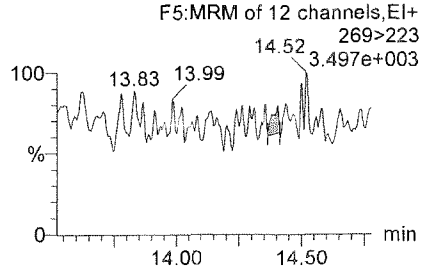
Fenthion|55-38-9



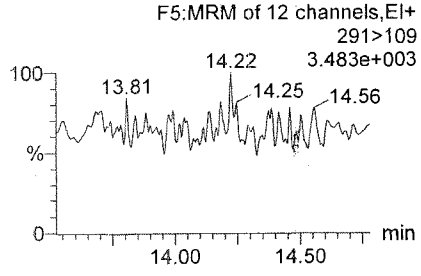
Trichloronate|327-98-0



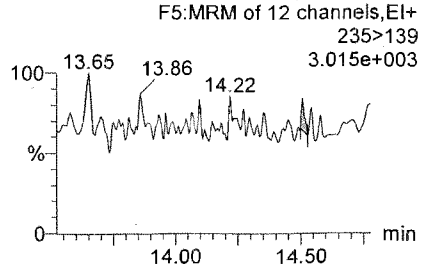
Trichloronate|327-98-0



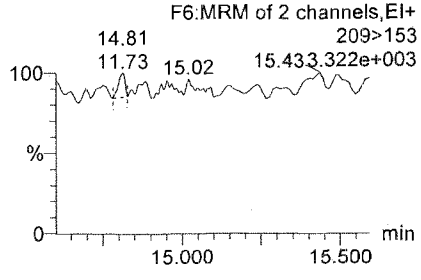
Ethyl Parathion|56-38-2



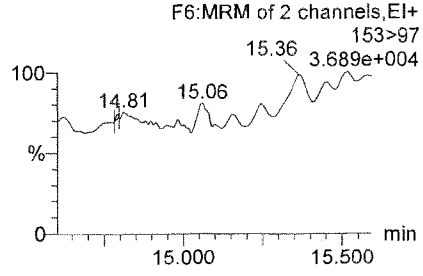
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



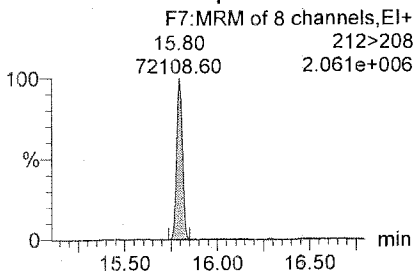
2213

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

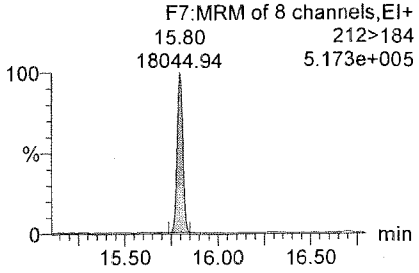
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

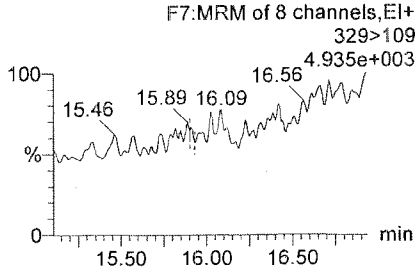
Fluoranthene-d10|93951-69-0



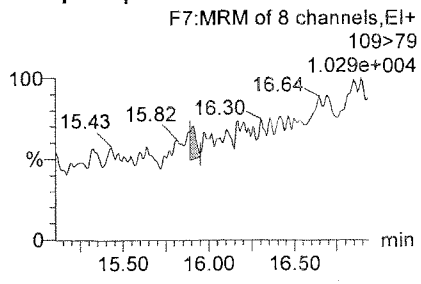
Fluoranthene-d10|93951-69-0



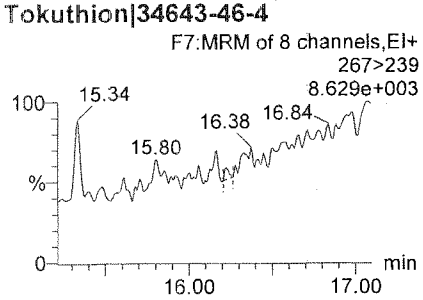
Stirophos|22248-79-9



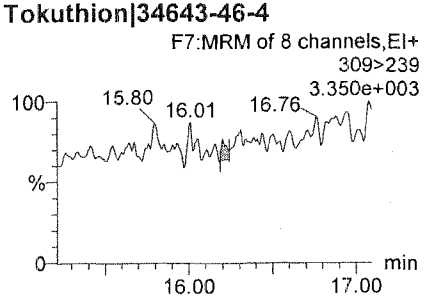
Stirophos|22248-79-9



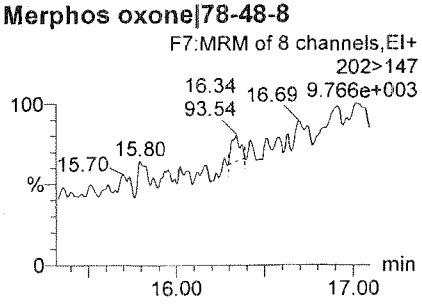
Tokuthion|34643-46-4



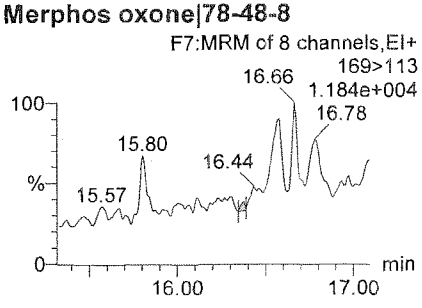
Tokuthion|34643-46-4



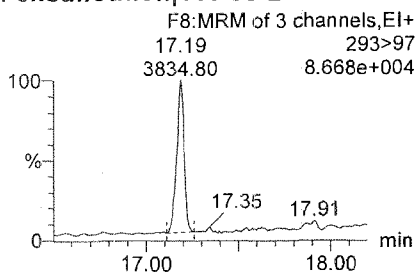
Merphos oxone|78-48-8



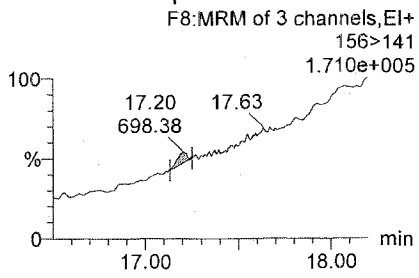
Merphos oxone|78-48-8



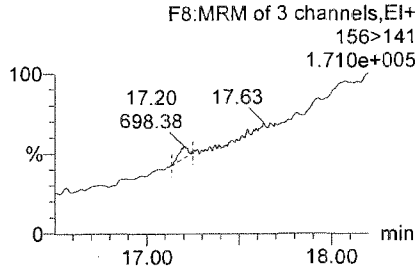
Fensulfothion|115-90-2



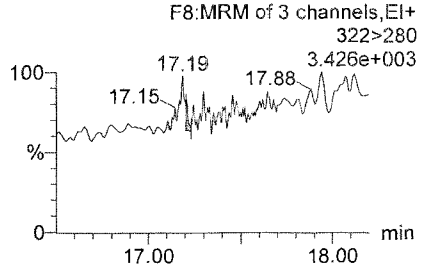
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



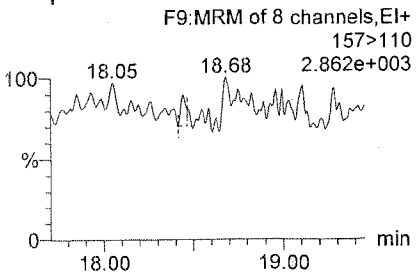
2214

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

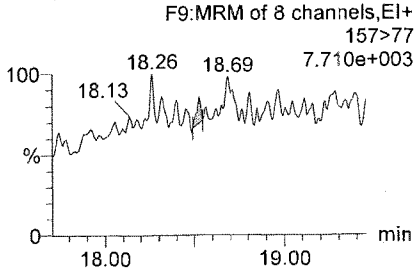
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F002, Date: 10-Oct-2013, Time: 09:26:49, ID: IB, Description: oppest ib, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

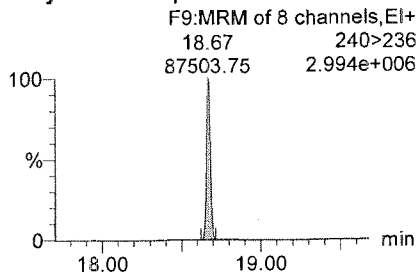
EPN|2104-64-5



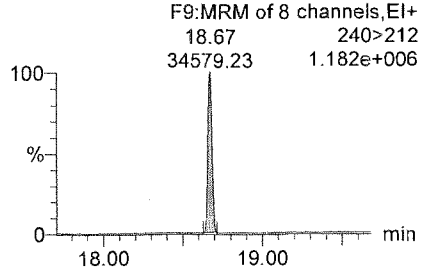
EPN|2104-64-5



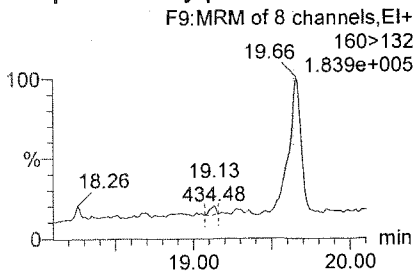
Chrysene-d12|1719-03-5



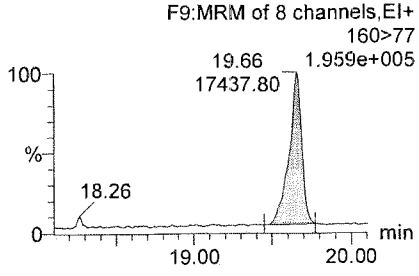
Chrysene-d12|1719-03-5



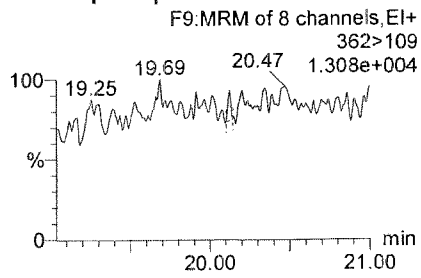
Azinphos methyl|86-50-0



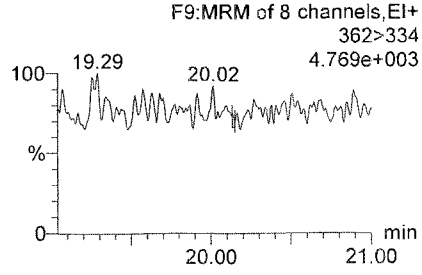
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2215

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	73322.758		bb		98.84	-1.2	3.590	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	286.495	73322.758	bb		5.00	-0.0	1.972	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	2729.818	73322.758	bb		4.11	-17.9	2.819	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	1545.690	73322.758	bd		4.72	-5.5	2.630	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.34	74.545	73322.758	MM	BLC	4.78	-4.3	0.558	2.462	YES
6	6	Ethoprop|13194-48-4	158>114	10.55	603.797	73322.758	bb		4.91	-1.9	1.686	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	508.177	73322.758	bb		4.68	-6.4	2.390	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	13.445	73322.758	MM	WP	5.04	0.9	2.782	3.714	NO
9	9	Phorate|298-02-2	121>93	11.08	387.027	73322.758	MM	BLC	4.42	-11.5	2.855	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	2079.918	73322.758	bb		4.81	-3.8	4.272	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	153.443	73322.758	bb		5.93	18.6	1.886	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.66	687.560	73322.758	bb		4.59	-8.2	1.513	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	793.596	73322.758	bb		4.38	-12.4	1.336	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	655.897	73322.758	db		4.90	-1.9	2.972	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.15	237.206	73322.758	bb		4.34	-13.2	1.757	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	2423.543	66540.086	bb		4.49	-10.1	1.505	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.44	924.135	66540.086	bb		5.14	2.9	0.953	0.860	NO
18	18	Malathion|121-75-5	173>99	13.78	1599.174	66540.086	bb		4.70	-6.1	1.441	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	2157.565	66540.086	bb		4.99	-0.2	3.186	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.04	1565.343	66540.086	bb		4.98	-0.4	2.344	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	1644.704	66540.086	bb		5.09	1.8	2.848	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	2771.586	66540.086	bb		5.02	0.4	2.148	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	524.982	66540.086	bb		4.58	-8.3	4.427	5.154	NO
24	24	Merphos|150-50-5	209>153			66540.086	MM-				0.000	2.363	YES
25	25	Fluoranthene-d10|93951-6...	212>208	15.80	66540.086		bb		97.44	-2.6	3.959	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	2542.130	66540.086	bb		4.56	-8.9	1.675	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	1930.909	66540.086	bb		4.70	-5.9	0.965	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	878.256	66540.086	bb		4.83	-3.3	2.210	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	1057.708	79516.758	bb		4.77	-4.5	1.433	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.37	2602.292	79516.758	bb		4.50	-10.1	6.866	6.079	NO
31	31	EPN|2104-64-5	157>110	18.45	891.027	79516.758	bb		4.73	-5.4	1.052	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	79516.758		bb		95.58	-4.4	2.522	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	1390.135	79516.758	bb		4.31	-13.7	1.278	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	850.140	79516.758	db		5.11	2.2	4.401	3.830	NO

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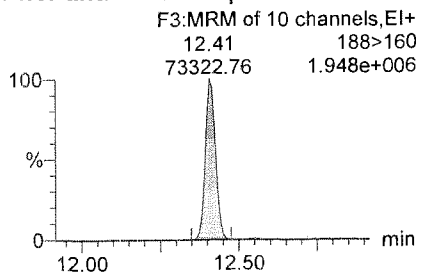
2216

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

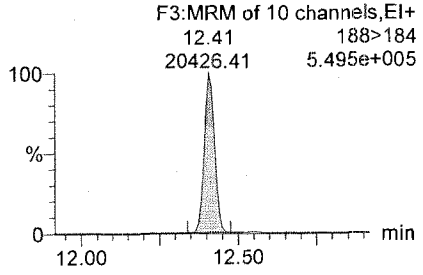
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

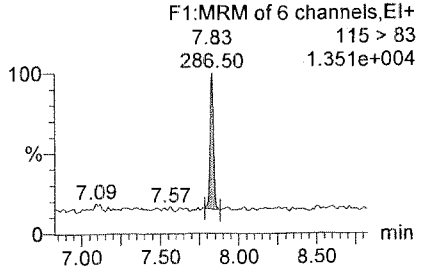
Phenanthrene-d10|1517-22-2



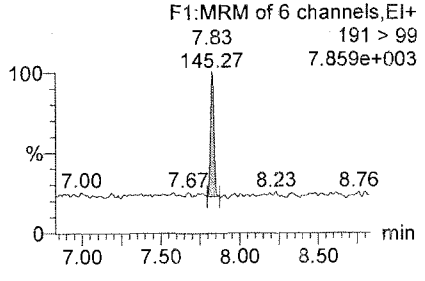
Phenanthrene-d10|1517-22-2



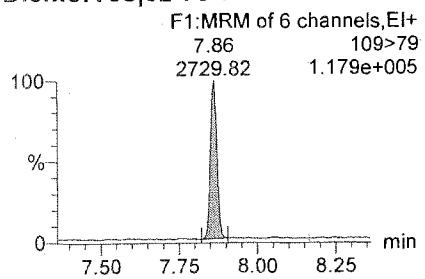
Dichlorvos-d6|203645-53-8



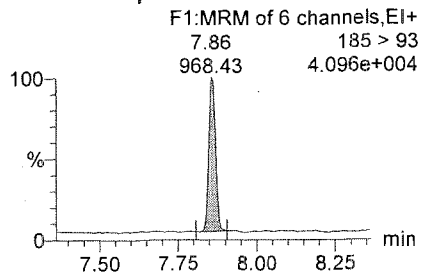
Dichlorvos-d6|203645-53-8



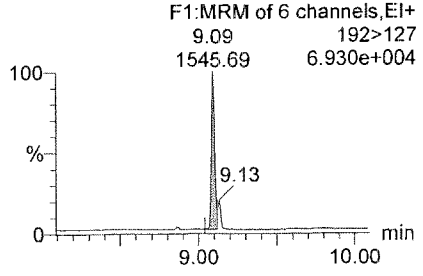
Dichlorvos|62-73-7



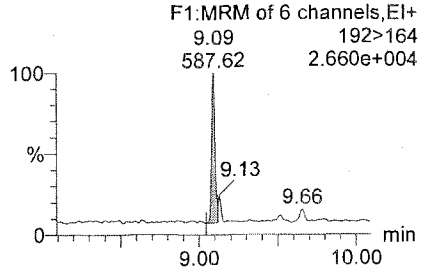
Dichlorvos|62-73-7



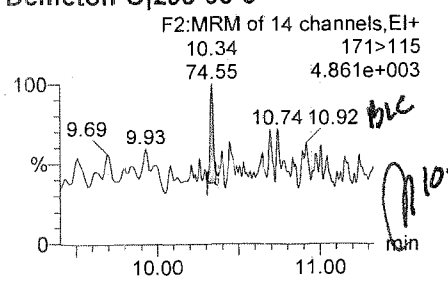
Mevinphos|7786-34-7



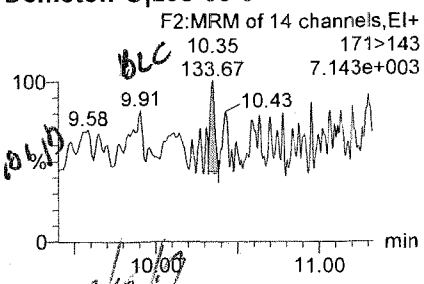
Mevinphos|7786-34-7



Demeton-O|298-03-3



Demeton-O|298-03-3



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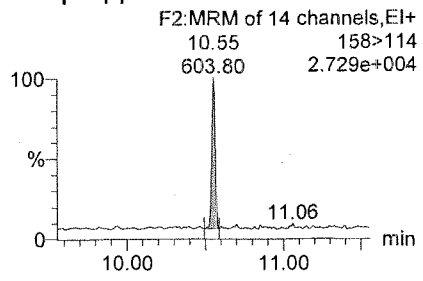
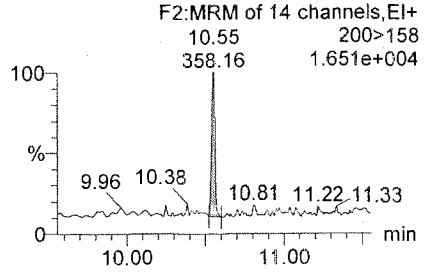
10/10/13

5

Ethoprop|13194-48-4



Ethoprop|13194-48-4



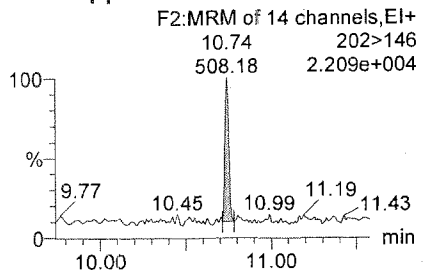
2217

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

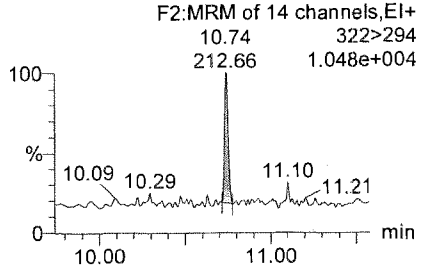
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

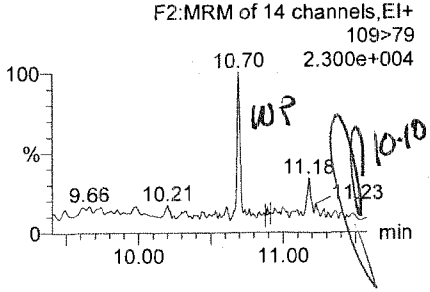
Sulfotep|3689-24-5



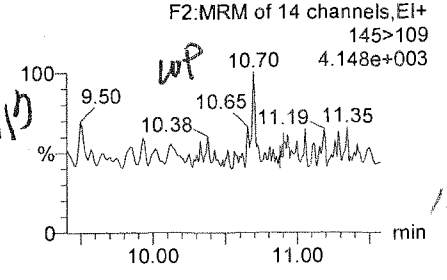
Sulfotep|3689-24-5



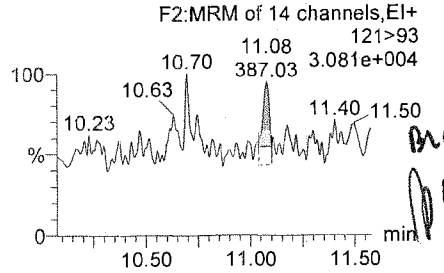
Naled|300-76-5



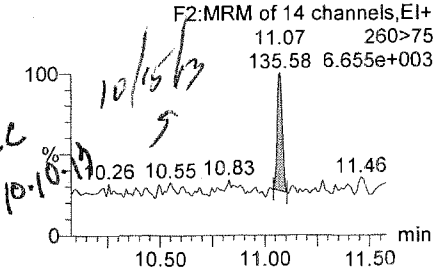
Naled|300-76-5



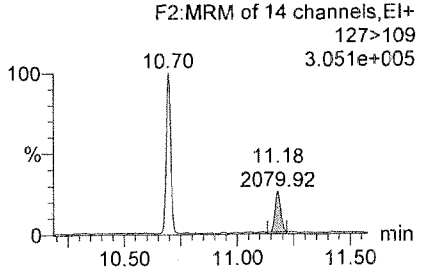
Phorate|298-02-2



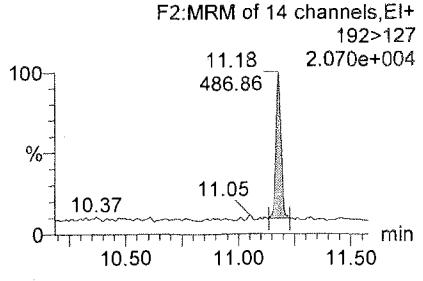
Phorate|298-02-2



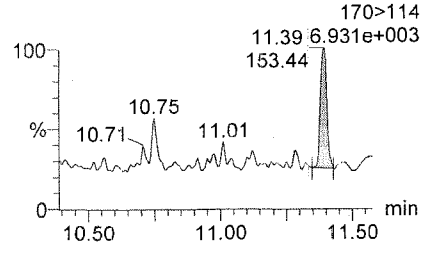
Monocrotophos|6923-22-4



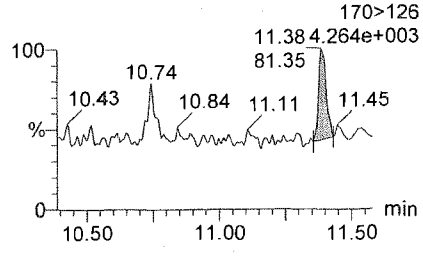
Monocrotophos|6923-22-4



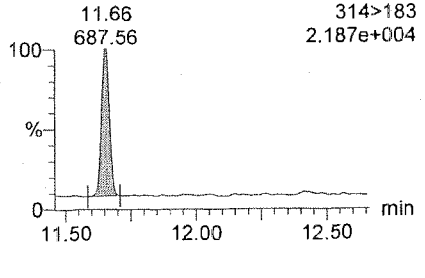
Demeton-S|126-75-0



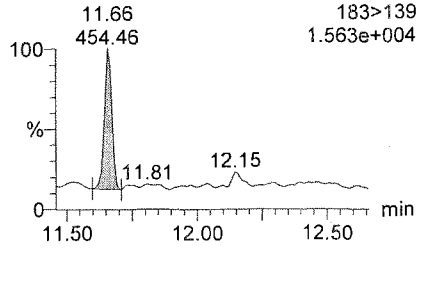
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



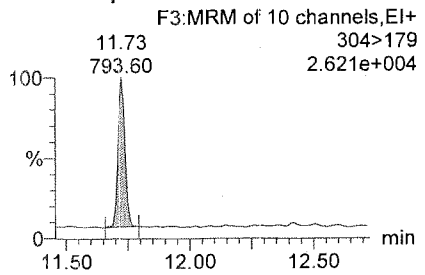
2218

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

Diazinon|333-41-5



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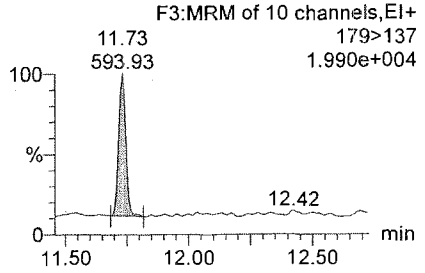
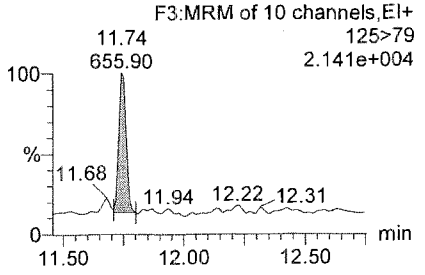
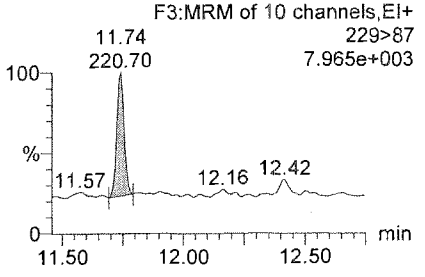


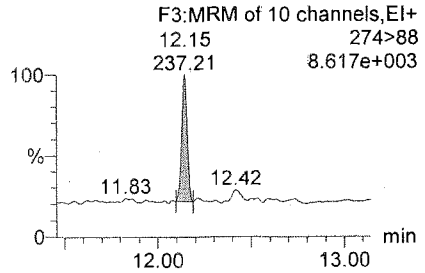
Dimethoate|60-51-5



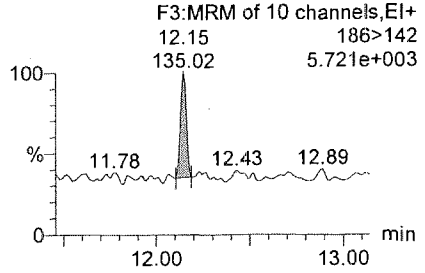
Dimethoate|60-51-5



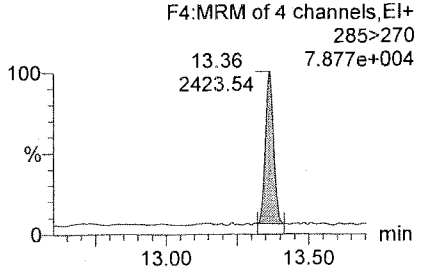
Disulfoton|298-04-4



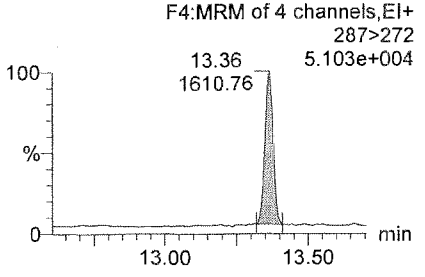
Disulfoton|298-04-4



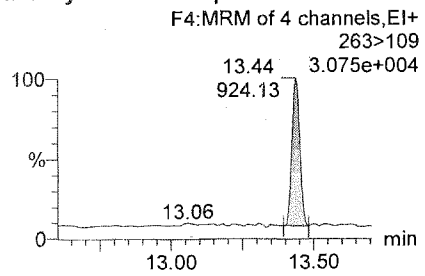
Ronnel|299-84-3



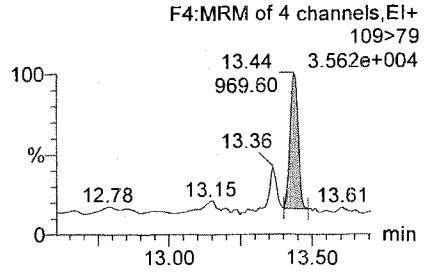
Ronnel|299-84-3



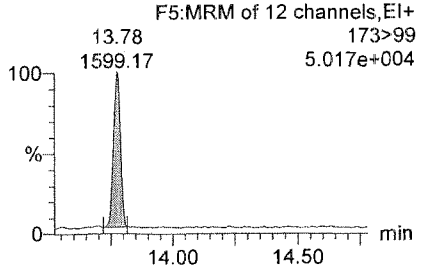
Methyl Parathion|298-00-0



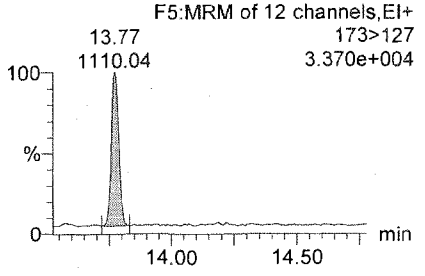
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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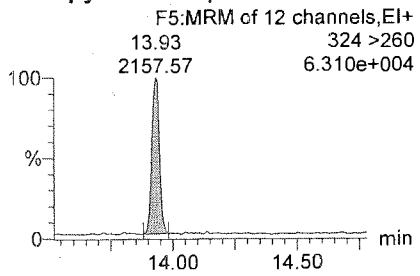
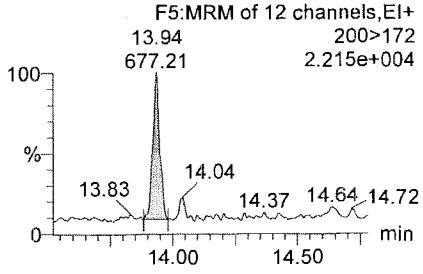
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

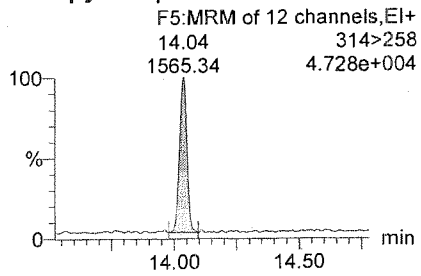
Chlorpyrifos-d10|CASID30732



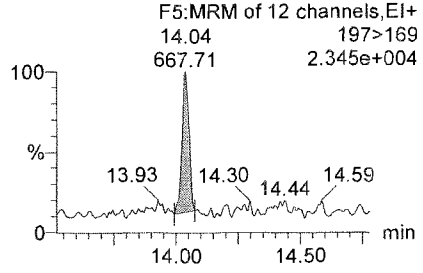
Chlorpyrifos-d10|CASID30732



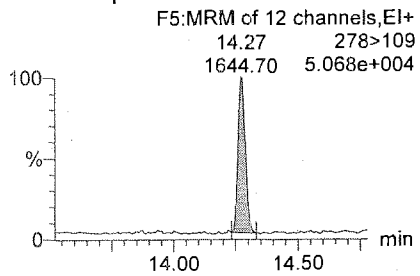
Chlorpyrifos|2921-88-2



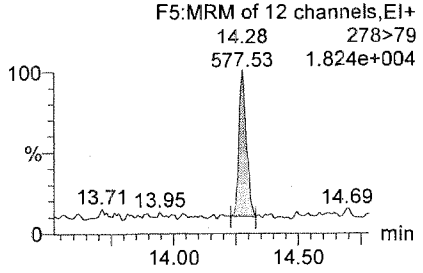
Chlorpyrifos|2921-88-2



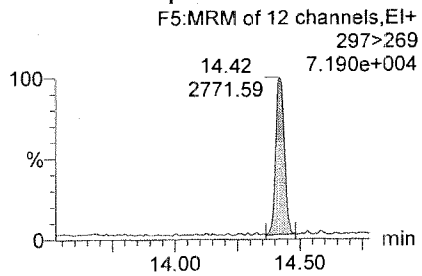
Fenthion|55-38-9



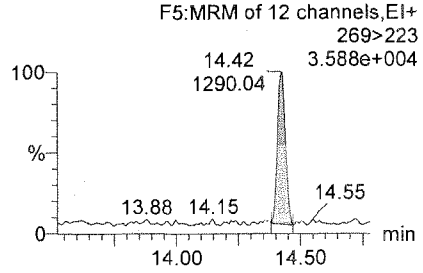
Fenthion|55-38-9



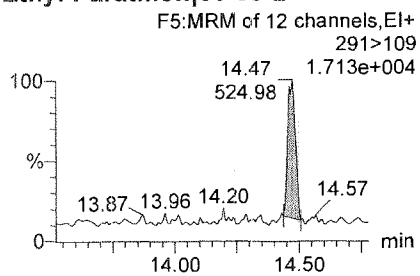
Trichloronate|327-98-0



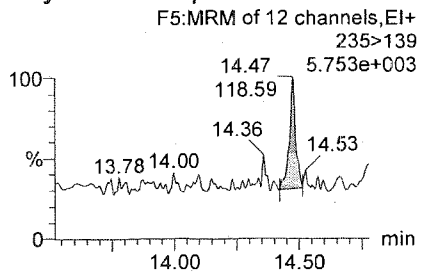
Trichloronate|327-98-0



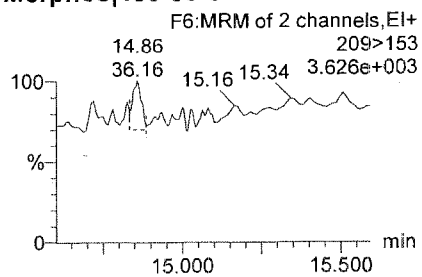
Ethyl Parathion|56-38-2



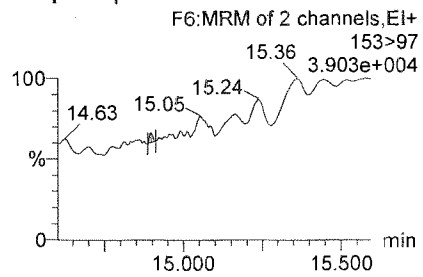
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



2220

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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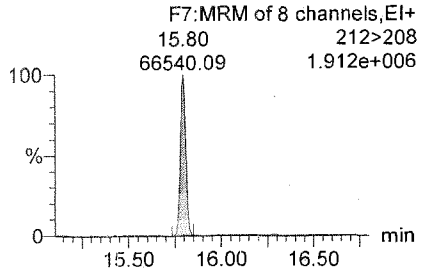
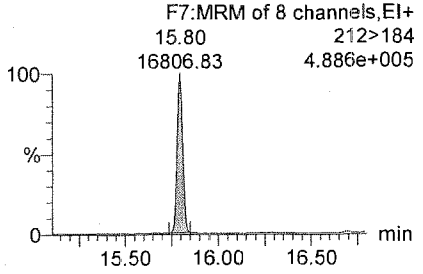
Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

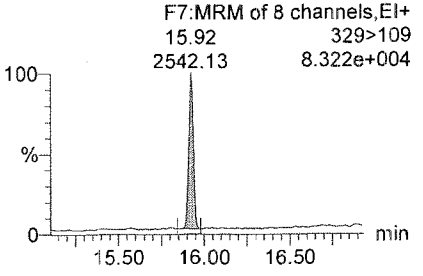
Fluoranthene-d10|93951-69-0



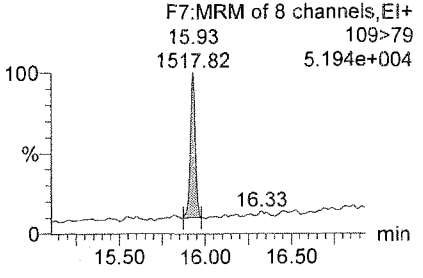
Fluoranthene-d10|93951-69-0



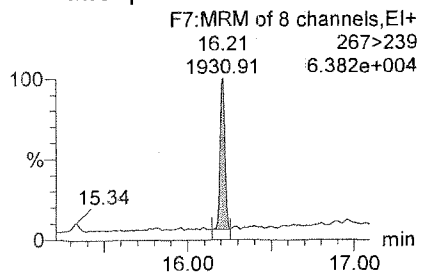
Stirophos|22248-79-9



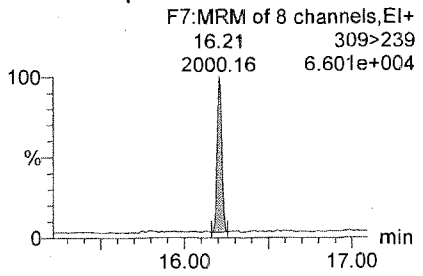
Stirophos|22248-79-9



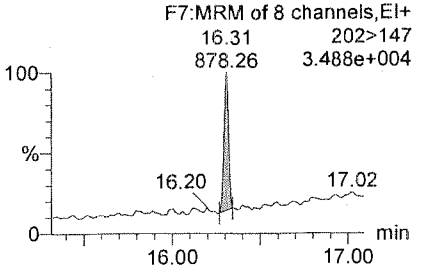
Tokuthion|34643-46-4



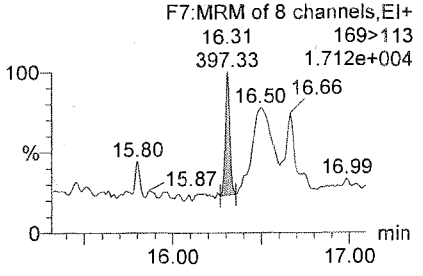
Tokuthion|34643-46-4



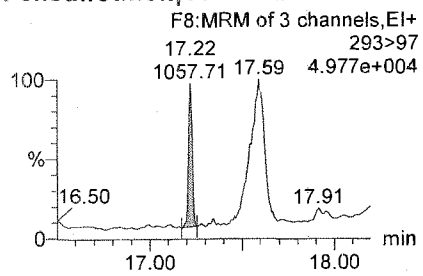
Merphos oxone|78-48-8



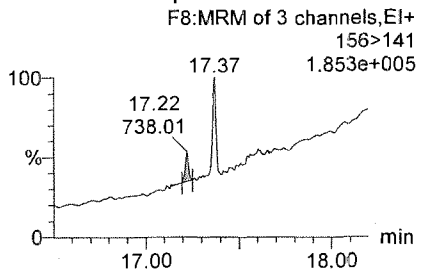
Merphos oxone|78-48-8



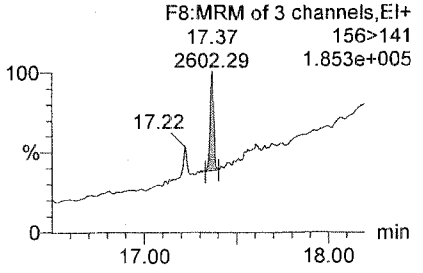
Fensulfothion|115-90-2



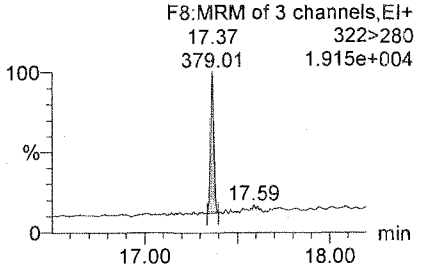
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2221

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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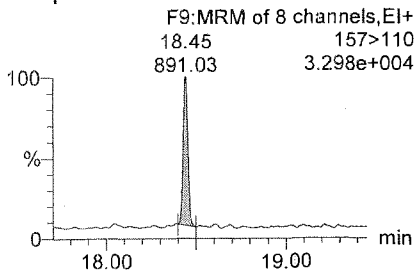
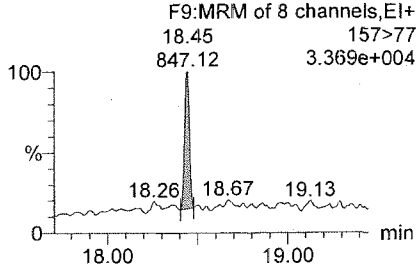
Name: 1010F003, Date: 10-Oct-2013, Time: 09:52:45, ID: ICAL 5, Description: oppest 5.0ng/ml svm44-30a, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

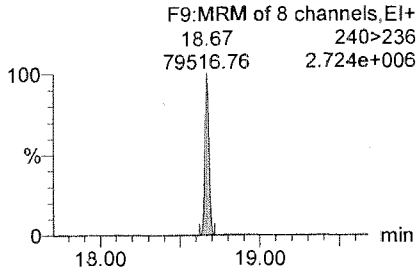
EPN|2104-64-5



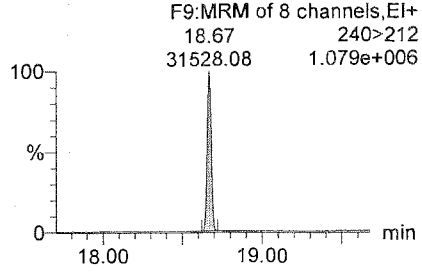
EPN|2104-64-5



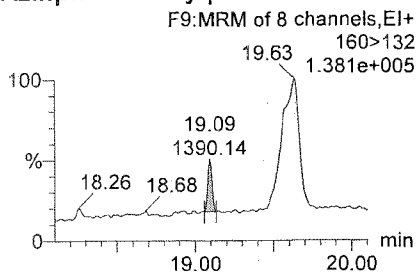
Chrysene-d12|1719-03-5



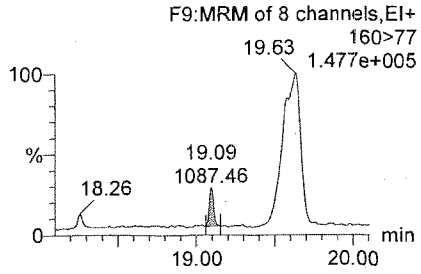
Chrysene-d12|1719-03-5



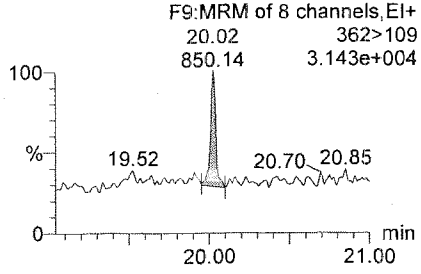
Azinphos methyl|86-50-0



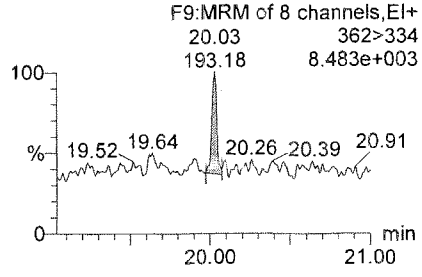
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



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Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

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5

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	77266.711		bb		104.16	4.2	3.570	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	539.809	77266.711	bb		8.94	-10.6	1.837	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	5936.332	77266.711	bb		8.47	-15.3	2.994	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	3222.186	77266.711	bd		9.34	-6.6	2.685	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	153.972	77266.711	bb	BLC	9.38	-6.2	2.383	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	1236.174	77266.711	bb		9.53	-4.7	1.546	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	1377.670	77266.711	bb		9.96	-0.4	2.172	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	75.977	77266.711	db		11.30	13.0	3.357	3.714	NO
9	9	Phorate|298-02-2	121>93	11.08	878.484	77266.711	bb		9.53	-4.7	2.681	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	4358.450	77266.711	bb		9.56	-4.4	4.504	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	288.003	77266.711	bd		10.57	5.7	1.470	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.66	1438.040	77266.711	bb		9.11	-8.9	1.456	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	1755.903	77266.711	bb		9.20	-8.0	1.380	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.75	1395.782	77266.711	db		9.90	-1.0	3.112	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.15	517.303	77266.711	bb		8.99	-10.1	1.661	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	5437.923	72778.172	bb		9.22	-7.8	1.479	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.44	1975.693	72778.172	bb		10.05	0.5	0.875	0.860	NO
18	18	Malathion|121-75-5	173>99	13.78	3679.918	72778.172	bb		9.88	-1.2	1.537	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	4505.579	72778.172	bb		9.52	-4.8	3.045	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	3369.329	72778.172	bb		9.80	-2.0	2.165	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.28	3379.073	72778.172	bb		9.56	-4.4	2.529	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	5803.160	72778.172	bb		9.61	-3.9	2.158	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	1259.184	72778.172	bb	BLC/SP	10.05	0.5	4.957	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	396.469	72778.172	bb		12.48	24.8	2.288	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.80	72778.172		bb		106.57	6.6	3.991	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	5644.157	72778.172	bb		9.25	-7.5	1.547	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	4169.029	72778.172	bb		9.28	-7.2	0.931	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	1880.973	72778.172	bb		9.47	-5.3	2.485	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	2279.494	87522.828	bb		9.35	-6.5	1.265	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.37	5800.220	87522.828	bb		9.10	-9.0	6.507	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	1847.137	87522.828	bb		8.91	-10.9	0.995	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	87522.828		bb		105.20	5.2	2.523	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	3372.255	87522.828	dd		9.51	-4.9	1.286	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.03	1713.407	87522.828	bb		9.35	-6.5	3.640	3.830	NO

2223

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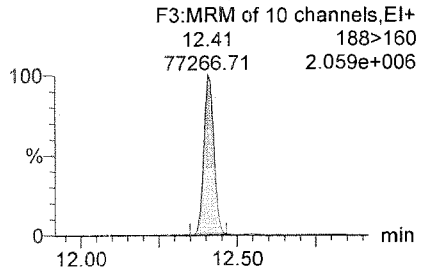
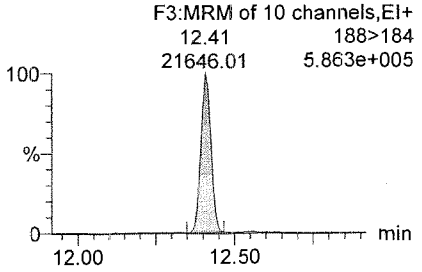
Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

10/15/13 5

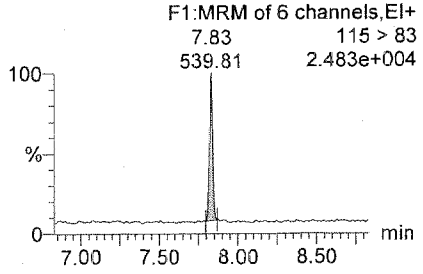
Phenanthrene-d10|1517-22-2



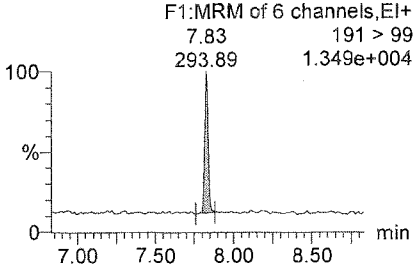
Phenanthrene-d10|1517-22-2



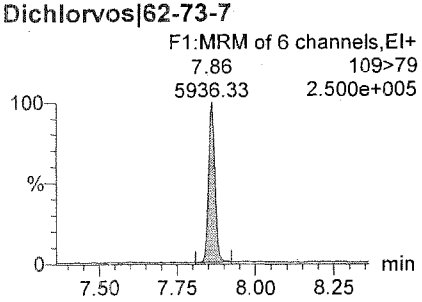
Dichlorvos-d6|203645-53-8



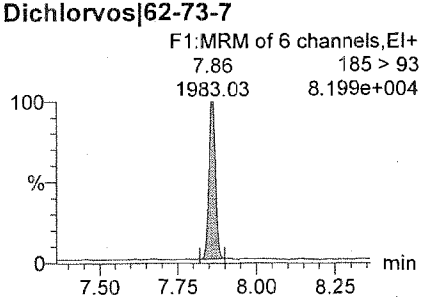
Dichlorvos-d6|203645-53-8



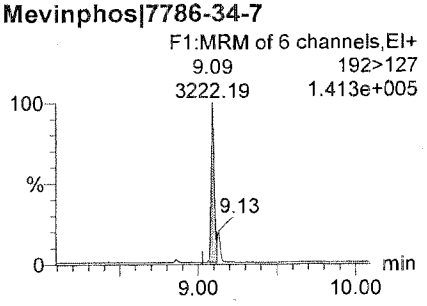
Dichlorvos|62-73-7



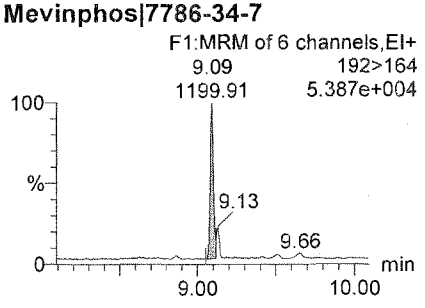
Dichlorvos|62-73-7



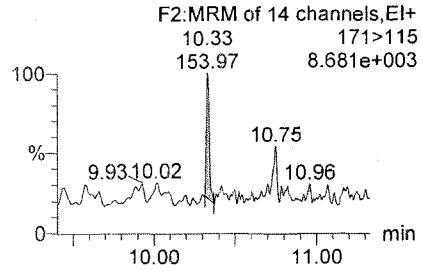
Mevinphos|7786-34-7



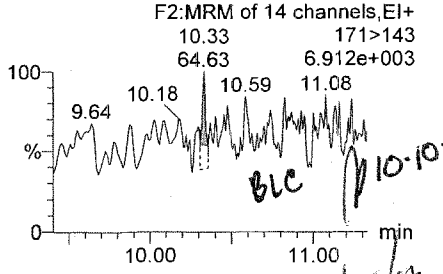
Mevinphos|7786-34-7



Demeton-O|298-03-3



Demeton-O|298-03-3



BLC 10-10-13

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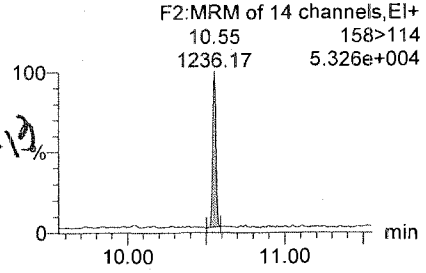
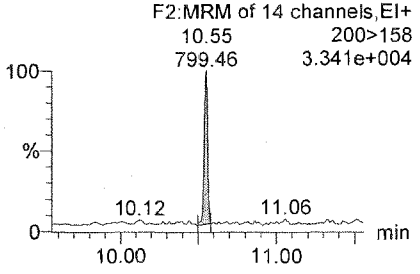
Ethoprop|13194-48-4



Ethoprop|13194-48-4



2224

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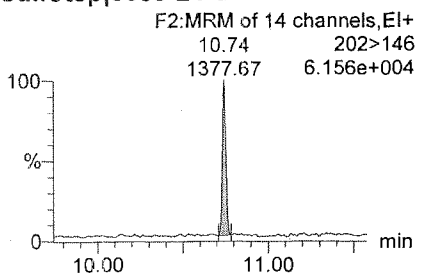
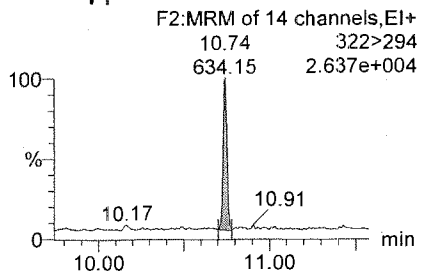
Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

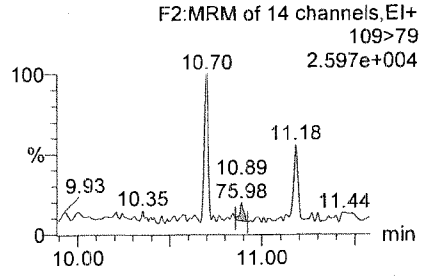
Sulfotep|3689-24-5



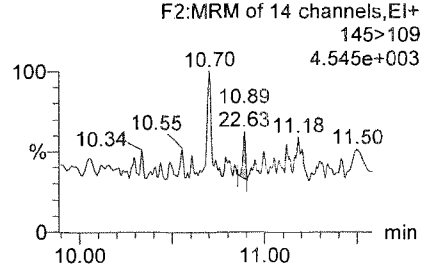
Sulfotep|3689-24-5



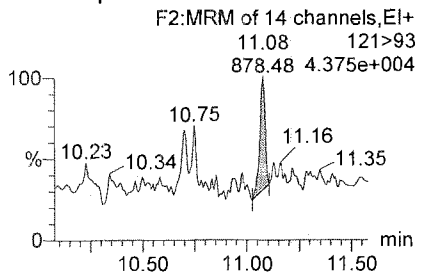
Naled|300-76-5



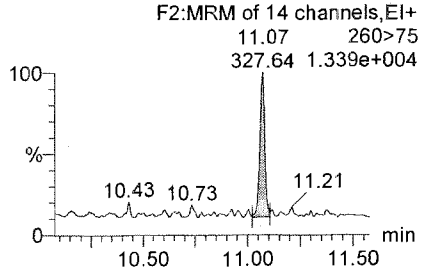
Naled|300-76-5



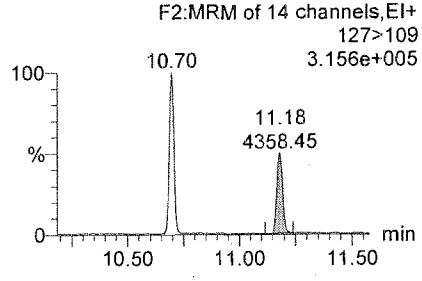
Phorate|298-02-2



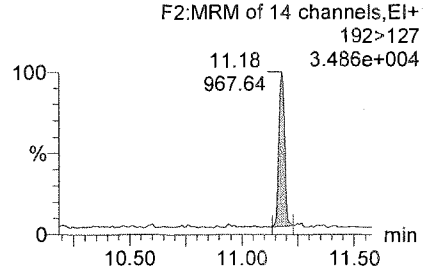
Phorate|298-02-2



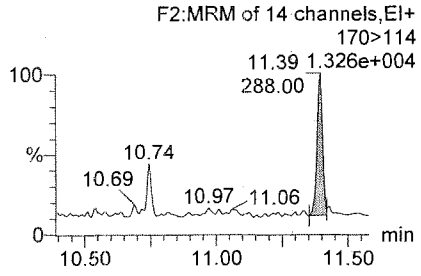
Monocrotophos|6923-22-4



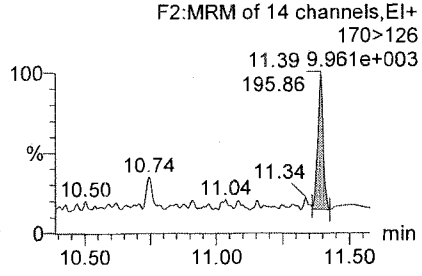
Monocrotophos|6923-22-4



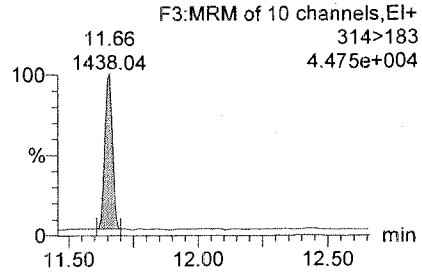
Demeton-S|126-75-0



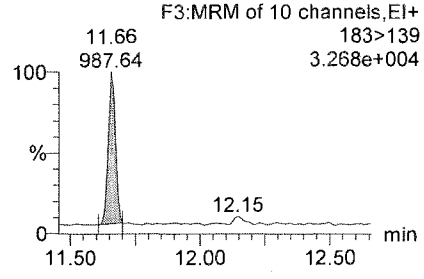
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



2225

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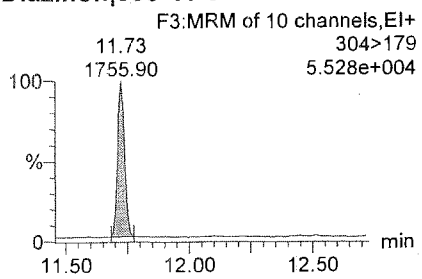
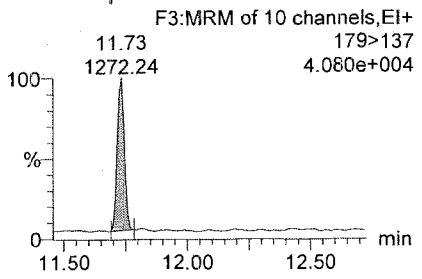
Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

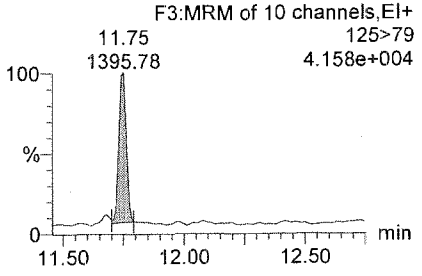
Diazinon|333-41-5



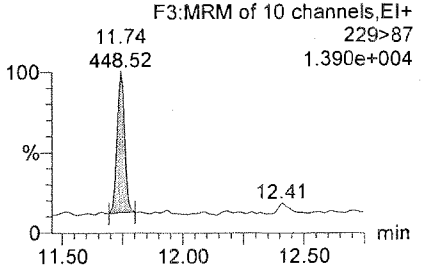
Diazinon|333-41-5



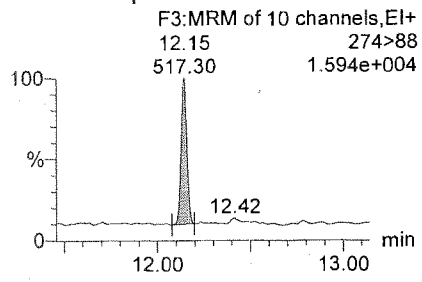
Dimethoate|60-51-5



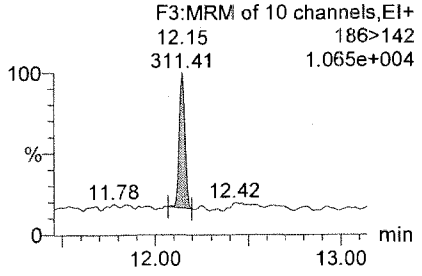
Dimethoate|60-51-5



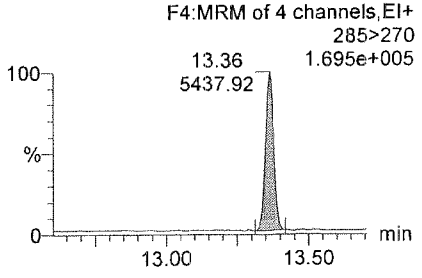
Disulfoton|298-04-4



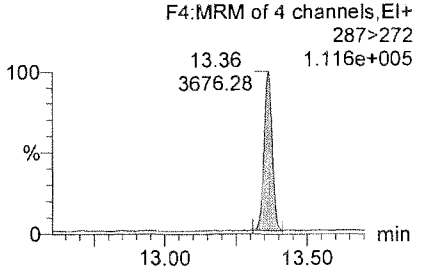
Disulfoton|298-04-4



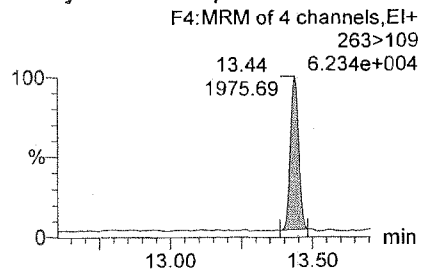
Ronnel|299-84-3



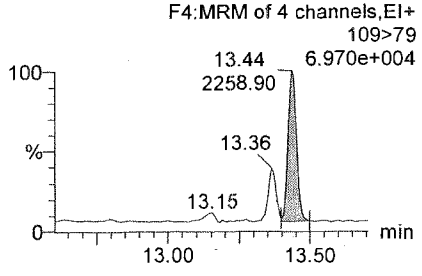
Ronnel|299-84-3



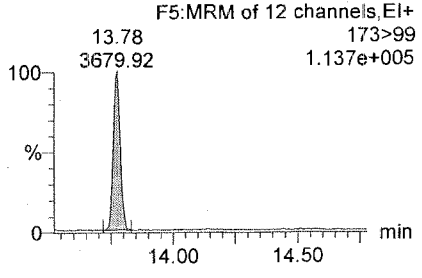
Methyl Parathion|298-00-0



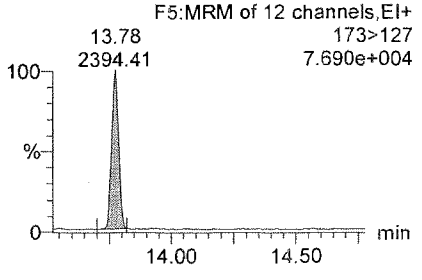
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



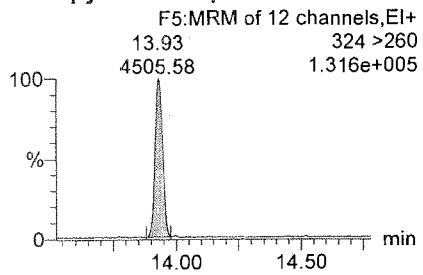
2226

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

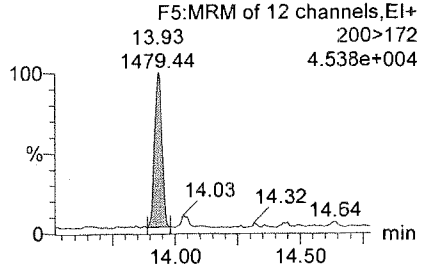
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

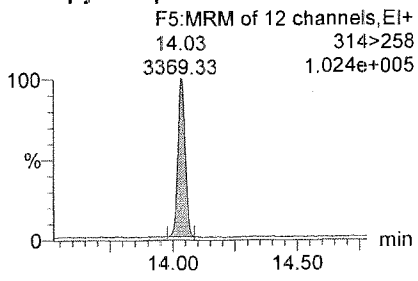
Chlorpyrifos-d10|CASID30732



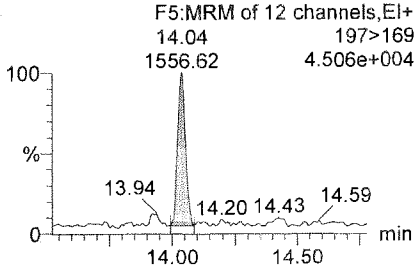
Chlorpyrifos-d10|CASID30732



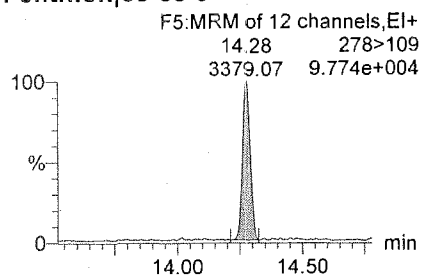
Chlorpyrifos|2921-88-2



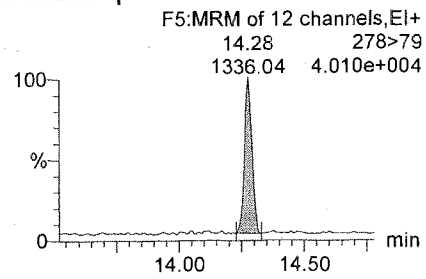
Chlorpyrifos|2921-88-2



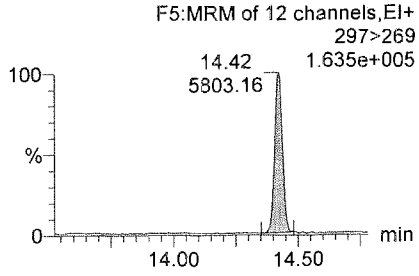
Fenthion|55-38-9



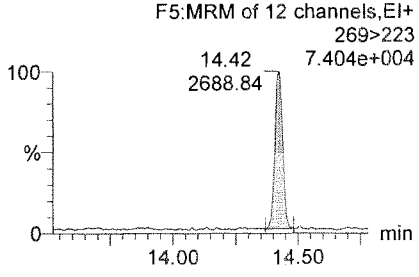
Fenthion|55-38-9



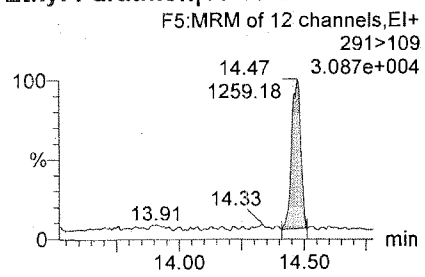
Trichloronate|327-98-0



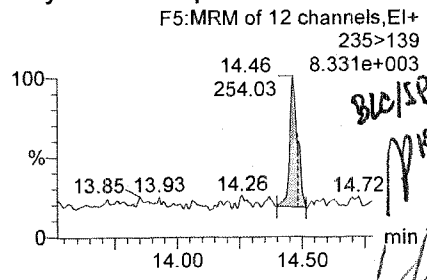
Trichloronate|327-98-0



Ethyl Parathion|56-38-2



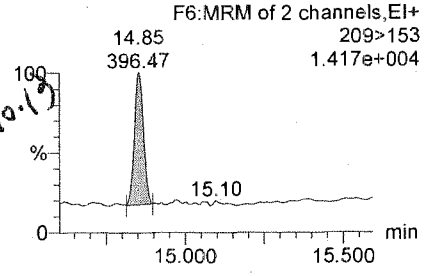
Ethyl Parathion|56-38-2



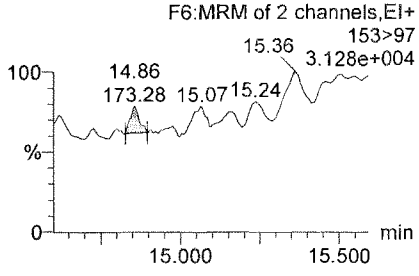
BLC/SP 10/10/13

10/15/13

Merphos|150-50-5



Merphos|150-50-5



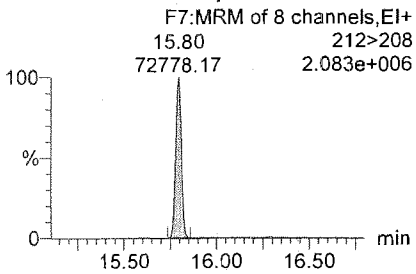
2227

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

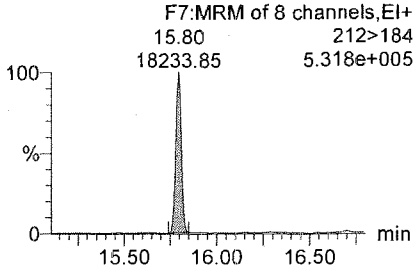
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

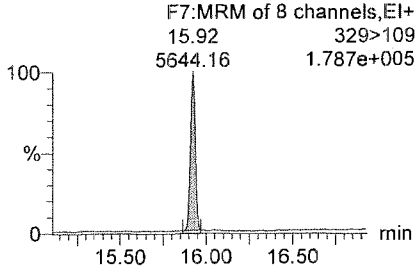
Fluoranthene-d10|93951-69-0



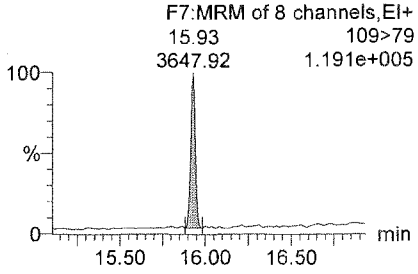
Fluoranthene-d10|93951-69-0



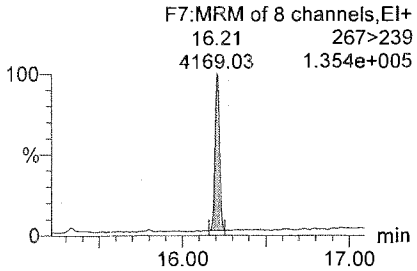
Stirophos|22248-79-9



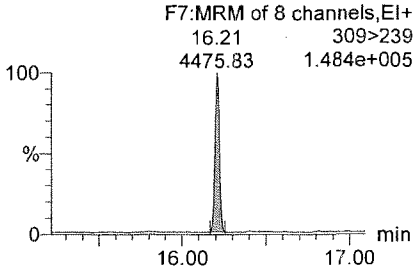
Stirophos|22248-79-9



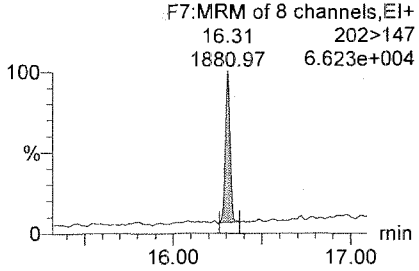
Tokuthion|34643-46-4



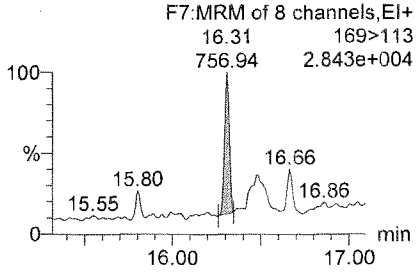
Tokuthion|34643-46-4



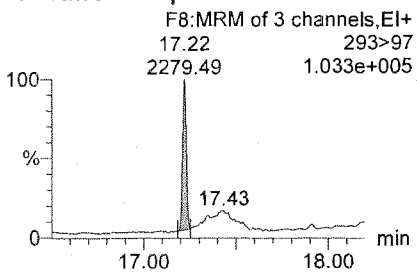
Merphos oxone|78-48-8



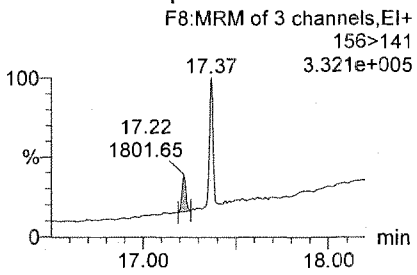
Merphos oxone|78-48-8



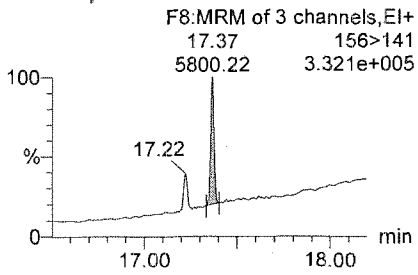
Fensulfothion|115-90-2



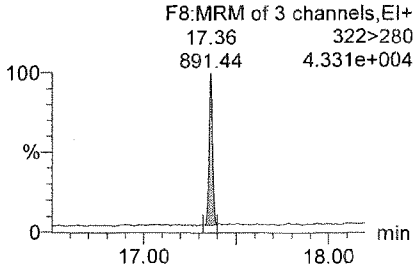
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



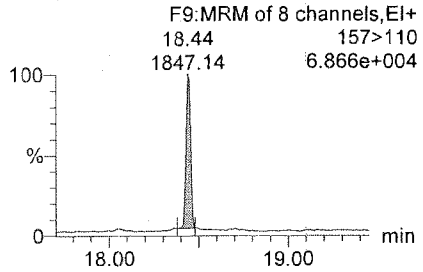
2228

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

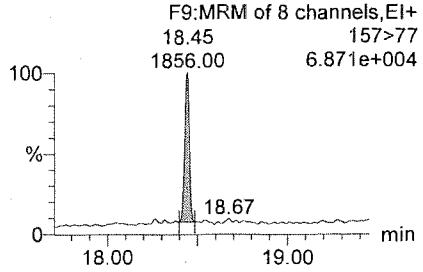
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F004, Date: 10-Oct-2013, Time: 10:18:43, ID: ICAL 10, Description: oppest 10ng/ml svm44-30b, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

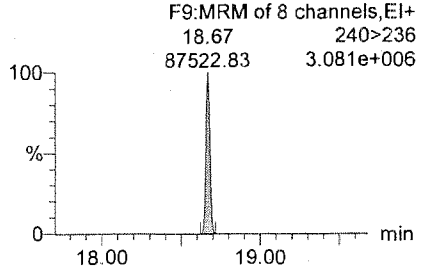
EPN|2104-64-5



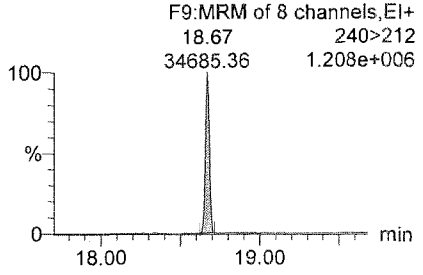
EPN|2104-64-5



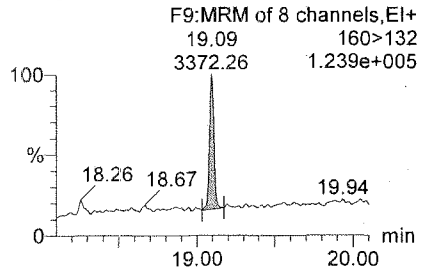
Chrysene-d12|1719-03-5



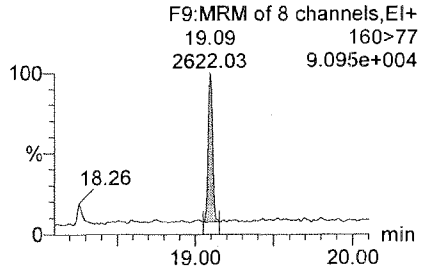
Chrysene-d12|1719-03-5



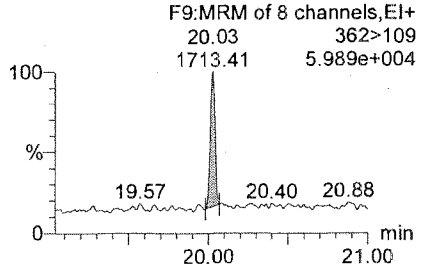
Azinphos methyl|86-50-0



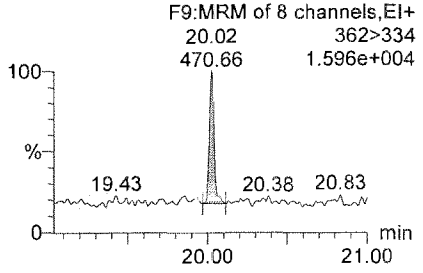
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2229

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	78670.594		bb		106.05	6.1	3.559	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	1234.214	78670.594	bb		20.07	0.4	1.880	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	12918.222	78670.594	bb		18.11	-9.4	3.005	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	6960.765	78670.594	bd		19.83	-0.9	2.770	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	379.115	78670.594	bb		22.68	13.4	2.272	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	2623.654	78670.594	bb		19.87	-0.6	1.709	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	3035.096	78670.594	bb		19.87	-0.6	2.033	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	154.331	78670.594	bb		18.78	-6.1	2.588	3.714	YES
9	9	Phorate|298-02-2	121>93	11.07	1951.051	78670.594	bb		20.78	3.9	2.801	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	8592.722	78670.594	bb		18.52	-7.4	4.283	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	532.915	78670.594	bb		19.20	-4.0	1.551	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	2922.583	78670.594	bb		18.19	-9.0	1.502	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	3697.293	78670.594	bb		19.03	-4.9	1.369	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	2939.741	78670.594	db		20.48	2.4	3.183	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	1122.376	78670.594	bb		19.15	-4.3	1.972	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	10629.347	70118.258	bb		18.70	-6.5	1.454	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.44	4005.337	70118.258	bb		21.16	5.8	0.916	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	7000.194	70118.258	bb		19.51	-2.4	1.485	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	8816.557	70118.258	bb		19.34	-3.3	2.988	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	6433.753	70118.258	bb		19.43	-2.9	2.162	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.28	6705.022	70118.258	bb		19.69	-1.6	2.582	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	11802.674	70118.258	bb		20.28	1.4	2.150	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	2518.848	70118.258	bb		20.87	4.3	5.315	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	1196.424	70118.258	bb		16.74	-16.3	2.360	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.80	70118.258		bb		102.68	2.7	3.963	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	11094.579	70118.258	bb		18.87	-5.7	1.576	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	8338.206	70118.258	bb		19.27	-3.6	0.943	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	3749.235	70118.258	bb		19.59	-2.1	2.358	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	4399.895	86394.398	bb		18.27	-8.6	1.302	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	11110.454	86394.398	bb		17.67	-11.7	6.401	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	3855.750	86394.398	bb		18.85	-5.8	1.069	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	86394.398		bb		103.85	3.8	2.512	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	6237.882	86394.398	bb		17.81	-10.9	1.261	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	3444.449	86394.398	bb		19.05	-4.8	4.074	3.830	NO

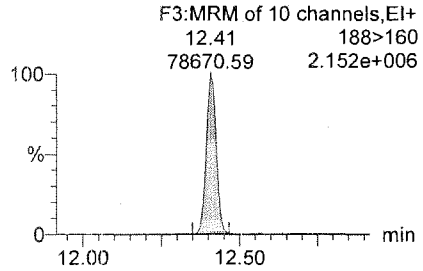
10/10/13 2230

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

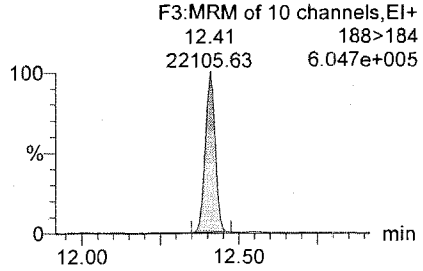
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

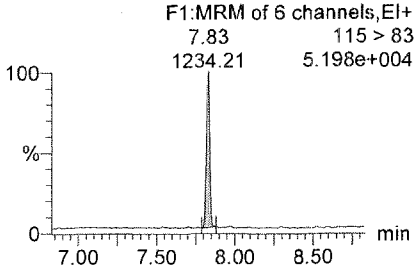
Phenanthrene-d10|1517-22-2



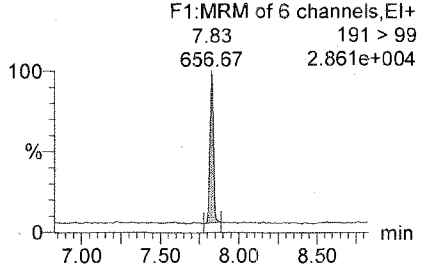
Phenanthrene-d10|1517-22-2



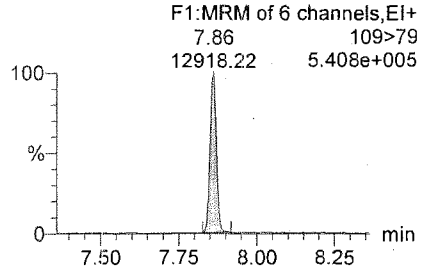
Dichlorvos-d6|203645-53-8



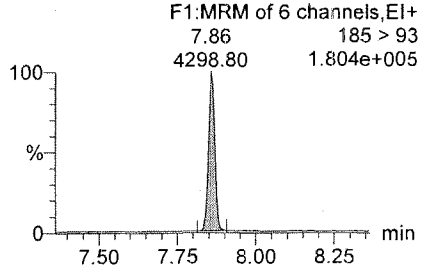
Dichlorvos-d6|203645-53-8



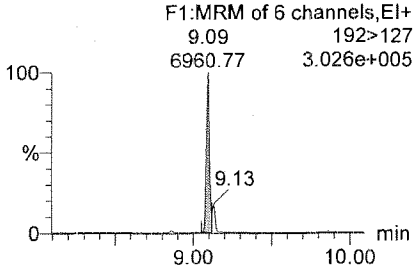
Dichlorvos|62-73-7



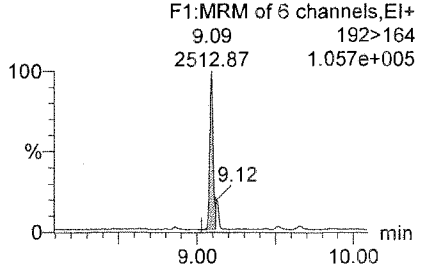
Dichlorvos|62-73-7



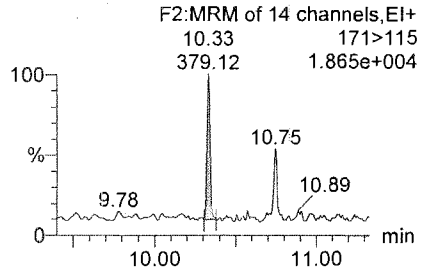
Mevinphos|7786-34-7



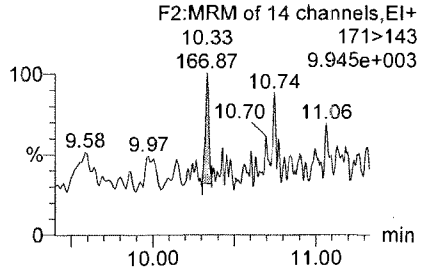
Mevinphos|7786-34-7



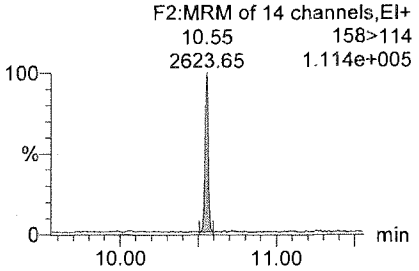
Demeton-O|298-03-3



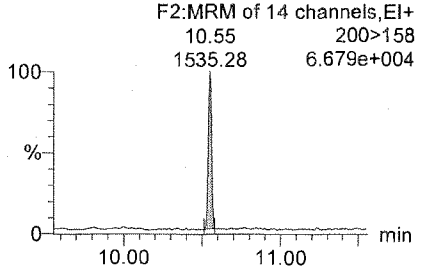
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



2231

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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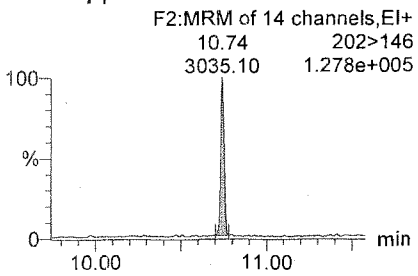
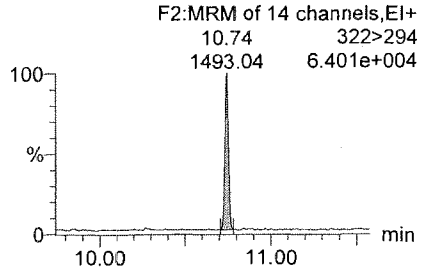
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

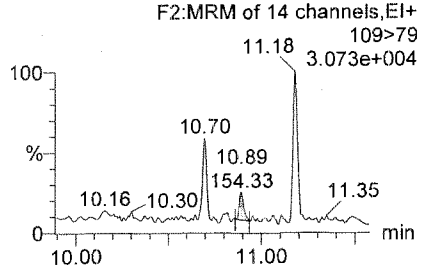
Sulfotep|3689-24-5



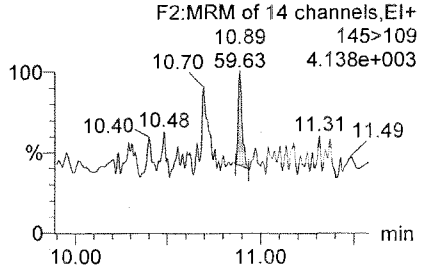
Sulfotep|3689-24-5



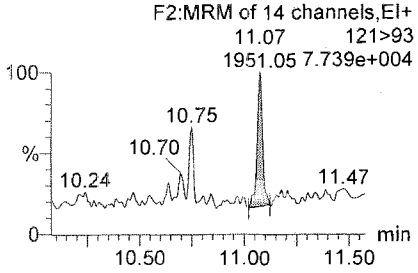
Naled|300-76-5



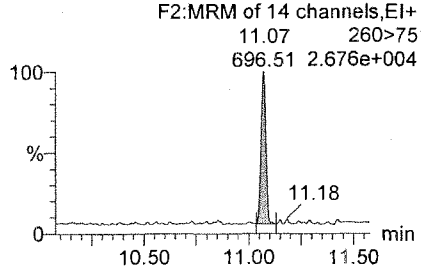
Naled|300-76-5



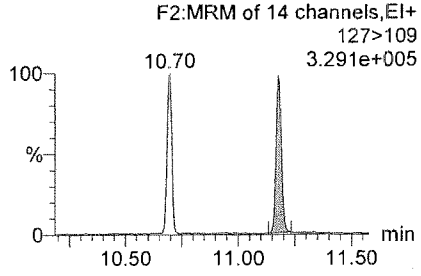
Phorate|298-02-2



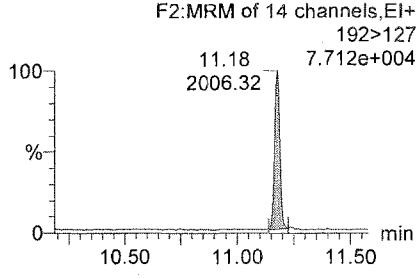
Phorate|298-02-2



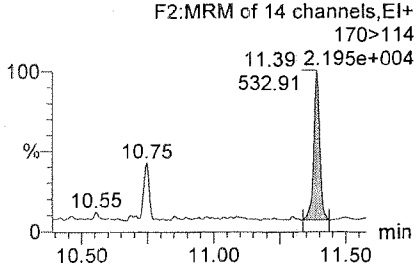
Monocrotophos|6923-22-4



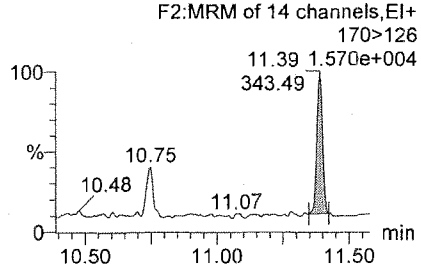
Monocrotophos|6923-22-4



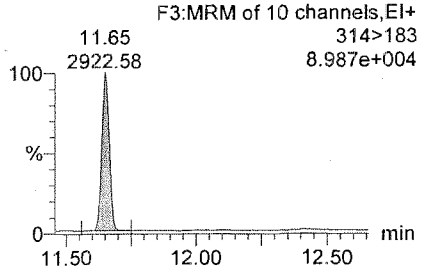
Demeton-S|126-75-0



Demeton-S|126-75-0



Diazinon-d10|CASID39254



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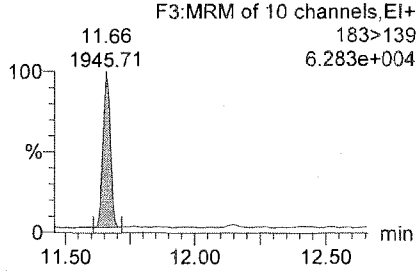

2232

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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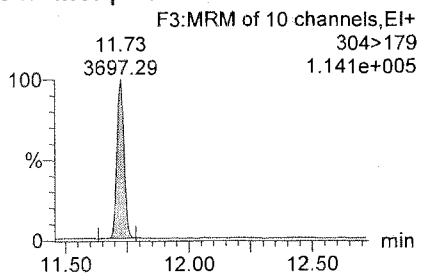
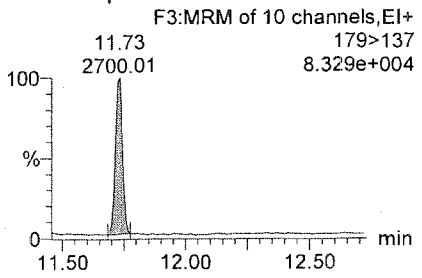
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

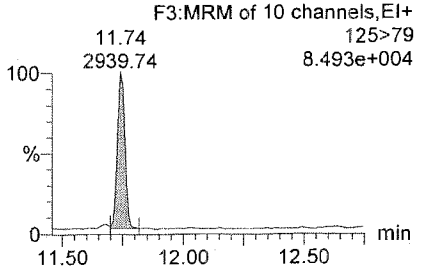
Diazinon|333-41-5



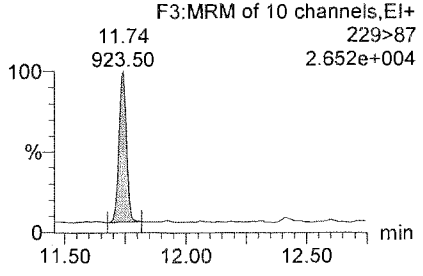
Diazinon|333-41-5



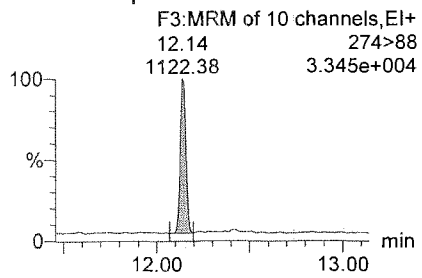
Dimethoate|60-51-5



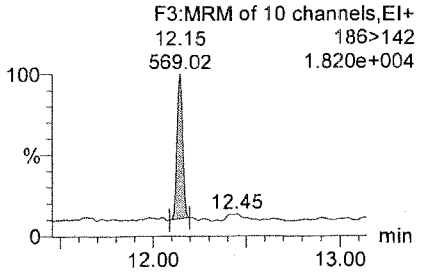
Dimethoate|60-51-5



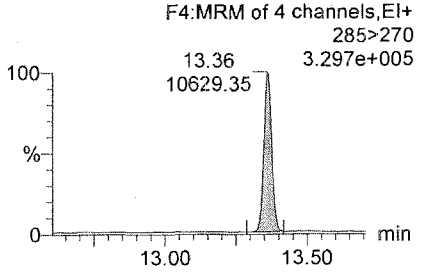
Disulfoton|298-04-4



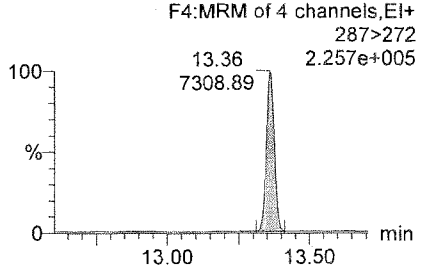
Disulfoton|298-04-4



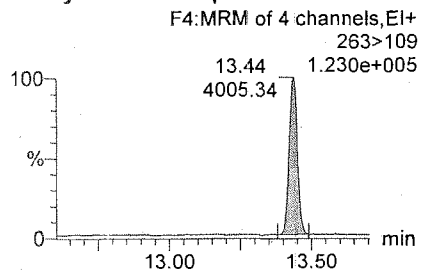
Ronnel|299-84-3



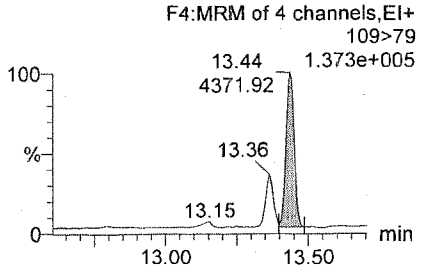
Ronnel|299-84-3



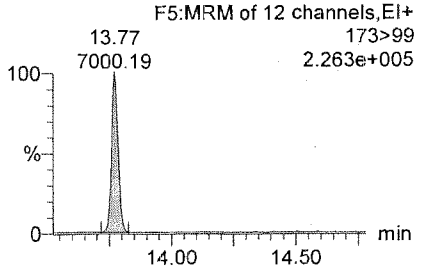
Methyl Parathion|298-00-0



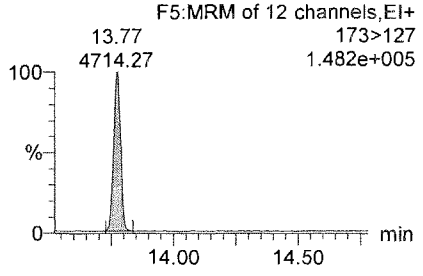
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5

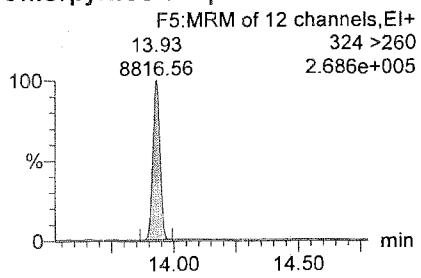


Dataset: C:\PESTEI.PRO\101013oppestcal.qld

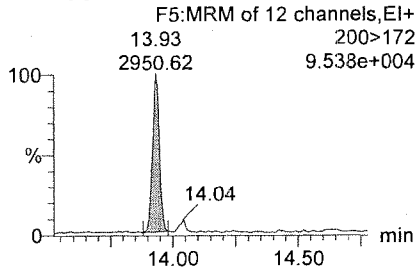
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

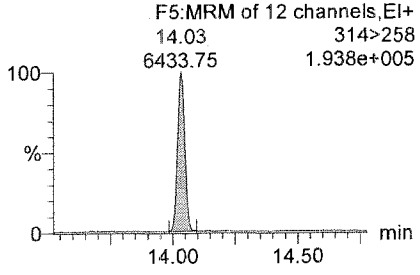
Chlorpyrifos-d10|CASID30732



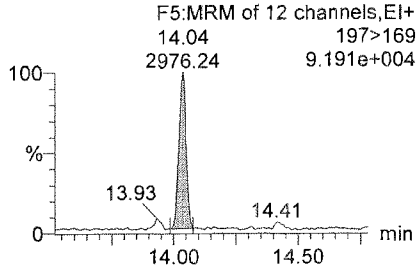
Chlorpyrifos-d10|CASID30732



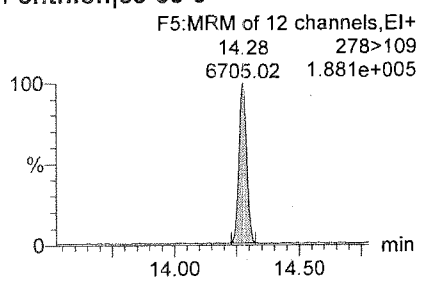
Chlorpyrifos|2921-88-2



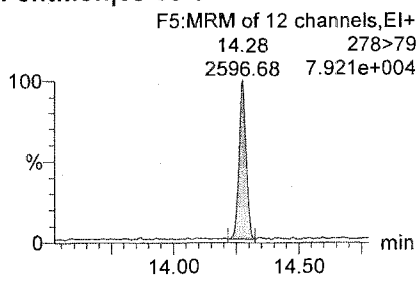
Chlorpyrifos|2921-88-2



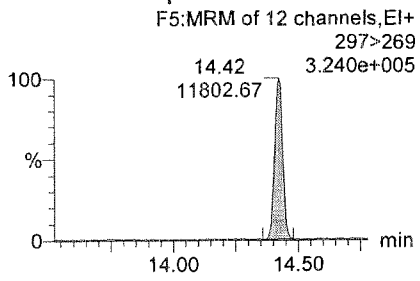
Fenthion|55-38-9



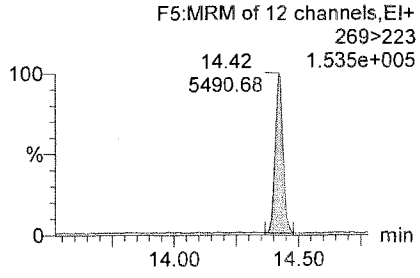
Fenthion|55-38-9



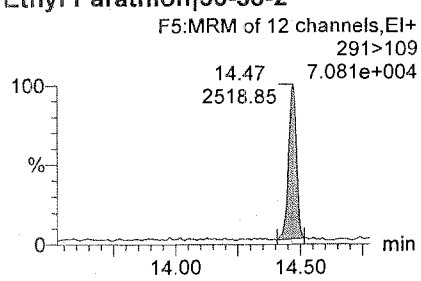
Trichloronate|327-98-0



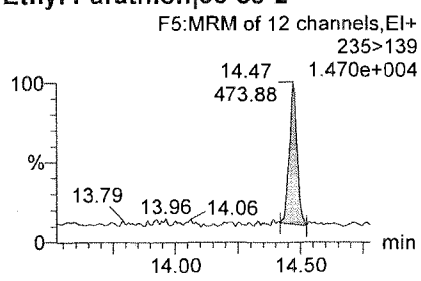
Trichloronate|327-98-0



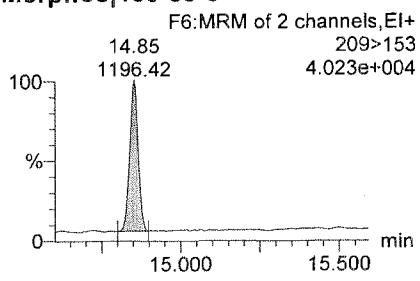
Ethyl Parathion|56-38-2



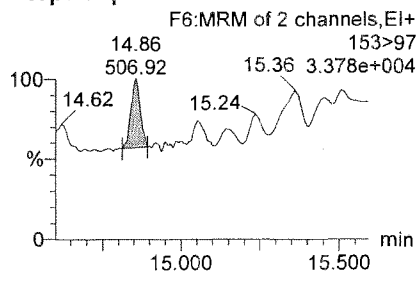
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



2234

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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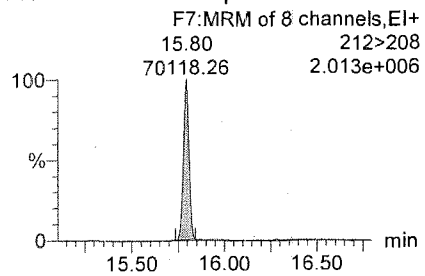
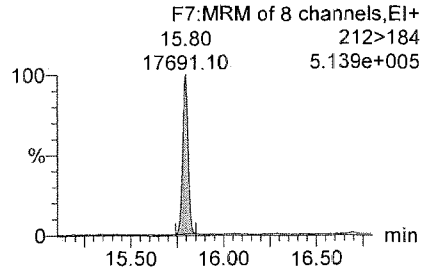
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

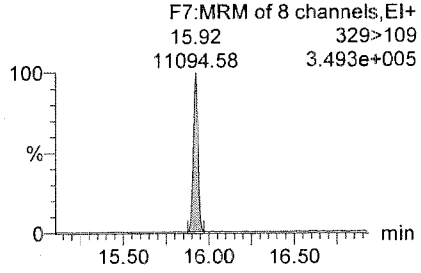
Fluoranthene-d10|93951-69-0



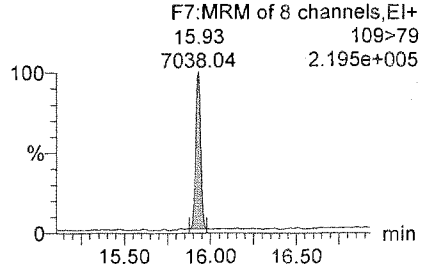
Fluoranthene-d10|93951-69-0



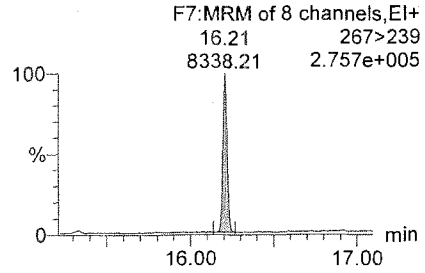
Stirophos|22248-79-9



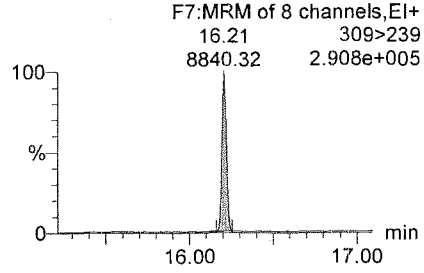
Stirophos|22248-79-9



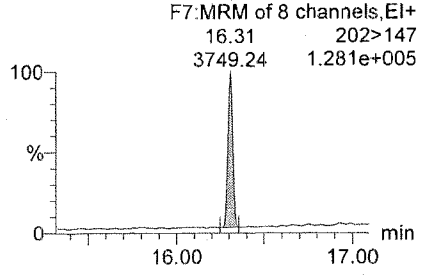
Tokuthion|34643-46-4



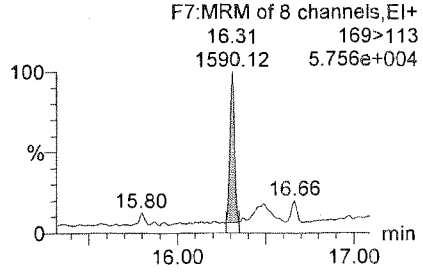
Tokuthion|34643-46-4



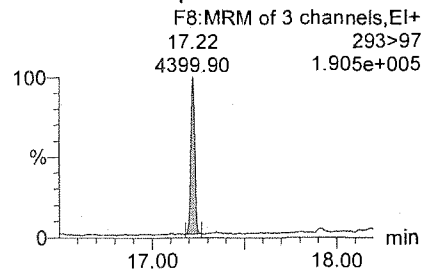
Merphos oxone|78-48-8



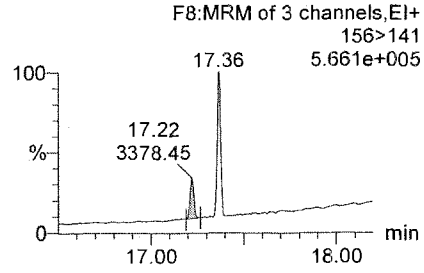
Merphos oxone|78-48-8



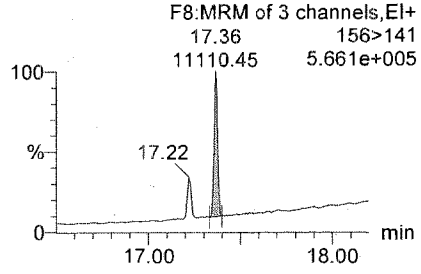
Fensulfothion|115-90-2



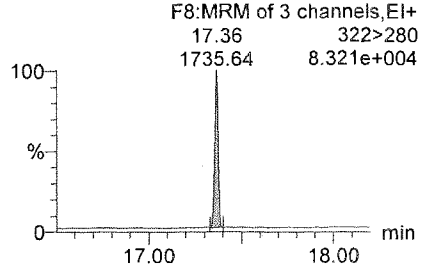
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



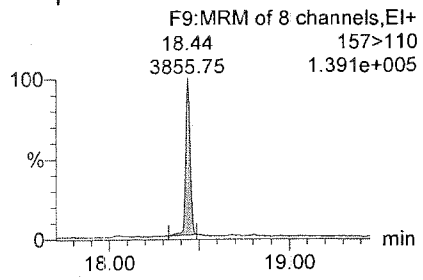
2235

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

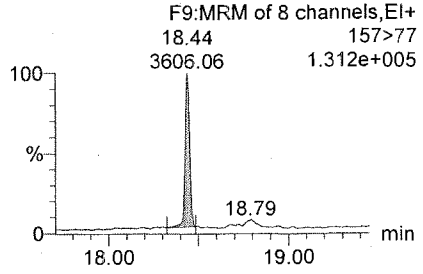
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F005, Date: 10-Oct-2013, Time: 10:45:25, ID: ICAL 20, Description: oppest 20ng/ml svm44-30c, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

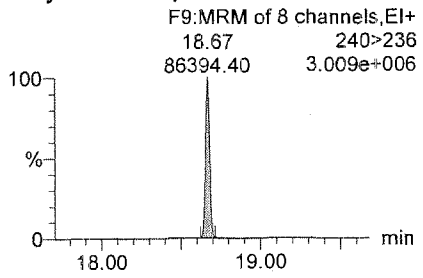
EPN|2104-64-5



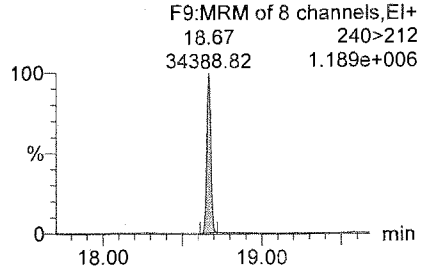
EPN|2104-64-5



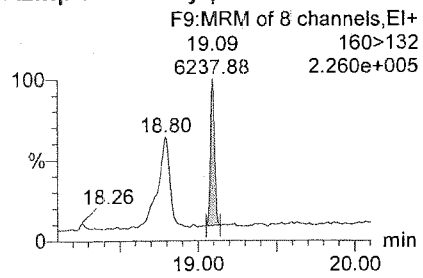
Chrysene-d12|1719-03-5



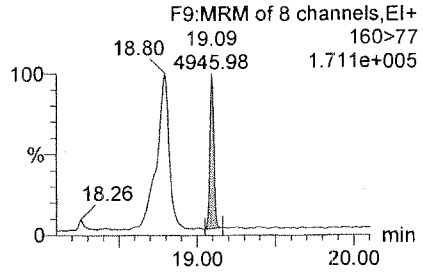
Chrysene-d12|1719-03-5



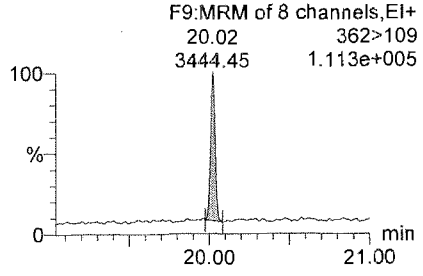
Azinphos methyl|86-50-0



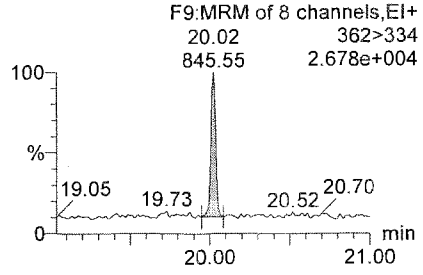
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2236

Quantify Sample Report **MassLynx 4.1**

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	70068.883		bb		94.46	-5.5	3.583	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	2710.220	70068.883	bb		49.48	-1.0	1.832	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	30023.463	70068.883	bb		47.26	-5.5	3.195	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	14687.813	70068.883	bd		46.97	-6.1	2.651	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	722.948	70068.883	bd		48.56	-2.9	2.715	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	5851.354	70068.883	bb		49.76	-0.5	1.700	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	6990.892	70068.883	bb		48.17	-3.7	2.111	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	424.467	70068.883	bb		48.21	-3.6	5.819	3.714	YES
9	9	Phorate|298-02-2	121>93	11.07	3825.307	70068.883	bb		45.75	-8.5	2.883	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	20959.742	70068.883	bb		50.72	1.4	4.463	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	1269.044	70068.883	bb		51.34	2.7	2.110	1.597	YES
12	12	Diazinon-d10|CASID39254	314>183	11.65	6971.937	70068.883	bb		48.73	-2.5	1.527	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	8219.733	70068.883	bb		47.50	-5.0	1.323	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	6528.694	70068.883	bb		51.07	2.1	3.280	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	2579.643	70068.883	bb		49.42	-1.2	1.875	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	25197.998	62970.359	bb		49.36	-1.3	1.467	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.44	8578.504	62970.359	bb		50.46	0.9	0.864	0.860	NO
18	18	Malathion|121-75-5	173>99	13.78	16343.981	62970.359	bb		50.73	1.5	1.420	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	21070.902	62970.359	bb		51.47	2.9	3.003	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	15384.195	62970.359	bb		51.73	3.5	2.240	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.28	15687.681	62970.359	bb		51.29	2.6	2.562	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	27000.990	62970.359	bb		51.67	3.3	2.122	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	5536.363	62970.359	bb		51.07	2.1	5.273	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	7019.396	62970.359	bb		50.18	0.4	2.433	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.80	62970.359		bb		92.21	-7.8	4.062	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	26123.920	62970.359	bb		49.47	-1.1	1.549	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	19560.826	62970.359	bb		50.34	0.7	0.942	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	8687.911	62970.359	bb		50.54	1.1	2.427	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	10064.459	77531.719	bb		46.58	-6.8	1.253	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	26892.758	77531.719	bb		47.65	-4.7	6.297	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	9188.250	77531.719	bb		50.04	0.1	1.143	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	77531.719		bb		93.19	-6.8	2.514	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	14896.299	77531.719	bb		47.40	-5.2	1.272	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	8035.342	77531.719	bb		49.51	-1.0	3.831	3.830	NO

10/10/13

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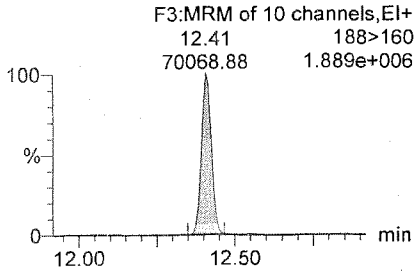
Dataset: C:\PESTEI.PRO\101013oppestcal.qld

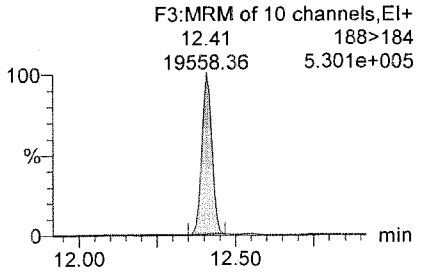
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

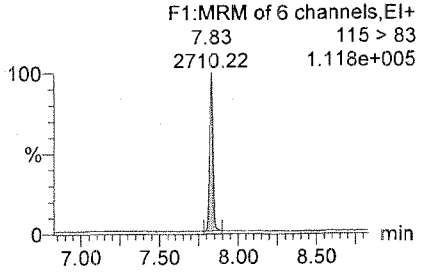
Phenanthrene-d10|1517-22-2



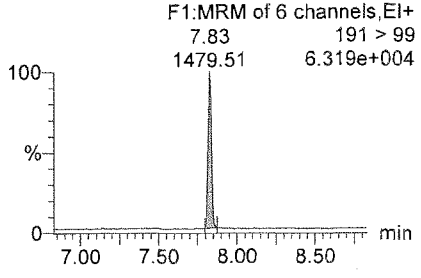
Phenanthrene-d10|1517-22-2



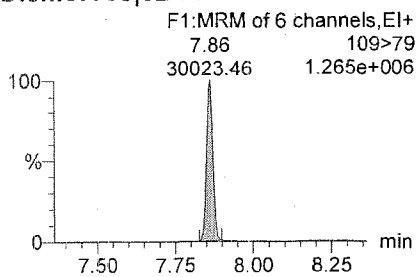
Dichlorvos-d6|203645-53-8



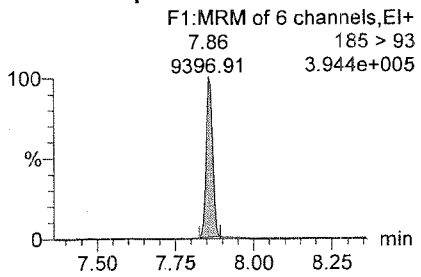
Dichlorvos-d6|203645-53-8



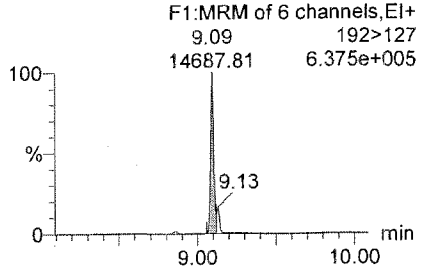
Dichlorvos|62-73-7



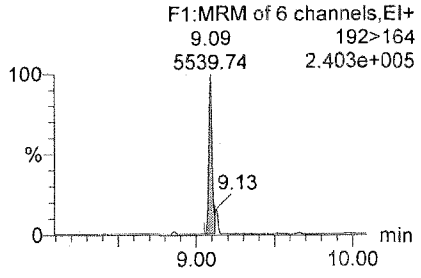
Dichlorvos|62-73-7



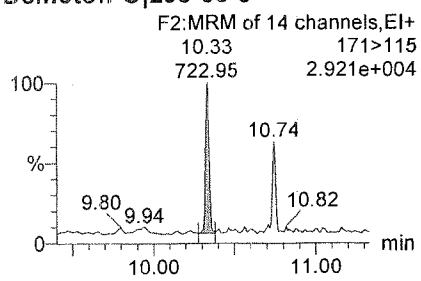
Mevinphos|7786-34-7



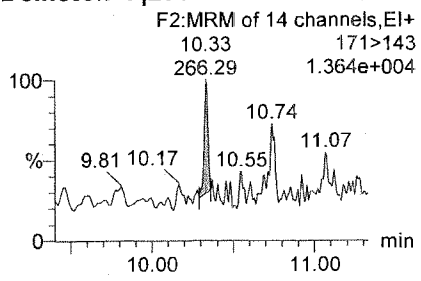
Mevinphos|7786-34-7



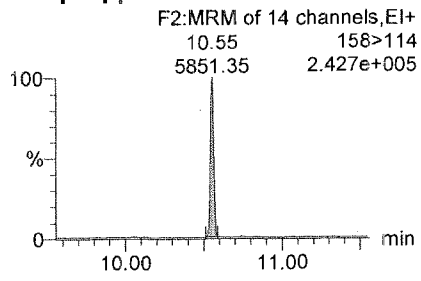
Demeton-O|298-03-3



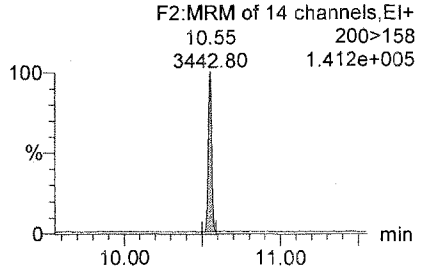
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



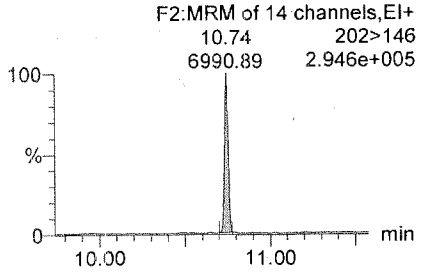
2238

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

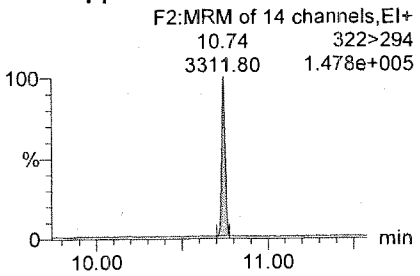
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

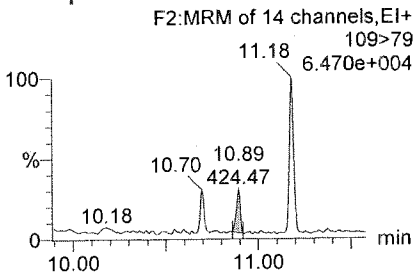
Sulfotep|3689-24-5



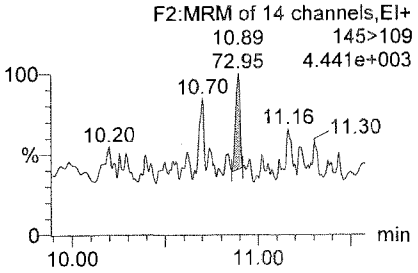
Sulfotep|3689-24-5



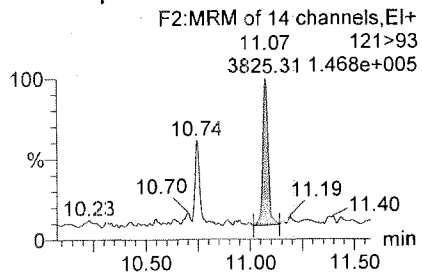
Naled|300-76-5



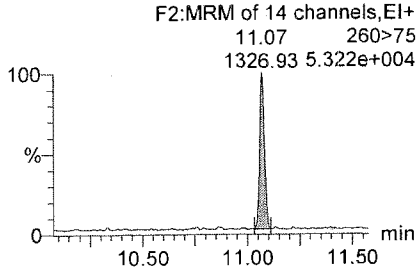
Naled|300-76-5



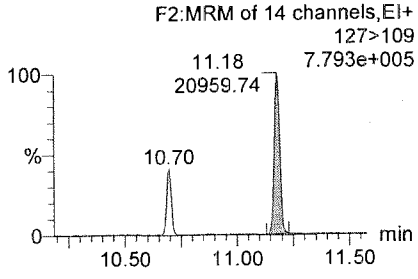
Phorate|298-02-2



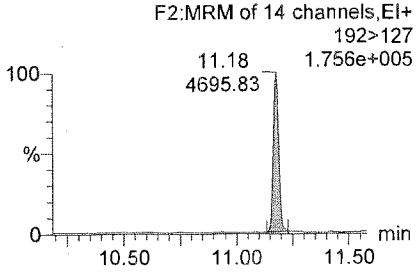
Phorate|298-02-2



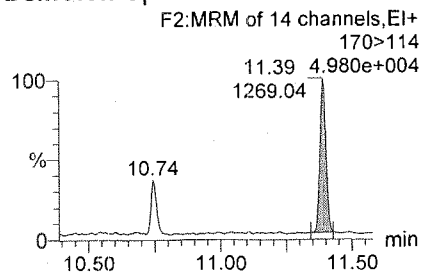
Monocrotophos|6923-22-4



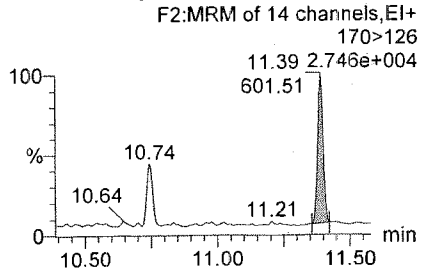
Monocrotophos|6923-22-4



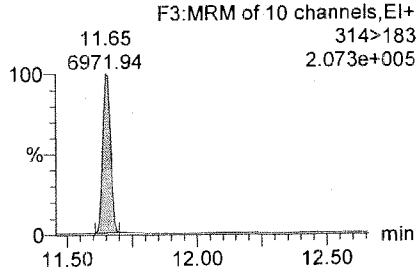
Demeton-S|126-75-0



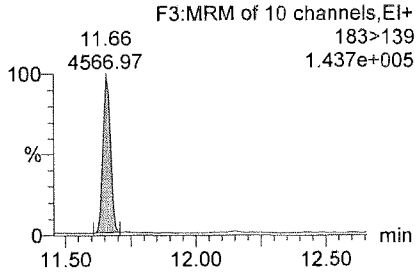
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



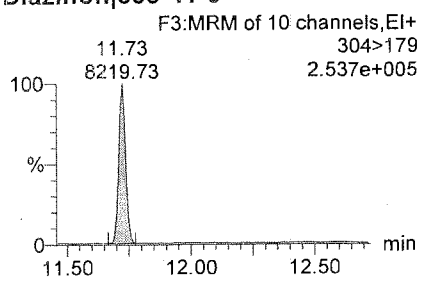
2239

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

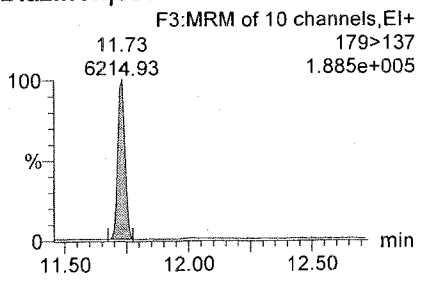
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

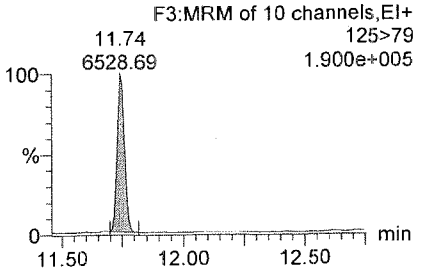
Diazinon|333-41-5



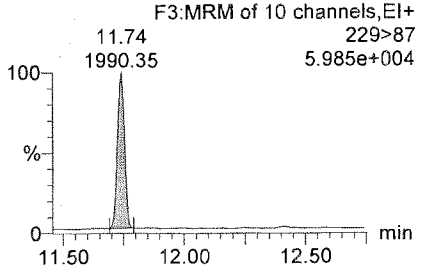
Diazinon|333-41-5



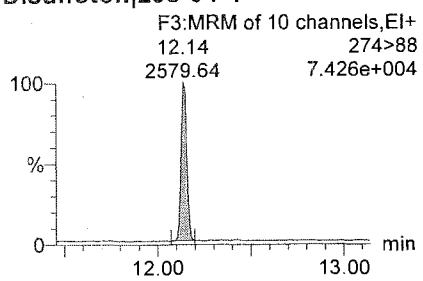
Dimethoate|60-51-5



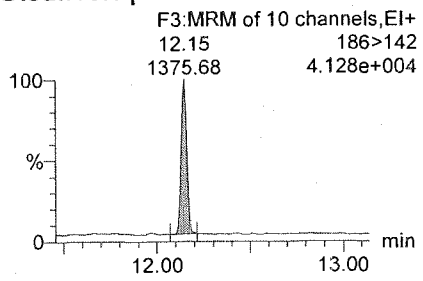
Dimethoate|60-51-5



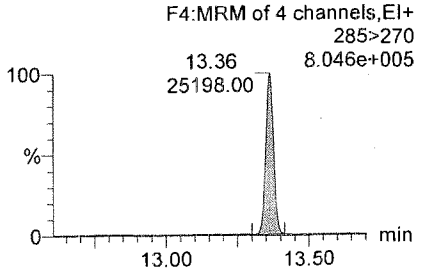
Disulfoton|298-04-4



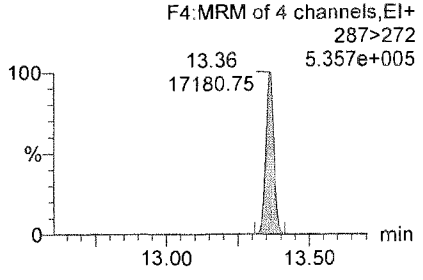
Disulfoton|298-04-4



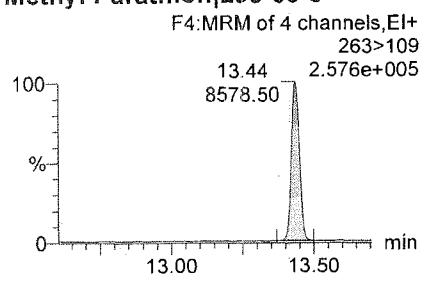
Ronnel|299-84-3



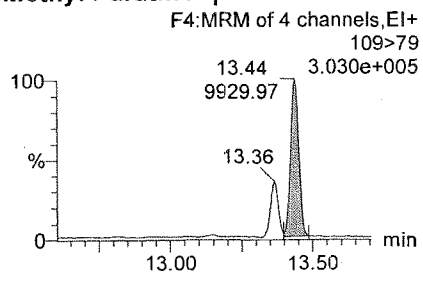
Ronnel|299-84-3



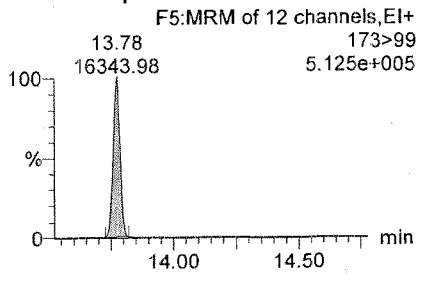
Methyl Parathion|298-00-0



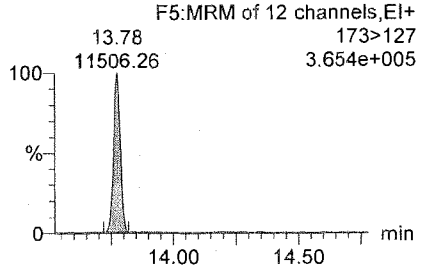
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



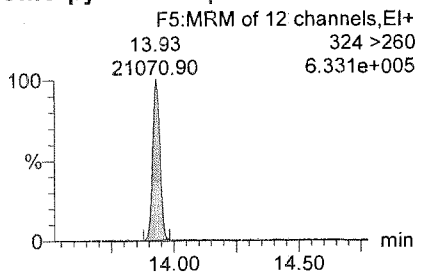
2240

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

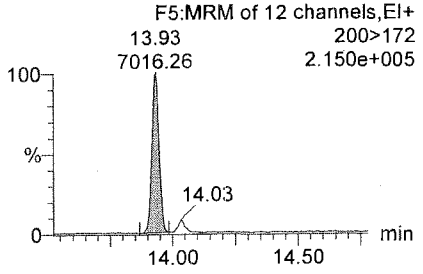
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

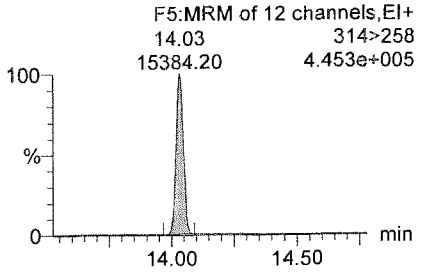
Chlorpyrifos-d10|CASID30732



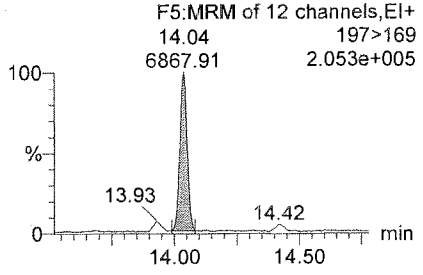
Chlorpyrifos-d10|CASID30732



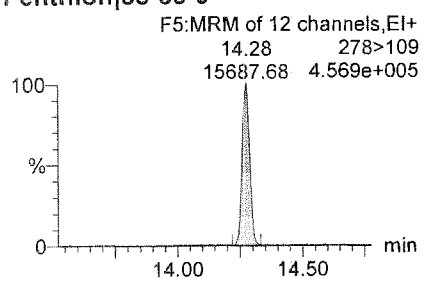
Chlorpyrifos|2921-88-2



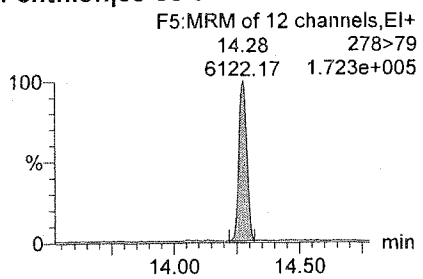
Chlorpyrifos|2921-88-2



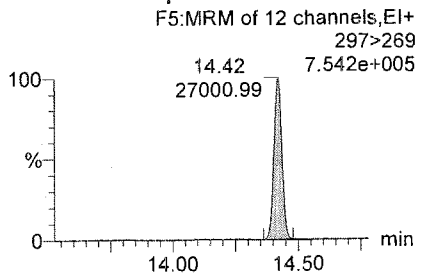
Fenthion|55-38-9



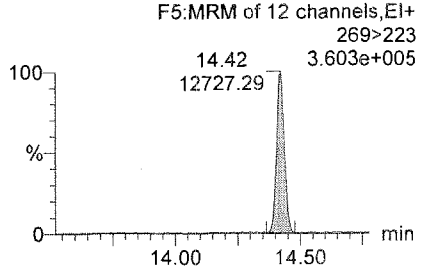
Fenthion|55-38-9



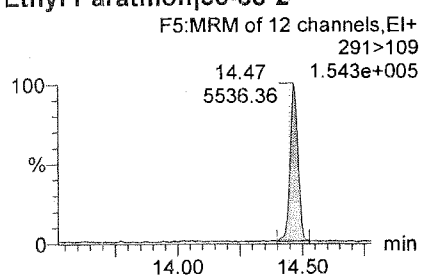
Trichloronate|327-98-0



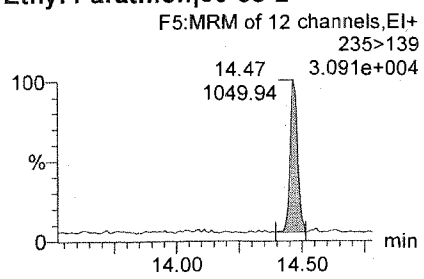
Trichloronate|327-98-0



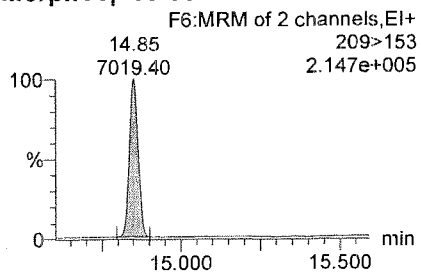
Ethyl Parathion|56-38-2



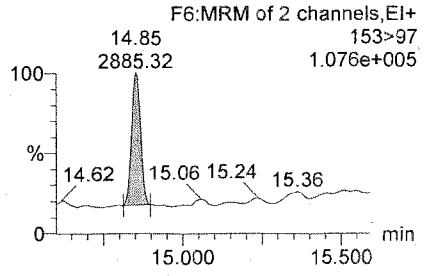
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



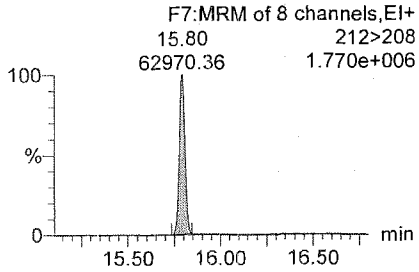
2241

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

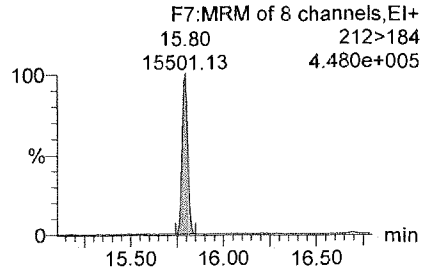
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

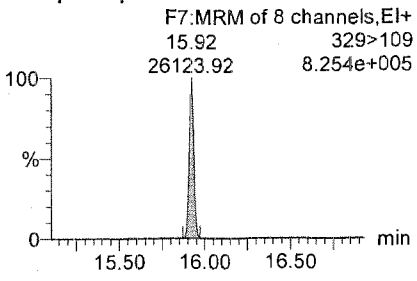
Fluoranthene-d10|93951-69-0



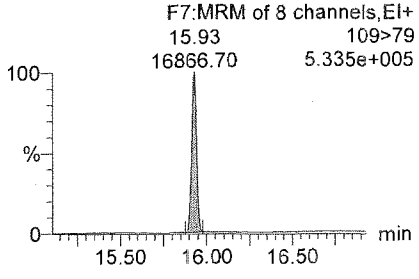
Fluoranthene-d10|93951-69-0



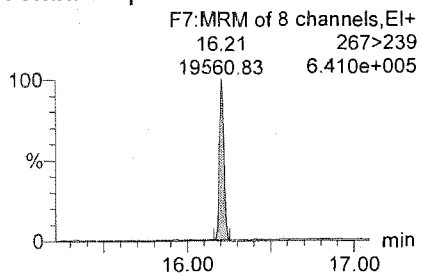
Stirophos|22248-79-9



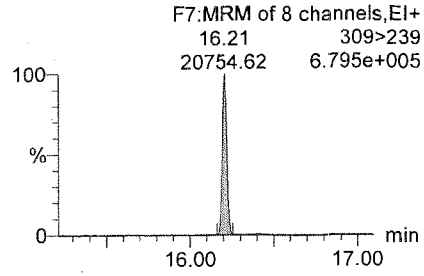
Stirophos|22248-79-9



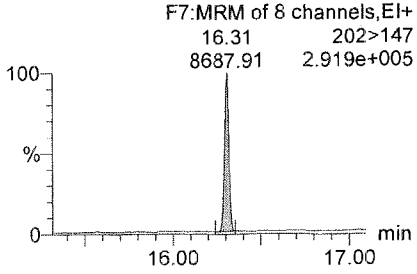
Tokuthion|34643-46-4



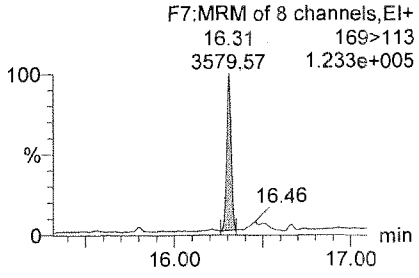
Tokuthion|34643-46-4



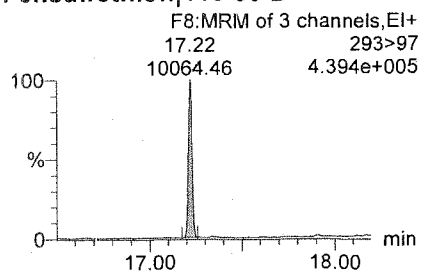
Merphos oxone|78-48-8



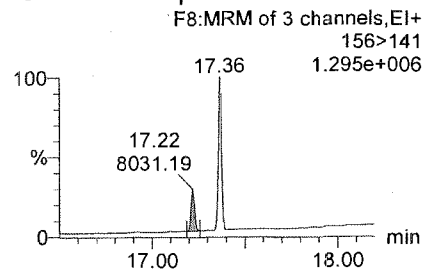
Merphos oxone|78-48-8



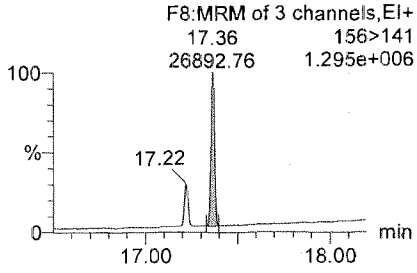
Fensulfothion|115-90-2



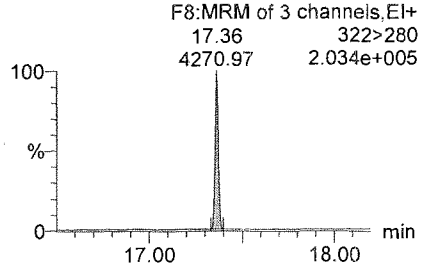
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



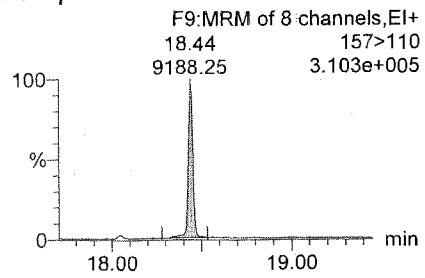
2242

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

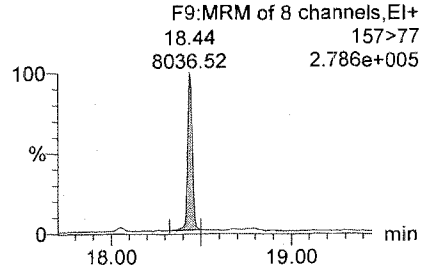
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F006, Date: 10-Oct-2013, Time: 11:11:33, ID: ICAL 50, Description: oppest 50ng/ml svm44-30d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

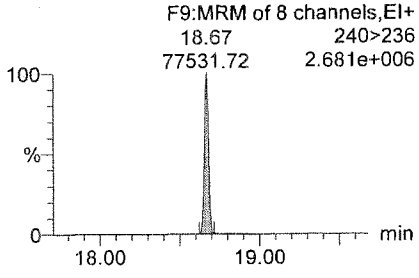
EPN|2104-64-5



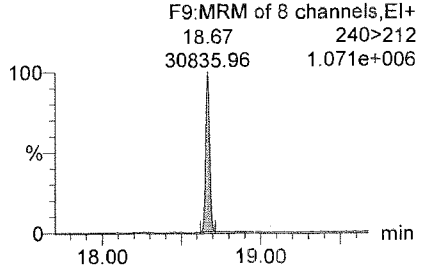
EPN|2104-64-5



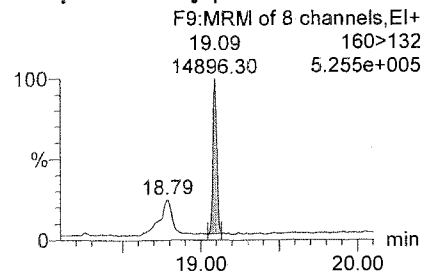
Chrysene-d12|1719-03-5



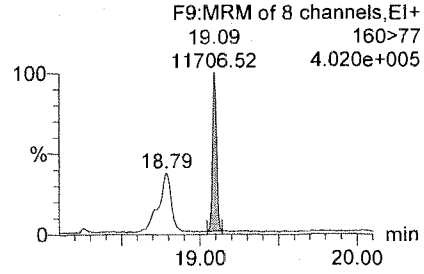
Chrysene-d12|1719-03-5



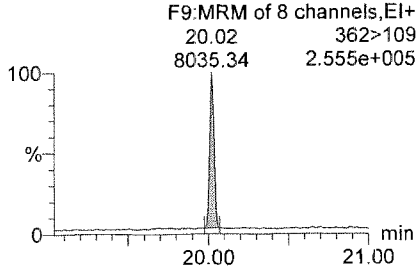
Azinphos methyl|86-50-0



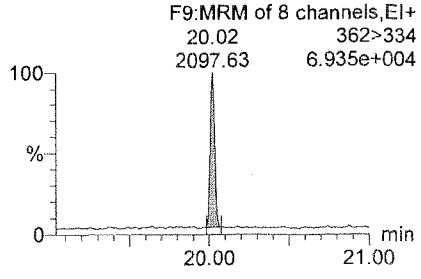
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2243

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10-10-13

Name: 1010F007, Date: 10-Oct-2013, Time: 11:37:39, ID: ICAL 80, Description: oppest 80ng/ml svm44-30e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

10/5/13
9

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	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	71371.898		bb		96.21	-3.8	3.572	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	4548.703	71371.898	bb		81.54	1.9	1.859	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	53435.938	71371.898	bb		82.58	3.2	3.293	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	25520.152	71371.898	bd		80.12	0.2	2.659	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	1273.943	71371.898	bb		84.00	5.0	2.300	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	9699.675	71371.898	bb		80.97	1.2	1.744	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	12306.247	71371.898	bb		80.15	0.2	1.944	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	785.659	71371.898	bb		80.56	0.7	4.134	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	6714.471	71371.898	bb		78.83	-1.5	2.786	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	31565.730	71371.898	bb		74.99	-6.3	4.338	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	2076.771	71371.898	bb		82.48	3.1	1.825	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	11592.815	71371.898	bb		79.54	-0.6	1.560	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	14259.550	71371.898	bb		80.89	1.1	1.340	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	10166.137	71371.898	bb		78.07	-2.4	3.126	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	4168.318	71371.898	bb		78.39	-2.0	1.877	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	41027.371	63045.840	bb		80.27	0.3	1.481	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	13345.997	63045.840	bb		78.40	-2.0	0.857	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	26471.467	63045.840	bb		82.06	2.6	1.464	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	33965.941	63045.840	bb		82.87	3.6	2.887	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	24596.443	63045.840	bb		82.61	3.3	2.167	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	24874.119	63045.840	bb		81.22	1.5	2.519	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	43597.652	63045.840	bb		83.33	4.2	2.178	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	8930.829	63045.840	bb		82.29	2.9	5.326	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	12840.175	63045.840	bb		80.99	1.2	2.372	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	63045.840		bb		92.32	-7.7	4.011	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	41091.848	63045.840	bb		77.72	-2.9	1.512	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	31363.346	63045.840	bb		80.62	0.8	0.939	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	14033.920	63045.840	bb		81.54	1.9	2.422	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	16180.127	75510.477	bb		76.89	-3.9	1.300	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	43371.980	75510.477	bb		78.91	-1.4	6.170	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	13737.849	75510.477	bb		76.82	-4.0	1.071	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	75510.477		bb		90.76	-9.2	2.529	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	23301.172	75510.477	bb		76.13	-4.8	1.308	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	12832.329	75510.477	bb		81.19	1.5	3.896	3.830	NO

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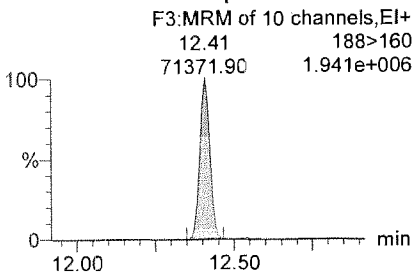
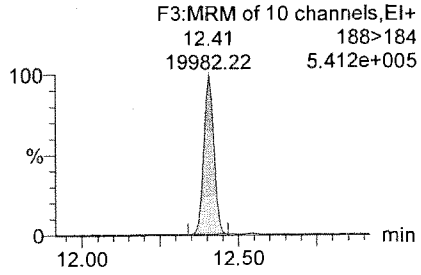
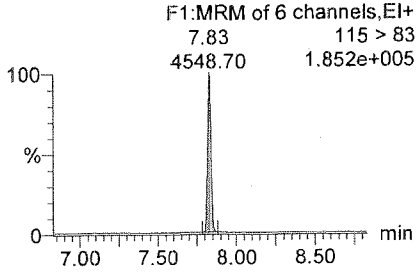
Phenanthrene-d10|1517-22-2



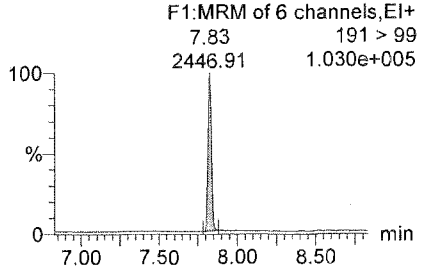
Phenanthrene-d10|1517-22-2



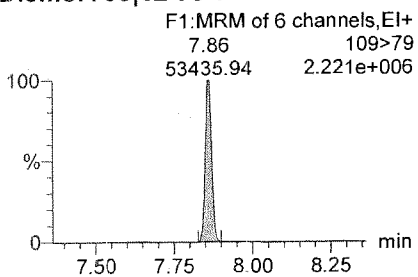
Dichlorvos-d6|203645-53-8



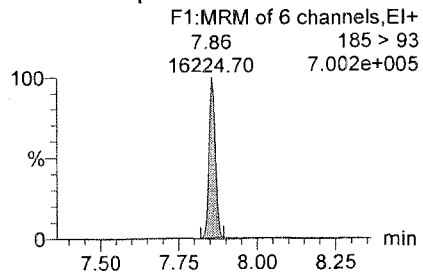
Dichlorvos-d6|203645-53-8



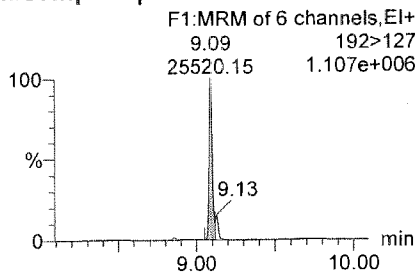
Dichlorvos|62-73-7



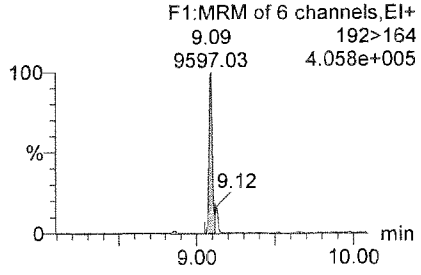
Dichlorvos|62-73-7



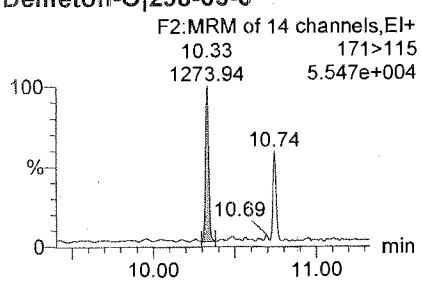
Mevinphos|7786-34-7



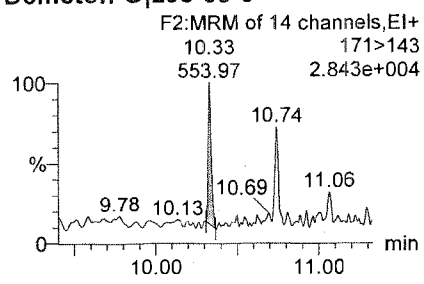
Mevinphos|7786-34-7



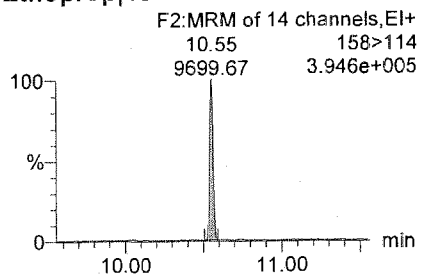
Demeton-O|298-03-3



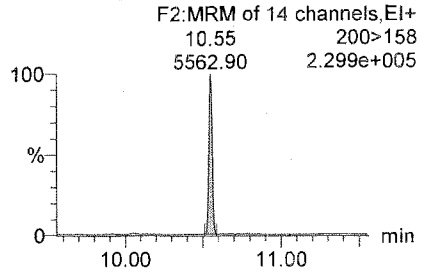
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



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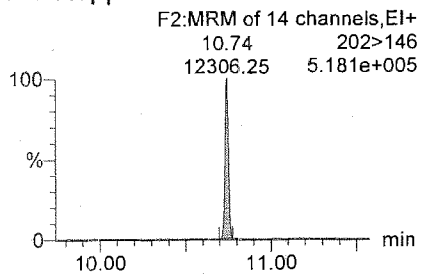
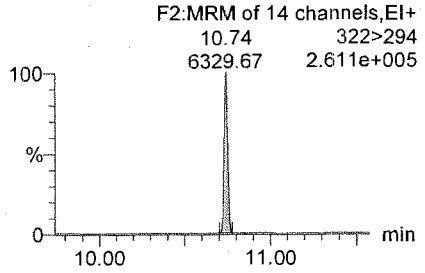
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

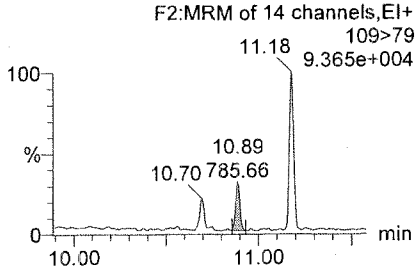
Sulfotep|3689-24-5



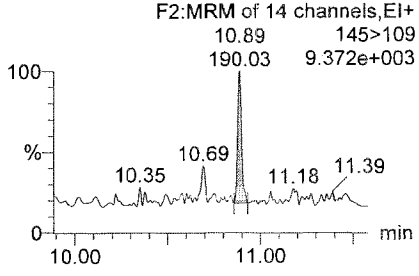
Sulfotep|3689-24-5



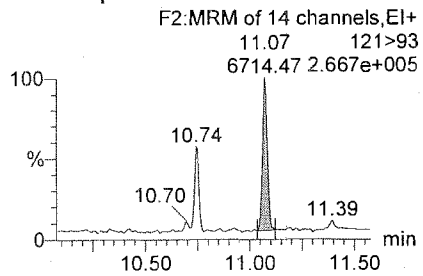
Naled|300-76-5



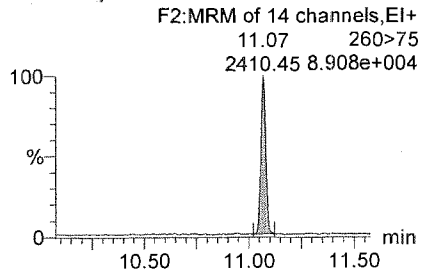
Naled|300-76-5



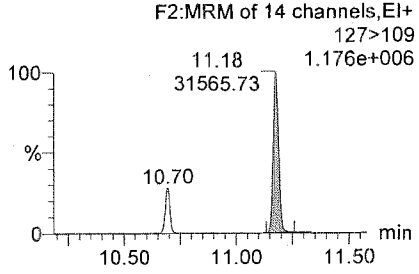
Phorate|298-02-2



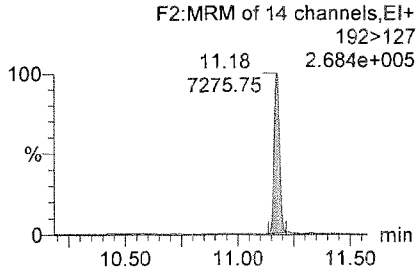
Phorate|298-02-2



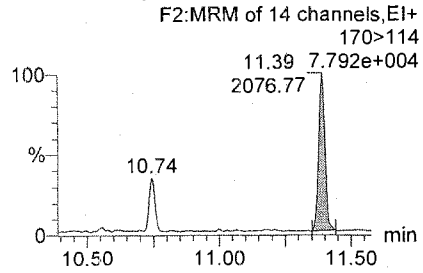
Monocrotophos|6923-22-4



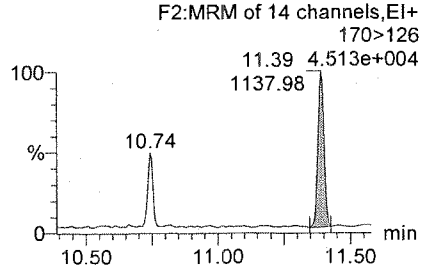
Monocrotophos|6923-22-4



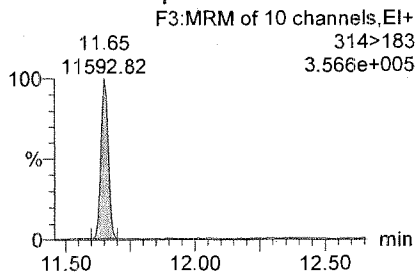
Demeton-S|126-75-0



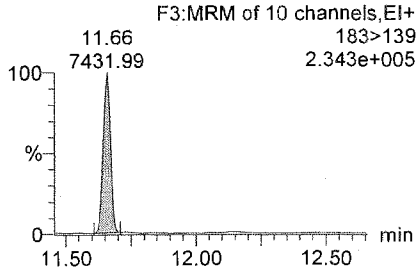
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



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Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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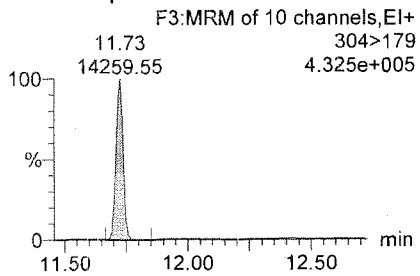
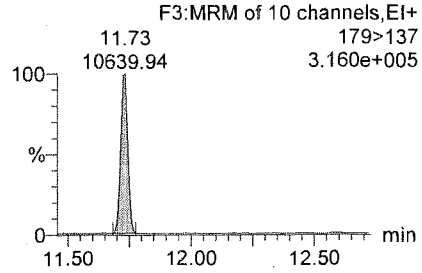
Name: 1010F007, Date: 10-Oct-2013, Time: 11:37:39, ID: ICAL 80, Description: oppest 80ng/ml svm44-30e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

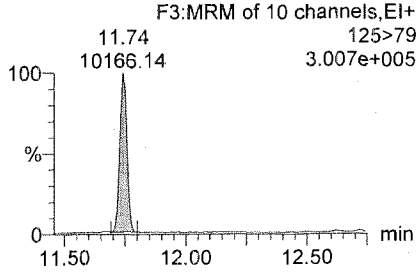
Diazinon|333-41-5



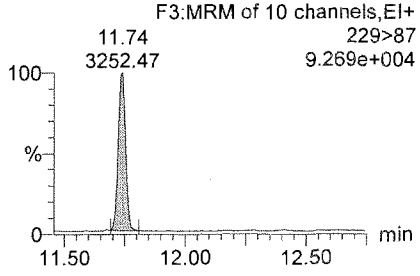
Diazinon|333-41-5



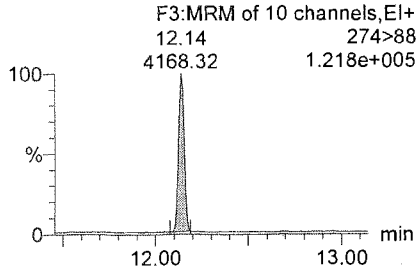
Dimethoate|60-51-5



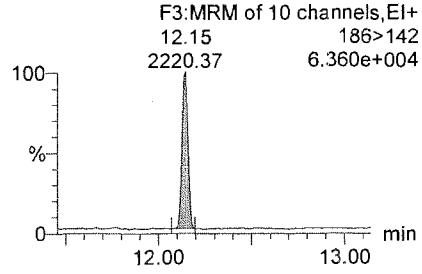
Dimethoate|60-51-5



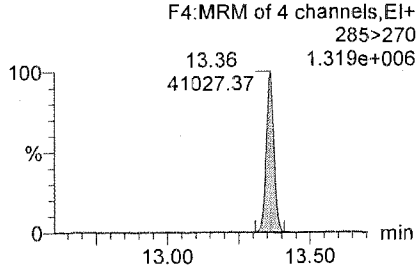
Disulfoton|298-04-4



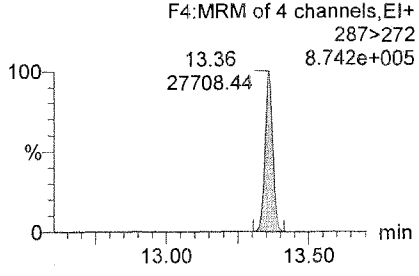
Disulfoton|298-04-4



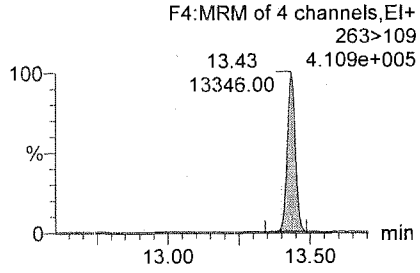
Ronnel|299-84-3



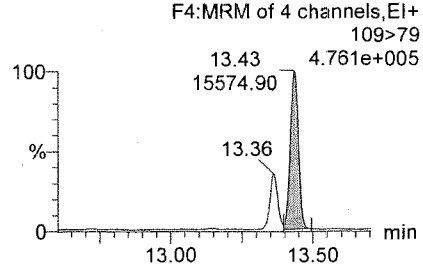
Ronnel|299-84-3



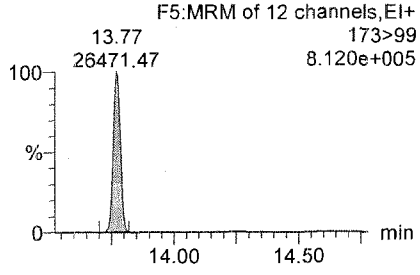
Methyl Parathion|298-00-0



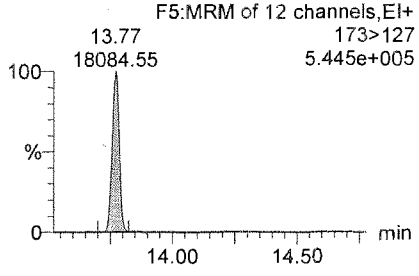
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



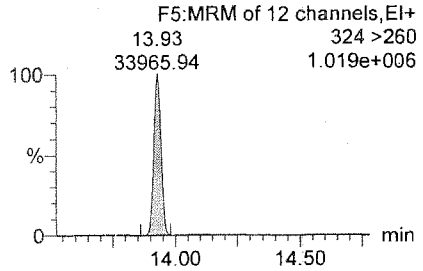
2247

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

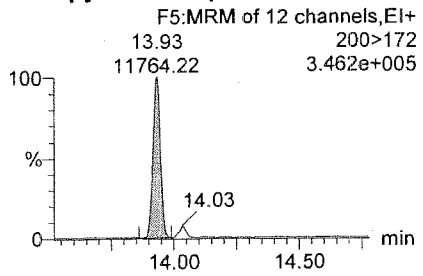
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F007, Date: 10-Oct-2013, Time: 11:37:39, ID: ICAL 80, Description: oppest 80ng/ml svm44-30e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

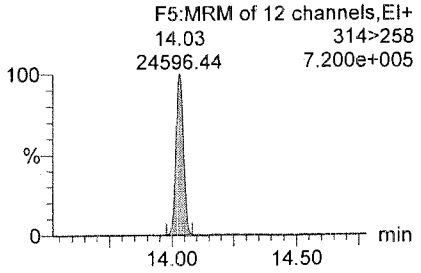
Chlorpyrifos-d10|CASID30732



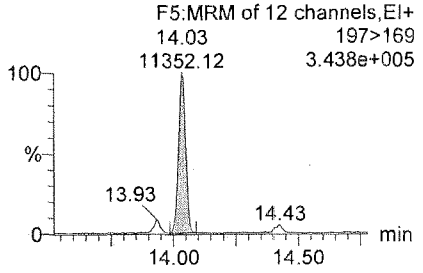
Chlorpyrifos-d10|CASID30732



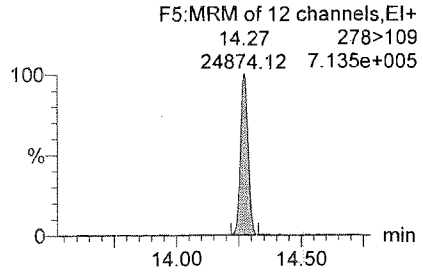
Chlorpyrifos|2921-88-2



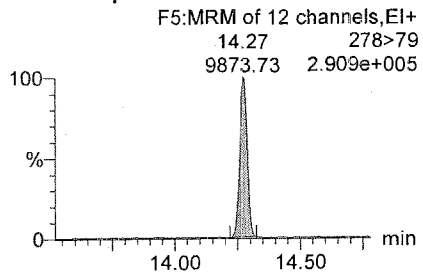
Chlorpyrifos|2921-88-2



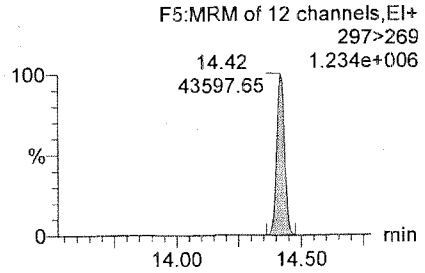
Fenthion|55-38-9



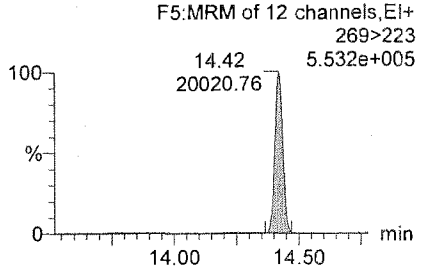
Fenthion|55-38-9



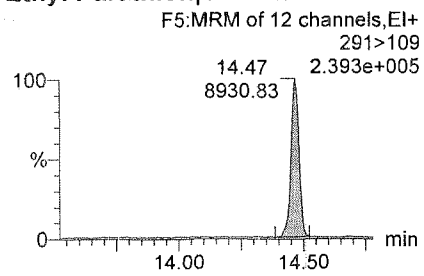
Trichloronate|327-98-0



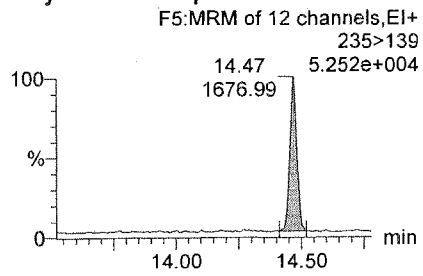
Trichloronate|327-98-0



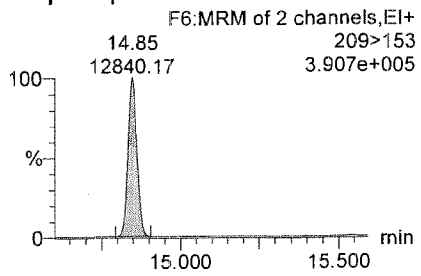
Ethyl Parathion|56-38-2



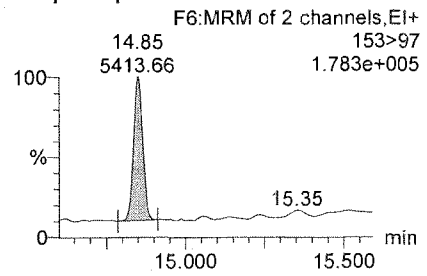
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



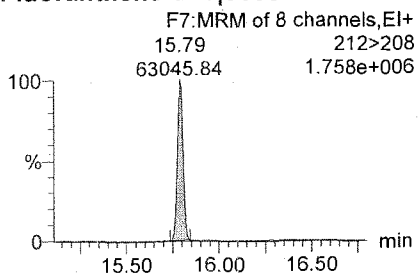
2248

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

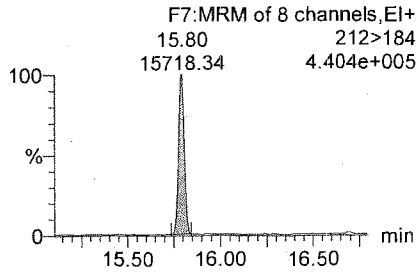
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F007, Date: 10-Oct-2013, Time: 11:37:39, ID: ICAL 80, Description: oppest 80ng/ml svm44-30e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

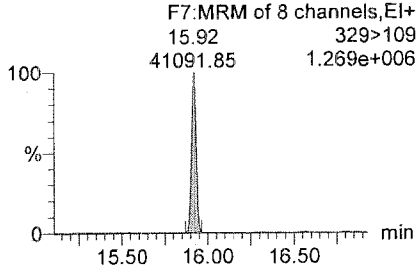
Fluoranthene-d10|93951-69-0



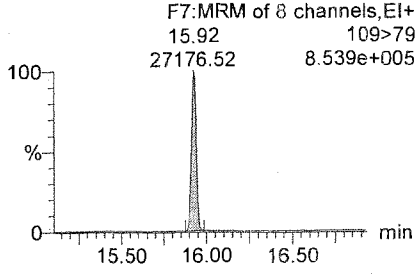
Fluoranthene-d10|93951-69-0



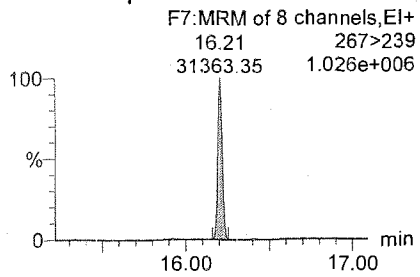
Stirophos|22248-79-9



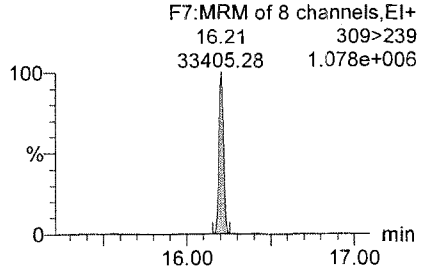
Stirophos|22248-79-9



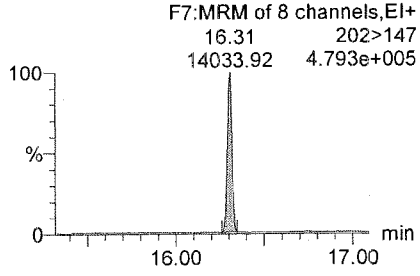
Tokuthion|34643-46-4



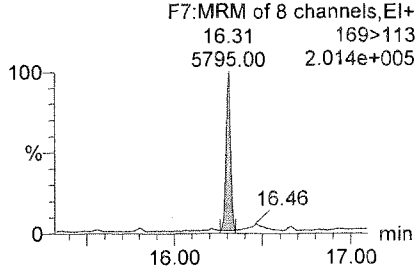
Tokuthion|34643-46-4



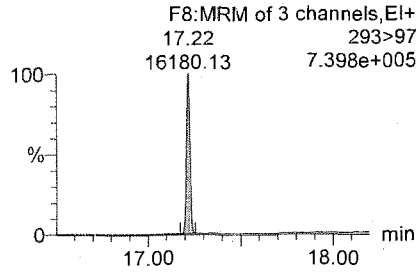
Merphos oxone|78-48-8



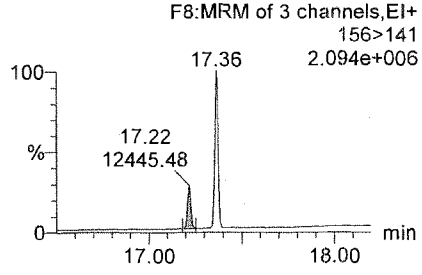
Merphos oxone|78-48-8



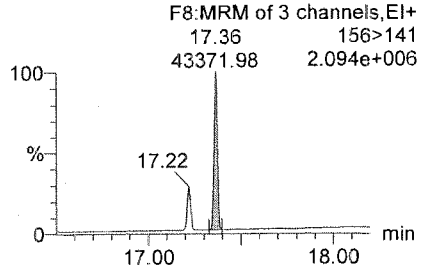
Fensulfothion|115-90-2



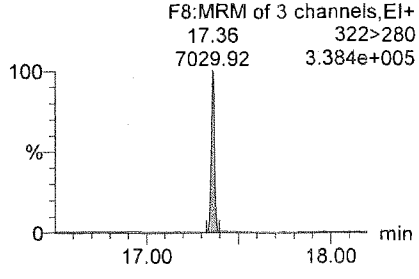
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



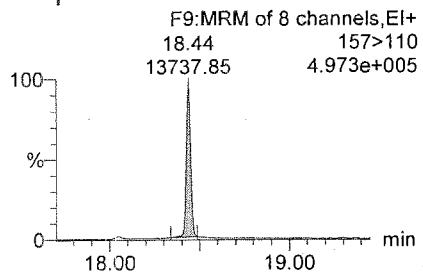
2249

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

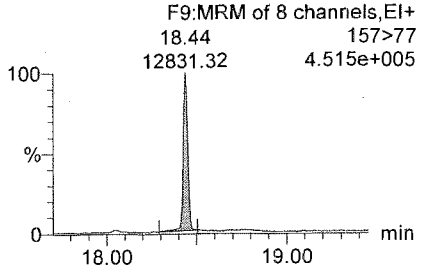
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F007, Date: 10-Oct-2013, Time: 11:37:39, ID: ICAL 80, Description: oppest 80ng/ml svm44-30e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

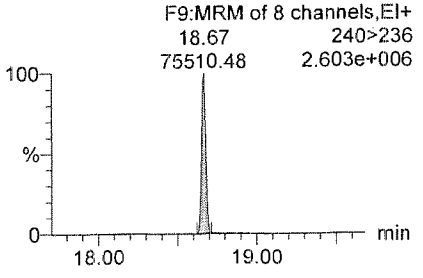
EPN|2104-64-5



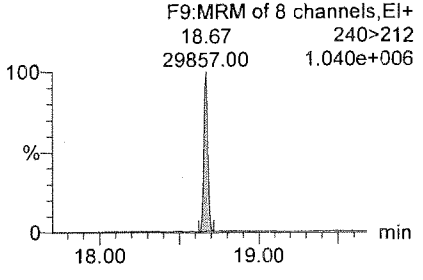
EPN|2104-64-5



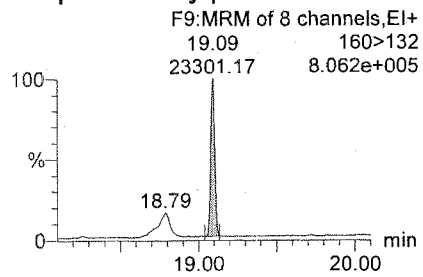
Chrysene-d12|1719-03-5



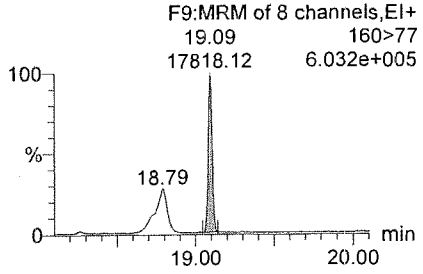
Chrysene-d12|1719-03-5



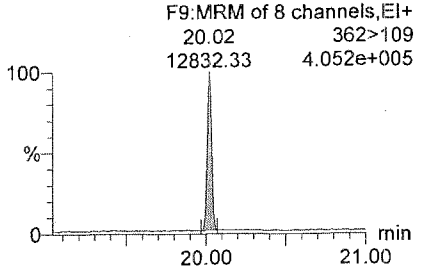
Azinphos methyl|86-50-0



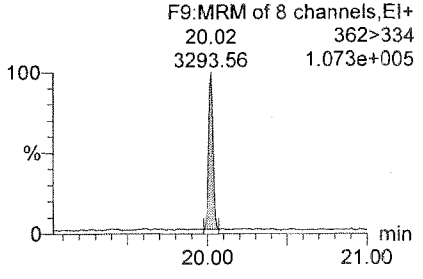
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2250

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	77055.992		bb		103.87	3.9	3.579	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	5782.088	77055.992	bb		96.00	-4.0	1.809	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	72325.500	77055.992	bb		103.52	3.5	3.310	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	34023.367	77055.992	bd		98.94	-1.1	2.593	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	1616.474	77055.992	bb		98.72	-1.3	2.462	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	13079.801	77055.992	bb		101.14	1.1	1.680	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	17789.506	77055.992	bb		104.76	4.8	2.104	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	1159.229	77055.992	bb		104.91	4.9	3.714	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	9484.042	77055.992	bb		103.14	3.1	2.719	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	43247.262	77055.992	bb		95.16	-4.8	4.172	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	2542.823	77055.992	bb		93.54	-6.5	1.597	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	16051.271	77055.992	bb		102.01	2.0	1.548	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.72	19363.443	77055.992	bb		101.74	1.7	1.304	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	14051.448	77055.992	bb		99.95	-0.0	3.279	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	5895.538	77055.992	bb		102.69	2.7	1.928	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	56449.195	67992.141	bb		102.41	2.4	1.478	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	18217.584	67992.141	bb		99.24	-0.8	0.860	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	35894.863	67992.141	bb		103.18	3.2	1.476	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	45578.523	67992.141	bb		103.12	3.1	2.898	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	32981.121	67992.141	bb		102.71	2.7	2.145	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	33978.512	67992.141	bb		102.88	2.9	2.558	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	59004.434	67992.141	bb		104.58	4.6	2.135	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	11905.872	67992.141	bb		101.72	1.7	5.154	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	17931.838	67992.141	bb		100.22	0.2	2.363	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	67992.141		bb		99.56	-0.4	3.924	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	57238.391	67992.141	bb		100.38	0.4	1.525	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	42591.219	67992.141	bb		101.52	1.5	0.927	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.30	19043.295	67992.141	bb		102.59	2.6	2.427	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	22758.992	83636.734	bb		97.64	-2.4	1.319	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	61365.551	83636.734	bb		100.80	0.8	6.079	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	19535.391	83636.734	bb		98.63	-1.4	1.105	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	83636.734		bb		100.53	0.5	2.534	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	33332.148	83636.734	bb		98.32	-1.7	1.317	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	17412.096	83636.734	bb		99.46	-0.5	3.830	3.830	NO

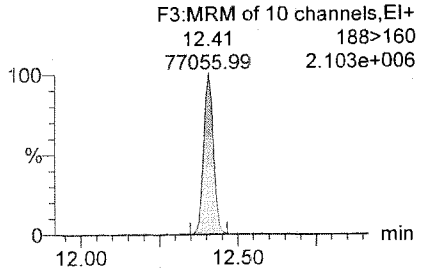
2251

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

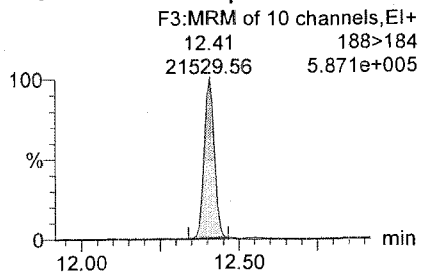
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

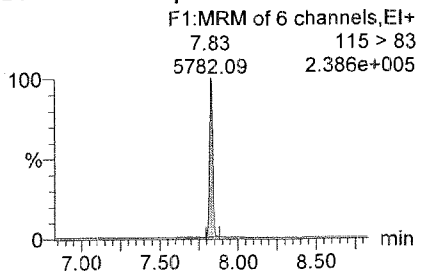
Phenanthrene-d10|1517-22-2



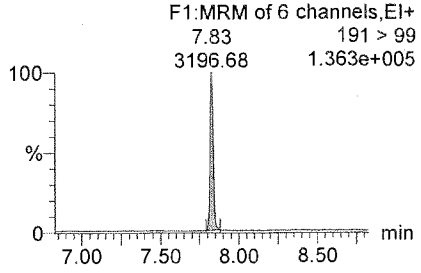
Phenanthrene-d10|1517-22-2



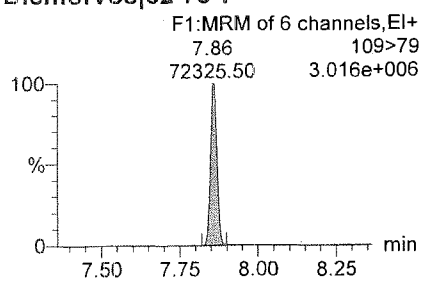
Dichlorvos-d6|203645-53-8



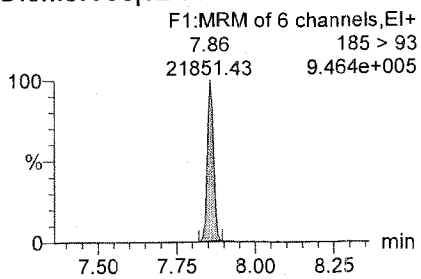
Dichlorvos-d6|203645-53-8



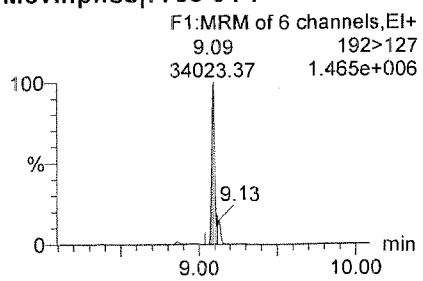
Dichlorvos|62-73-7



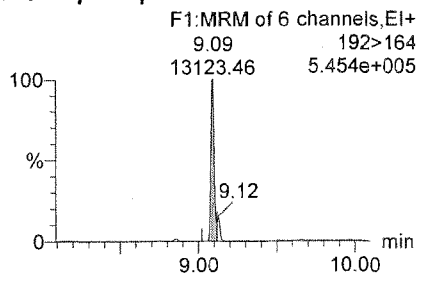
Dichlorvos|62-73-7



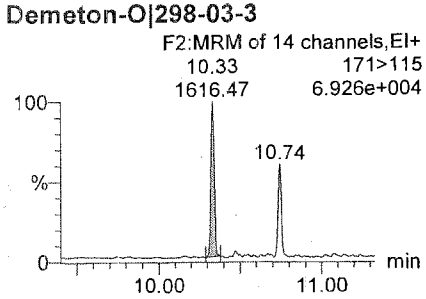
Mevinphos|7786-34-7



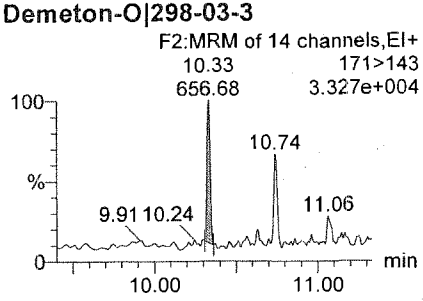
Mevinphos|7786-34-7



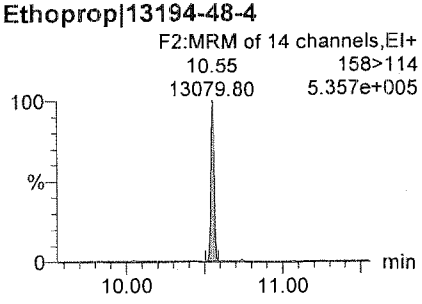
Demeton-O|298-03-3



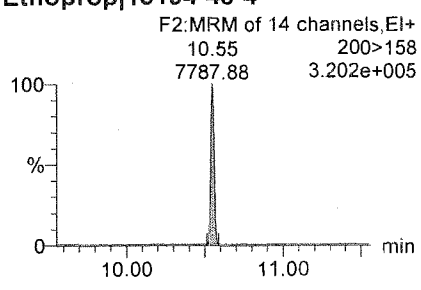
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



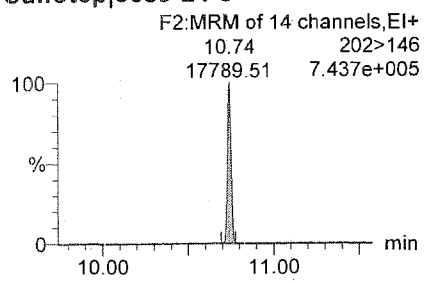
2252

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

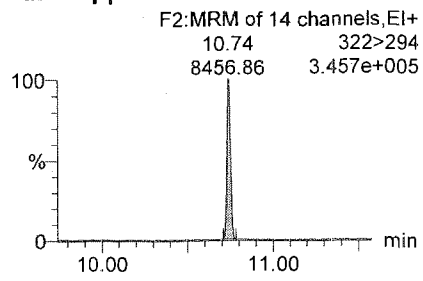
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

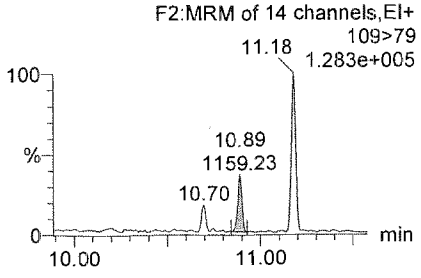
Sulfotep|3689-24-5



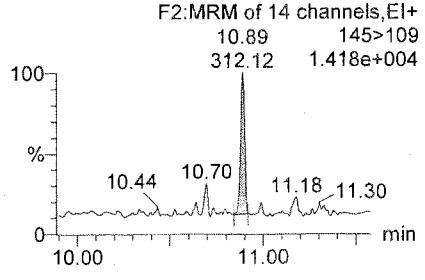
Sulfotep|3689-24-5



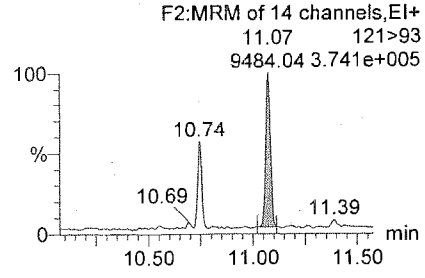
Naled|300-76-5



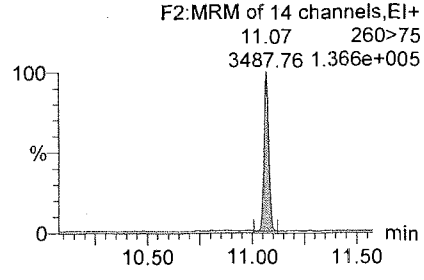
Naled|300-76-5



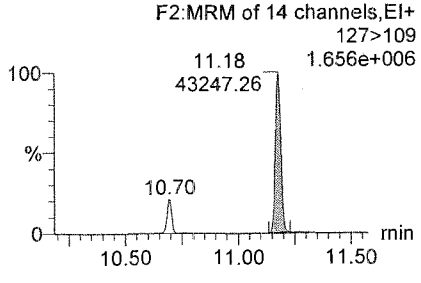
Phorate|298-02-2



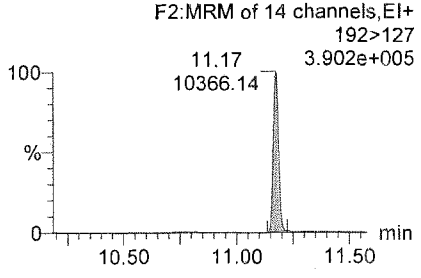
Phorate|298-02-2



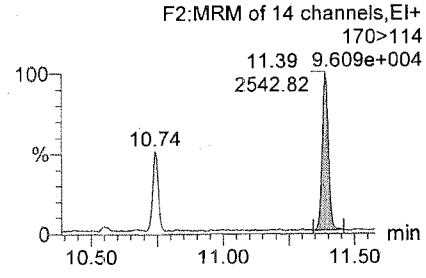
Monocrotophos|6923-22-4



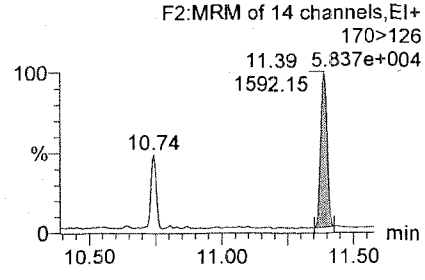
Monocrotophos|6923-22-4



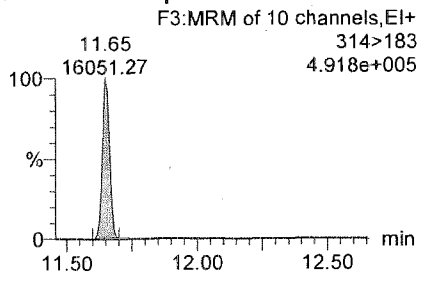
Demeton-S|126-75-0



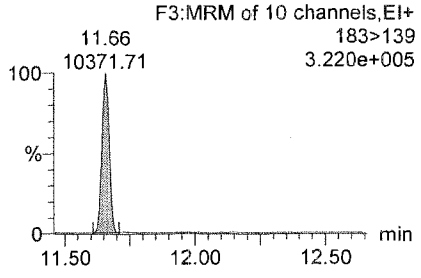
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



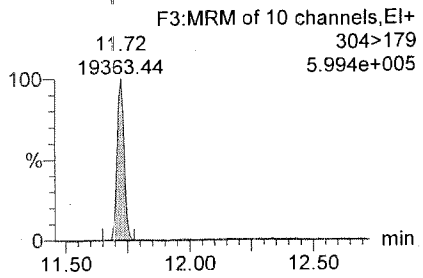
2253

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

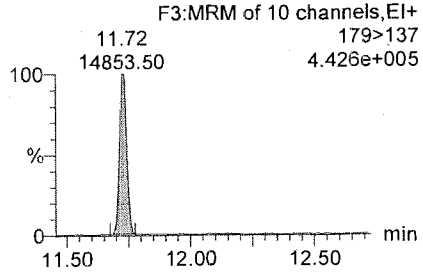
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

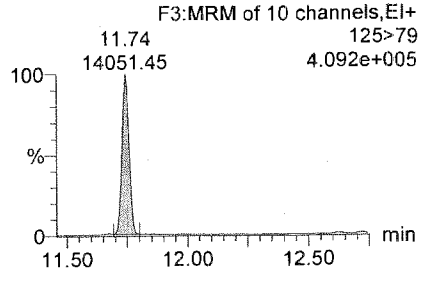
Diazinon|333-41-5



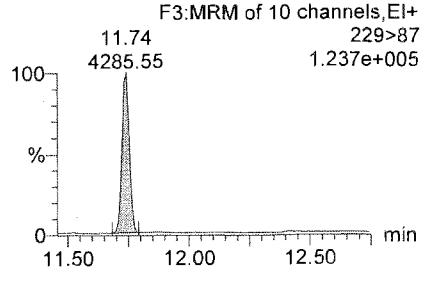
Diazinon|333-41-5



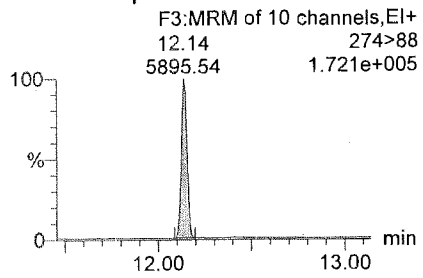
Dimethoate|60-51-5



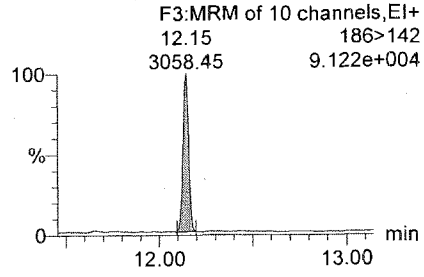
Dimethoate|60-51-5



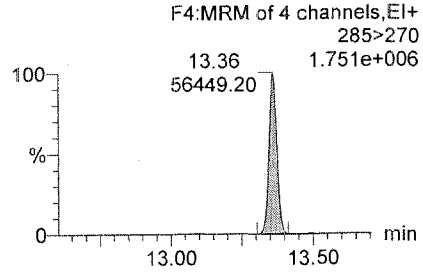
Disulfoton|298-04-4



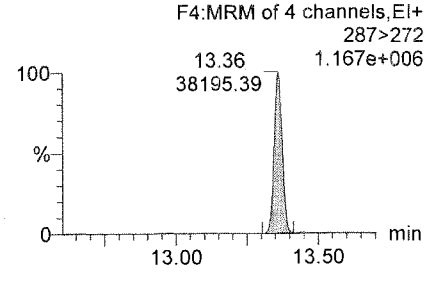
Disulfoton|298-04-4



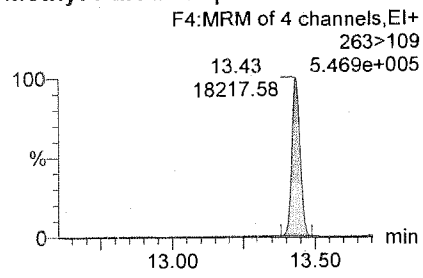
Ronnel|299-84-3



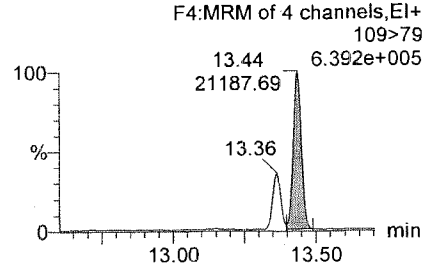
Ronnel|299-84-3



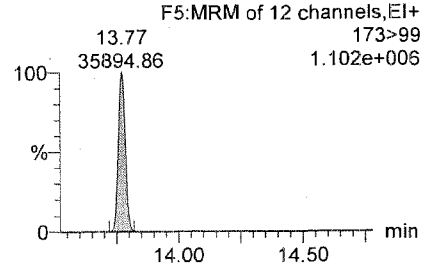
Methyl Parathion|298-00-0



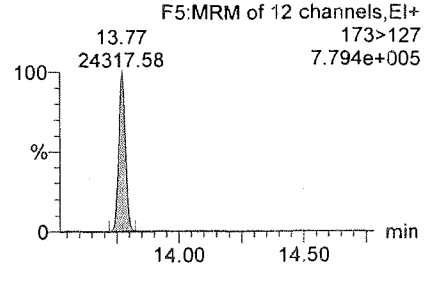
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



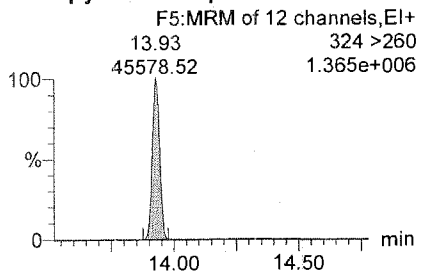
2254

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

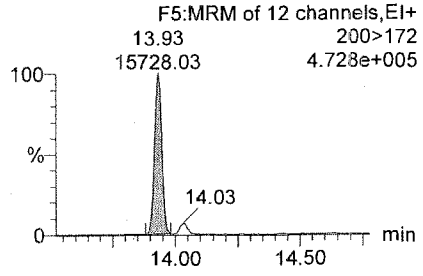
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

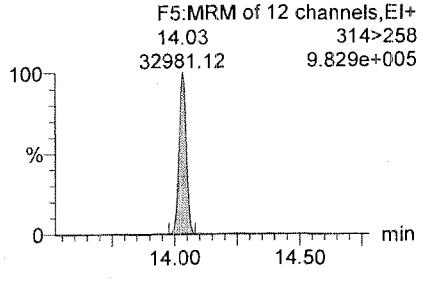
Chlorpyrifos-d10|CASID30732



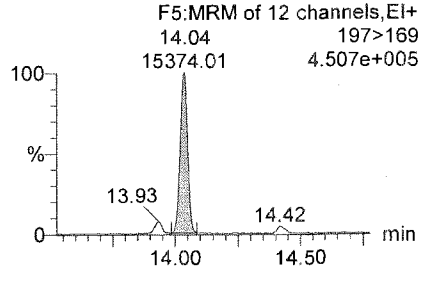
Chlorpyrifos-d10|CASID30732



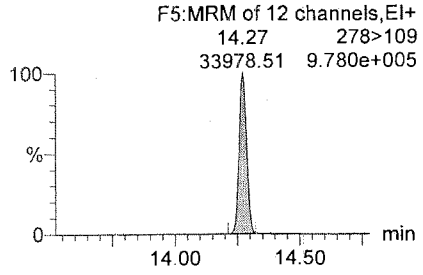
Chlorpyrifos|2921-88-2



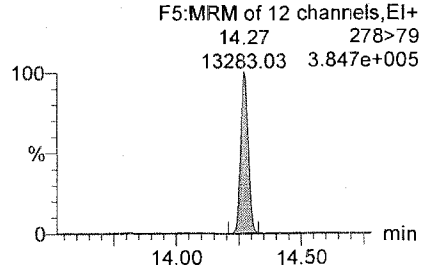
Chlorpyrifos|2921-88-2



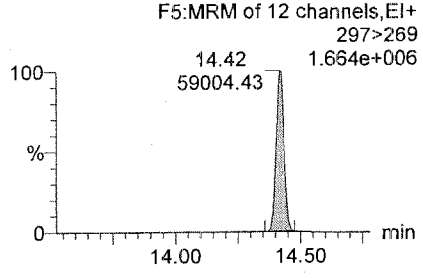
Fenthion|55-38-9



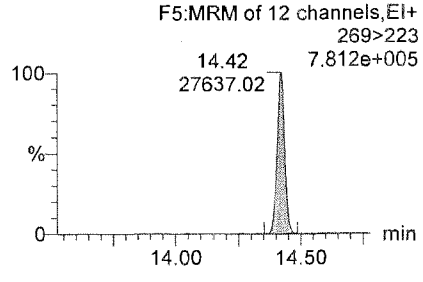
Fenthion|55-38-9



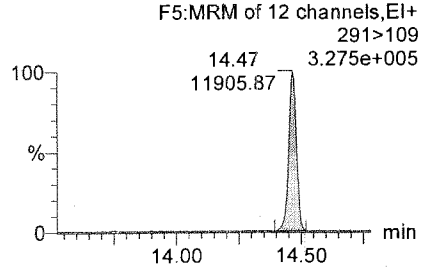
Trichloronate|327-98-0



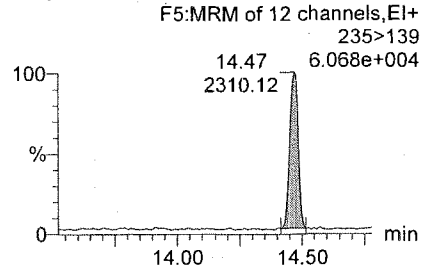
Trichloronate|327-98-0



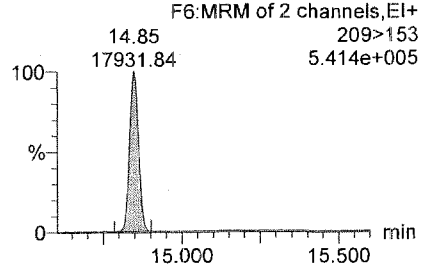
Ethyl Parathion|56-38-2



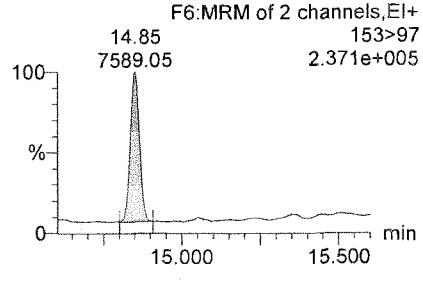
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



2255

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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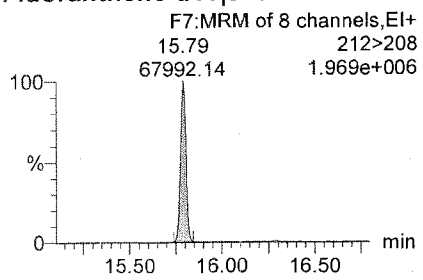
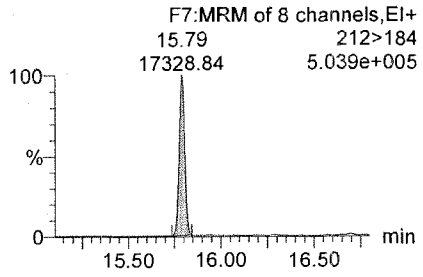
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

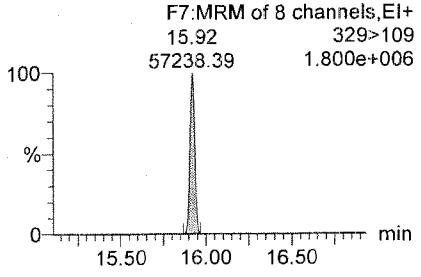
Fluoranthene-d10|93951-69-0



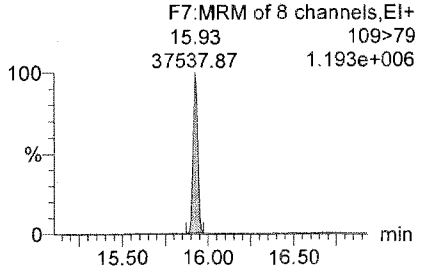
Fluoranthene-d10|93951-69-0



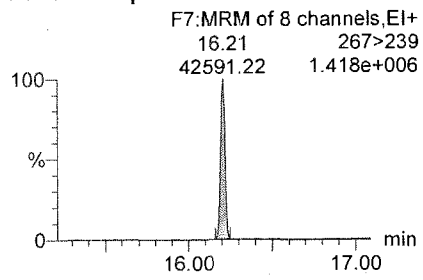
Stirophos|22248-79-9



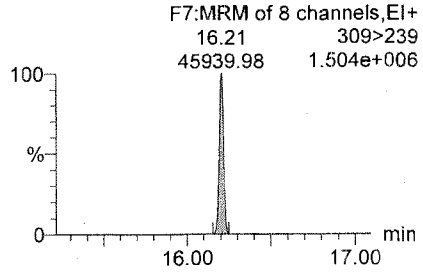
Stirophos|22248-79-9



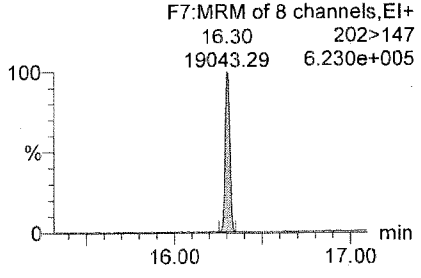
Tokuthion|34643-46-4



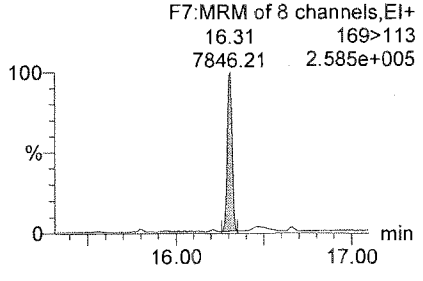
Tokuthion|34643-46-4



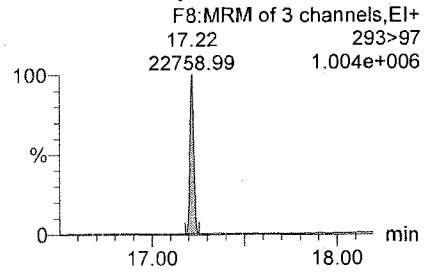
Merphos oxone|78-48-8



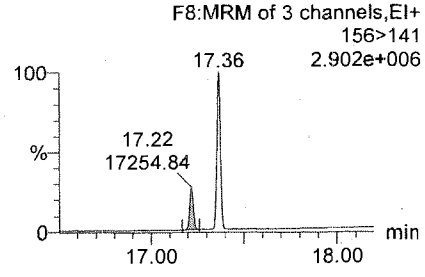
Merphos oxone|78-48-8



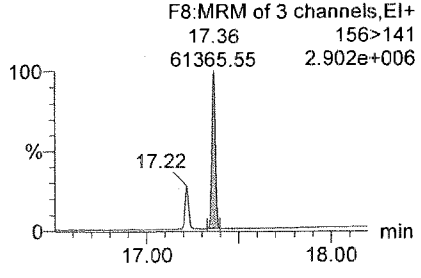
Fensulfothion|115-90-2



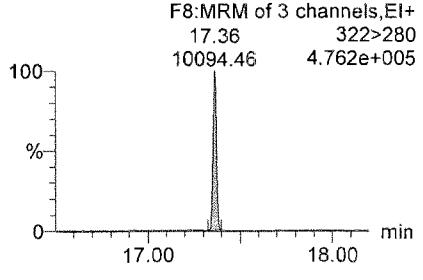
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



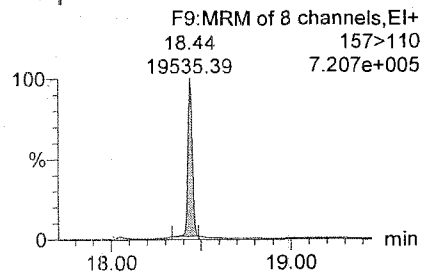
2256

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

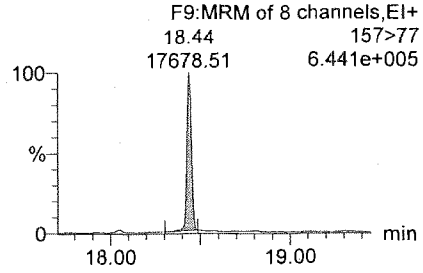
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F008, Date: 10-Oct-2013, Time: 12:03:44, ID: ICAL 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

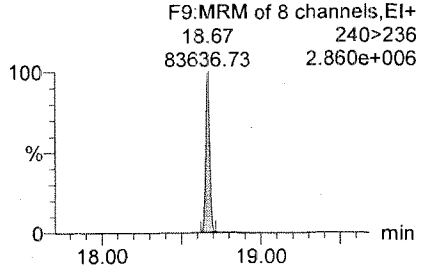
EPN|2104-64-5



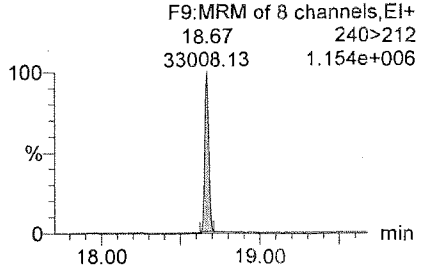
EPN|2104-64-5



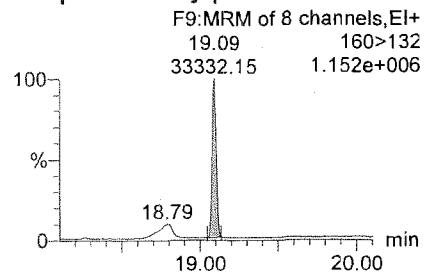
Chrysene-d12|1719-03-5



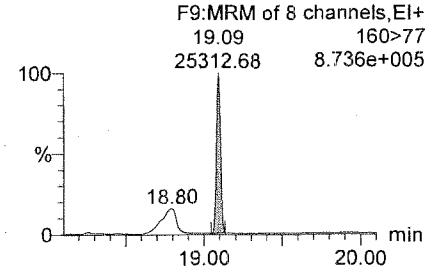
Chrysene-d12|1719-03-5



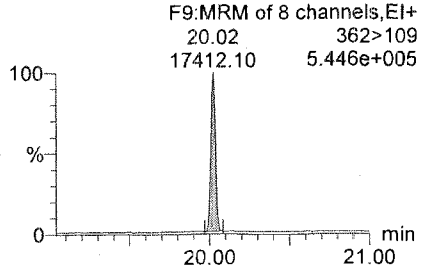
Azinphos methyl|86-50-0



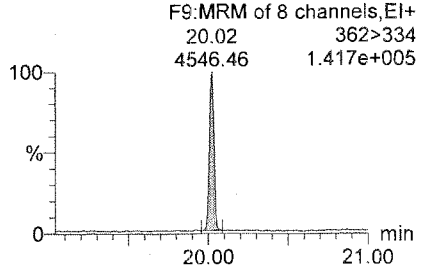
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2257

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	75869.664		bb		102.28	2.3	3.582	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	6859.799	75869.664	bb		115.67	-3.6	1.734	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	87905.727	75869.664	bb		127.79	6.5	3.371	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	40438.453	75869.664	bd		119.43	-0.5	2.661	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	1875.036	75869.664	bb		116.31	-3.1	1.844	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	15265.822	75869.664	bb		119.88	-0.1	1.666	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	20239.320	75869.664	bb		119.44	-0.5	2.089	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	1331.540	75869.664	bb		119.28	-0.6	3.993	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	10720.104	75869.664	bb		118.40	-1.3	2.676	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	50321.656	75869.664	bb		112.46	-6.3	4.411	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	2982.144	75869.664	bb		111.42	-7.1	1.883	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	18017.484	75869.664	bb		116.29	-3.1	1.453	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	21648.857	75869.664	bb		115.53	-3.7	1.261	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	15963.984	75869.664	bb		115.33	-3.9	3.196	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	6850.101	75869.664	bb		121.19	1.0	1.962	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	66162.117	67909.039	bb		120.18	0.1	1.484	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	21125.275	67909.039	bb		115.22	-4.0	0.849	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	40720.945	67909.039	bb		117.20	-2.3	1.429	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	52745.016	67909.039	bb		119.48	-0.4	2.929	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	37847.453	67909.039	bb		118.01	-1.7	2.139	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	38700.895	67909.039	bb		117.32	-2.2	2.483	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	66017.188	67909.039	bb		117.15	-2.4	2.083	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	13568.412	67909.039	bb		116.06	-3.3	4.983	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	21981.088	67909.039	bb		118.81	-1.0	2.419	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	67909.039		bb		99.44	-0.6	4.017	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	67613.234	67909.039	bb		118.72	-1.1	1.523	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	49891.359	67909.039	bb		119.07	-0.8	0.944	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	21726.883	67909.039	bb		117.19	-2.3	2.477	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	26768.607	82044.352	bb		117.07	-2.4	1.354	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	71870.352	82044.352	bb		120.35	0.3	6.011	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	22584.258	82044.352	bb		116.24	-3.1	1.068	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	82044.352		bb		98.62	-1.4	2.500	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	38685.230	82044.352	bb		116.32	-3.1	1.291	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	19872.033	82044.352	bb		115.71	-3.6	4.122	3.830	NO

10/10/13
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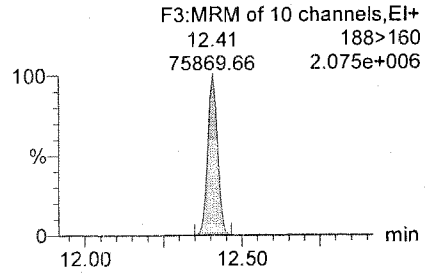
2258

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

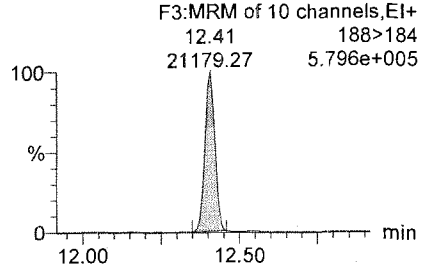
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

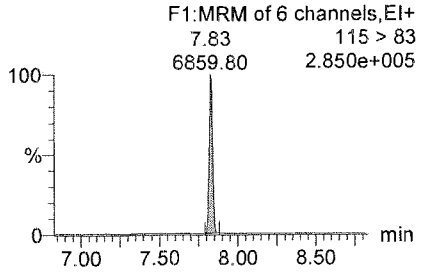
Phenanthrene-d10|1517-22-2



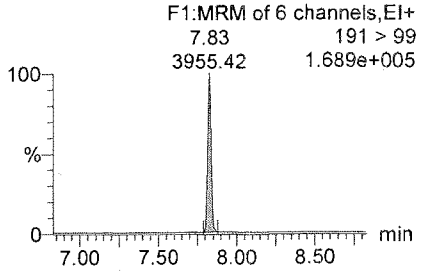
Phenanthrene-d10|1517-22-2



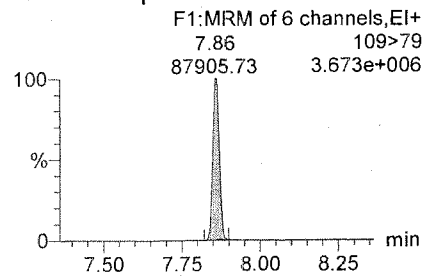
Dichlorvos-d6|203645-53-8



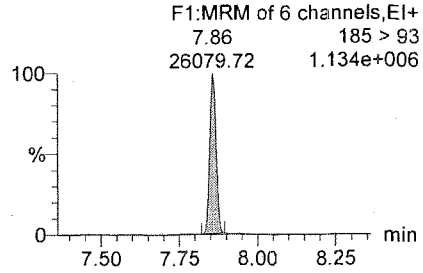
Dichlorvos-d6|203645-53-8



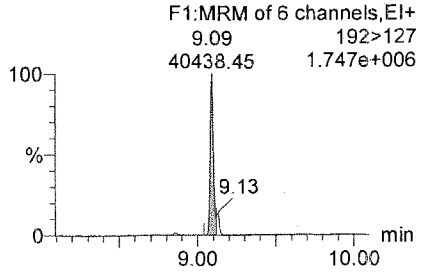
Dichlorvos|62-73-7



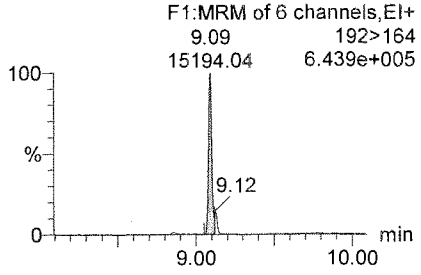
Dichlorvos|62-73-7



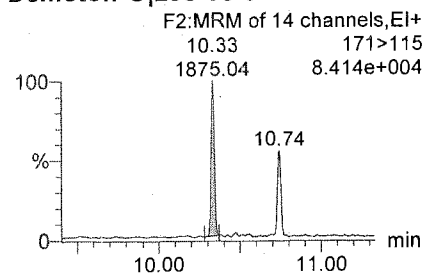
Mevinphos|7786-34-7



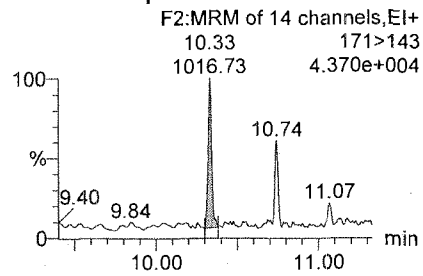
Mevinphos|7786-34-7



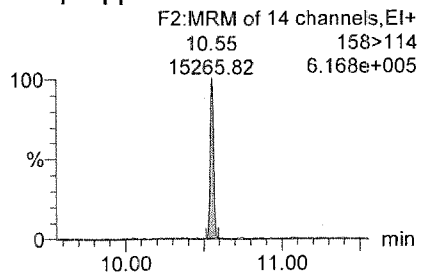
Demeton-O|298-03-3



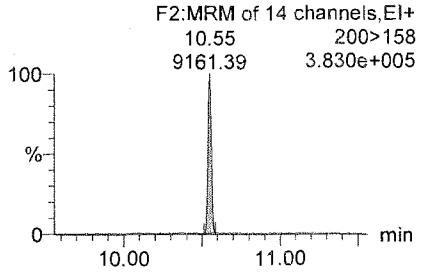
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



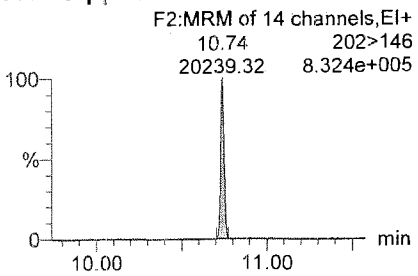
2259

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

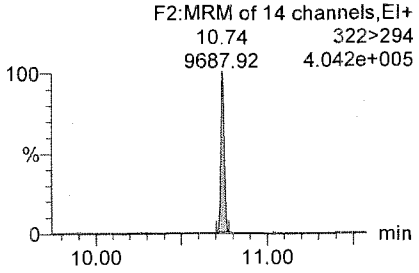
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

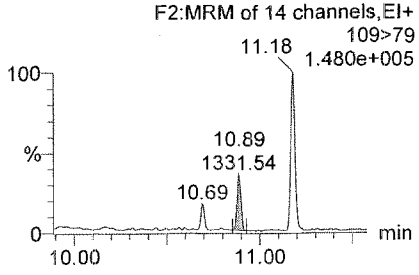
Sulfotep|3689-24-5



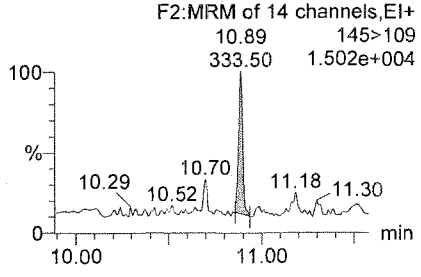
Sulfotep|3689-24-5



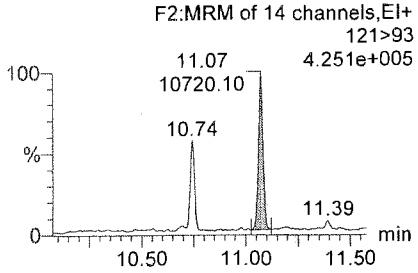
Naled|300-76-5



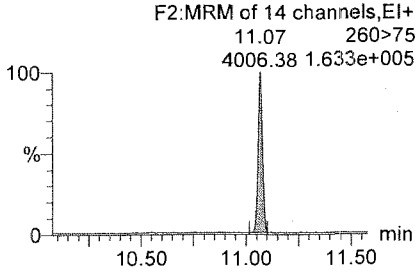
Naled|300-76-5



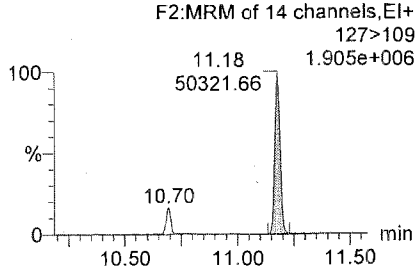
Phorate|298-02-2



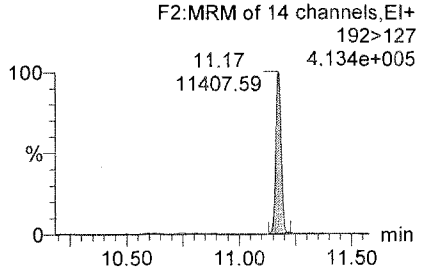
Phorate|298-02-2



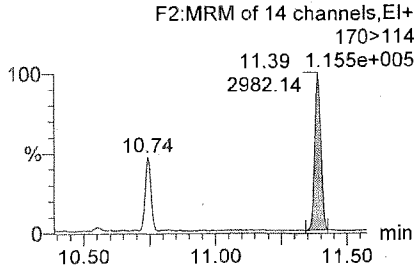
Monocrotophos|6923-22-4



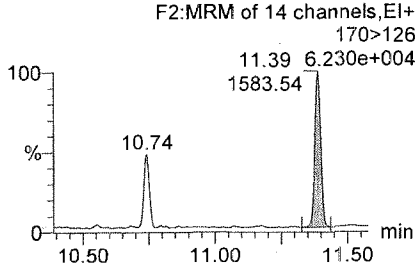
Monocrotophos|6923-22-4



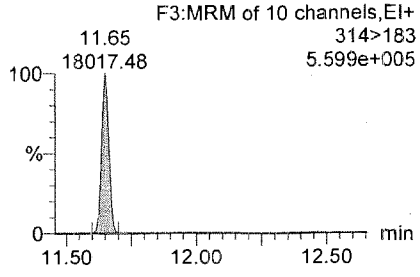
Demeton-S|126-75-0



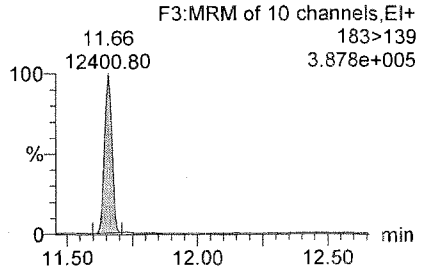
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



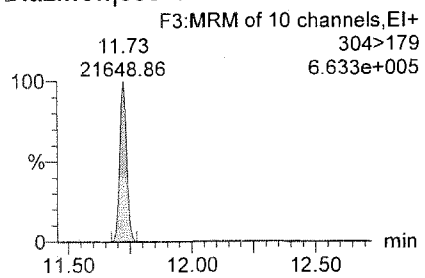
2260

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

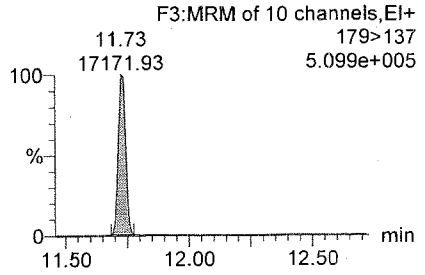
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

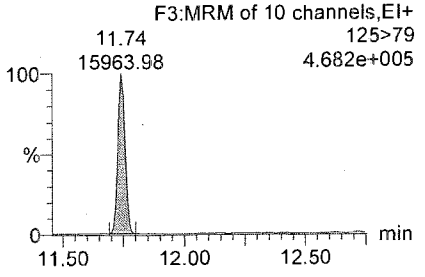
Diazinon|333-41-5



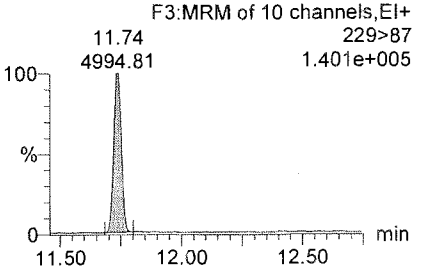
Diazinon|333-41-5



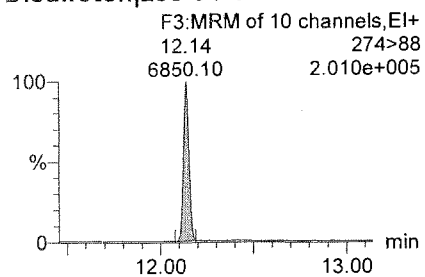
Dimethoate|60-51-5



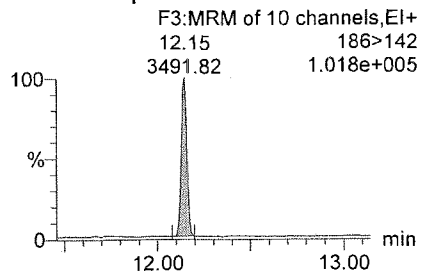
Dimethoate|60-51-5



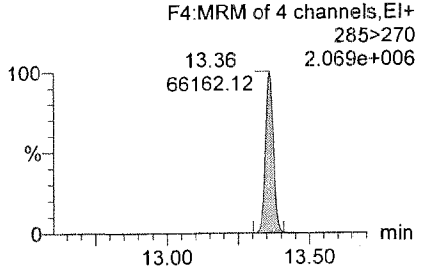
Disulfoton|298-04-4



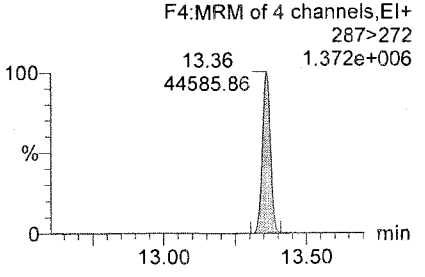
Disulfoton|298-04-4



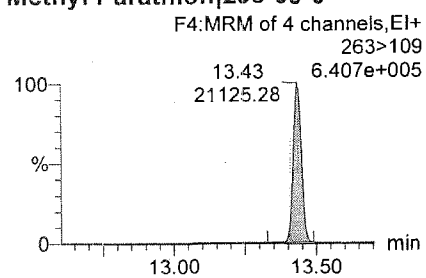
Ronnel|299-84-3



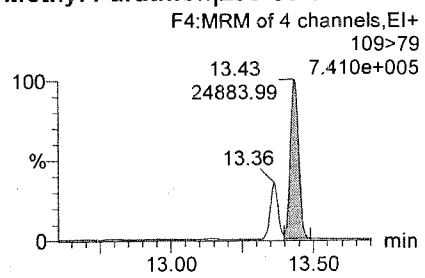
Ronnel|299-84-3



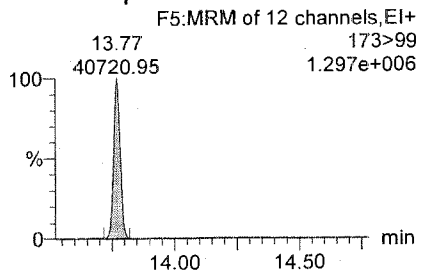
Methyl Parathion|298-00-0



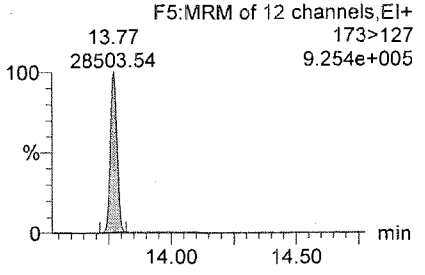
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



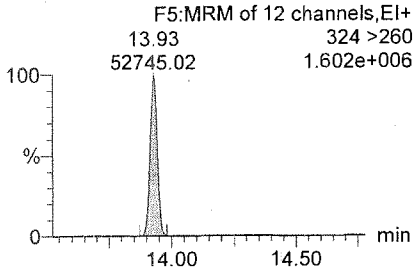
2261

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

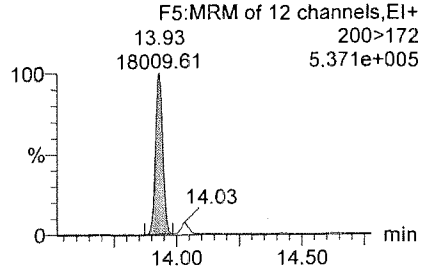
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

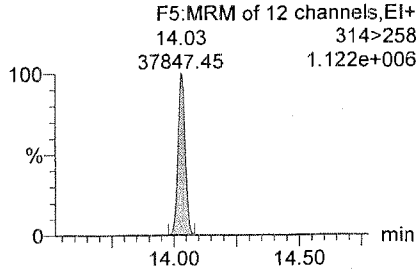
Chlorpyrifos-d10|CASID30732



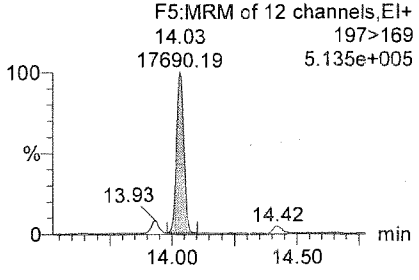
Chlorpyrifos-d10|CASID30732



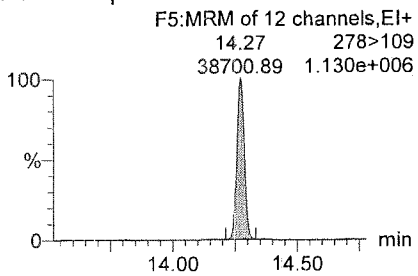
Chlorpyrifos|2921-88-2



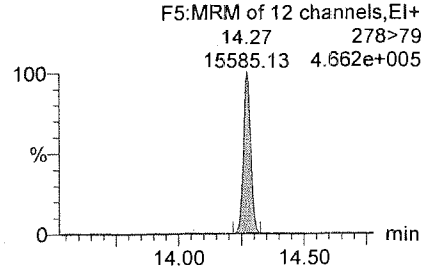
Chlorpyrifos|2921-88-2



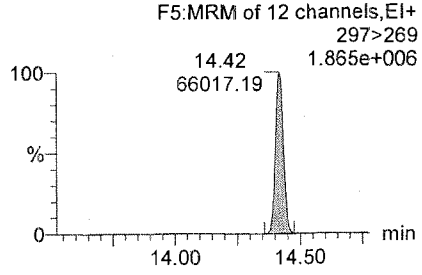
Fenthion|55-38-9



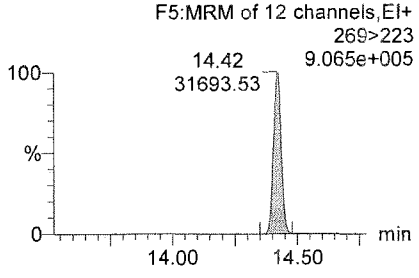
Fenthion|55-38-9



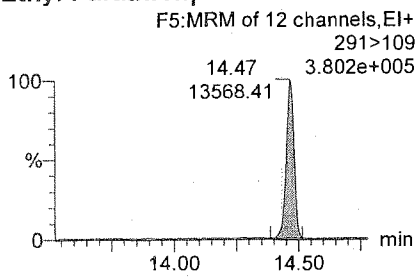
Trichloronate|327-98-0



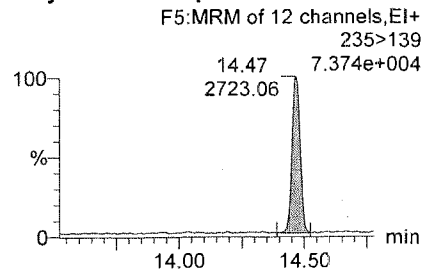
Trichloronate|327-98-0



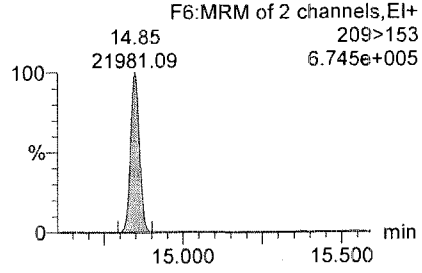
Ethyl Parathion|56-38-2



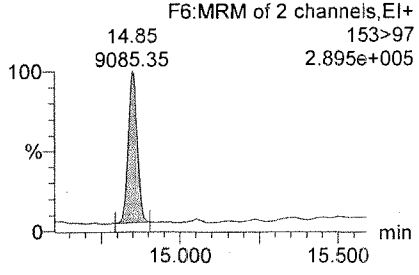
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



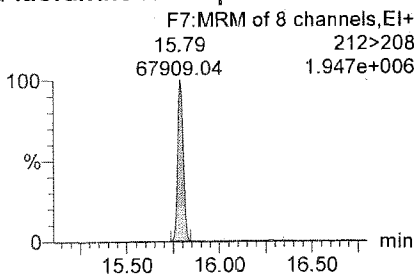
2262

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

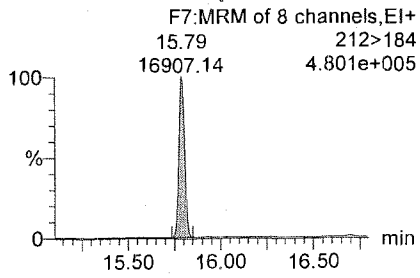
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

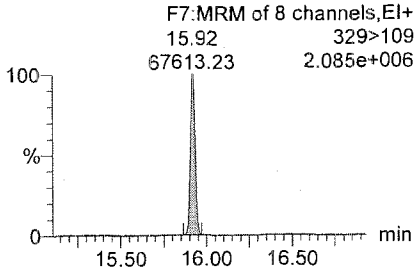
Fluoranthene-d10|93951-69-0



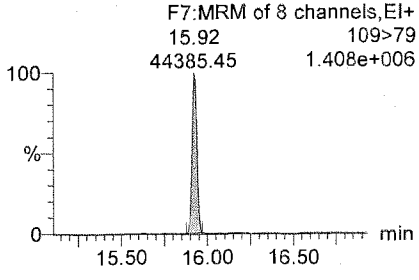
Fluoranthene-d10|93951-69-0



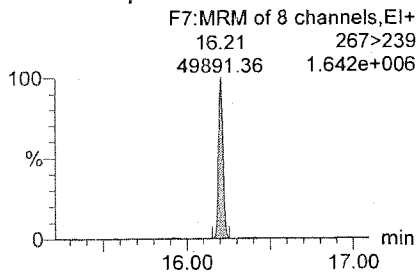
Stirophos|22248-79-9



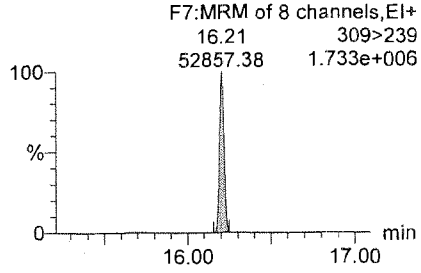
Stirophos|22248-79-9



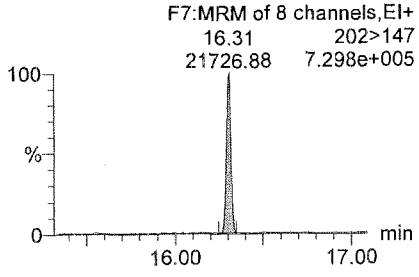
Tokuthion|34643-46-4



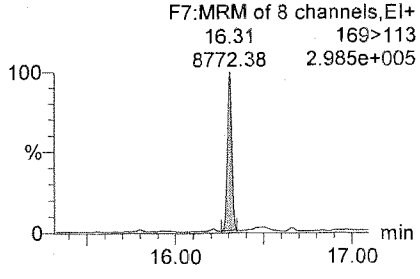
Tokuthion|34643-46-4



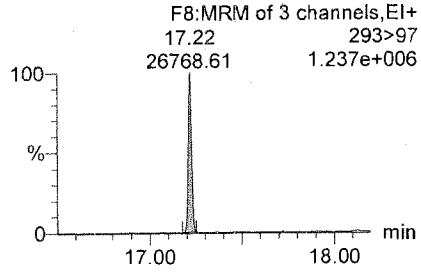
Merphos oxone|78-48-8



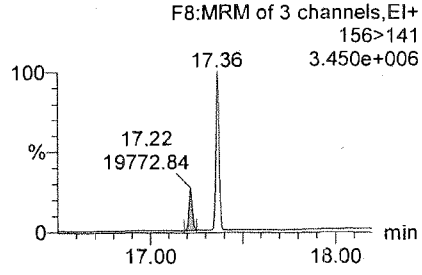
Merphos oxone|78-48-8



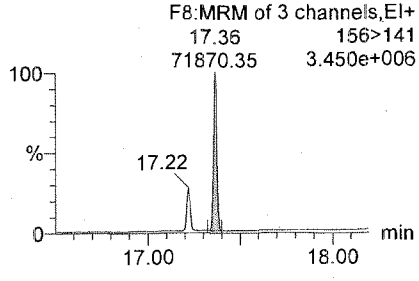
Fensulfothion|115-90-2



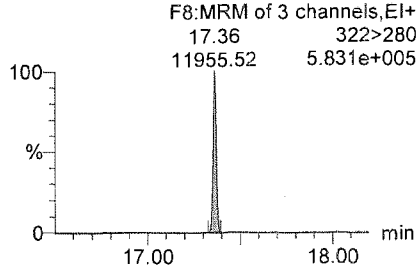
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



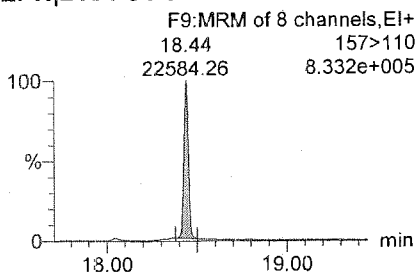
2263

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

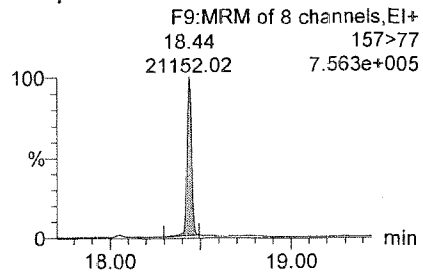
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F009, Date: 10-Oct-2013, Time: 12:30:01, ID: ICAL 120, Description: oppest 120ng/ml svm44-30g, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

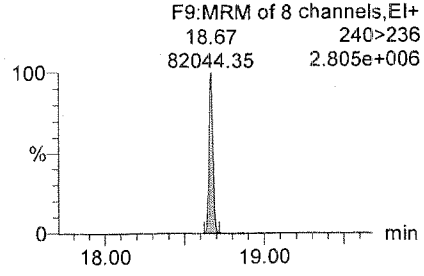
EPN|2104-64-5



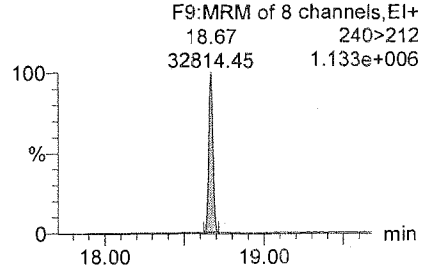
EPN|2104-64-5



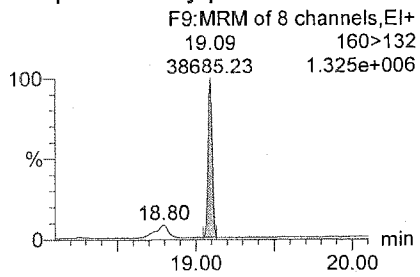
Chrysene-d12|1719-03-5



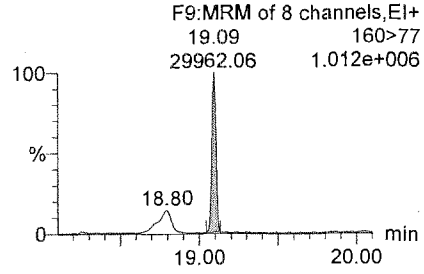
Chrysene-d12|1719-03-5



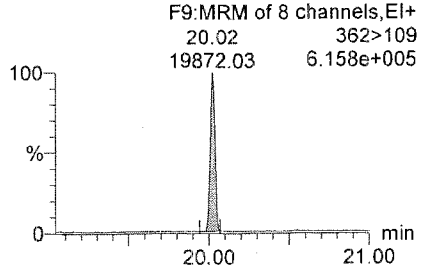
Azinphos methyl|86-50-0



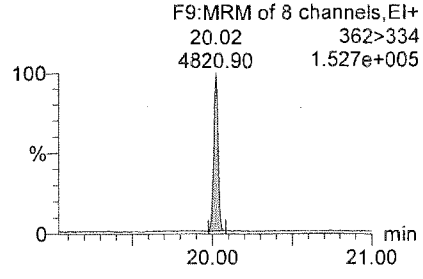
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2264

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F010, Date: 10-Oct-2013, Time: 12:57:03, ID: ICAL 160, Description: oppest 160ng/ml svm44-30h, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

10/15/13

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	73239.500		bb		98.73	-1.3	3.530	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	9446.575	73239.500	bb		165.01	3.1	1.798	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	123543.664	73239.500	bb		186.05	16.3	3.453	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	54026.203	73239.500	bd		165.29	3.3	2.702	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	2412.370	73239.500	bb		155.01	-3.1	2.231	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	19743.949	73239.500	bb		160.62	0.4	1.726	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	26966.729	73239.500	bb		159.28	-0.4	2.100	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	1726.118	73239.500	bb		151.82	-5.1	3.303	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	14144.467	73239.500	bb		161.83	1.1	2.667	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	70705.828	73239.500	bb		163.68	2.3	4.418	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	3930.539	73239.500	bb		152.13	-4.9	1.721	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	24939.354	73239.500	bb		166.75	4.2	1.503	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	29682.451	73239.500	bb		164.09	2.6	1.281	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	20960.584	73239.500	bb		156.87	-2.0	3.238	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	8976.276	73239.500	bb		164.50	2.8	1.866	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	91404.477	69226.883	bb		162.87	1.8	1.503	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	28736.736	69226.883	bb		153.75	-3.9	0.849	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	55734.504	69226.883	bb		157.35	-1.7	1.456	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	71068.078	69226.883	bb		157.92	-1.3	2.865	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	51162.477	69226.883	bb		156.49	-2.2	2.184	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	52346.727	69226.883	bb		155.66	-2.7	2.427	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	88871.000	69226.883	bb		154.70	-3.3	2.080	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	18774.322	69226.883	bb		157.54	-1.5	5.367	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	32326.955	69226.883	bb		161.15	0.7	2.449	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	69226.883		bb		101.37	1.4	4.001	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	95260.313	69226.883	bb		164.09	2.6	1.500	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	69141.750	69226.883	bb		161.87	1.2	0.938	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	29693.281	69226.883	bb		157.11	-1.8	2.377	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	38789.652	84061.180	bb		165.58	3.5	1.393	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	102961.430	84061.180	bb		168.27	5.2	5.938	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	32633.838	84061.180	bb		163.93	2.5	1.110	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	84061.180		bb		101.04	1.0	2.509	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	57007.855	84061.180	bb		167.30	4.6	1.321	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	28110.016	84061.180	bb		159.76	-0.2	4.152	3.830	NO

2265

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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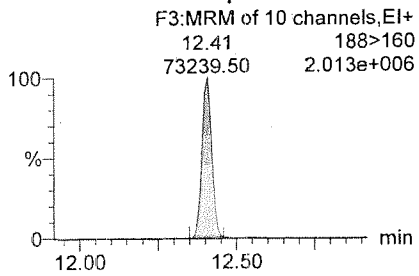
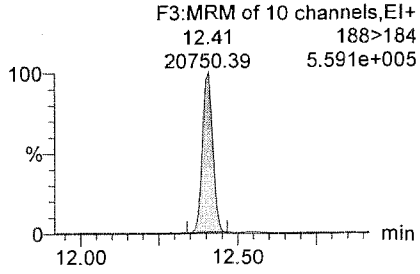
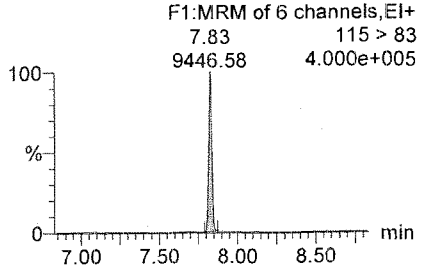
Phenanthrene-d10|1517-22-2



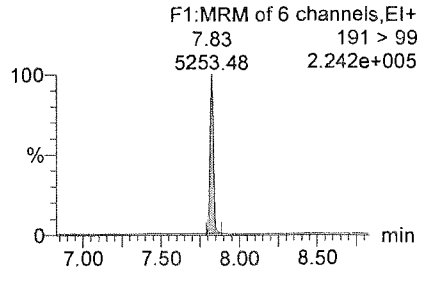
Phenanthrene-d10|1517-22-2



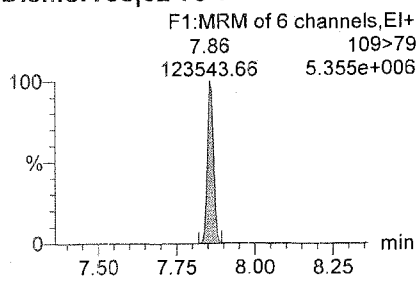
Dichlorvos-d6|203645-53-8



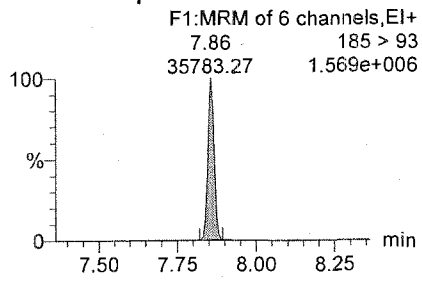
Dichlorvos-d6|203645-53-8



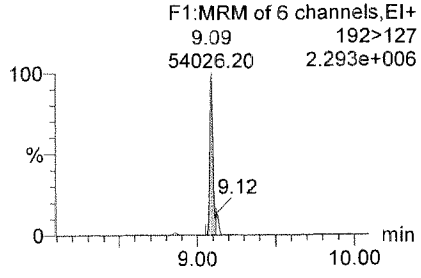
Dichlorvos|62-73-7



Dichlorvos|62-73-7



Mevinphos|7786-34-7



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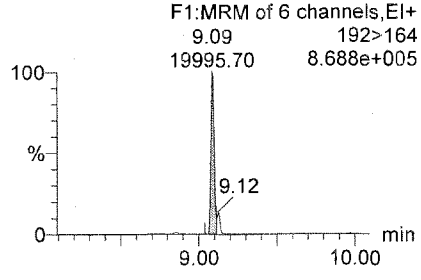
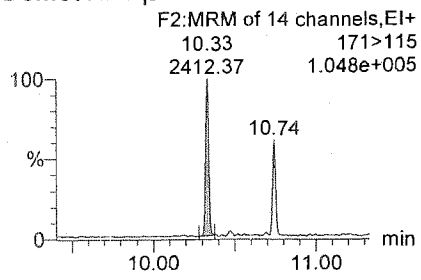
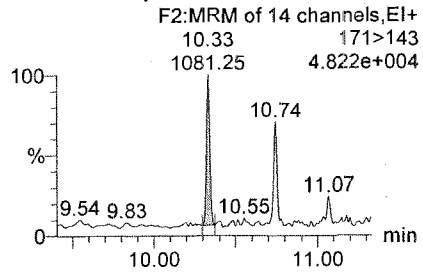


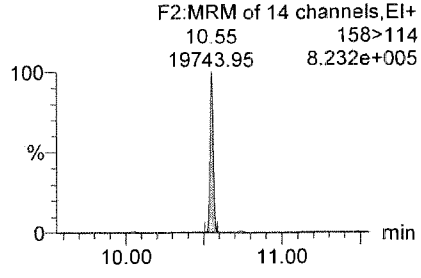
Demeton-O|298-03-3



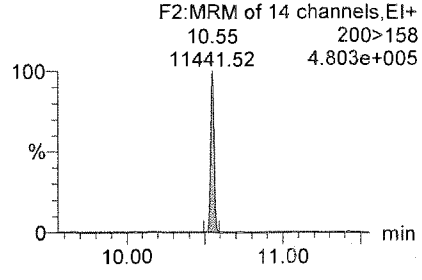
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



2266

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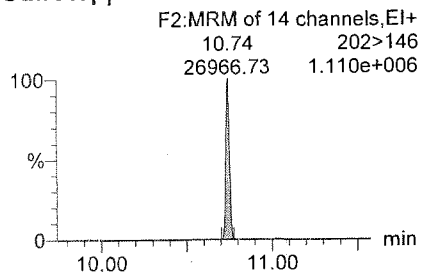
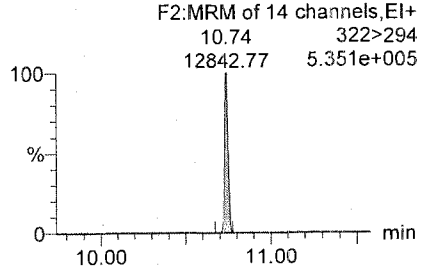
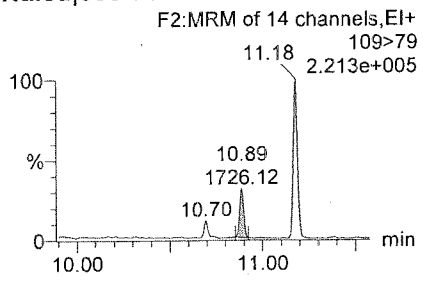
Sulfotep|3689-24-5



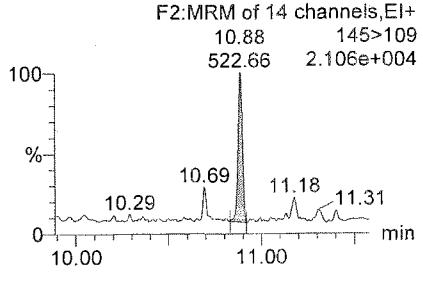
Sulfotep|3689-24-5



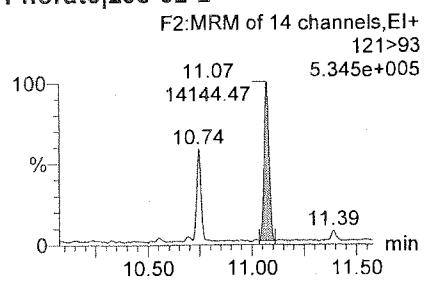
Naled|300-76-5



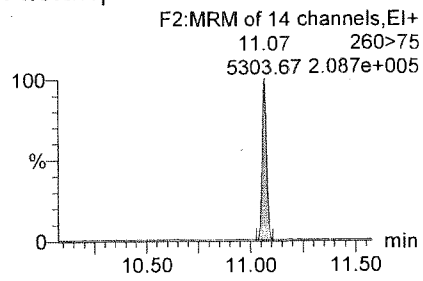
Naled|300-76-5



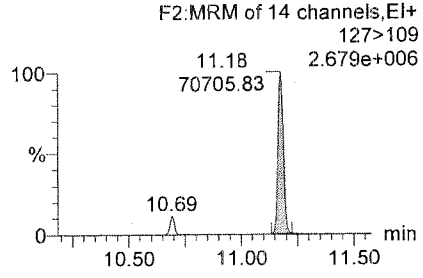
Phorate|298-02-2



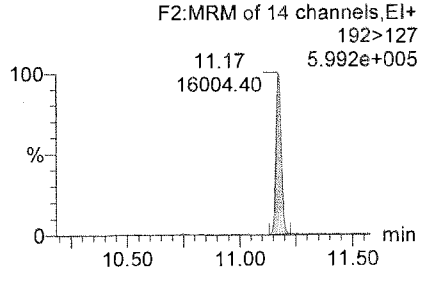
Phorate|298-02-2



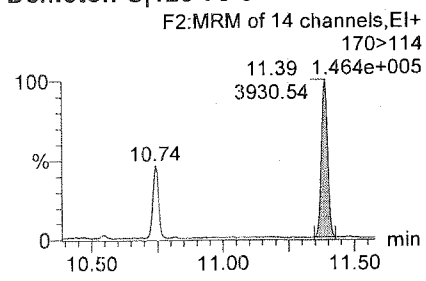
Monocrotophos|6923-22-4



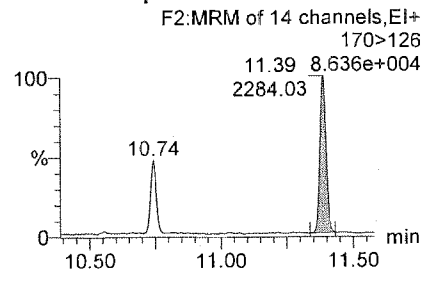
Monocrotophos|6923-22-4



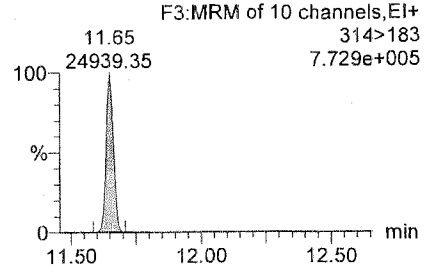
Demeton-S|126-75-0



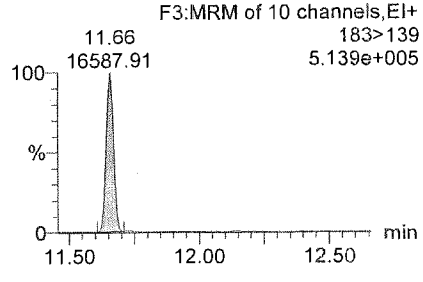
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



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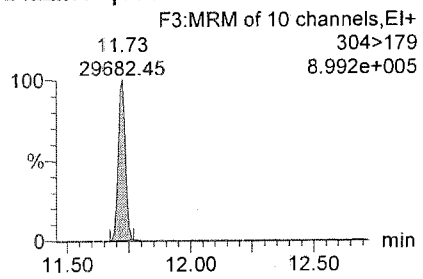
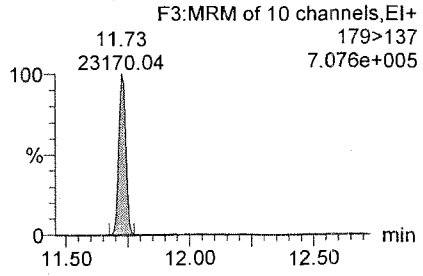
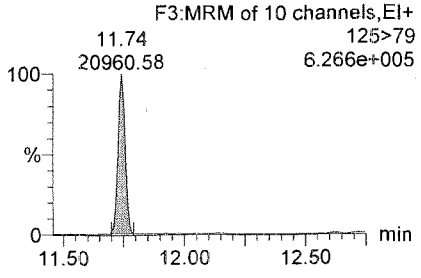
Diazinon|333-41-5



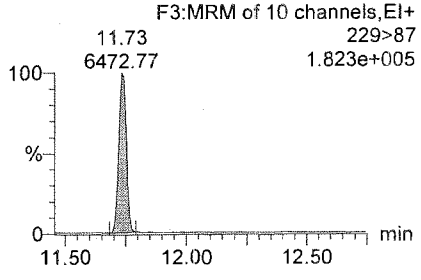
Diazinon|333-41-5



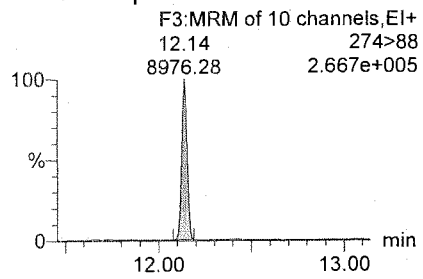
Dimethoate|60-51-5



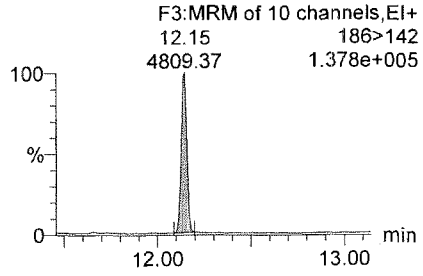
Dimethoate|60-51-5



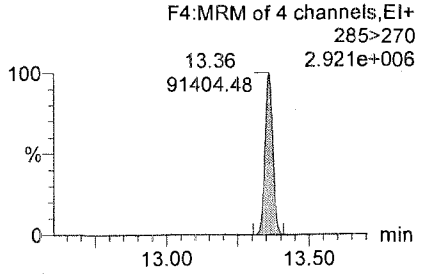
Disulfoton|298-04-4



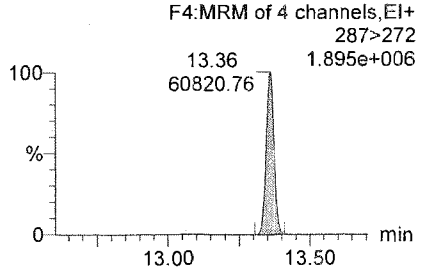
Disulfoton|298-04-4



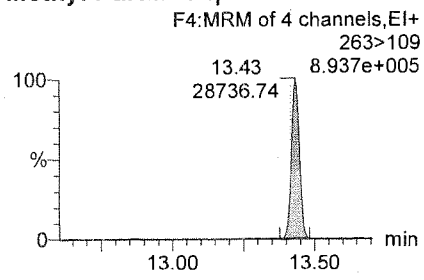
Ronnel|299-84-3



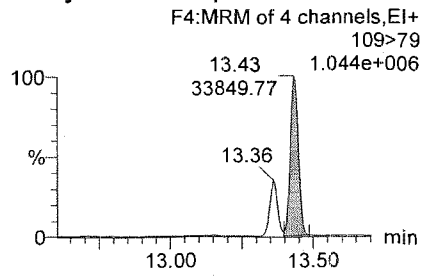
Ronnel|299-84-3



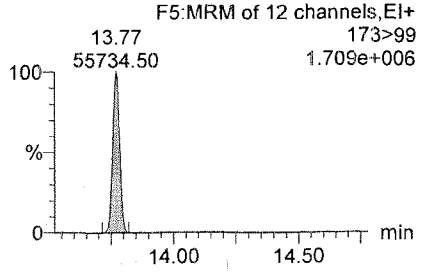
Methyl Parathion|298-00-0



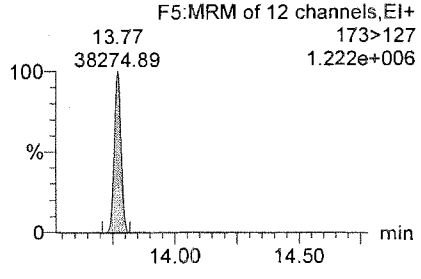
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



2268

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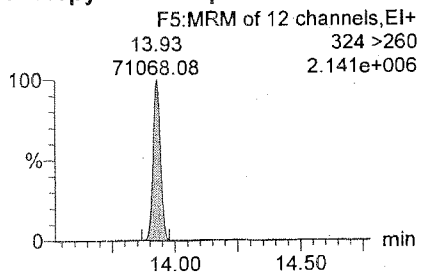
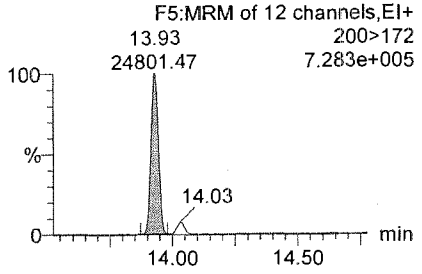
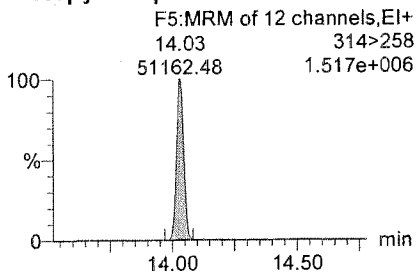
Chlorpyrifos-d10|CASID30732



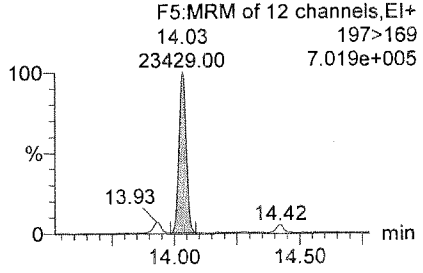
Chlorpyrifos-d10|CASID30732



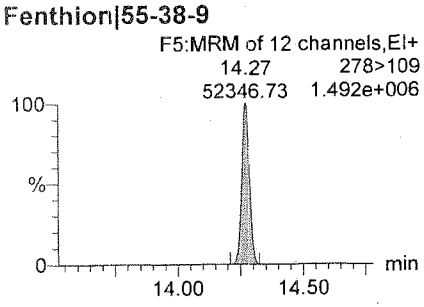
Chlorpyrifos|2921-88-2



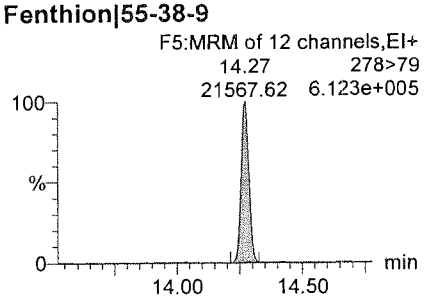
Chlorpyrifos|2921-88-2



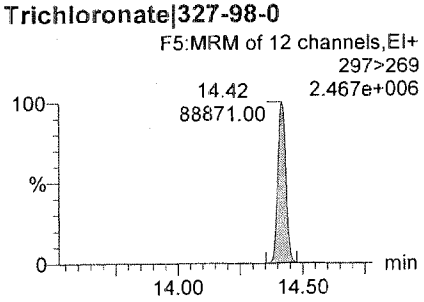
Fenthion|55-38-9



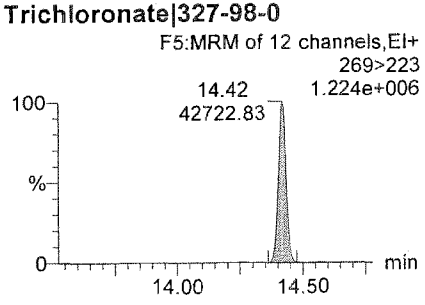
Fenthion|55-38-9



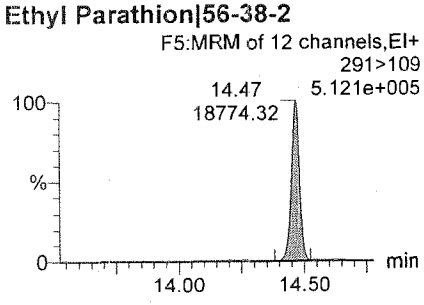
Trichloronate|327-98-0



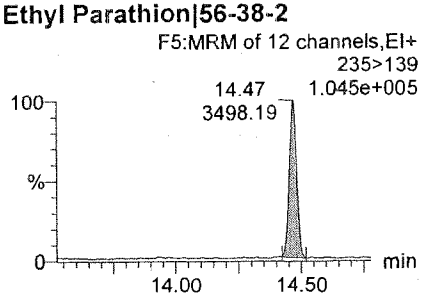
Trichloronate|327-98-0



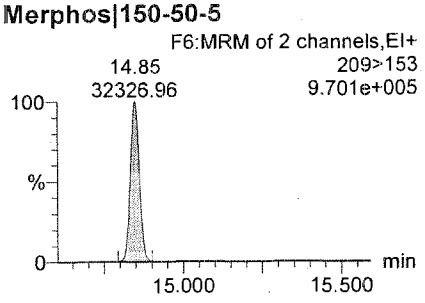
Ethyl Parathion|56-38-2



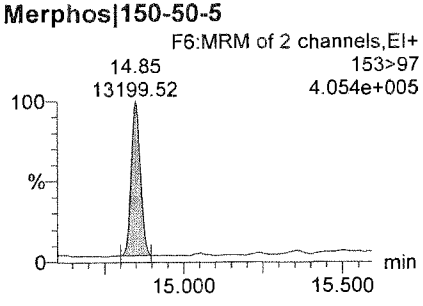
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



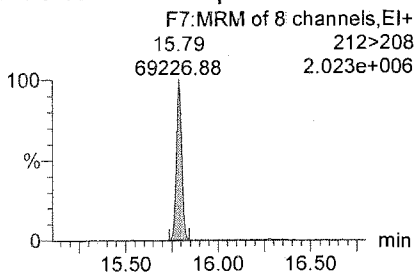
2269

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

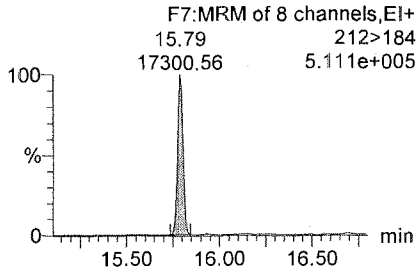
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F010, Date: 10-Oct-2013, Time: 12:57:03, ID: ICAL 160, Description: oppest 160ng/ml svm44-30h, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

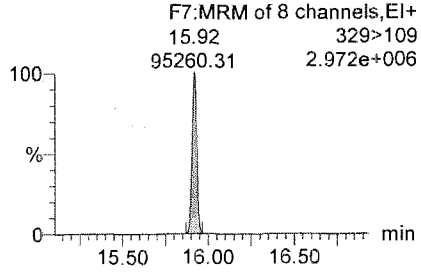
Fluoranthene-d10|93951-69-0



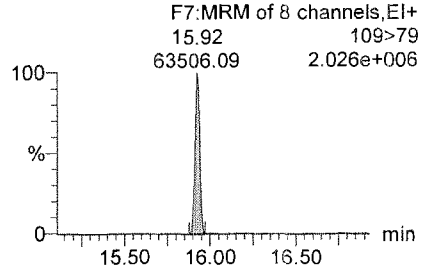
Fluoranthene-d10|93951-69-0



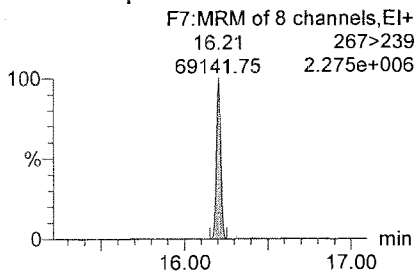
Stirophos|22248-79-9



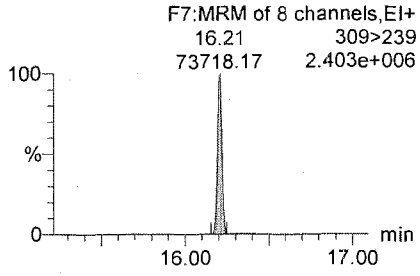
Stirophos|22248-79-9



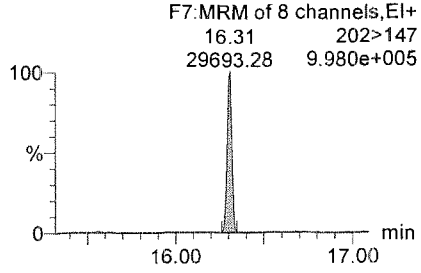
Tokuthion|34643-46-4



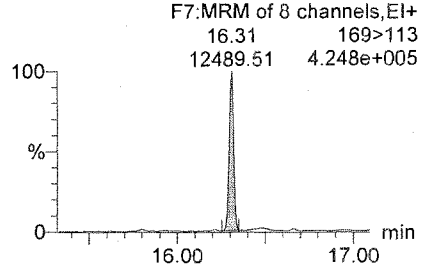
Tokuthion|34643-46-4



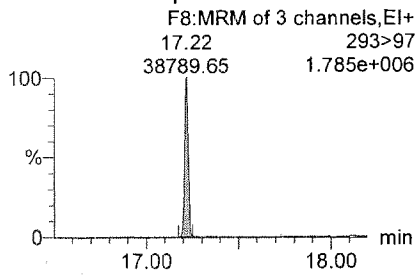
Merphos oxone|78-48-8



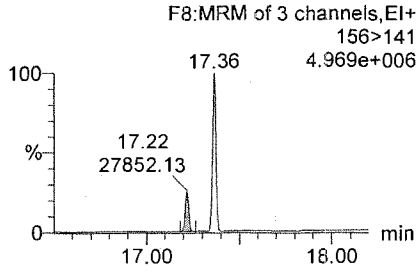
Merphos oxone|78-48-8



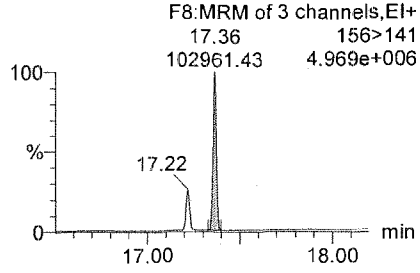
Fensulfothion|115-90-2



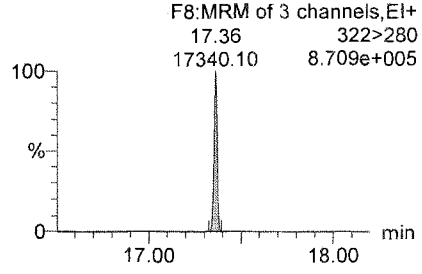
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



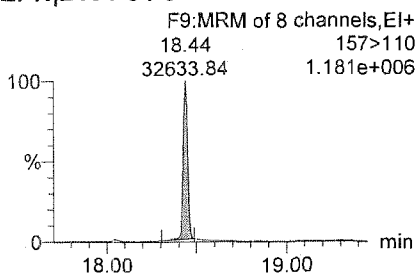
2270

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

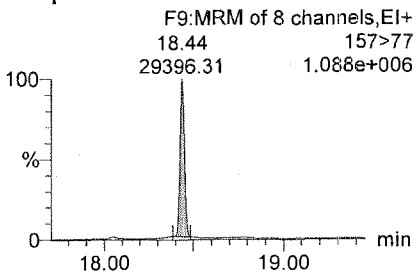
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F010, Date: 10-Oct-2013, Time: 12:57:03, ID: ICAL 160, Description: oppest 160ng/ml svm44-30h, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

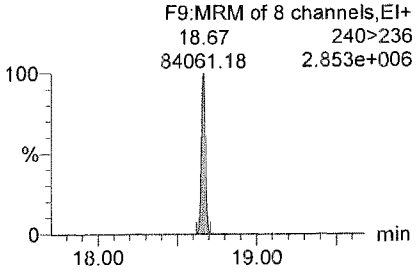
EPN|2104-64-5



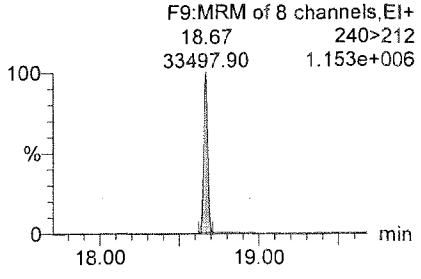
EPN|2104-64-5



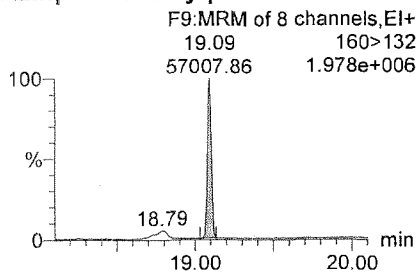
Chrysene-d12|1719-03-5



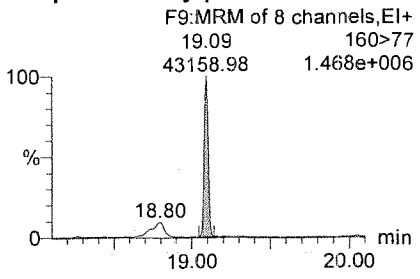
Chrysene-d12|1719-03-5



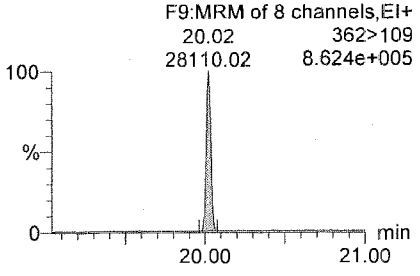
Azinphos methyl|86-50-0



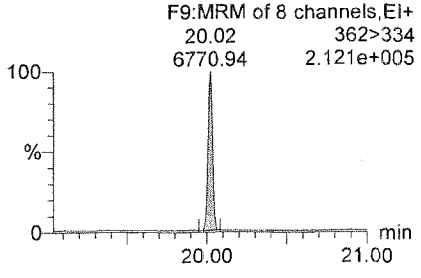
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2271

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	75235.633		bb		101.42	1.4	3.627	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	12062.260	75235.633	bb		205.11	2.6	1.800	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	161728.813	75235.633	bb		237.09	18.5	3.468	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	69531.266	75235.633	bd		207.08	3.5	2.624	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	3336.533	75235.633	bb		208.70	4.4	2.582	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	24794.037	75235.633	bb		196.35	-1.8	1.689	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	35533.730	75235.633	bb		198.00	-1.0	2.130	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	2598.342	75235.633	bb		205.51	2.8	4.430	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	19029.213	75235.633	bb		211.95	6.0	2.832	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	93068.836	75235.633	bb		209.74	4.9	4.379	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	4857.293	75235.633	bb		183.01	-8.5	1.681	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	32448.568	75235.633	bb		211.21	5.6	1.470	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	39228.730	75235.633	bb		211.11	5.6	1.256	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	27341.883	75235.633	bb		199.20	-0.4	3.340	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	11942.720	75235.633	bb		213.06	6.5	1.930	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	121759.797	70655.828	bb		212.57	6.3	1.510	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	37499.957	70655.828	bb		196.57	-1.7	0.840	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	73034.586	70655.828	bb		202.02	1.0	1.468	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	90385.992	70655.828	bb		196.78	-1.6	2.853	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	65856.070	70655.828	bb		197.36	-1.3	2.169	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	68058.258	70655.828	bb		198.29	-0.9	2.444	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	112313.328	70655.828	bb		191.55	-4.2	2.025	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	23725.910	70655.828	bb		195.06	-2.5	5.030	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	42696.223	70655.828	bb		199.33	-0.3	2.478	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	70655.828		bb		103.46	3.5	4.026	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	126252.367	70655.828	bb		213.07	6.5	1.496	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	88763.492	70655.828	bb		203.60	1.8	0.937	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	38890.414	70655.828	bb		201.61	0.8	2.371	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	52203.402	85852.063	bb		218.19	9.1	1.445	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	137224.016	85852.063	bb		219.59	9.8	5.743	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	44412.250	85852.063	bb		218.44	9.2	1.131	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.67	85852.063		bb		103.19	3.2	2.533	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	77614.328	85852.063	bb		223.03	11.5	1.343	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	37151.109	85852.063	bb		206.73	3.4	4.085	3.830	NO

10/15/13
9

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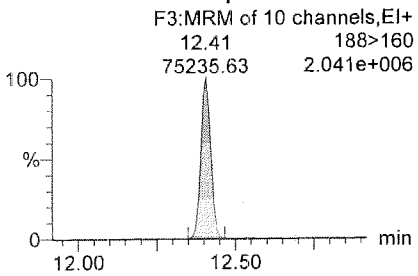
Dataset: C:\PESTEI.PRO\101013oppestcal.qld

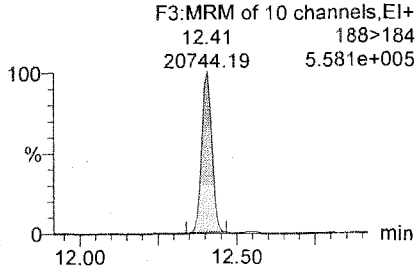
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

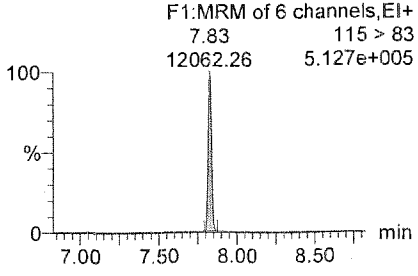
Phenanthrene-d10|1517-22-2



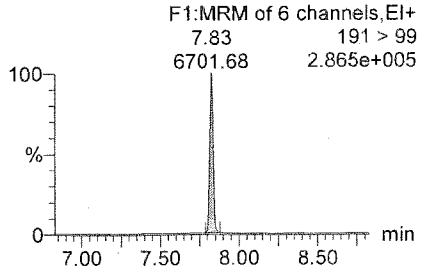
Phenanthrene-d10|1517-22-2



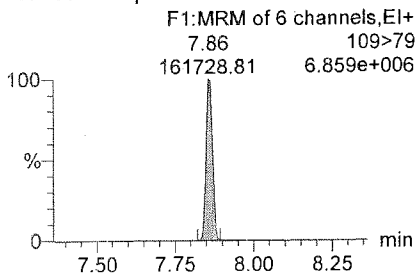
Dichlorvos-d6|203645-53-8



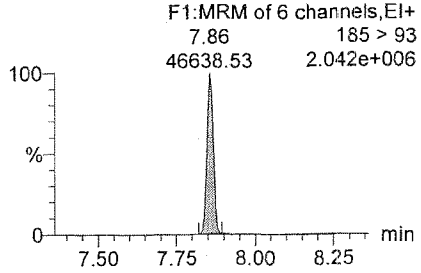
Dichlorvos-d6|203645-53-8



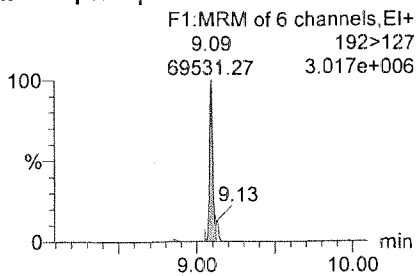
Dichlorvos|62-73-7



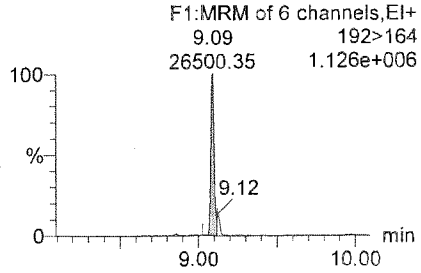
Dichlorvos|62-73-7



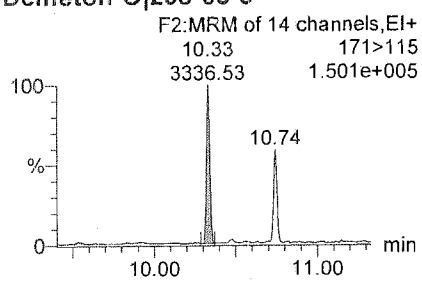
Mevinphos|7786-34-7



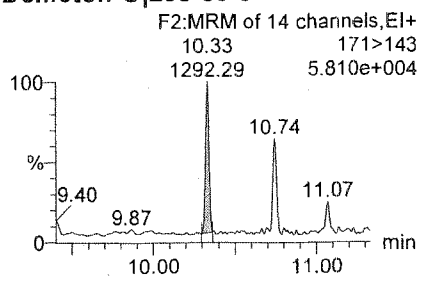
Mevinphos|7786-34-7



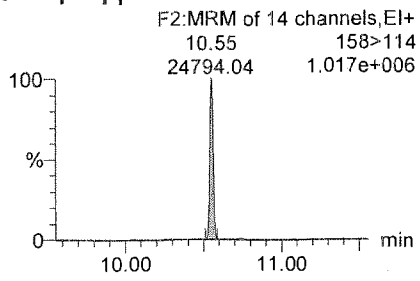
Demeton-O|298-03-3



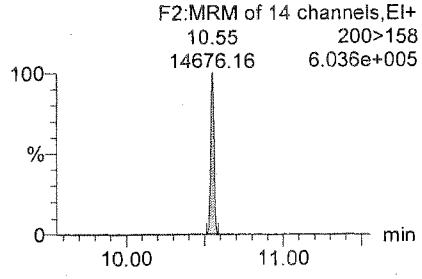
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



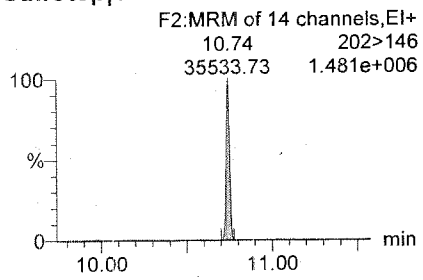
2273

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

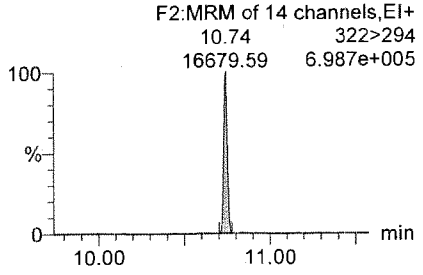
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

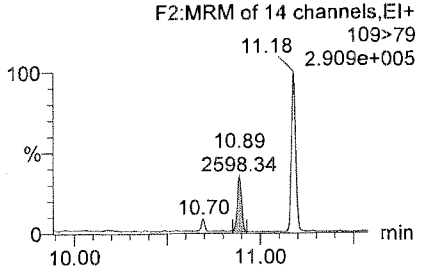
Sulfotep|3689-24-5



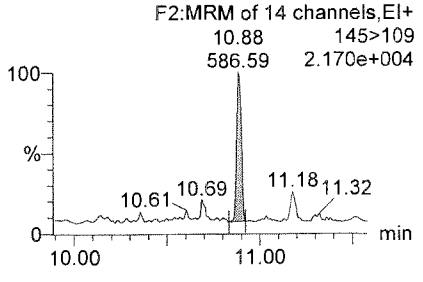
Sulfotep|3689-24-5



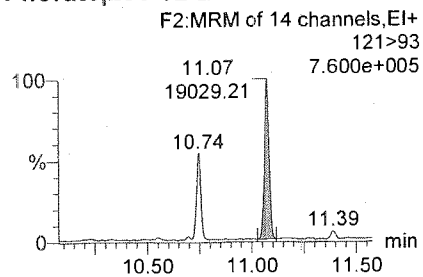
Naled|300-76-5



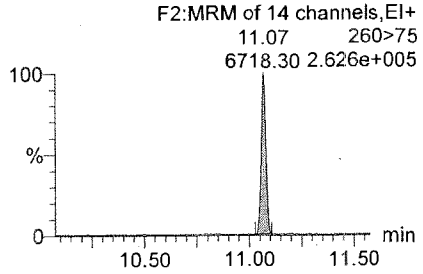
Naled|300-76-5



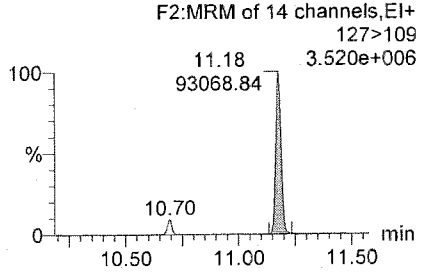
Phorate|298-02-2



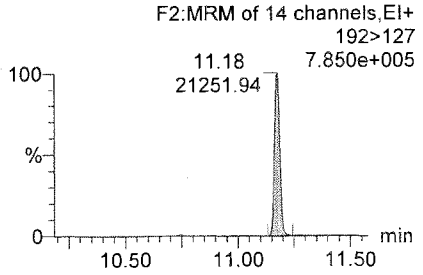
Phorate|298-02-2



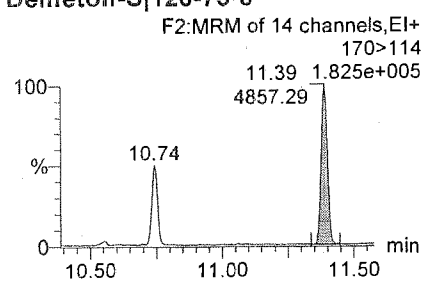
Monocrotophos|6923-22-4



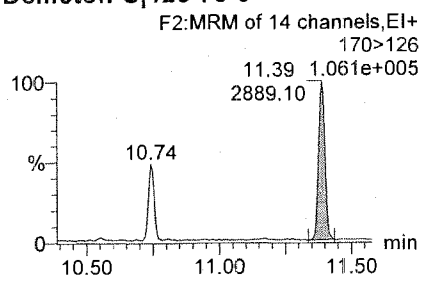
Monocrotophos|6923-22-4



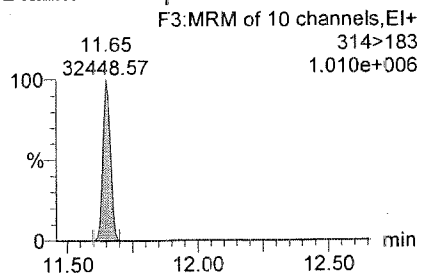
Demeton-S|126-75-0



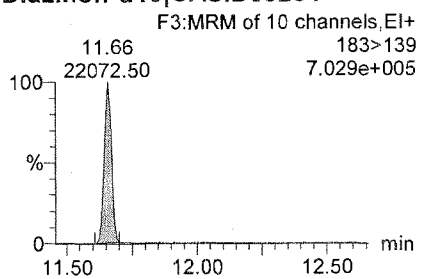
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



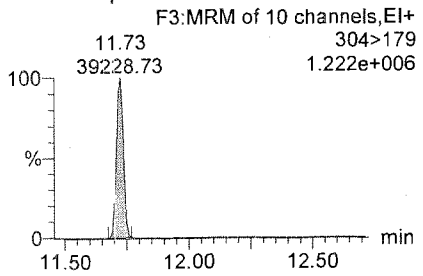
2274

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

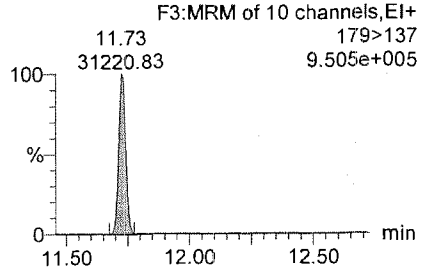
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

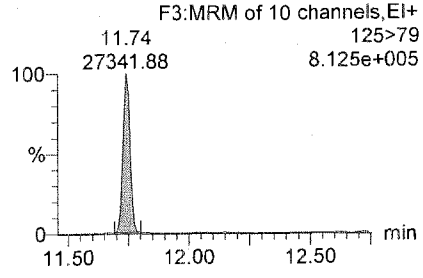
Diazinon|333-41-5



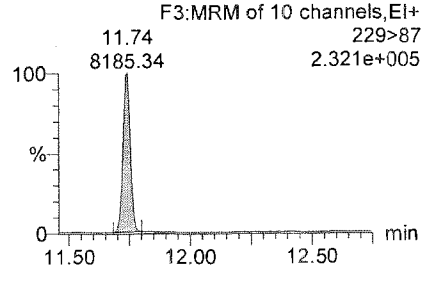
Diazinon|333-41-5



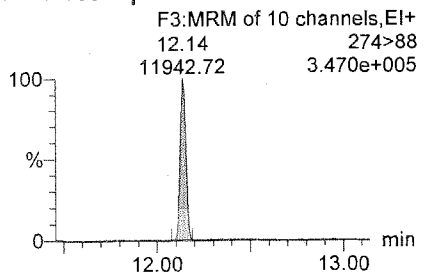
Dimethoate|60-51-5



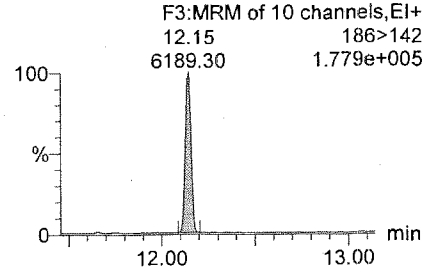
Dimethoate|60-51-5



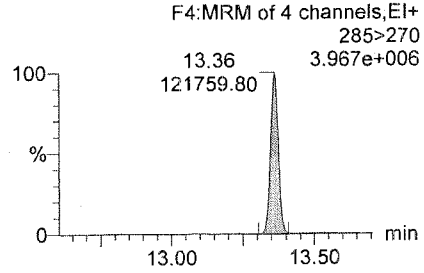
Disulfoton|298-04-4



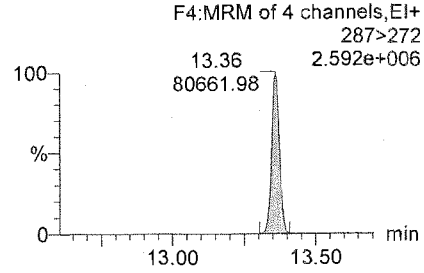
Disulfoton|298-04-4



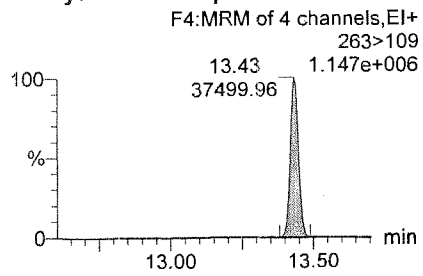
Ronnel|299-84-3



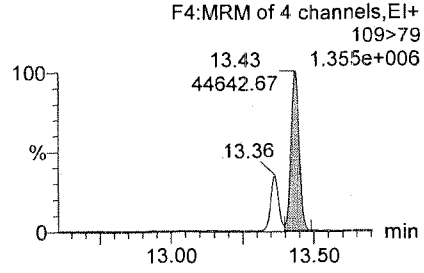
Ronnel|299-84-3



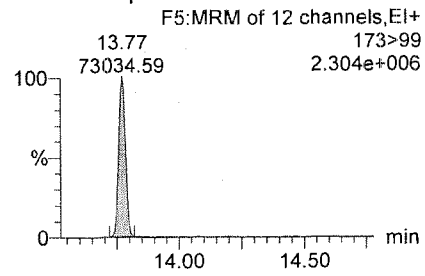
Methyl Parathion|298-00-0



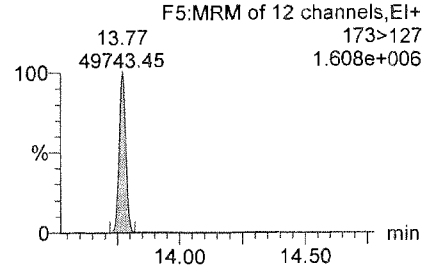
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



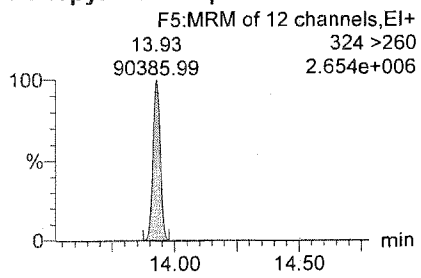
2275

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

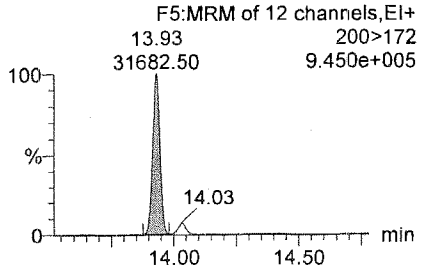
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

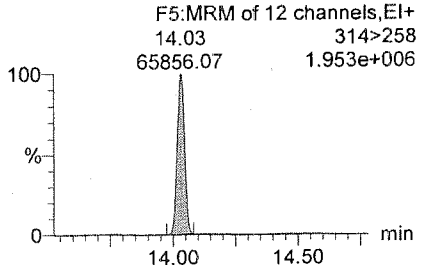
Chlorpyrifos-d10|CASID30732



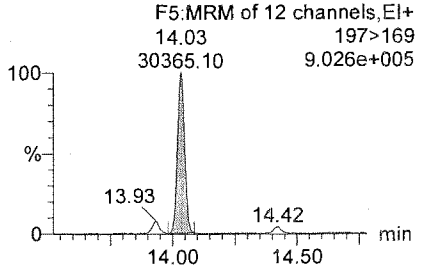
Chlorpyrifos-d10|CASID30732



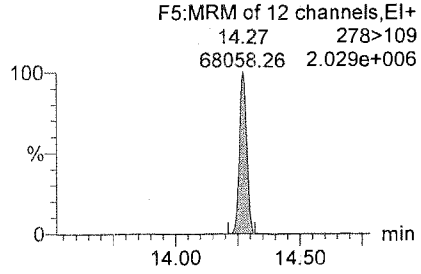
Chlorpyrifos|2921-88-2



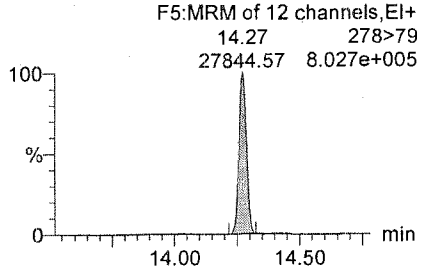
Chlorpyrifos|2921-88-2



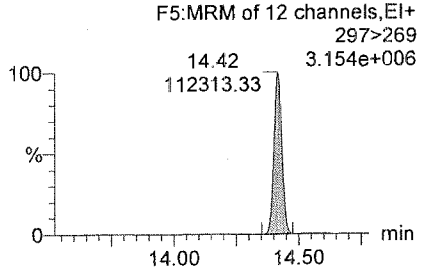
Fenthion|55-38-9



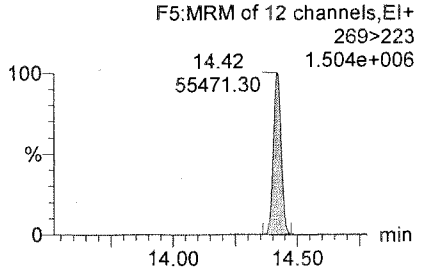
Fenthion|55-38-9



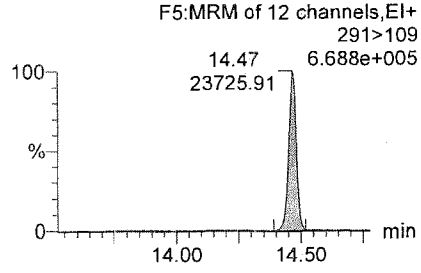
Trichloronate|327-98-0



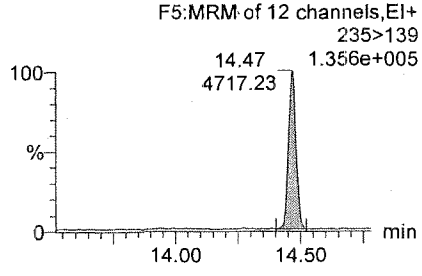
Trichloronate|327-98-0



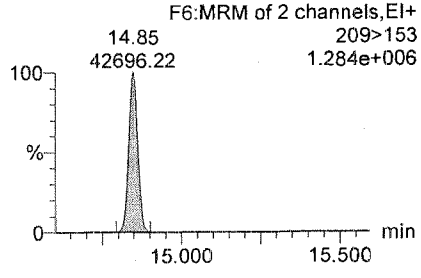
Ethyl Parathion|56-38-2



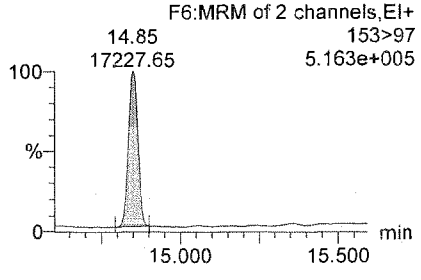
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



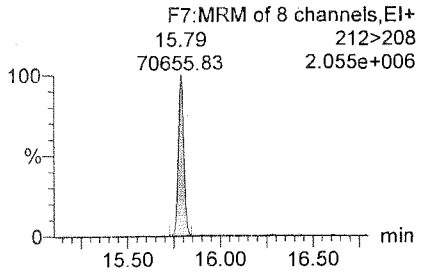
2276

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

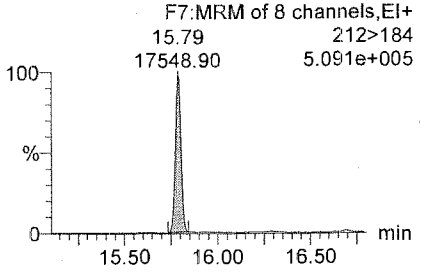
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

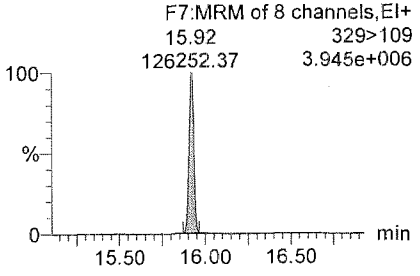
Fluoranthene-d10|93951-69-0



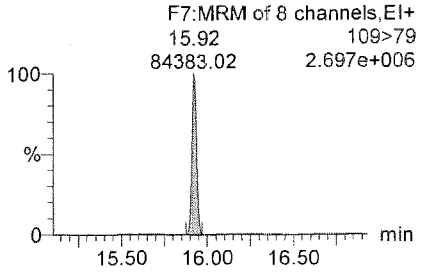
Fluoranthene-d10|93951-69-0



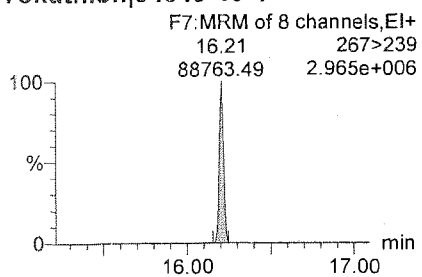
Stirophos|22248-79-9



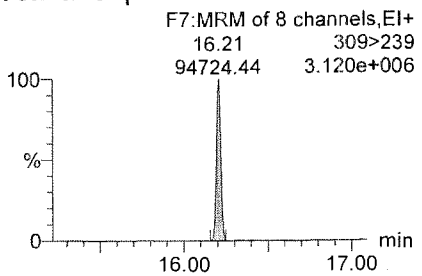
Stirophos|22248-79-9



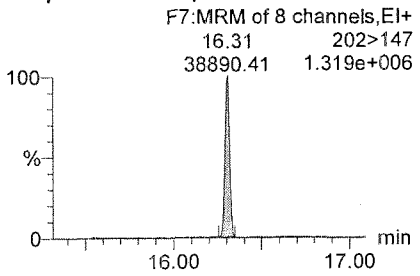
Tokuthion|34643-46-4



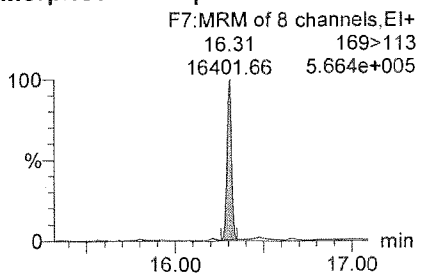
Tokuthion|34643-46-4



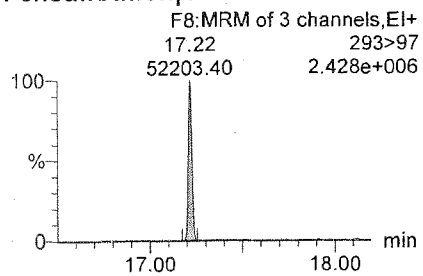
Merphos oxone|78-48-8



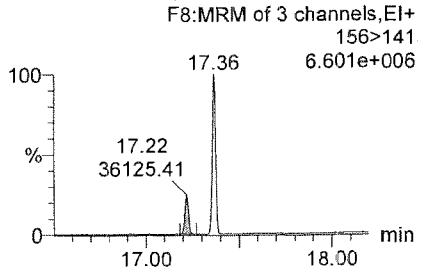
Merphos oxone|78-48-8



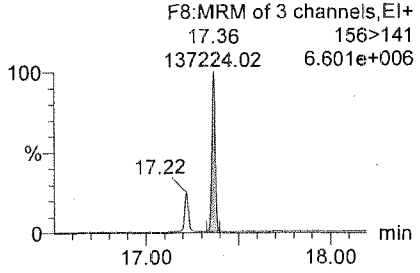
Fensulfothion|115-90-2



Fensulfothion|115-90-2



Bolstar|35400-43-2



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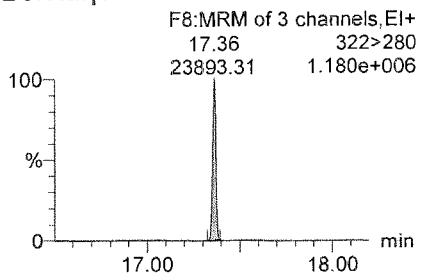


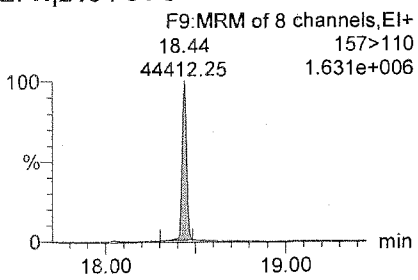
2277

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

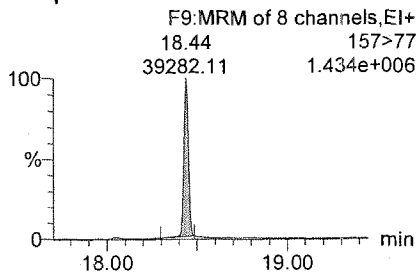
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F011, Date: 10-Oct-2013, Time: 13:24:06, ID: ICAL 200, Description: oppest 200ng/ml svm44-30i, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

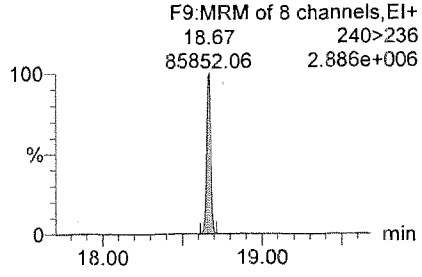
EPN|2104-64-5



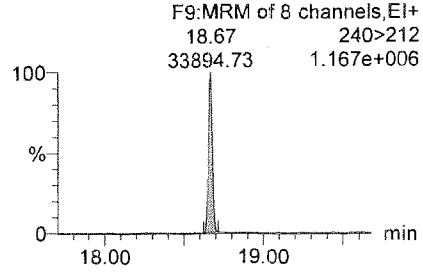
EPN|2104-64-5



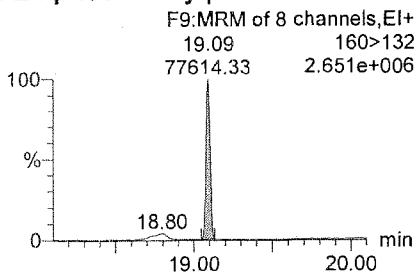
Chrysene-d12|1719-03-5



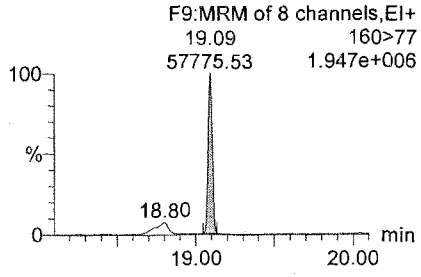
Chrysene-d12|1719-03-5



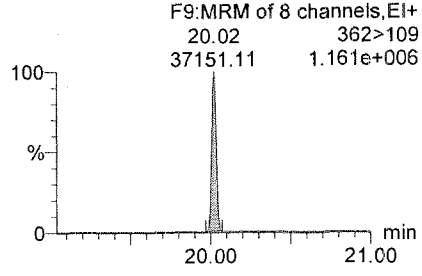
Azinphos methyl|86-50-0



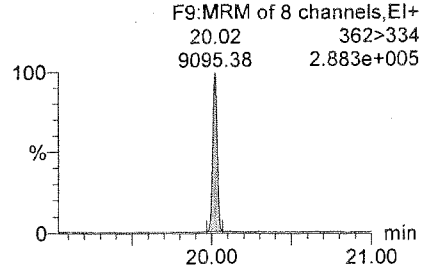
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2278

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

10/15/13
9

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	69717.727		bb		93.98	-6.0	3.588	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	18199.936	69717.727	bb		333.97	11.3	1.817	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	255833.391	69717.727	bbX		404.73	34.9	3.568	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	105991.984	69717.727	bd		340.66	13.6	2.611	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	4362.087	69717.727	bb		294.45	-1.9	2.180	2.462	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	37515.965	69717.727	bb		320.61	6.9	1.769	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	54009.832	69717.727	bb		300.65	0.2	2.144	2.104	NO
8	8	Naled|300-76-5	109>79	10.89	3962.536	69717.727	bb		299.44	-0.2	3.844	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	28301.314	69717.727	bb		340.17	13.4	2.663	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	153418.500	69717.727	bb		373.10	24.4	4.496	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	7445.739	69717.727	bb		302.74	0.9	1.795	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	51436.266	69717.727	bb		361.29	20.4	1.457	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.73	63525.859	69717.727	bb		368.92	23.0	1.259	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	40855.934	69717.727	bb		321.21	7.1	3.470	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	18341.227	69717.727	bb		353.11	17.7	1.936	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	200073.766	71664.844	bb		344.37	14.8	1.549	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	59348.734	71664.844	bb		306.72	2.2	0.842	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	115992.305	71664.844	bb		316.33	5.4	1.430	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.93	142541.109	71664.844	bb		305.96	2.0	2.927	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	102480.422	71664.844	bb		302.80	0.9	2.151	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	107617.398	71664.844	bb		309.14	3.0	2.505	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.42	178300.734	71664.844	bb		299.81	-0.1	2.071	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.47	38515.727	71664.844	bb		312.20	4.1	4.927	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	71914.648	71664.844	bb		300.07	0.0	2.589	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	71664.844		bb		104.94	4.9	3.980	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	211993.703	71664.844	bb		352.74	17.6	1.506	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	148010.734	71664.844	bb		334.72	11.6	0.970	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.31	63667.789	71664.844	bb		325.41	8.5	2.388	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	92168.430	89876.219	bb		367.98	22.7	1.630	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	236899.188	89876.219	bb		362.12	20.7	5.263	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	75808.727	89876.219	bb		356.18	18.7	1.127	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.66	89876.219		bb		108.03	8.0	2.509	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	140279.250	89876.219	bb		385.05	28.3	1.417	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.03	61786.082	89876.219	bb		328.43	9.5	3.918	3.830	NO

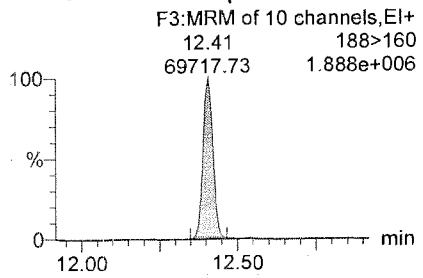
2279

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

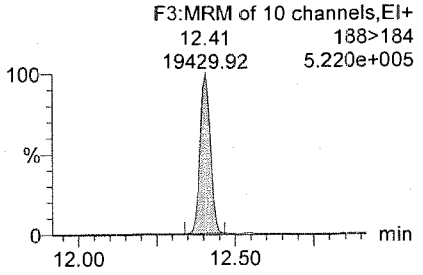
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

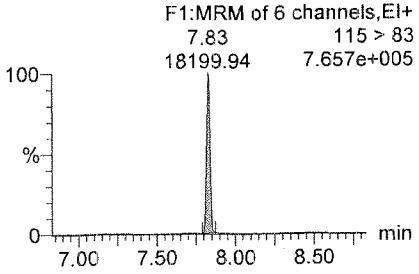
Phenanthrene-d10|1517-22-2



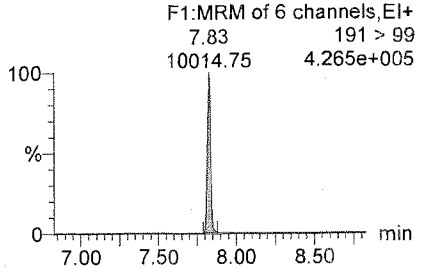
Phenanthrene-d10|1517-22-2



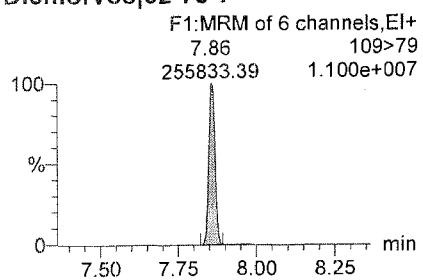
Dichlorvos-d6|203645-53-8



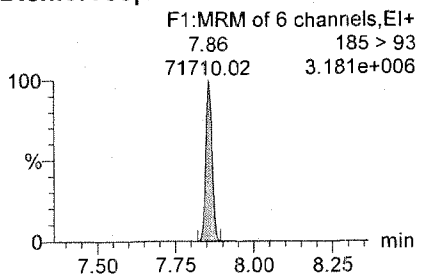
Dichlorvos-d6|203645-53-8



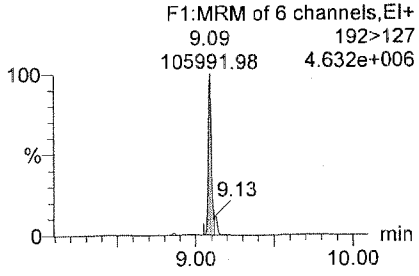
Dichlorvos|62-73-7



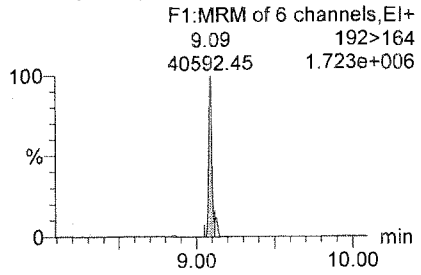
Dichlorvos|62-73-7



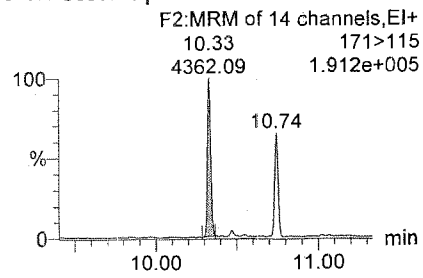
Mevinphos|7786-34-7



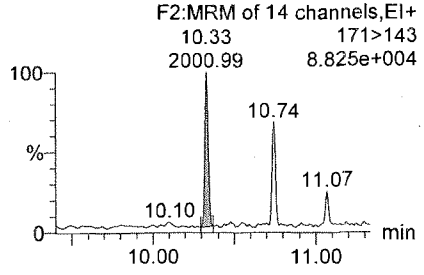
Mevinphos|7786-34-7



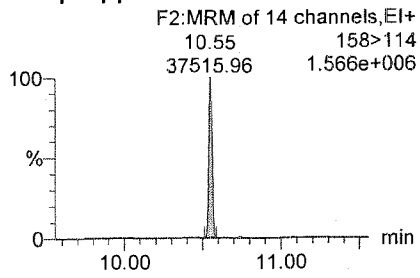
Demeton-O|298-03-3



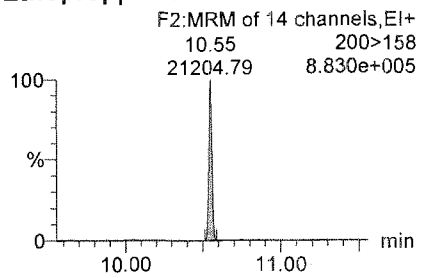
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



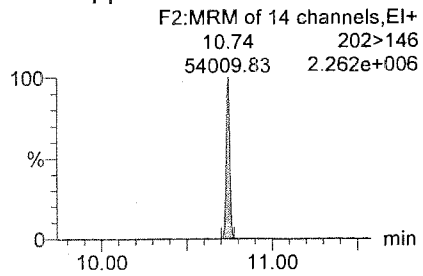
2280

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

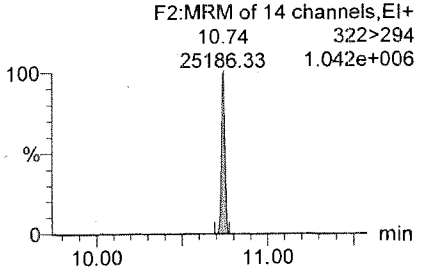
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

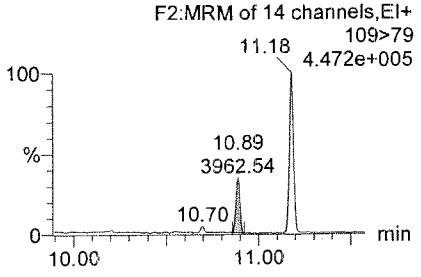
Sulfotep|3689-24-5



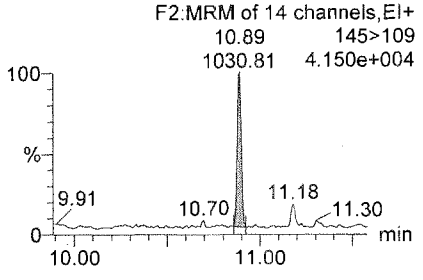
Sulfotep|3689-24-5



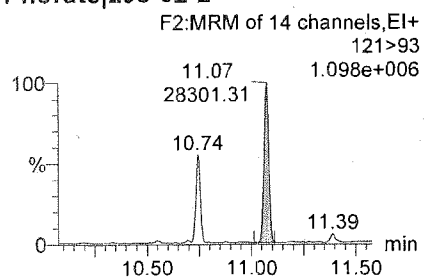
Naled|300-76-5



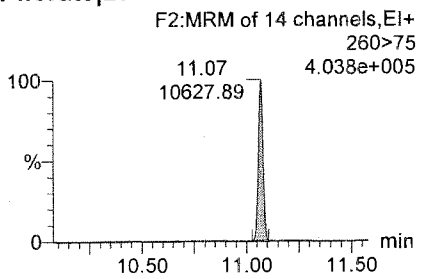
Naled|300-76-5



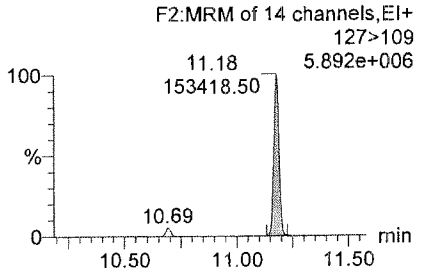
Phorate|298-02-2



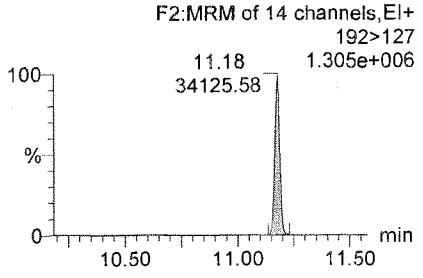
Phorate|298-02-2



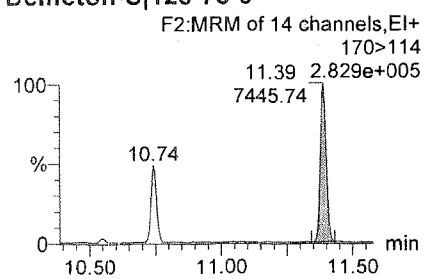
Monocrotophos|6923-22-4



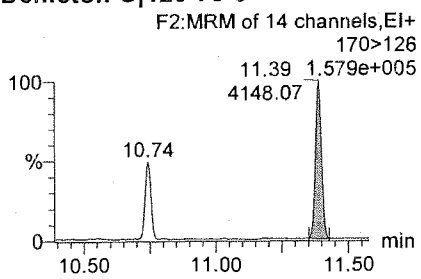
Monocrotophos|6923-22-4



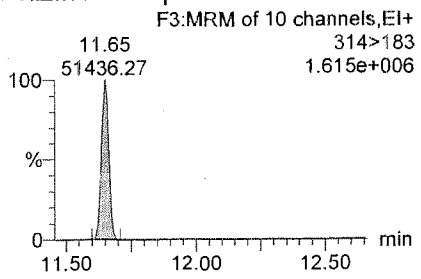
Demeton-S|126-75-0



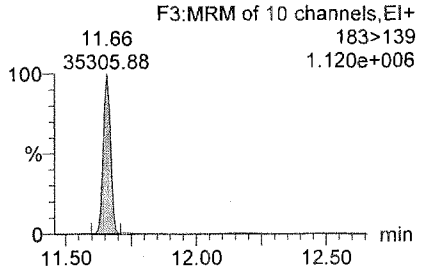
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



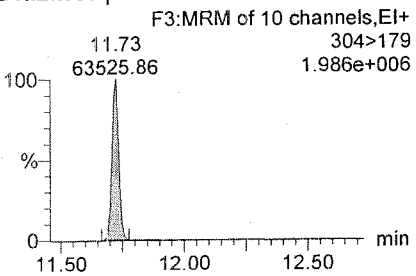
2281

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

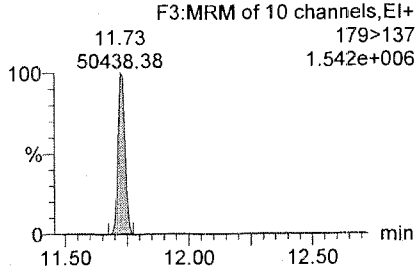
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

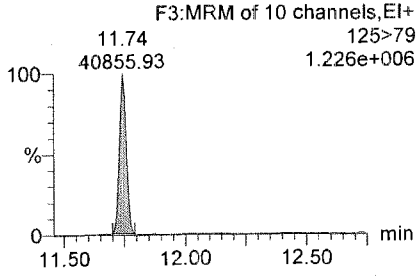
Diazinon|333-41-5



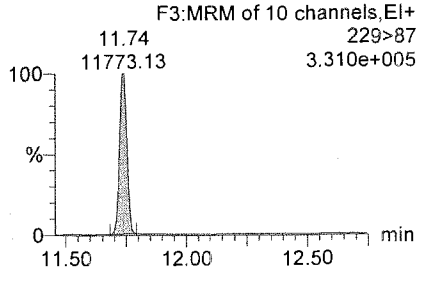
Diazinon|333-41-5



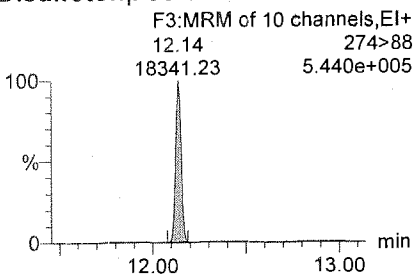
Dimethoate|60-51-5



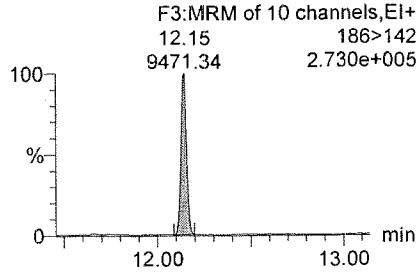
Dimethoate|60-51-5



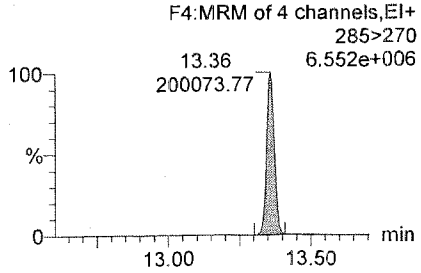
Disulfoton|298-04-4



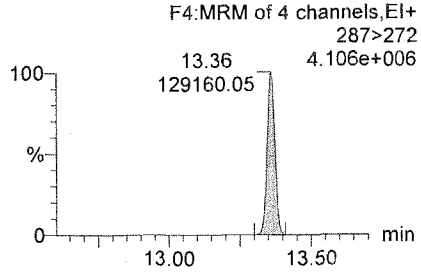
Disulfoton|298-04-4



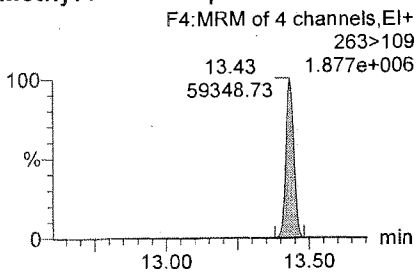
Ronnel|299-84-3



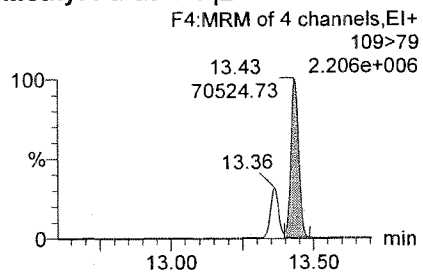
Ronnel|299-84-3



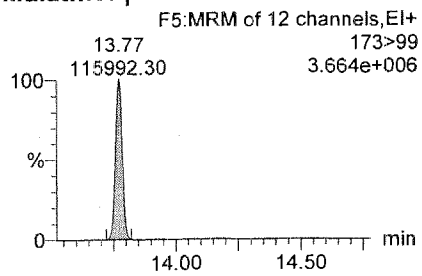
Methyl Parathion|298-00-0



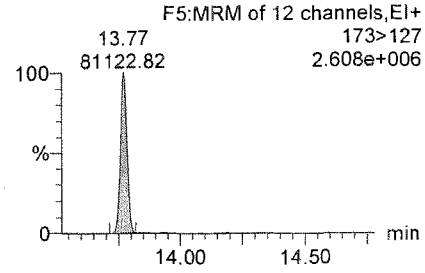
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



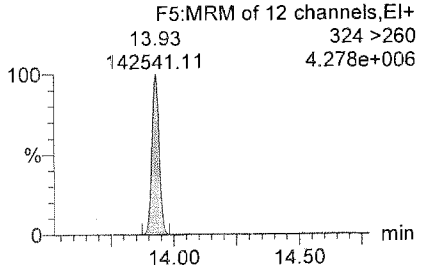
2282

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

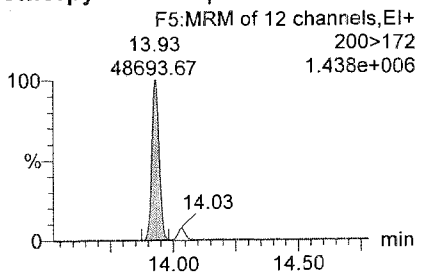
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

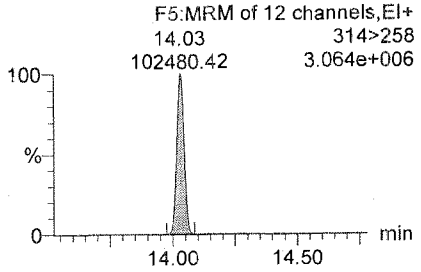
Chlorpyrifos-d10|CASID30732



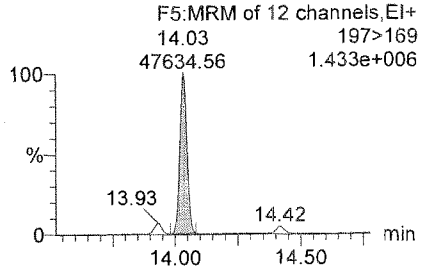
Chlorpyrifos-d10|CASID30732



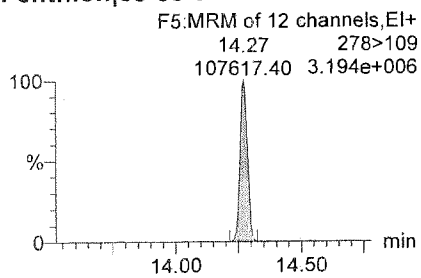
Chlorpyrifos|2921-88-2



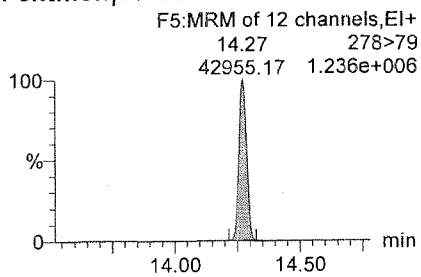
Chlorpyrifos|2921-88-2



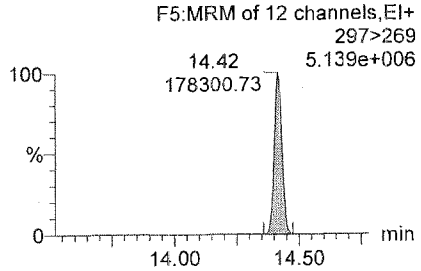
Fenthion|55-38-9



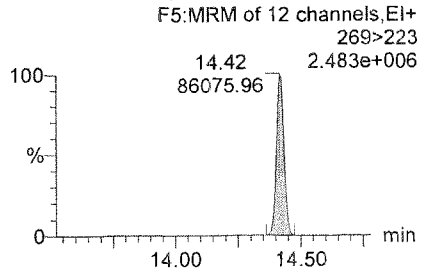
Fenthion|55-38-9



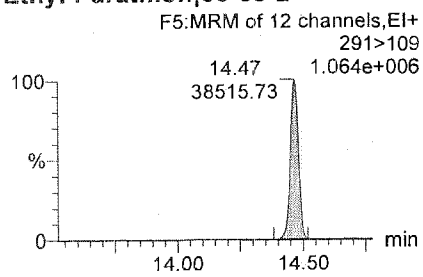
Trichloronate|327-98-0



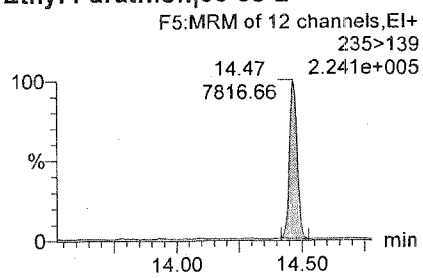
Trichloronate|327-98-0



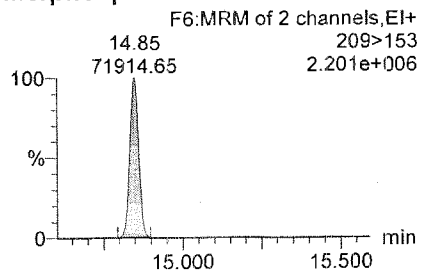
Ethyl Parathion|56-38-2



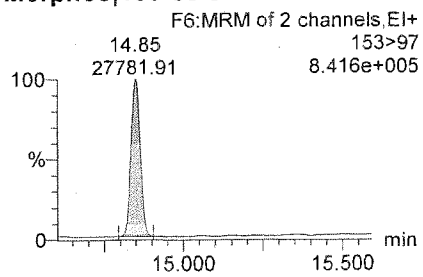
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



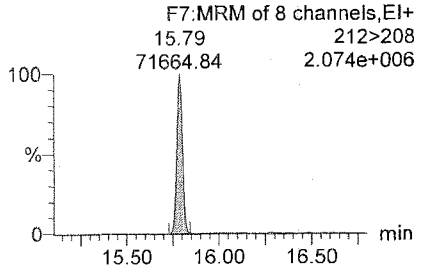
2283

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

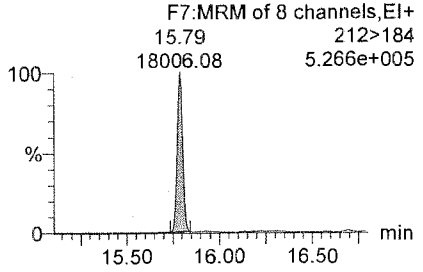
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

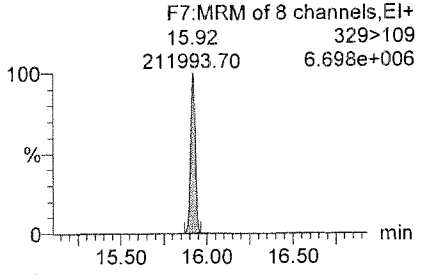
Fluoranthene-d10|93951-69-0



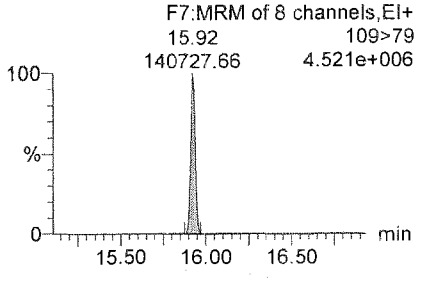
Fluoranthene-d10|93951-69-0



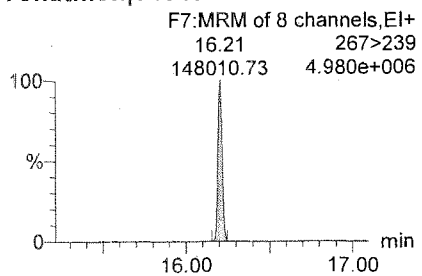
Stirophos|22248-79-9



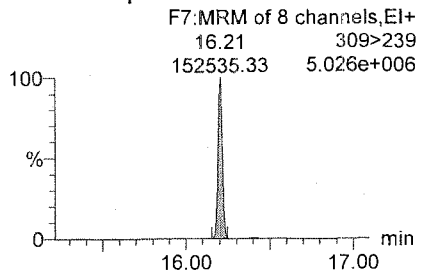
Stirophos|22248-79-9



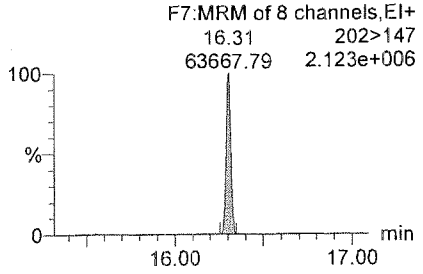
Tokuthion|34643-46-4



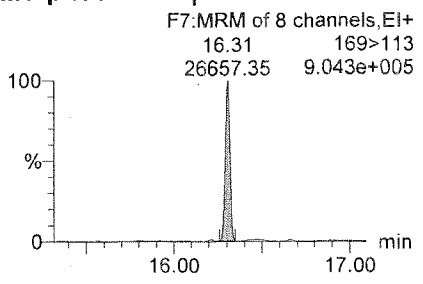
Tokuthion|34643-46-4



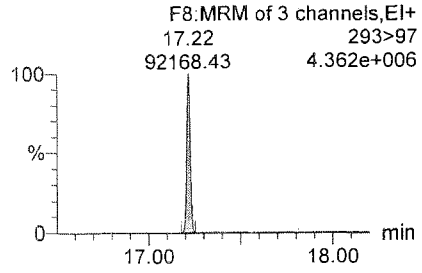
Merphos oxone|78-48-8



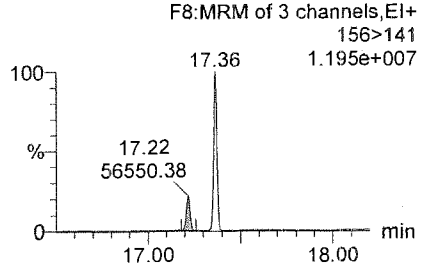
Merphos oxone|78-48-8



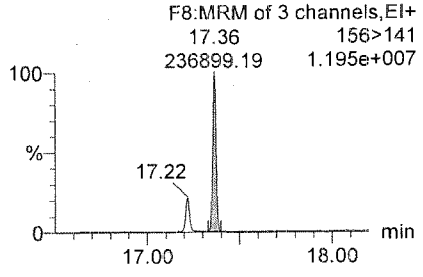
Fensulfothion|115-90-2



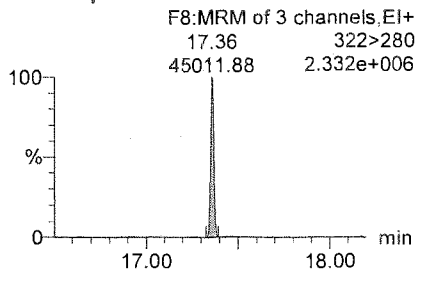
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



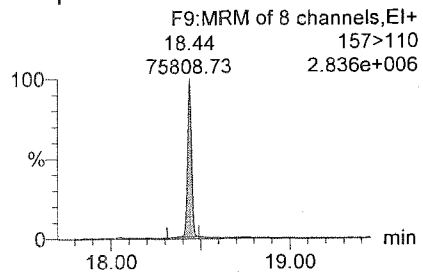
2284

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

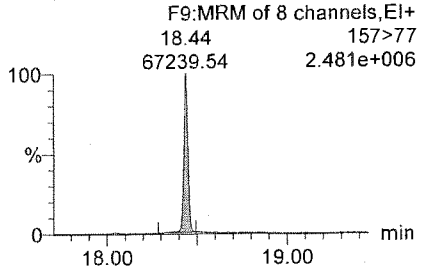
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F012, Date: 10-Oct-2013, Time: 13:51:03, ID: ICAL 300, Description: oppest 300ng/ml svm44-30j, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

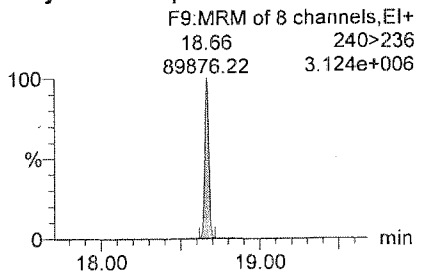
EPN|2104-64-5



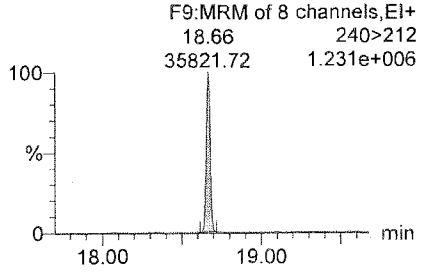
EPN|2104-64-5



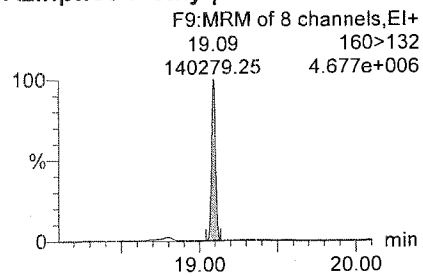
Chrysene-d12|1719-03-5



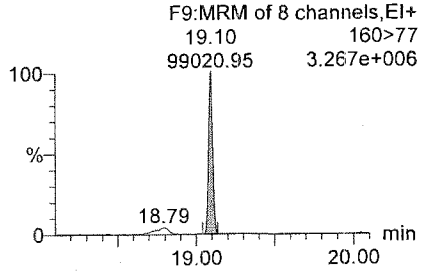
Chrysene-d12|1719-03-5



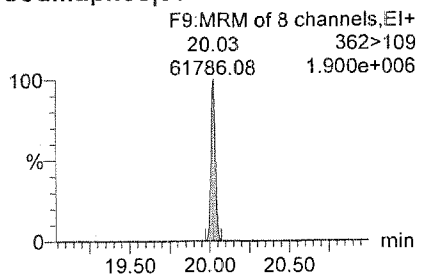
Azinphos methyl|86-50-0



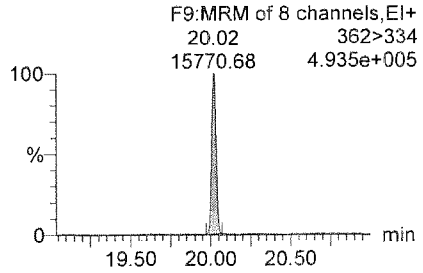
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2285

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

10.10.13

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	75964.867		bb		102.40	2.4	3.601	3.579	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	5917.536	75964.867	bb		99.66	-0.3	1.745	1.809	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	75725.008	75964.867	bb		109.95	9.9	3.327	3.310	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	32935.793	75964.867	bd		97.15	-2.8	2.637	2.593	NO
5	5	Demeton-O|298-03-3	171>115	10.33	1718.427	75964.867	bb		106.46	6.5	3.324	2.462	YES
6	6	Ethoprop|13194-48-4	158>114	10.55	12669.175	75964.867	bb		99.37	-0.6	1.639	1.680	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	19032.467	75964.867	bb		112.85	12.8	2.145	2.104	NO
8	8	Naled|300-76-5	109>79	10.88	1199.876	75964.867	bb		109.28	9.3	3.869	3.714	NO
9	9	Phorate|298-02-2	121>93	11.07	9853.933	75964.867	bb		108.70	8.7	2.756	2.719	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	44998.965	75964.867	bb		100.43	0.4	4.441	4.172	NO
11	11	Demeton-S|126-75-0	170>114	11.39	2639.248	75964.867	bb		98.49	-1.5	1.774	1.597	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	16132.591	75964.867	bb		104.00	4.0	1.501	1.548	NO
13	13	Diazinon|333-41-5	304>179	11.72	19348.465	75964.867	bb		103.12	3.1	1.345	1.304	NO
14	14	Dimethoate|60-51-5	125>79	11.74	13403.832	75964.867	bb		96.72	-3.3	3.189	3.279	NO
15	15	Disulfoton|298-04-4	274>88	12.14	6088.661	75964.867	bb		107.58	7.6	1.886	1.928	NO
16	16	Ronnel|299-84-3	285>270	13.36	57046.867	70235.852	bb		100.19	0.2	1.476	1.478	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	18437.881	70235.852	bb		97.23	-2.8	0.853	0.860	NO
18	18	Malathion|121-75-5	173>99	13.77	35623.199	70235.852	bb		99.13	-0.9	1.486	1.476	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	46523.961	70235.852	bb		101.89	1.9	2.908	2.898	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	33847.461	70235.852	bb		102.04	2.0	2.203	2.145	NO
21	21	Fenthion|55-38-9	278>109	14.27	29826.361	70235.852	bb		87.42	-12.6	2.495	2.558	NO
22	22	Trichloronate|327-98-0	297>269	14.41	59050.414	70235.852	bb		101.31	1.3	2.071	2.135	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.46	12501.906	70235.852	bb		103.40	3.4	4.875	5.154	NO
24	24	Merphos|150-50-5	209>153	14.85	36621.637	70235.852	bb		176.54	76.5	2.444	2.363	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	70235.852		bb		102.85	2.8	3.931	3.924	NO
26	26	Stirophos|22248-79-9	329>109	15.92	57923.379	70235.852	bb		98.34	-1.7	1.527	1.525	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	42694.449	70235.852	bb		98.51	-1.5	0.927	0.927	NO
28	28	Merphos oxone|78-48-8	202>147	16.30	12212.277	70235.852	bb		63.69	-36.3	2.396	2.427	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	20731.051	87008.758	bb		85.50	-14.5	1.225	1.319	NO
30	30	Bolstar|35400-43-2	156>141	17.36	63709.301	87008.758	bb		100.59	0.6	6.093	6.079	NO
31	31	EPN|2104-64-5	157>110	18.44	20392.924	87008.758	bb		98.97	-1.0	1.079	1.105	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.66	87008.758		bb		104.58	4.6	2.516	2.534	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	33884.699	87008.758	bb		96.07	-3.9	1.307	1.317	NO
34	34	Coumaphos|56-72-4	362>109	20.02	18035.029	87008.758	bb		99.02	-1.0	4.188	3.830	NO

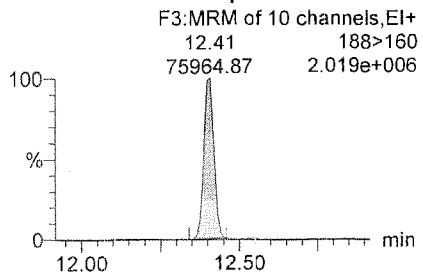
2286

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

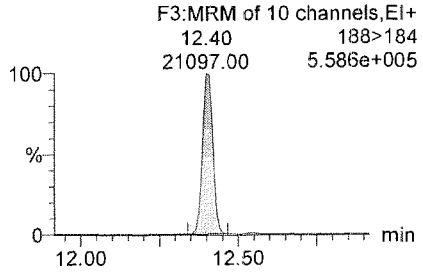
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

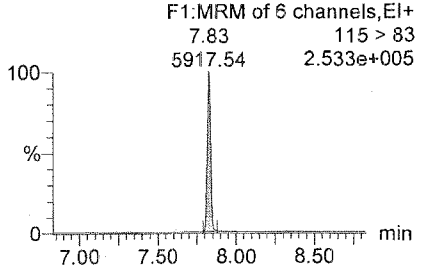
Phenanthrene-d10|1517-22-2



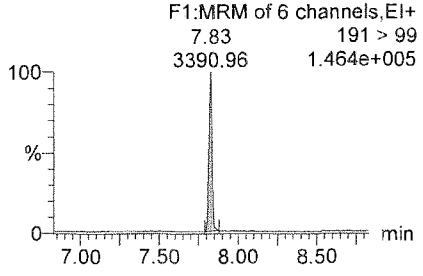
Phenanthrene-d10|1517-22-2



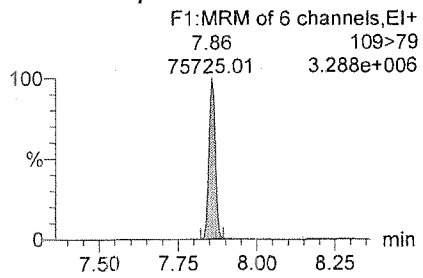
Dichlorvos-d6|203645-53-8



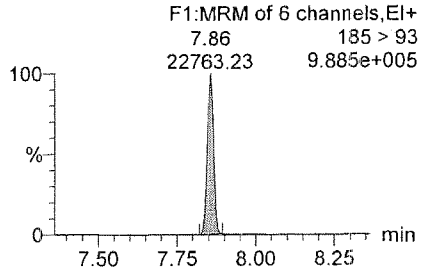
Dichlorvos-d6|203645-53-8



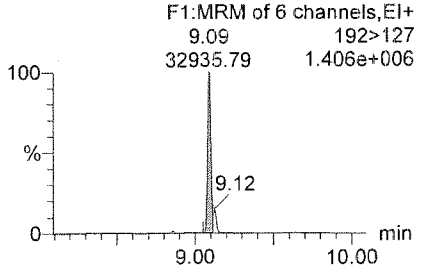
Dichlorvos|62-73-7



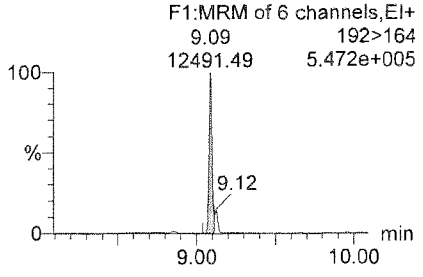
Dichlorvos|62-73-7



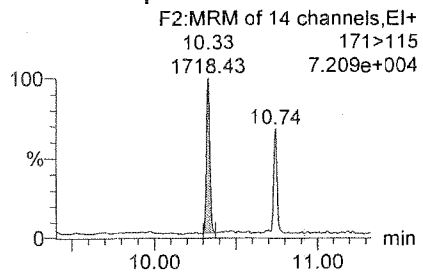
Mevinphos|7786-34-7



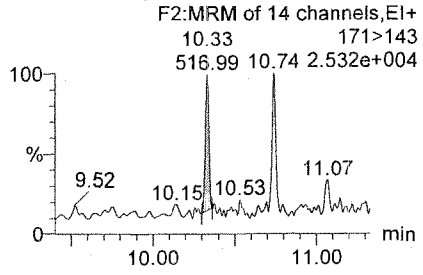
Mevinphos|7786-34-7



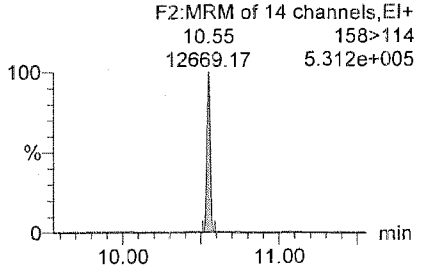
Demeton-O|298-03-3



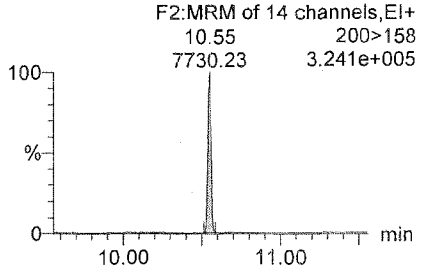
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



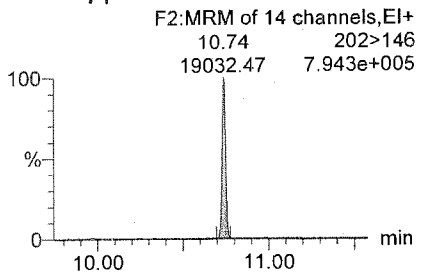
2287

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

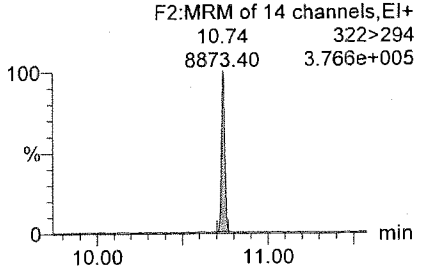
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

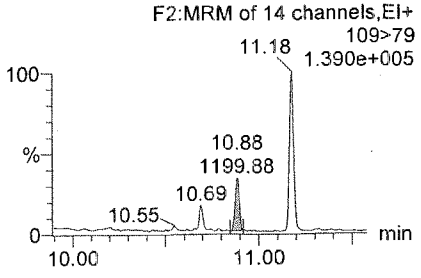
Sulfotep|3689-24-5



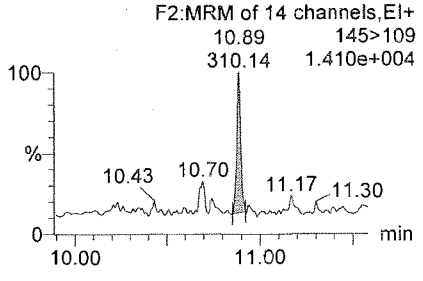
Sulfotep|3689-24-5



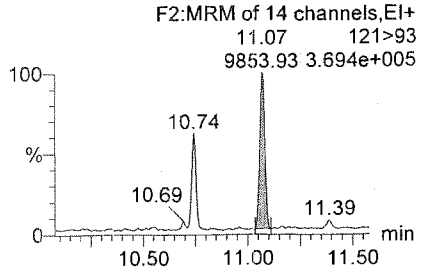
Naled|300-76-5



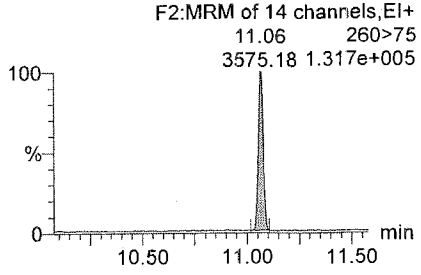
Naled|300-76-5



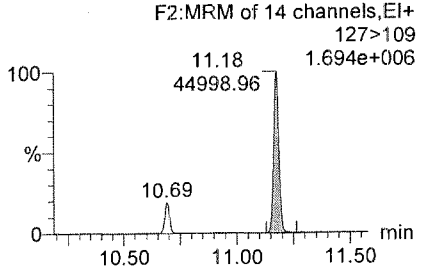
Phorate|298-02-2



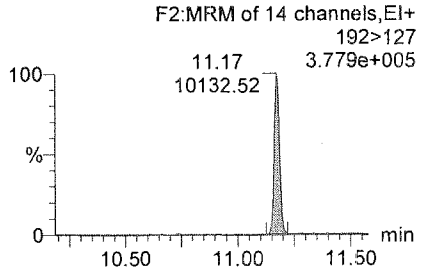
Phorate|298-02-2



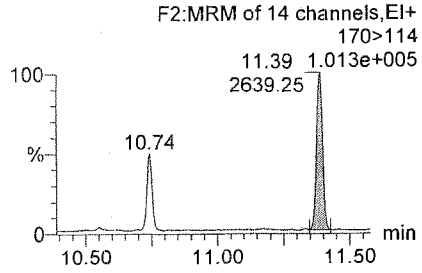
Monocrotophos|6923-22-4



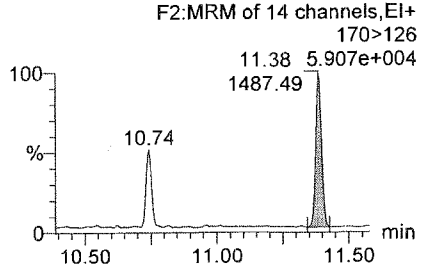
Monocrotophos|6923-22-4



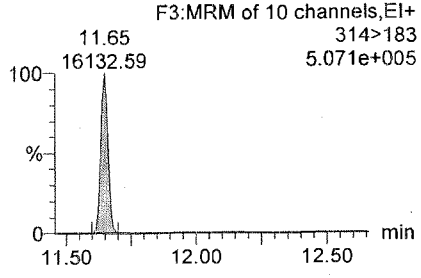
Demeton-S|126-75-0



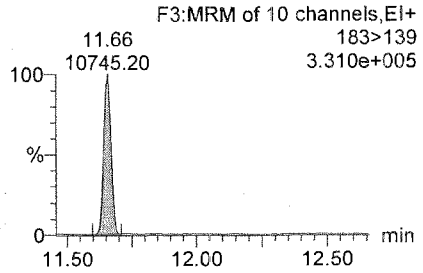
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



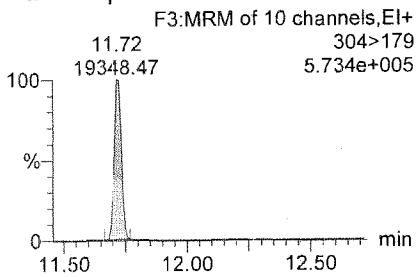
2288

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

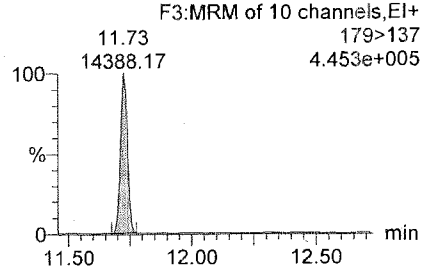
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

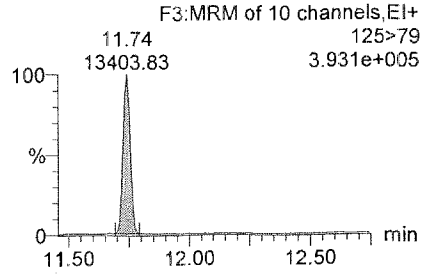
Diazinon|333-41-5



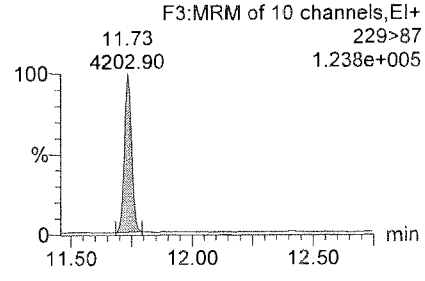
Diazinon|333-41-5



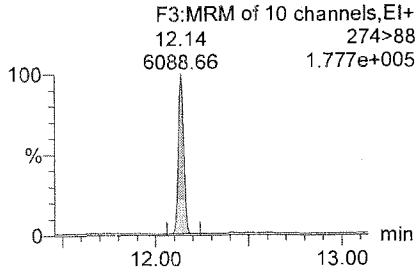
Dimethoate|60-51-5



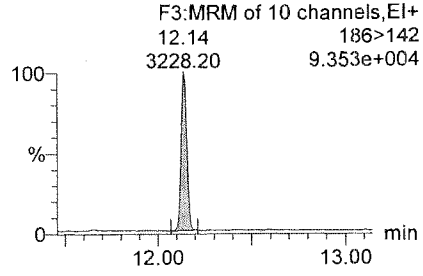
Dimethoate|60-51-5



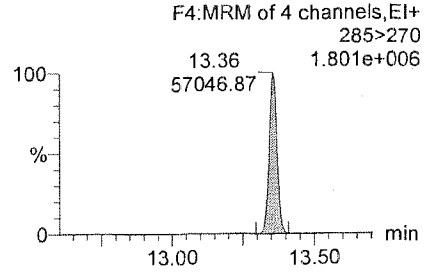
Disulfoton|298-04-4



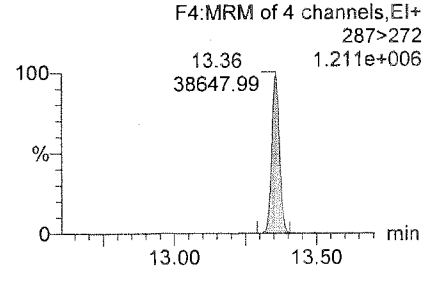
Disulfoton|298-04-4



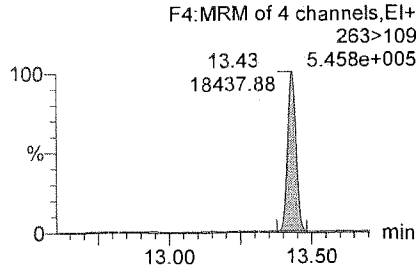
Ronnel|299-84-3



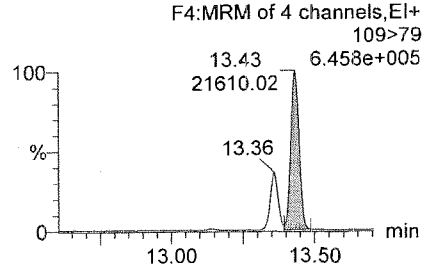
Ronnel|299-84-3



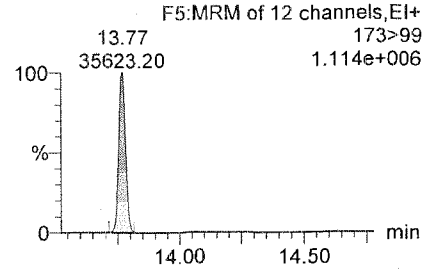
Methyl Parathion|298-00-0



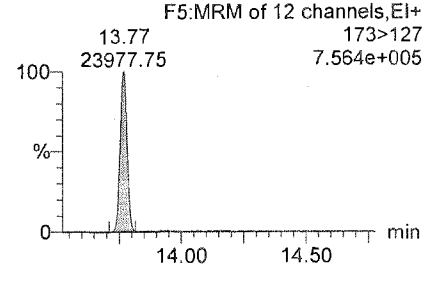
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



2289

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

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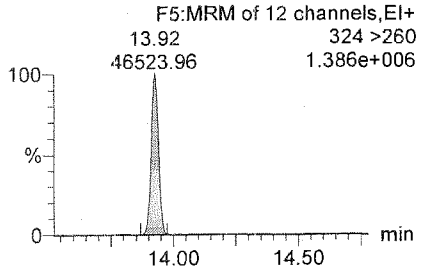
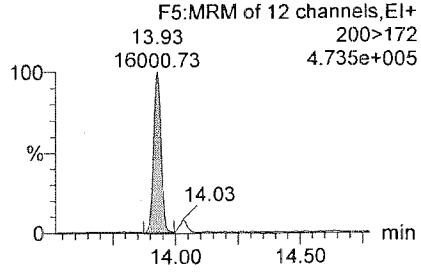
Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

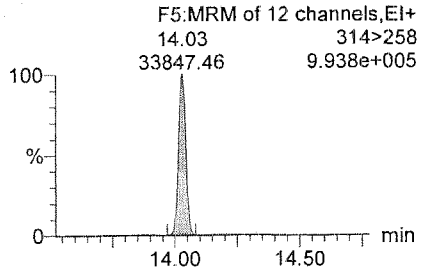
Chlorpyrifos-d10|CASID30732



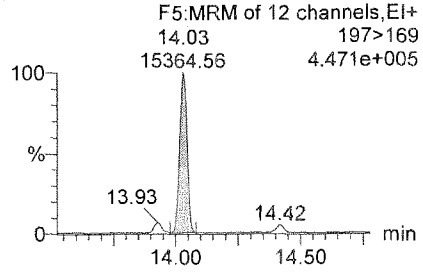
Chlorpyrifos-d10|CASID30732



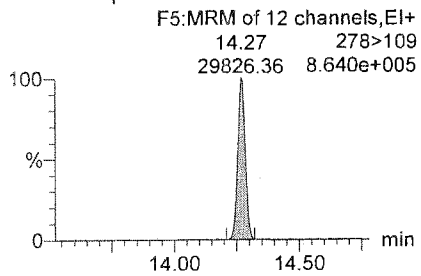
Chlorpyrifos|2921-88-2



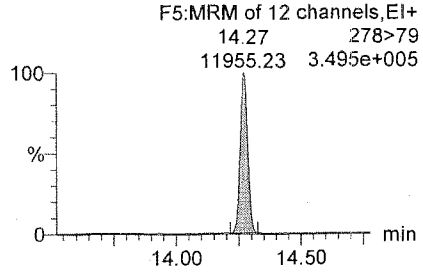
Chlorpyrifos|2921-88-2



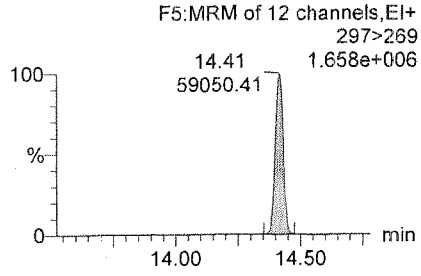
Fenthion|55-38-9



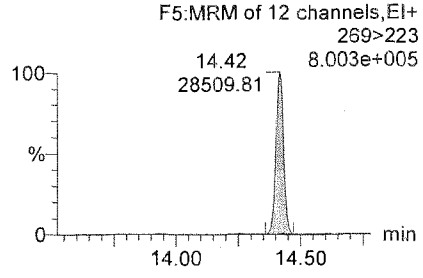
Fenthion|55-38-9



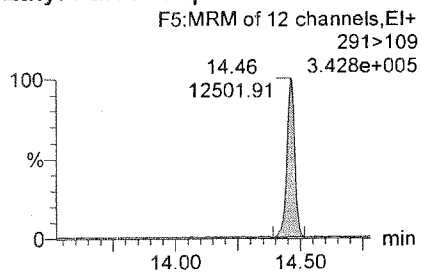
Trichloronate|327-98-0



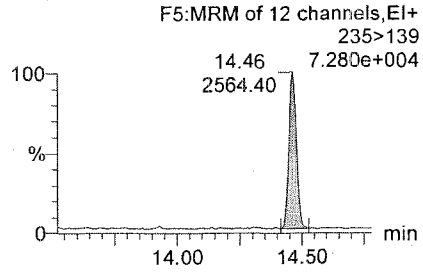
Trichloronate|327-98-0



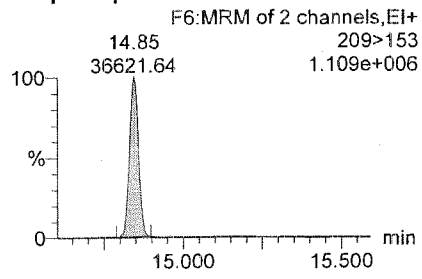
Ethyl Parathion|56-38-2



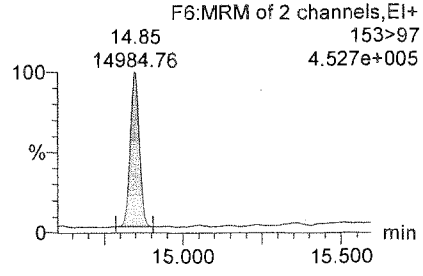
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



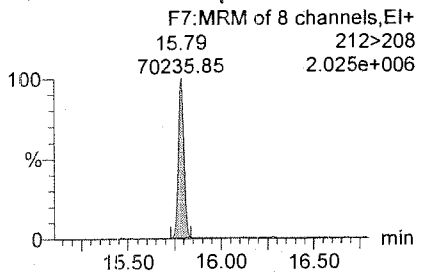
2290

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

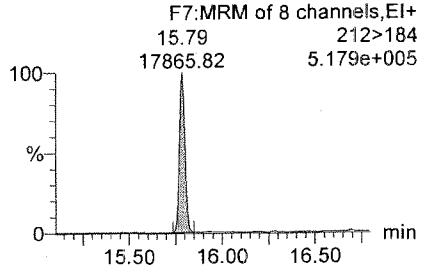
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

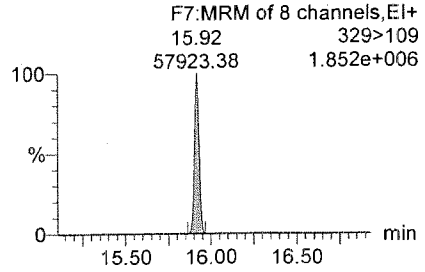
Fluoranthene-d10|93951-69-0



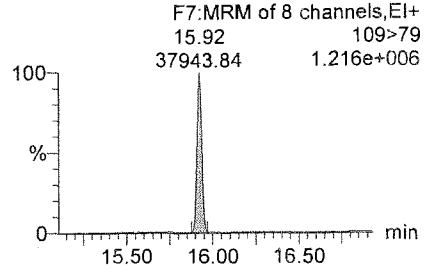
Fluoranthene-d10|93951-69-0



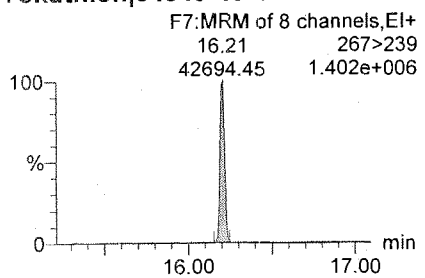
Stirophos|22248-79-9



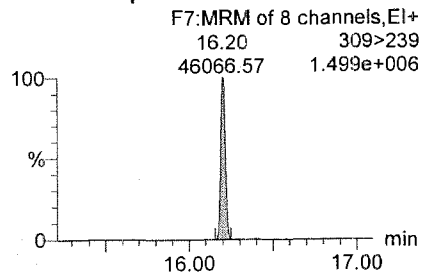
Stirophos|22248-79-9



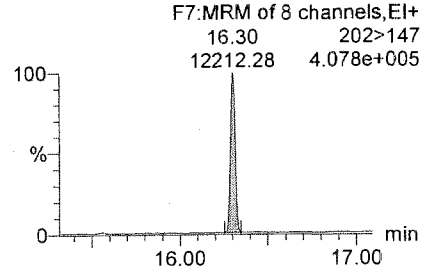
Tokuthion|34643-46-4



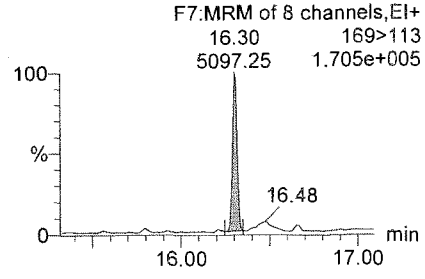
Tokuthion|34643-46-4



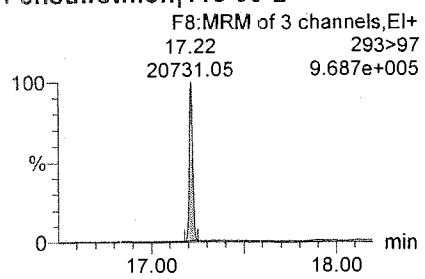
Merphos oxone|78-48-8



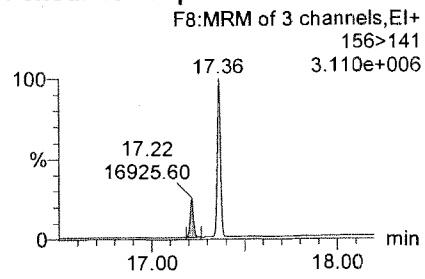
Merphos oxone|78-48-8



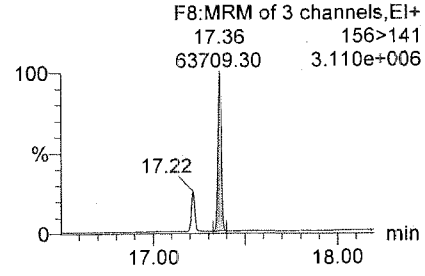
Fensulfothion|115-90-2



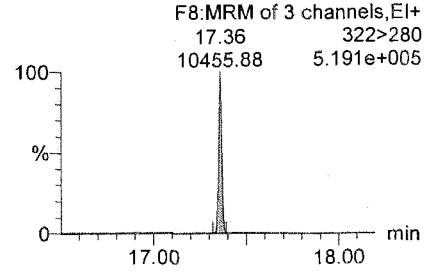
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



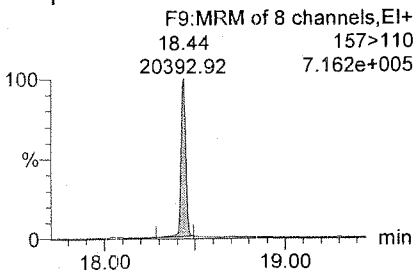
2291

Dataset: C:\PESTEI.PRO\101013oppestcal.qld

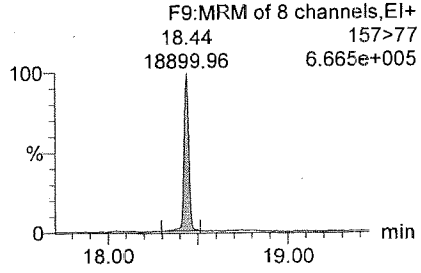
Last Altered: Thursday, October 10, 2013 14:58:09 Pacific Daylight Time
Printed: Thursday, October 10, 2013 15:03:10 Pacific Daylight Time

Name: 1010F013, Date: 10-Oct-2013, Time: 14:18:05, ID: ICV 100, Description: oppest 100ng/ml svm44-39e, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

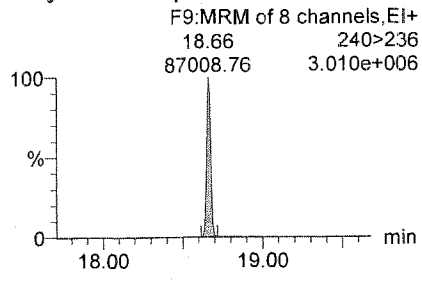
EPN|2104-64-5



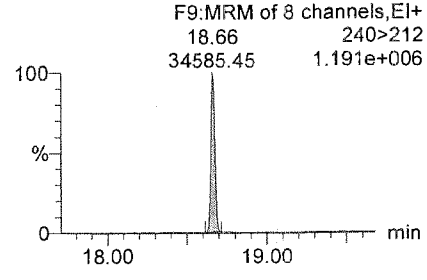
EPN|2104-64-5



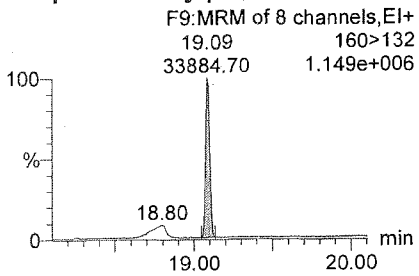
Chrysene-d12|1719-03-5



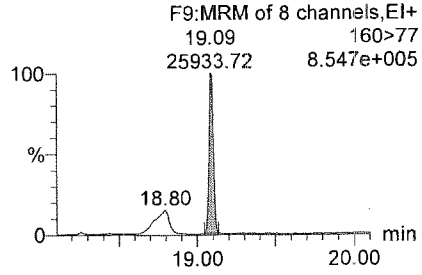
Chrysene-d12|1719-03-5



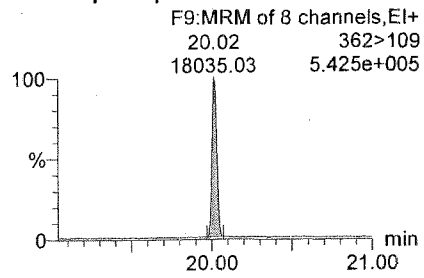
Azinphos methyl|86-50-0



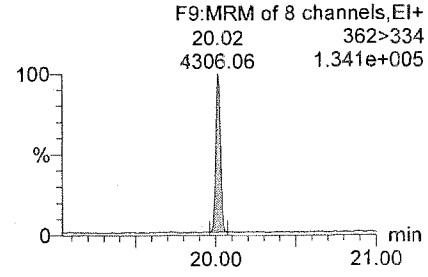
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2292

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Environmental Planning Specialists
Project: Drexel

Service Request: K1309638
Date Analyzed: 10/10/2013

Continuing Calibration Verification Summary
Organophosphorus Pesticides by HRGC/MS/MS

Calibration Type: Internal Standard
Analysis Method: GC/MS/MS

Calibration Date: 10/10/2013
Calibration ID: CAL12837
Analysis Lot: KWG1311302
Units: ng/ml

File ID: J:\MS21\DATA\101013\1010F014.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Demeton-O	100	92	0.01	0.0212	0.0196	-8	NA	± 25 %	AverageRF
Demeton-S	100	87	0.01	0.0353	0.0306	-13	NA	± 25 %	AverageRF
Demeton-O,S	100	89		NA	NA	NA	-11	± 25 %	NA
Naled (Dibrom)	100	100	0.01	0.0130	0.0149	NA	4	± 25 %	Quadratic
Phorate	100	100	0.01	0.119	0.124	4	NA	± 25 %	AverageRF
Monocrotophos	100	95	0.01	0.590	0.563	-5	NA	± 25 %	AverageRF
Dimethoate	100	97	0.01	0.182	0.178	-3	NA	± 25 %	AverageRF
Ronnel	100	100	0.01	0.811	0.823	2	NA	± 25 %	AverageRF
Methyl Parathion	100	98	0.01	0.270	0.264	-2	NA	± 25 %	AverageRF
Malathion	100	99	0.01	0.512	0.506	-1	NA	± 25 %	AverageRF
Fenthion	100	100	0.01	0.486	0.485	0	NA	± 25 %	AverageRF
Trichloronate	100	100	0.01	0.830	0.827	0	NA	± 25 %	AverageRF
Ethyl Parathion	100	99	0.01	0.172	0.170	-1	NA	± 25 %	AverageRF
Merphos	100	100	0.01	0.231	0.267	NA	1	± 25 %	Quadratic
Merphos, Total	100	99		NA	NA	NA	-1	± 25 %	NA
Tokuthion	100	100	0.01	0.617	0.620	0	NA	± 25 %	AverageRF
Merphos oxone	100	97	0.01	0.273	0.265	-3	NA	± 25 %	AverageRF
Fensulfothion	100	95	0.01	0.279	0.264	-5	NA	± 25 %	AverageRF
Bolstar (Sulprofos)	100	98	0.01	0.728	0.716	-2	NA	± 25 %	AverageRF
EPN	100	100	0.01	0.237	0.241	2	NA	± 25 %	AverageRF
Azinphos-methyl	100	96	0.01	0.405	0.389	-4	NA	± 25 %	AverageRF
Coumaphos	100	97	0.01	0.209	0.203	-3	NA	± 25 %	AverageRF
Dichlorvos-d6	100	100	0.01	0.0782	0.0785	0	NA	± 25 %	AverageRF
Chlorpyrifos-d10	100	100	0.01	0.650	0.656	1	NA	± 25 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: J:\MS21\DATA\101013\1010F014.D
Lab ID: KWG1311302-1
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 10/10/2013 14:45
Date Quantitated: 10/10/2013 14:45
Batch ID: KWG1311302
Analysis Method: GC/MS/MS
MethodJoinID: MJ1040

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Second Source ICAL Verification	Merphos	76.5	NA	25	Total ok
	Merphos oxone	-36.3	NA	25	

Primary Review: 10/11/13

Secondary Review: 10/15/13

Quantitation Report

Data File:	J:\MS21\DATA\101013\1010F014.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 14:45	**Quant Date:**	10/10/2013 14:45	**Vial:**	
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1311302-1			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABLE
Prod Code:	8270D PEST OP	**Collect Date:**		**Receive Date:**	10/11/2013

Analysis Lot:	KWG1311302	**Prep Lot:**		**Report Group:**	
Analysis Method:	GC/MS/MS	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:		**Calibration ID:**	CAL12837
Title:		**Method ID:**	MJ1040
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
0	Phenanthrene-d10	12.41	0.00	73438	99.00	OK
0	Fluoranthene-d10	15.79	0.00	66736	97.72	OK
0	Chrysene-d12	18.66	-0.01	81155	97.55	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	Dichlorvos-d6	7.83			5763	100.39		15-96	NA	
1	Diazinon-d10	11.65			15642	104.31		44-125	NA	
25	Chlorpyrifos-d10	13.92			43746	100.84		39-124	NA	

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
1	Dichlorvos	7.86			70283	105.56			
1	Mevinphos	9.09			33513	102.25			
1	Demeton-O	10.33			I436	92.05			
	Demeton-O,S				0	89.34			
1	Ethoprop (Prophos)	10.55			12487	101.31			
1	Sulfotep	10.74			17927	110.21			
1	Naled (Dibrom)	10.89			1094	104.09			
1	Phorate	11.07			9136	104.24			
1	Monocrotophos	11.18			41351	95.47			
1	Demeton-S	11.39			2244	86.63			
1	Diazinon	11.73			18640	102.77			
1	Dimethoate	11.74			13045	97.36			
1	Disulfoton	12.14			5918	108.16			
25	Ronnel	13.36			54935	101.54			
25	Methyl Parathion	13.43			17637	97.88			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS21\DATA\101013\1010F014.D			**Instrument:**	MS21
Acqu Date:	10/10/2013 14:45	**Quant Date:**	10/10/2013 14:45	**Vial:**	
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG1311302-1			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ng/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
25	Malathion	13.77			33777	98.92			
25	Chlorpyrifos	14.03			31969	101.43			
25	Fenthion	14.27			32334	99.74			
25	Trichloronate	14.42			55158	99.60			
25	Ethyl Parathion	14.46			11318	98.52			
25	Merphos	14.85			17802	101.17			
	Merphos, Total				0	99.19			
25	Stirophos	15.92			55257	98.73			
25	Tokuthion	16.21			41366	100.46			
25	Merphos oxone	16.30			17710	97.20			
32	Fensulfothion	17.22			21446	94.82			
32	Bolstar (Sulprofos)	17.36			58106	98.36			
32	EPN	18.44			19534	101.64			
32	Azinphos-methyl	19.09			31586	96.01			
32	Coumaphos	20.02			16505	97.16			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	ng/ml	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	Phenanthrene-d10|1517-2...	188>160	12.41	73438.273		bb		99.00	-1.0	3.562	3.562	NO
2	2	Dichlorvos-d6|203645-53-8	115 > 83	7.83	5762.948	73438.273	bb		100.39	0.4	1.766	1.766	NO
3	3	Dichlorvos|62-73-7	109>79	7.86	70283.164	73438.273	bb		105.56	5.6	3.268	3.268	NO
4	4	Mevinphos|7786-34-7	192>127	9.09	33512.781	73438.273	bd		102.25	2.3	2.725	2.725	NO
5	5	Demeton-O|298-03-3	171>115	10.33	1436.450	73438.273	bb		92.05	-7.9	2.144	2.144	NO
6	6	Ethoprop|13194-48-4	158>114	10.55	12486.818	73438.273	bb		101.31	1.3	1.746	1.746	NO
7	7	Sulfotep|3689-24-5	202>146	10.74	17926.480	73438.273	bb		110.21	10.2	2.195	2.195	NO
8	8	Naled|300-76-5	109>79	10.89	1094.417	73438.273	bb		104.09	4.1	3.352	3.352	NO
9	9	Phorate|298-02-2	121>93	11.07	9135.677	73438.273	bb		104.24	4.2	2.631	2.631	NO
10	10	Monocrotophos|6923-22-4	127>109	11.18	41351.008	73438.273	bb		95.47	-4.5	4.455	4.455	NO
11	11	Demeton-S|126-75-0	170>114	11.39	2244.233	73438.273	bb		86.63	-13.4	1.541	1.541	NO
12	12	Diazinon-d10|CASID39254	314>183	11.65	15642.039	73438.273	bb		104.31	4.3	1.545	1.545	NO
13	13	Diazinon|333-41-5	304>179	11.73	18640.082	73438.273	bb		102.77	2.8	1.325	1.325	NO
14	14	Dimethoate|60-51-5	125>79	11.74	13044.989	73438.273	bb		97.36	-2.6	3.113	3.113	NO
15	15	Disulfoton|298-04-4	274>88	12.14	5917.717	73438.273	bb		108.16	8.2	1.941	1.941	NO
16	16	Ronnel|299-84-3	285>270	13.36	54934.574	66735.797	bb		101.54	1.5	1.469	1.469	NO
17	17	Methyl Parathion|298-00-0	263>109	13.43	17636.865	66735.797	bb		97.88	-2.1	0.844	0.844	NO
18	18	Malathion|121-75-5	173>99	13.77	33777.129	66735.797	bb		98.92	-1.1	1.464	1.464	NO
19	19	Chlorpyrifos-d10|CASID30...	324 >260	13.92	43746.262	66735.797	bb		100.84	0.8	2.879	2.879	NO
20	20	Chlorpyrifos|2921-88-2	314>258	14.03	31968.680	66735.797	bb		101.43	1.4	2.179	2.179	NO
21	21	Fenthion|55-38-9	278>109	14.27	32333.781	66735.797	bb		99.74	-0.3	2.452	2.452	NO
22	22	Trichloronate|327-98-0	297>269	14.42	55158.098	66735.797	bb		99.60	-0.4	2.040	2.040	NO
23	23	Ethyl Parathion|56-38-2	291>109	14.46	11318.394	66735.797	bb		98.52	-1.5	4.912	4.912	NO
24	24	Merphos|150-50-5	209>153	14.85	17802.061	66735.797	bb		101.17	1.2	2.393	2.393	NO
25	25	Fluoranthene-d10|93951-6...	212>208	15.79	66735.797		bb		97.72	-2.3	3.973	3.973	NO
26	26	Stirophos|22248-79-9	329>109	15.92	55257.281	66735.797	bb		98.73	-1.3	1.508	1.508	NO
27	27	Tokuthion|34643-46-4	267>239	16.21	41365.984	66735.797	bb		100.46	0.5	0.939	0.939	NO
28	28	Merphos oxone|78-48-8	202>147	16.30	17709.938	66735.797	bb		97.20	-2.8	2.340	2.340	NO
29	29	Fensulfothion|115-90-2	293>97	17.22	21446.391	81155.367	bb		94.82	-5.2	1.220	1.220	NO
30	30	Bolstar|35400-43-2	156>141	17.36	58105.875	81155.367	bb		98.36	-1.6	6.221	6.221	NO
31	31	EPN|2104-64-5	157>110	18.44	19534.344	81155.367	bb		101.64	1.6	1.110	1.110	NO
32	32	Chrysene-d12|1719-03-5	240>236	18.66	81155.367		bb		97.55	-2.5	2.504	2.504	NO
33	33	Azinphos methyl|86-50-0	160>132	19.09	31585.705	81155.367	bb		96.01	-4.0	1.294	1.294	NO
34	34	Coumaphos|56-72-4	362>109	20.02	16505.320	81155.367	bb		97.16	-2.8	4.250	4.250	NO

2297

Quantify Sample Report **MassLynx 4.1**

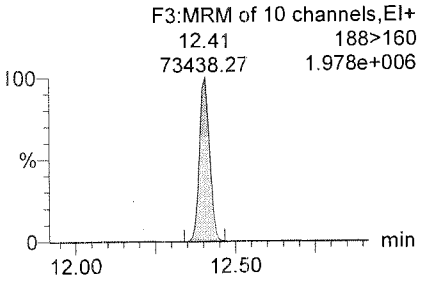
Dataset: C:\PESTEI.PRO\101013oppestdata.qld

Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

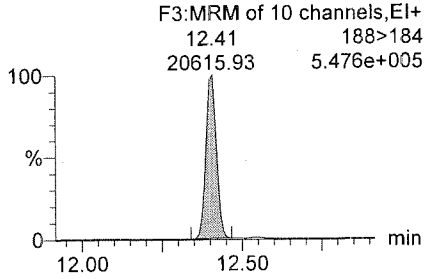
Method: C:\PESTEI.PRO\MethDB\nppestc.mdb 10 Oct 2013 15:14:06
Calibration: C:\PESTEI.PRO\CurveDB\101013oppest.cdb 10 Oct 2013 14:58:09

Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

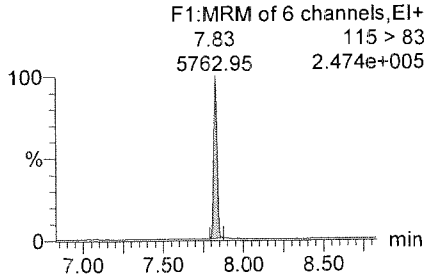
Phenanthrene-d10|1517-22-2



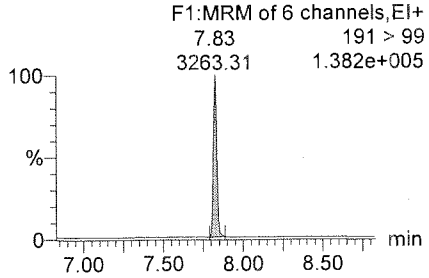
Phenanthrene-d10|1517-22-2



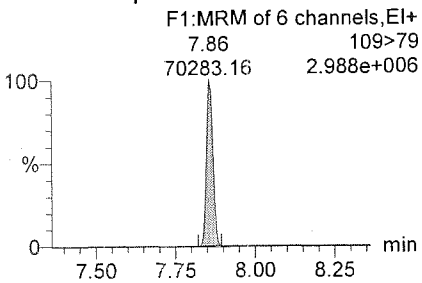
Dichlorvos-d6|203645-53-8



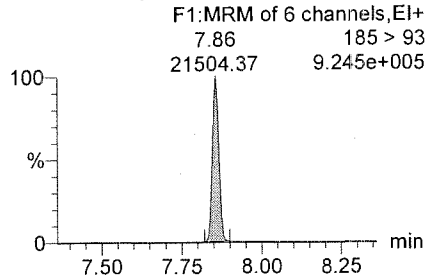
Dichlorvos-d6|203645-53-8



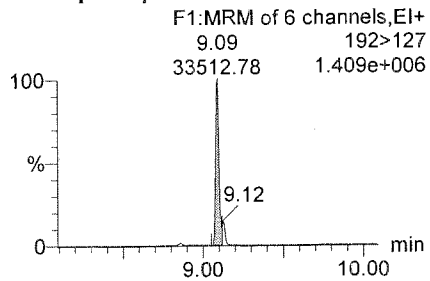
Dichlorvos|62-73-7



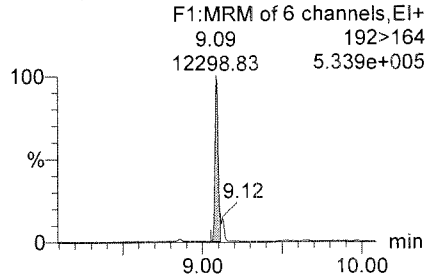
Dichlorvos|62-73-7



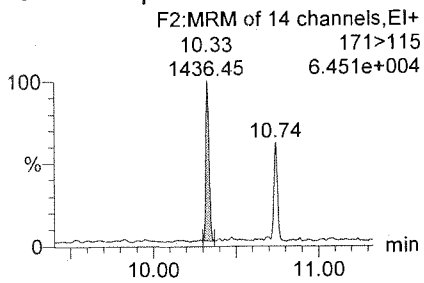
Mevinphos|7786-34-7



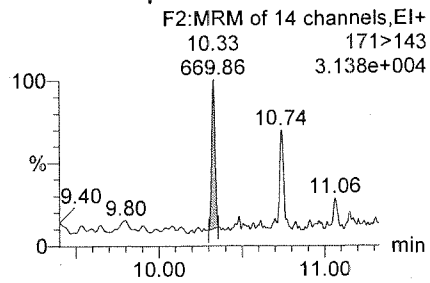
Mevinphos|7786-34-7



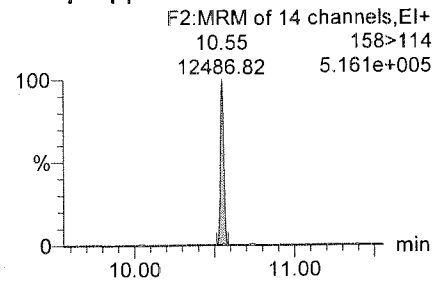
Demeton-O|298-03-3



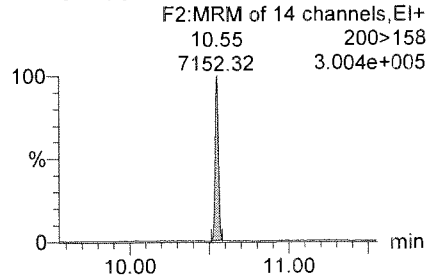
Demeton-O|298-03-3



Ethoprop|13194-48-4



Ethoprop|13194-48-4



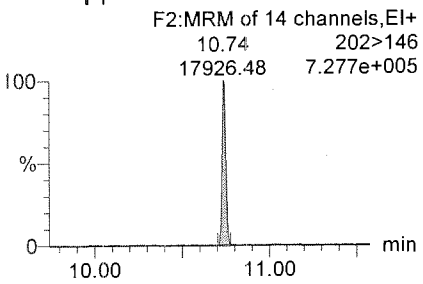
2298

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

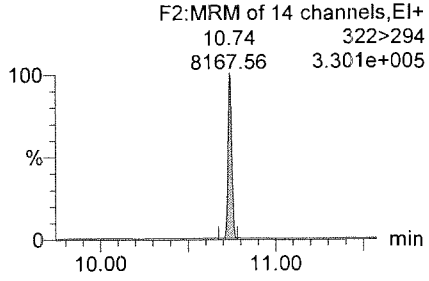
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

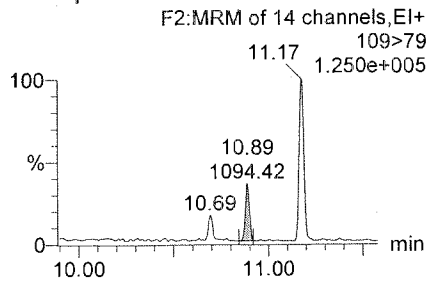
Sulfotep|3689-24-5



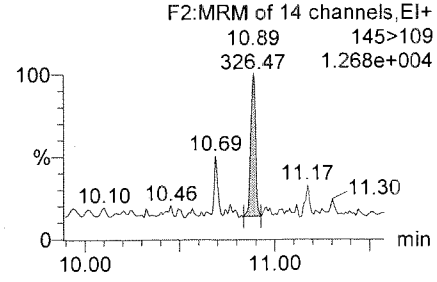
Sulfotep|3689-24-5



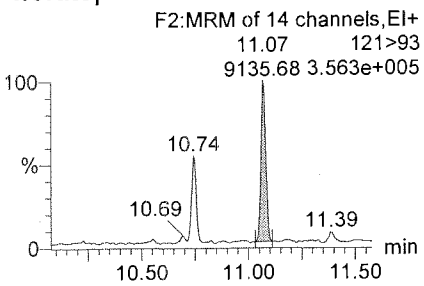
Naled|300-76-5



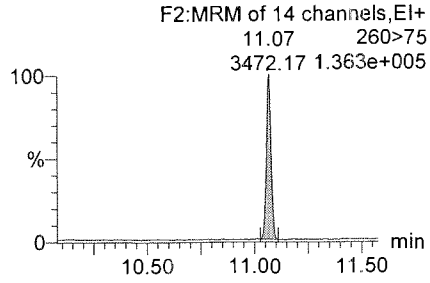
Naled|300-76-5



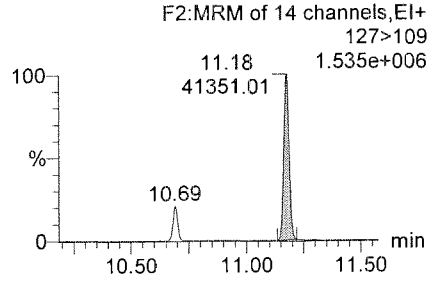
Phorate|298-02-2



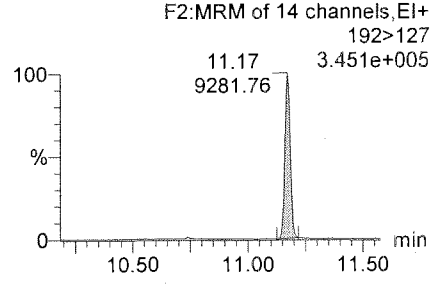
Phorate|298-02-2



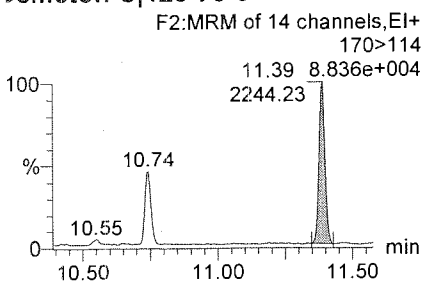
Monocrotophos|6923-22-4



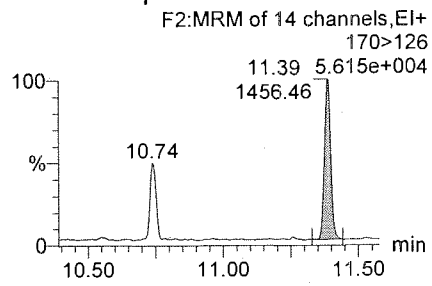
Monocrotophos|6923-22-4



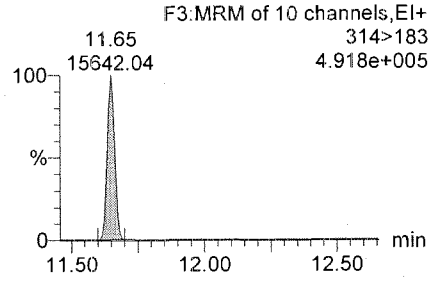
Demeton-S|126-75-0



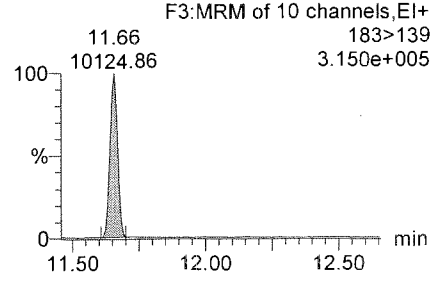
Demeton-S|126-75-0



Diazinon-d10|CASID39254



Diazinon-d10|CASID39254



2299

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

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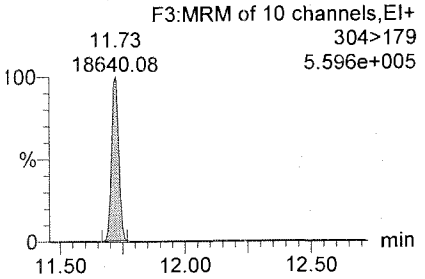
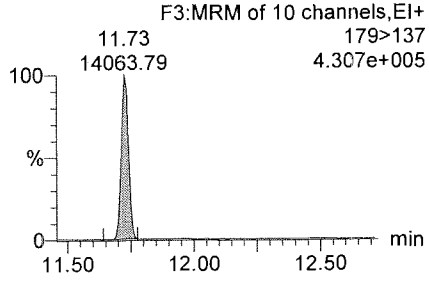
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

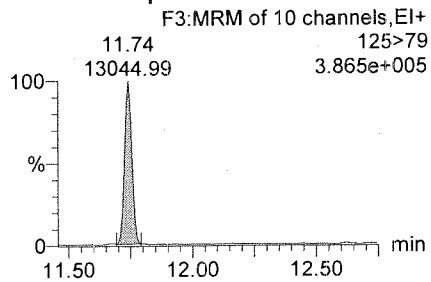
Diazinon|333-41-5



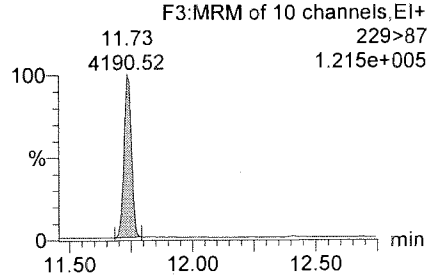
Diazinon|333-41-5



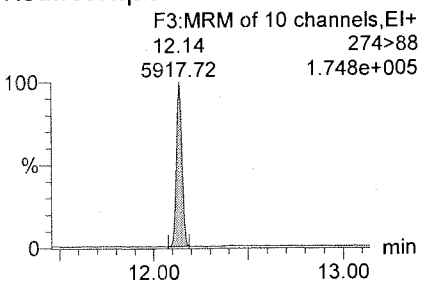
Dimethoate|60-51-5



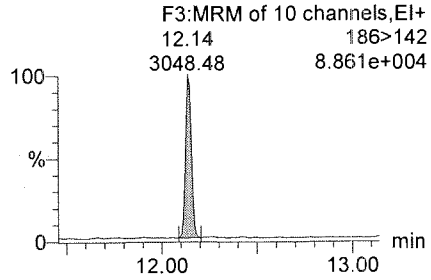
Dimethoate|60-51-5



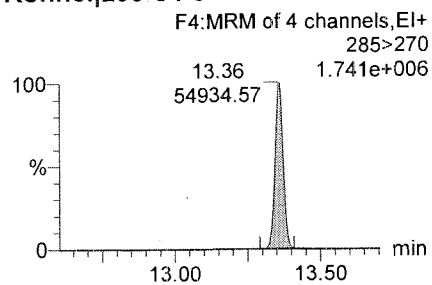
Disulfoton|298-04-4



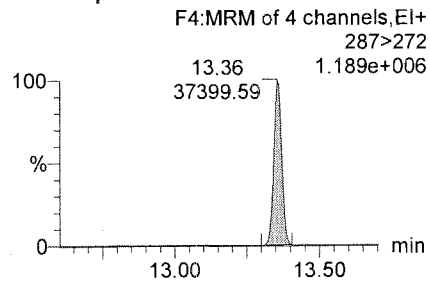
Disulfoton|298-04-4



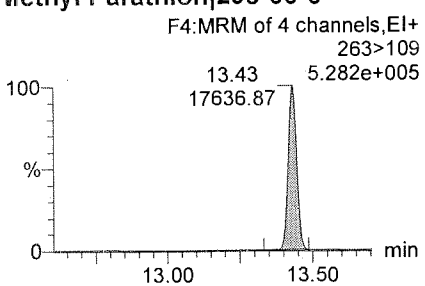
Ronnel|299-84-3



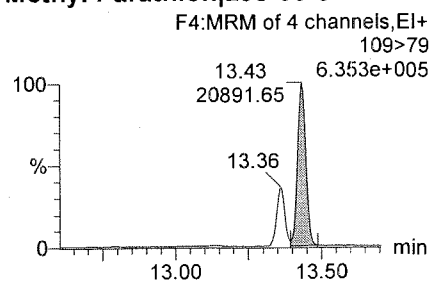
Ronnel|299-84-3



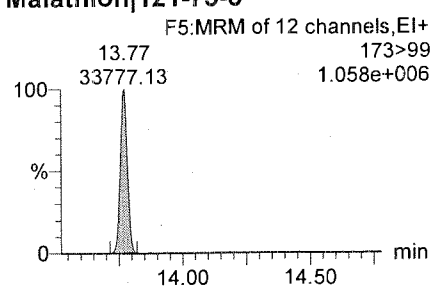
Methyl Parathion|298-00-0



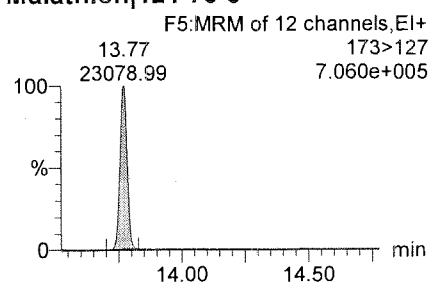
Methyl Parathion|298-00-0



Malathion|121-75-5



Malathion|121-75-5



2300

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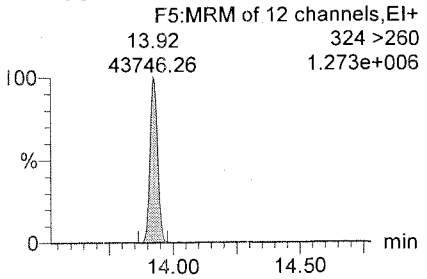
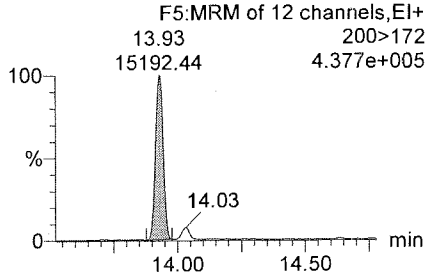
Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

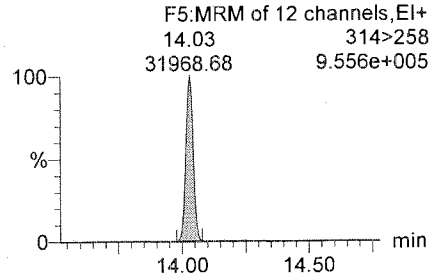
Chlorpyrifos-d10|CASID30732



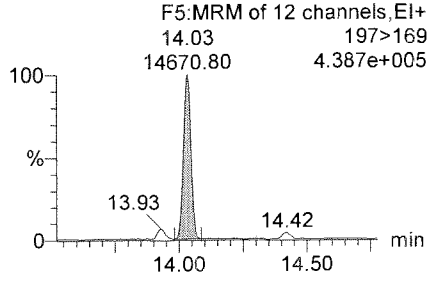
Chlorpyrifos-d10|CASID30732



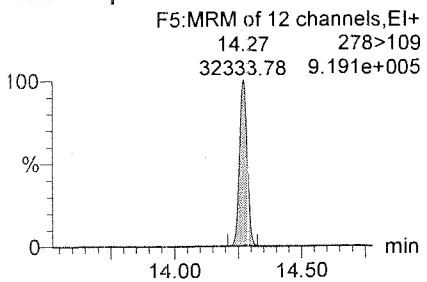
Chlorpyrifos|2921-88-2



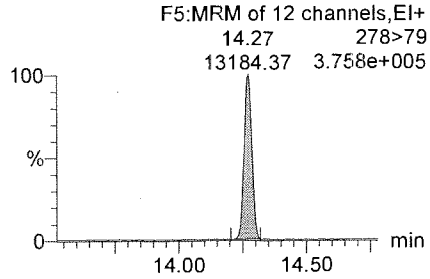
Chlorpyrifos|2921-88-2



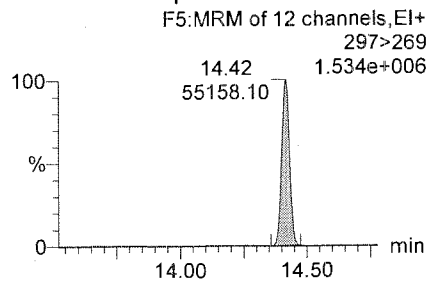
Fenthion|55-38-9



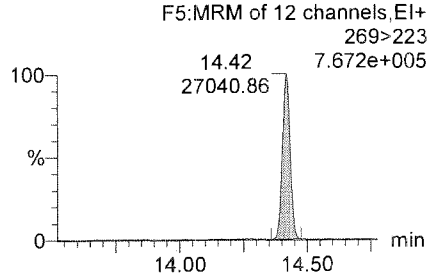
Fenthion|55-38-9



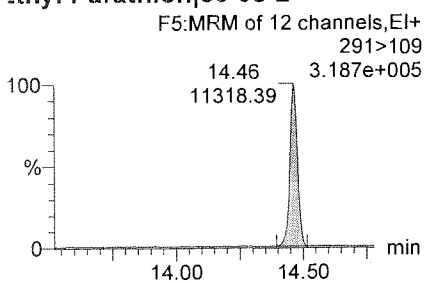
Trichloronate|327-98-0



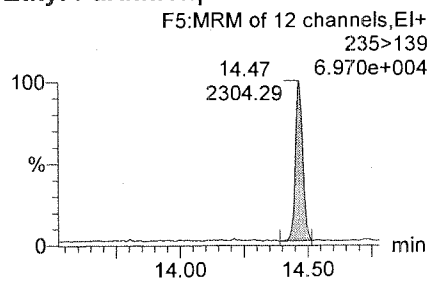
Trichloronate|327-98-0



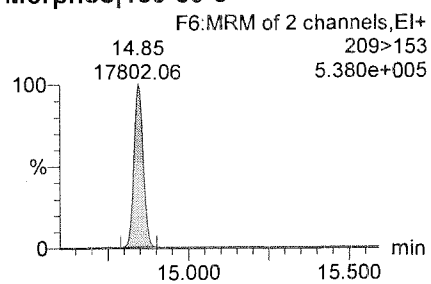
Ethyl Parathion|56-38-2



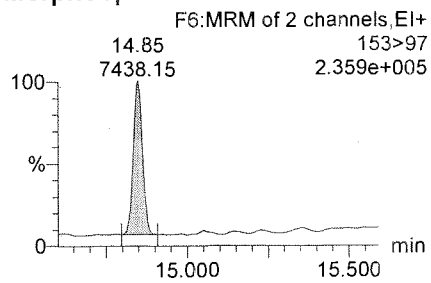
Ethyl Parathion|56-38-2



Merphos|150-50-5



Merphos|150-50-5



2301

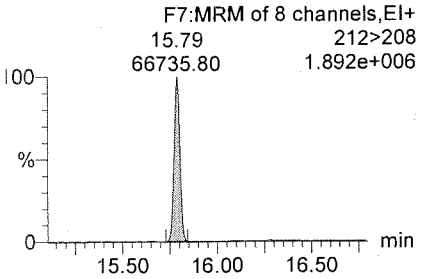
Quantify Sample Report **MassLynx 4.1**

Dataset: C:\PESTEI.PRO\101013oppestdata.qld

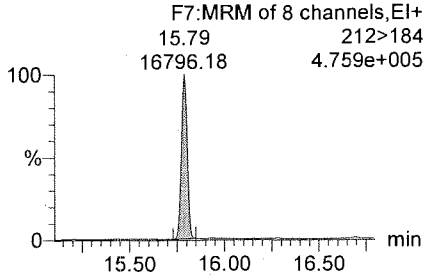
Last Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
Printed: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

Name: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

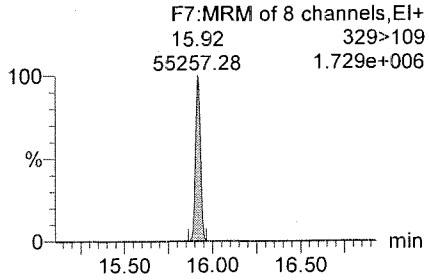
Fluoranthene-d10|93951-69-0



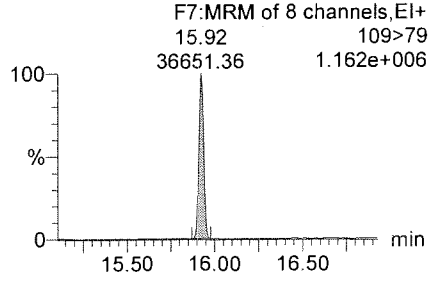
Fluoranthene-d10|93951-69-0



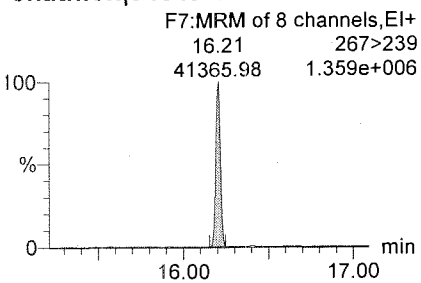
Stirophos|22248-79-9



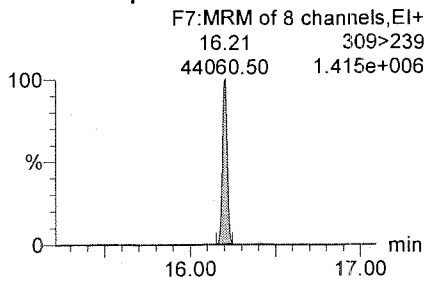
Stirophos|22248-79-9



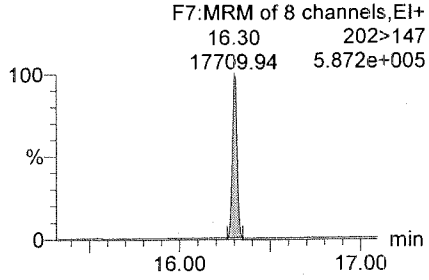
Tokuthion|34643-46-4



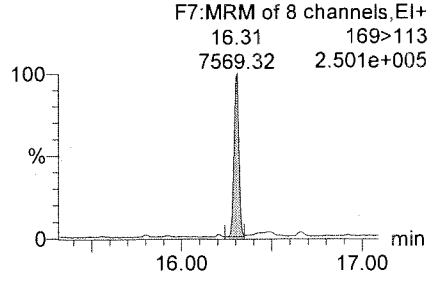
Tokuthion|34643-46-4



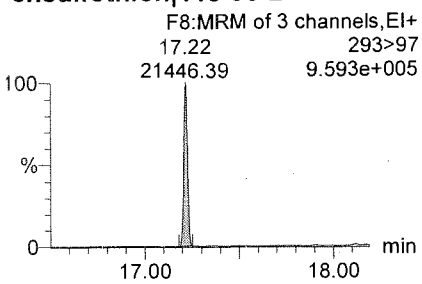
Merphos oxone|78-48-8



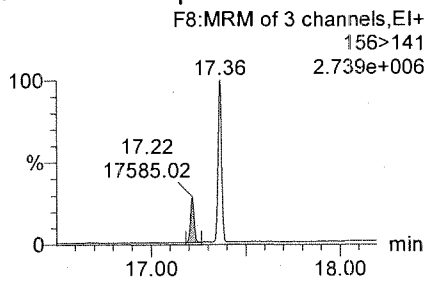
Merphos oxone|78-48-8



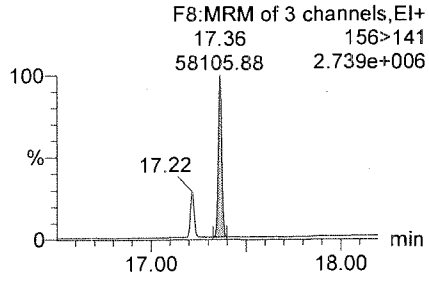
Fensulfothion|115-90-2



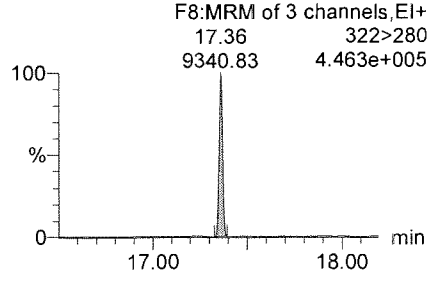
Fensulfothion|115-90-2



Bolstar|35400-43-2



Bolstar|35400-43-2



2302

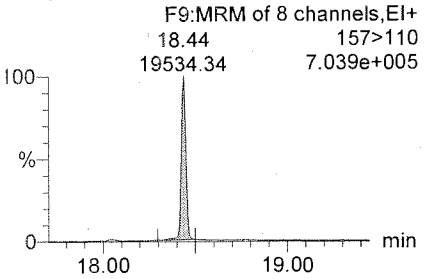
)uantify Sample Report **MassLynx 4.1**

)ataset: C:\PESTEI.PRO\101013oppestdata.qld

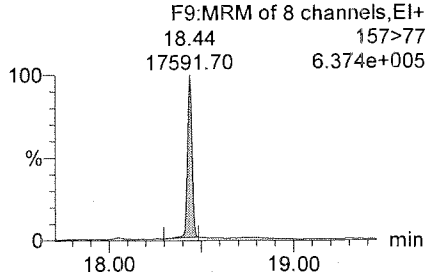
.ast Altered: Friday, October 11, 2013 08:10:21 Pacific Daylight Time
'rinted: Friday, October 11, 2013 08:11:43 Pacific Daylight Time

lame: 1010F014, Date: 10-Oct-2013, Time: 14:45:20, ID: CCV 100, Description: oppest 100ng/ml svm44-30f, Instrument: MS21, IS Method Name: C:\PESTEI.PRO\ACQUDB\nppest1.EXP

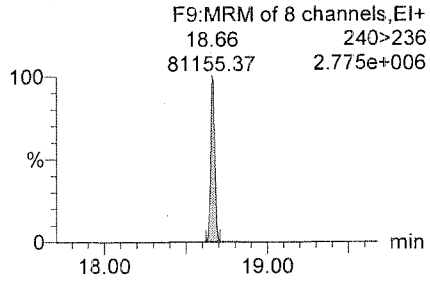
:PN|2104-64-5



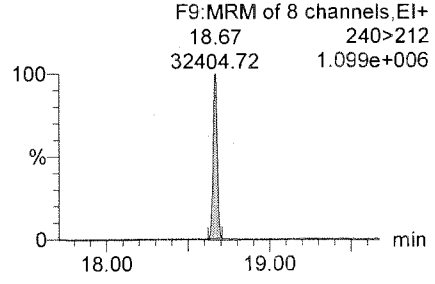
EPN|2104-64-5



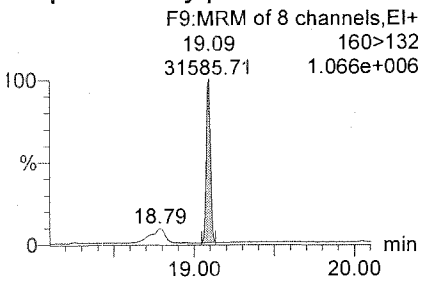
Chrysene-d12|1719-03-5



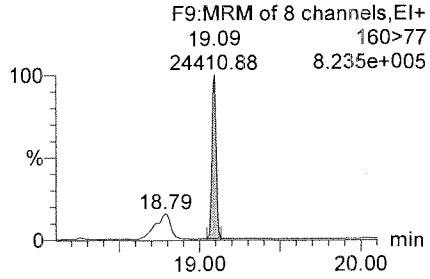
Chrysene-d12|1719-03-5



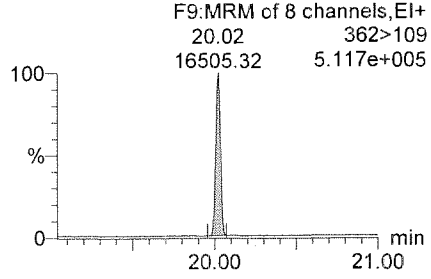
\zinphos methyl|86-50-0



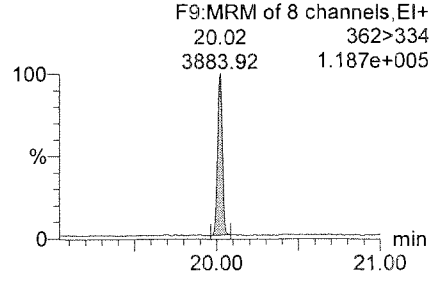
Azinphos methyl|86-50-0



Coumaphos|56-72-4



Coumaphos|56-72-4



2303

Sample List: C:\PESTEI.PRO\SampleDB\101013.SPL
Last Modified: Thursday, October 10, 2013 09:11:54 Pacific Daylight Time
Printed: Thursday, October 10, 2013 09:12:53 Pacific Daylight Time

	File Name	File Text	MS File	Inlet File	MS Tune File	Vial	% SV	Sample Type	Conc A	Sample ID
1	1010F001	dftpp 1ug/ml svm42-93d	dftppmrm	dftppfs	dtrscan	1	50.000000	Standard	---	DFTPP
2	1010F002	oppest ib	nppest1	ptvpst4	dtrscan	2	50.000000	Blank	---	IB
3	1010F003	oppest 5.0ng/ml svm44-30a	nppest1	ptvpst4	dtrscan	3	50.000000	Standard	5	ICAL 5
4	1010F004	oppest 10ng/ml svm44-30b	nppest1	ptvpst4	dtrscan	4	50.000000	Standard	10	ICAL 10
5	1010F005	oppest 20ng/ml svm44-30c	nppest1	ptvpst4	dtrscan	5	50.000000	Standard	20	ICAL 20
6	1010F006	oppest 50ng/ml svm44-30d	nppest1	ptvpst4	dtrscan	6	50.000000	Standard	50	ICAL 50
7	1010F007	oppest 80ng/ml svm44-30e	nppest1	ptvpst4	dtrscan	7	50.000000	Standard	80	ICAL 80
8	1010F008	oppest 100ng/ml svm44-30f	nppest1	ptvpst4	dtrscan	8	50.000000	Standard	100	ICAL 100
9	1010F009	oppest 120ng/ml svm44-30g	nppest1	ptvpst4	dtrscan	9	50.000000	Standard	120	ICAL 120
10	1010F010	oppest 160ng/ml svm44-30h	nppest1	ptvpst4	dtrscan	10	50.000000	Standard	160	ICAL 160
11	1010F011	oppest 200ng/ml svm44-30i	nppest1	ptvpst4	dtrscan	11	50.000000	Standard	200	ICAL 200
12	1010F012	oppest 300ng/ml svm44-30j	nppest1	ptvpst4	dtrscan	12	50.000000	Standard	300	ICAL 300
13	1010F013	oppest 100ng/ml svm44-39e	nppest1	ptvpst4	dtrscan	13	50.000000	QC	100	ICV 100

AE12837 10.10.13

10/15/13

5

2304

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Thursday, October 10, 2013 09:27:53 Pacific Daylight Time
Printed: Thursday, October 10, 2013 09:28:29 Pacific Daylight Time

10.10.13

Method: C:\PESTEI.PRO\MethDB\dftppqt.mdb 10 Oct 2013 09:27:51
Calibration: 10 Oct 2013 09:27:34

Name: 1010F001, Date: 10-Oct-2013, Time: 09:13:19, ID: DFTPP, Description: dftpp 1ug/ml svm42-93d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\dftppmrm.EXP

10/5/13
5

	#	Name	Trace	RT	Area	Mod.Comm.	1° Ratio	2° Ratio (A...	3° Ratio (A...	4° Ratio (A...
1	1	dftpp|5074-71-5	442>198	9.11	81387.172		6.141	2.440	3.185	11.649

2305

Quantify Sample Report **MassLynx 4.1**

Dataset: Untitled

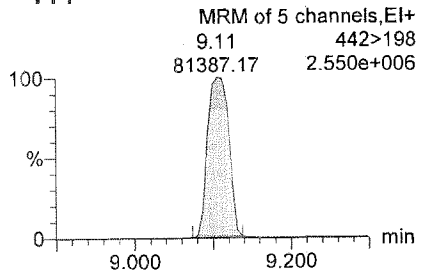
Last Altered: Thursday, October 10, 2013 09:27:53 Pacific Daylight Time
Printed: Thursday, October 10, 2013 09:28:29 Pacific Daylight Time

10/10/13

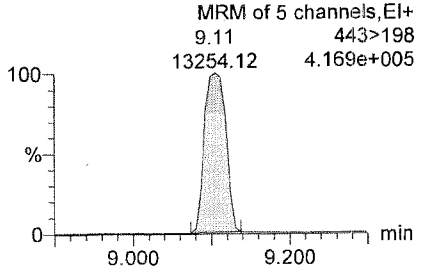
Method: C:\PESTEI.PRO\MethDB\dftppqt.mdb 10 Oct 2013 09:27:51
Calibration: 10 Oct 2013 09:27:34

Name: 1010F001, Date: 10-Oct-2013, Time: 09:13:19, ID: DFTPP, Description: dftpp 1ug/ml svm42-93d, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\dftppmrm.EXP

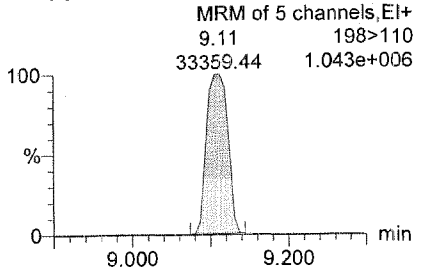
dftpp|5074-71-5



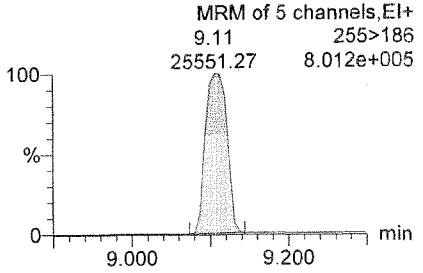
dftpp|5074-71-5



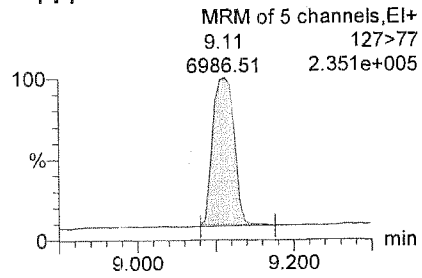
dftpp|5074-71-5



dftpp|5074-71-5



dftpp|5074-71-5



	#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	Conc.	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	1	dftpp|5074-71-5	442>198	9.11	81387.172		bb		1.00	0.0	6.141	6.141	NO

2306

Instrument RunLog

Instrument ID: MS21
Department: Semivoa GCMS
Analysis Lot: KWG1311302

Instrument Type: GC

FileSpecification	Type	Laboratory ID	Client ID	Product	Matrix	Dilution	Acquisition Started	Acquisition Ended
J:\MS21\DATA\101013\1010F014.D	CCV	KWG1311302-1	Continuing Calibration	8270D PEST OI	NOT APP	1.0	10/10/2013 14:45:20	10/10/2013 14:45:20
J:\MS21\DATA\101013\1010F015.D	MB	KWG1310066-3	Method Blank	8270D Pest OP	WATER	1.0	10/10/2013 15:15:15	10/10/2013 15:15:15
J:\MS21\DATA\101013\1010F016.D	LCS	KWG1310066-1	Lab Control Sample	8270D Pest OP	WATER	1.0	10/10/2013 15:39:35	10/10/2013 15:39:35
J:\MS21\DATA\101013\1010F017.D	DLCS	KWG1310066-2	Duplicate Lab Control S	8270D Pest OP	WATER	1.0	10/10/2013 16:05:53	10/10/2013 16:05:53
J:\MS21\DATA\101013\1010F018.D	SMPL	K1309638-001	13254-BW-4	8270D Pest OP	WATER	1.0	10/10/2013 16:32:04	10/10/2013 16:32:04
J:\MS21\DATA\101013\1010F019.D	SMPL	K1309638-002	13254-BW-2	8270D Pest OP	WATER	1.0	10/10/2013 16:58:15	10/10/2013 16:58:15
J:\MS21\DATA\101013\1010F020.D	SMPL	K1309638-004	13253-BW-3	8270D Pest OP	WATER	1.0	10/10/2013 17:24:26	10/10/2013 17:24:26
J:\MS21\DATA\101013\1010F021.D	SMPL	K1309638-005	13253-Well D	8270D Pest OP	WATER	1.0	10/10/2013 17:50:38	10/10/2013 17:50:38
J:\MS21\DATA\101013\1010F022.D	SMPL	K1309638-008	13255-BW-1	8270D Pest OP	WATER	1.0	10/10/2013 18:16:44	10/10/2013 18:16:44
J:\MS21\DATA\101013\1010F023.D	SMPL	K1309638-010	13255-DUP	8270D Pest OP	WATER	1.0	10/10/2013 18:43:29	10/10/2013 18:43:29
J:\MS21\DATA\101013\1010F024.D	SMPL	K1309638-011	13255-Rinse	8270D Pest OP	WATER	1.0	10/10/2013 19:09:40	10/10/2013 19:09:40

2307

#362765 AC12837 10.11.12

10/5/13
5

Quantify Sample Summary Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Thursday, October 10, 2013 09:27:53 Pacific Daylight Time
Printed: Thursday, October 10, 2013 09:28:29 Pacific Daylight Time

10.10.13

Method: C:\PESTEI.PRO\MethDB\dftppqt.mdb 10 Oct 2013 09:27:51
Calibration: 10 Oct 2013 09:27:34

10/15/13

Name: 1010F001, Date: 10-Oct-2013, Time: 09:13:19, ID: DFTPP, Description: dftpp 1ug/ml svm42-93d, Instrument: MS21, MS Method Name: C:\PESTEI.PRO\ACQUDB\dftppmrm.EXP

#	Name	Trace	RT	Area	Mod.Comm...	1° Ratio	2° Ratio (A...	3° Ratio (A...	4° Ratio (A...
1	dftpp|5074-71-5	442>198	9.11	81387.172		6.141	2.440	3.185	11.649

2308

Quantify Sample Report **MassLynx 4.1**

Dataset: Untitled

Last Altered: Thursday, October 10, 2013 09:27:53 Pacific Daylight Time
Printed: Thursday, October 10, 2013 09:28:29 Pacific Daylight Time

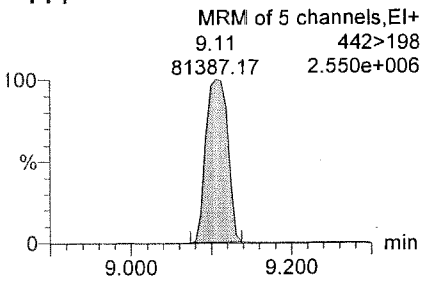
10/10/13

Method: C:\PESTEI.PRO\MethDB\dftppqt.mdb 10 Oct 2013 09:27:51
Calibration: 10 Oct 2013 09:27:34

10/15/13
9

Name: 1010F001, Date: 10-Oct-2013, Time: 09:13:19, ID: DFTPP, Description: dftpp 1ug/ml svm42-93d, Instrument: MS21,
MS Method Name: C:\PESTEI.PRO\ACQUDB\dftppmrm.EXP

dftpp|5074-71-5



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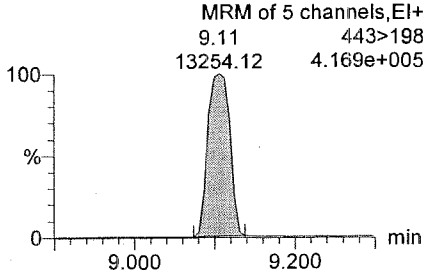

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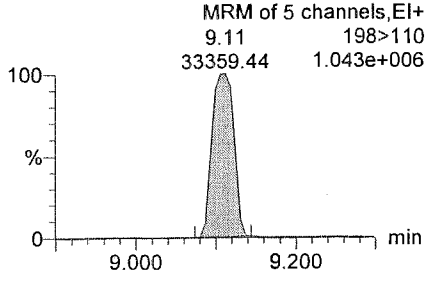

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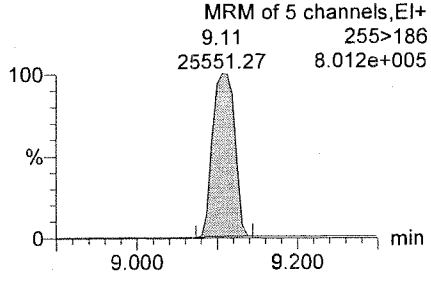
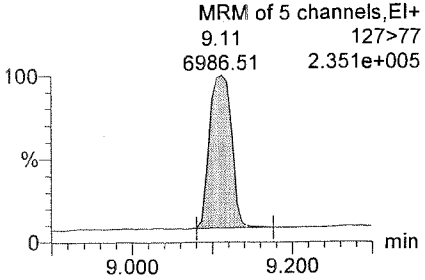


dftpp|5074-71-5



2309

#	Name	Trace	RT	Area	IS Area	Prim...	Mod.Comm...	Conc.	%Dev	1° Ratio	1° Ratio (Pred)	1° Ratio Flag
1	dftpp|5074-71-5	442>198	9.11	81387.172		bb		1.00	0.0	6.141	6.141	NO

Organic Analysis:
Organophosphorus Pesticides by HRGC/MS/MS

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1310066	**Prep Method:**	EPA 3535A	**Prep Date:**	09/17/13 08:35
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.
K1309638-001	13254-BW-4	8270D Pest OP	WATER	1020ml	10ml
K1309638-002	13254-BW-2	8270D Pest OP	WATER	1020ml	10ml
K1309638-004	13253-BW-3	8270D Pest OP	WATER	1020ml	10ml
K1309638-005	13253-Well D	8270D Pest OP	WATER	1020ml	10ml
K1309638-008	13255-BW-1	8270D Pest OP	WATER	1020ml	10ml
K1309638-010	13255-DUP	8270D Pest OP	WATER	1000ml	10ml
K1309638-011	13255-Rinse	8270D Pest OP	WATER	1020ml	10ml
KWG1310066-1	Lab Control Sample	8270D Pest OP	WATER	1000ml	10ml
KWG1310066-2	Duplicate Lab Control Sampl	8270D Pest OP	WATER	1000ml	10ml
KWG1310066-3	Method Blank	8270D Pest OP	WATER	1020ml	10ml

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1309638-001	1282466	SVM43-69C	100uL			CSavella
K1309638-002	1282467	SVM43-69C	100uL			CSavella
K1309638-004	1282468	SVM43-69C	100uL			CSavella
K1309638-005	1282469	SVM43-69C	100uL			CSavella
K1309638-008	1282470	SVM43-69C	100uL			CSavella
K1309638-010	1282471	SVM43-69C	100uL			CSavella
K1309638-011	1282465	SVM43-69C	100uL			CSavella
KWG1310066-1	1282472	SVM43-69C	100uL	SVM43-70B	100uL	CSavella
KWG1310066-2	1282473	SVM43-69C	100uL	SVM43-70B	100uL	CSavella
KWG1310066-3	1282474	SVM43-69C	100uL			CSavella

Comments: I.S. = SVM42-8C

Started By: AMeyers Assisted By: _____ Training: Yes / No

Completed By: AMeyers Assisted By: _____ Yes / No

Reviewed By: KBaily Date: 9-18-13 Storage: SVM LAB

Chain of Custody

Relinquished By: AMeyers Date: 9/17/13

Received By: _____ Date: 10.10.13 Extracts Examined: Yes / No

Preparation Information

Group ID:	KWG1310066	**Prep Method:**	EPA 3535A	**Prep Date:**	09/17/13 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. mL	pH	Int. Vol.	Final Vol. mL	Surr. Added ul	Spike Added ul
1	K1309638-001	13254-BW-4	24	✓	8270D Pest OP	WATER	1020	6	NA	10	100	NA
* 2	K1309638-002	13254-BW-2	24	✓	8270D Pest OP	WATER	1020	6		10		
3	K1309638-004	13253-BW-3	24	✓	8270D Pest OP	WATER	1020	6		10		
4	K1309638-005	13253-Well D	24	✓	8270D Pest OP	WATER	1020	6		10		
5	K1309638-008	13255-BW-1	24	✓	8270D Pest OP	WATER	1000	6		10		
6	K1309638-010	13255-DUP	24	✓	8270D Pest OP	WATER	1020	6		10		
7	K1309638-011	13255-Rinse	24	✓	8270D Pest OP	WATER	1020	6		10		
8	KWG1310066-1	Lab Control Sample			8270D Pest OP	WATER	1000	5		10		100
9	KWG1310066-2	Duplicate Lab Control Sample			8270D Pest OP	WATER	1000	5		10		
10	KWG1310066-3	Method Blank			8270D Pest OP	WATER	1020	5		10		NA

191951

Comments: *EE 9/17/13 Am moving slowly through disk
*sample peach in color and very murky 9/17/13 Am: 911 performed, had SVM43-70B, XP 2.29.14, 10ug/ml to poke hole in disk to aid extraction.

Surrogate ID: *~~SVM43-4DD, XP 12.26.13, 10ppm~~, 100ul EPP (ZA)

Spike ID: *~~SVM42-2~~ SVM43-69C, XP 5.27.14, 10ug/ml, 100 ul EPP (ZA)

Witness: (Sandra) 9/17/13

Started By: AMeyers Assisted By:

Completed By: AMeyers Assisted By:

Additional Prep Information For OP Pesticides in Water by 3535A

Service Request #: K1309638 Work Group #: KWG1310066

Solvents/Reagents used:

Methanol Lot#: 41907 Acetone Lot #: DI858 Hexane Lot #: 36452

H2O Phobic DVB extraction cartridge Lot #: 326666

Extraction Program # 8081.6 Initial Purge Program # 8081.4
Between Sample Purge Program# 8081.8

Start (Time/Date/Initial): 835 9/17/13 Am

Stop (Time/Date/Initial): 1040 9/17/13 Am

Dry Disk Lot #: B024004243 67 9 1050/9/17/13 Am
EE 9/17/13 Am

Turbo Vap (Temp/ID/Time/Date/Initial): 28,-10,27.0/K-TV-04/1100/9-17-13/Am

OP Pest Vial: AMBER Vial Storage: SVM LAB

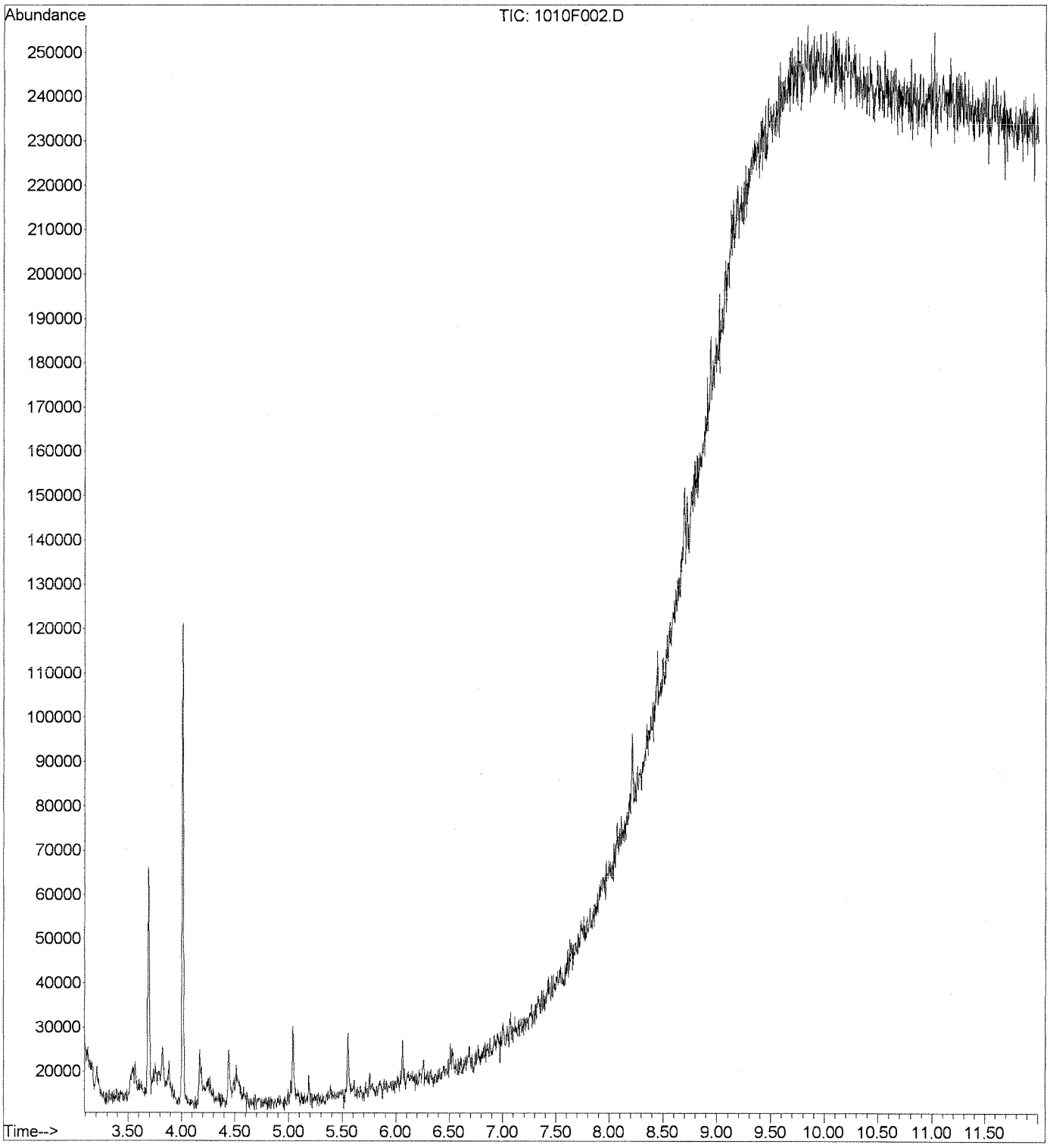
Archived Extract Storage: Activities

Completed (Time/Date/Initial): 1220 9/17/13 Am

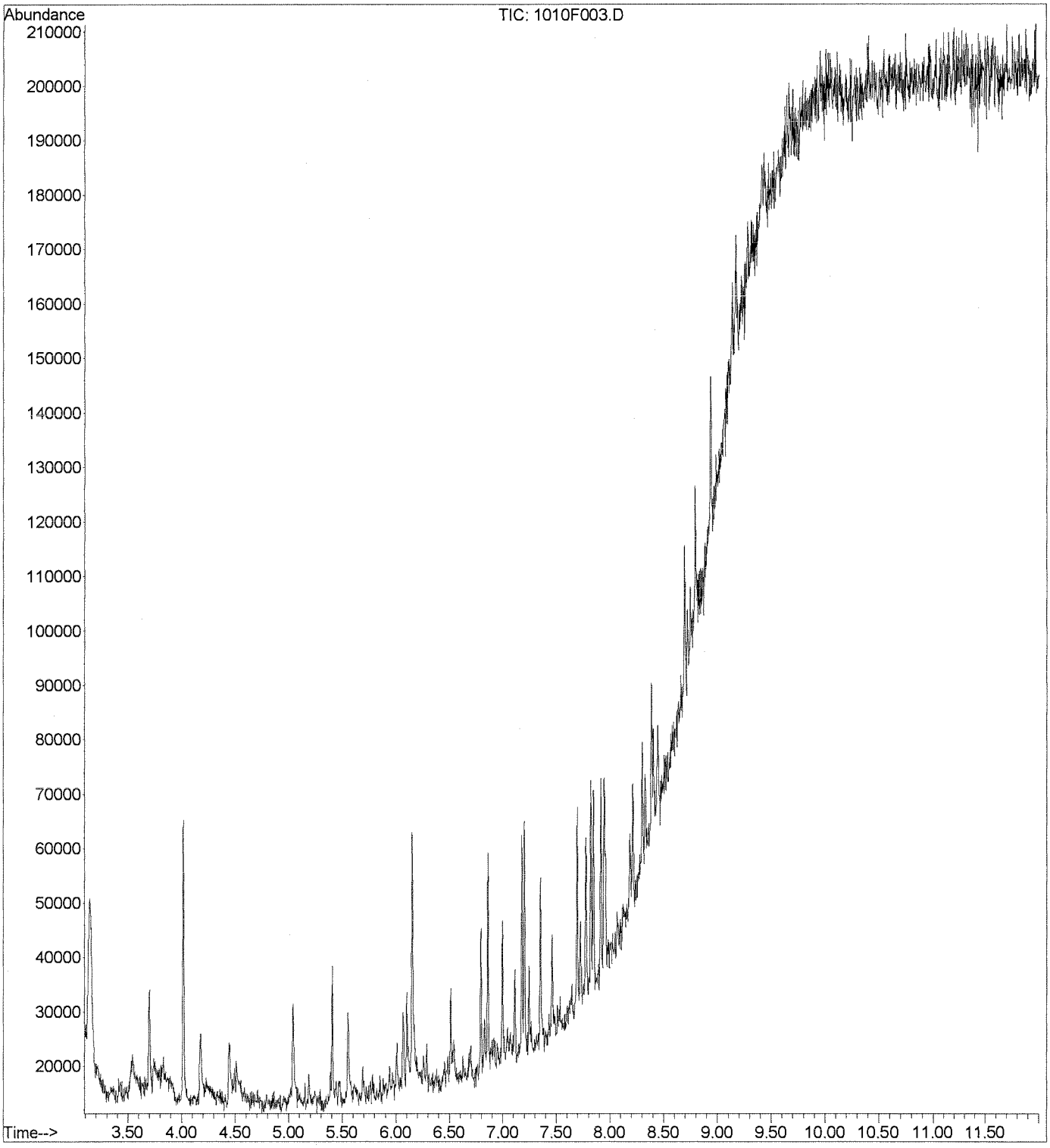
Comments/Observations: _____

Bench Sheet Review Check List
☒ Hold Times Met (if no, Reason: _____)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

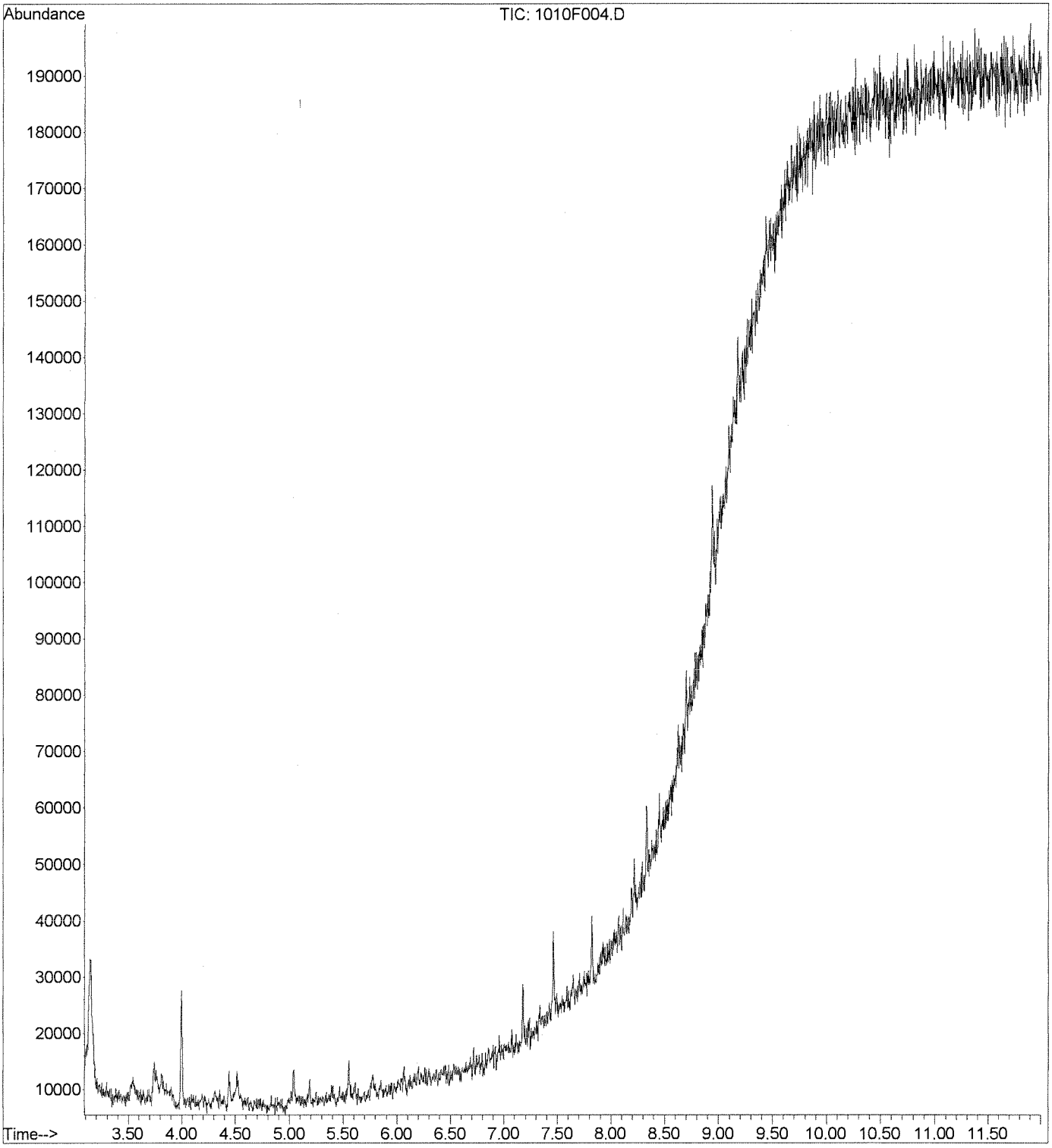
File : J:\MS29\DATA\101013\1010F002.D
Operator : JPeterson
Acquired : 10 Oct 2013 9:35 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: HEXANE
Misc Info :
Vial Number: 1



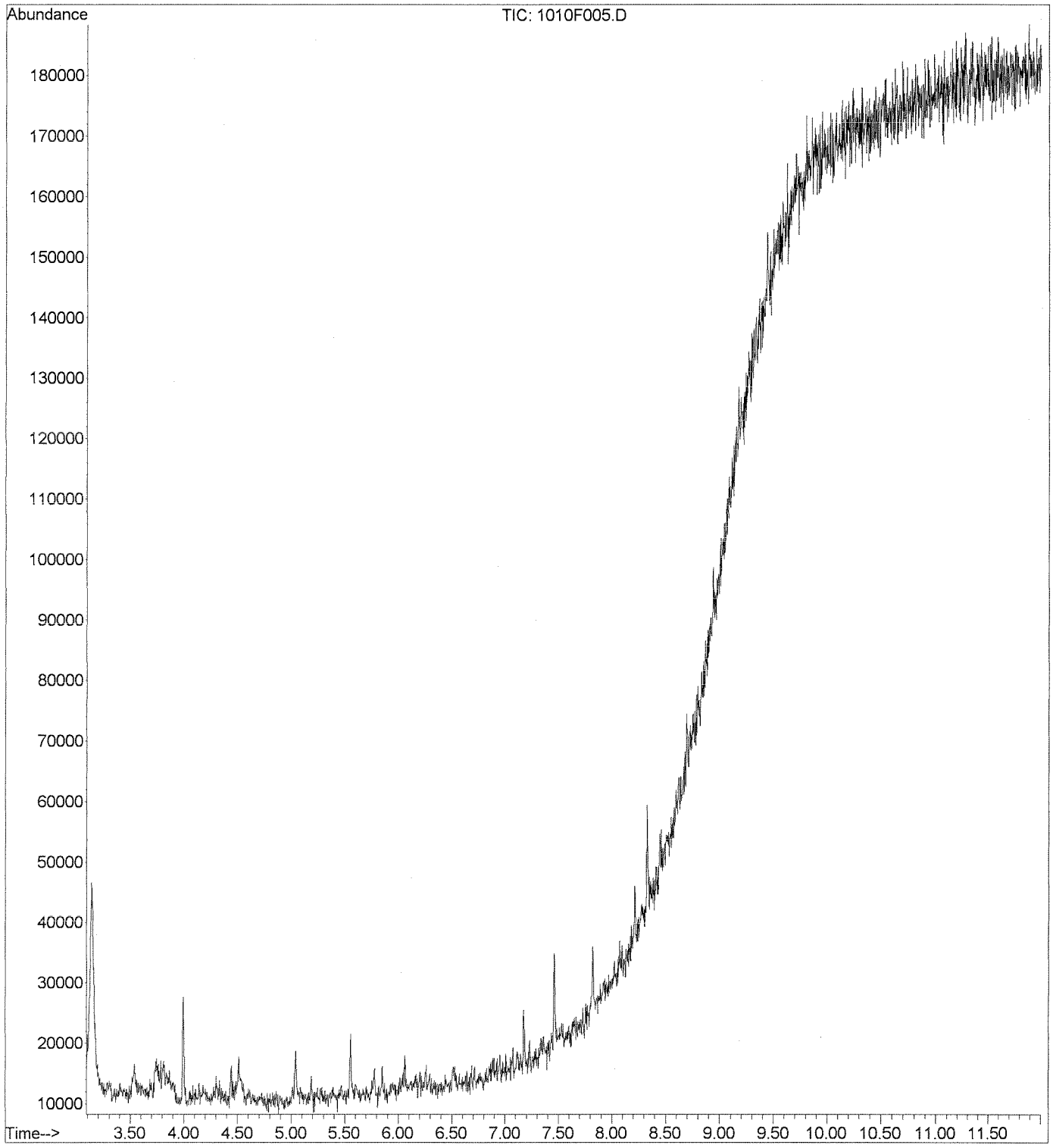
File : J:\MS29\DATA\101013\1010F003.D
Operator : JPeterson
Acquired : 10 Oct 2013 9:51 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: oppest 300 ng/ml
Misc Info :
Vial Number: 3



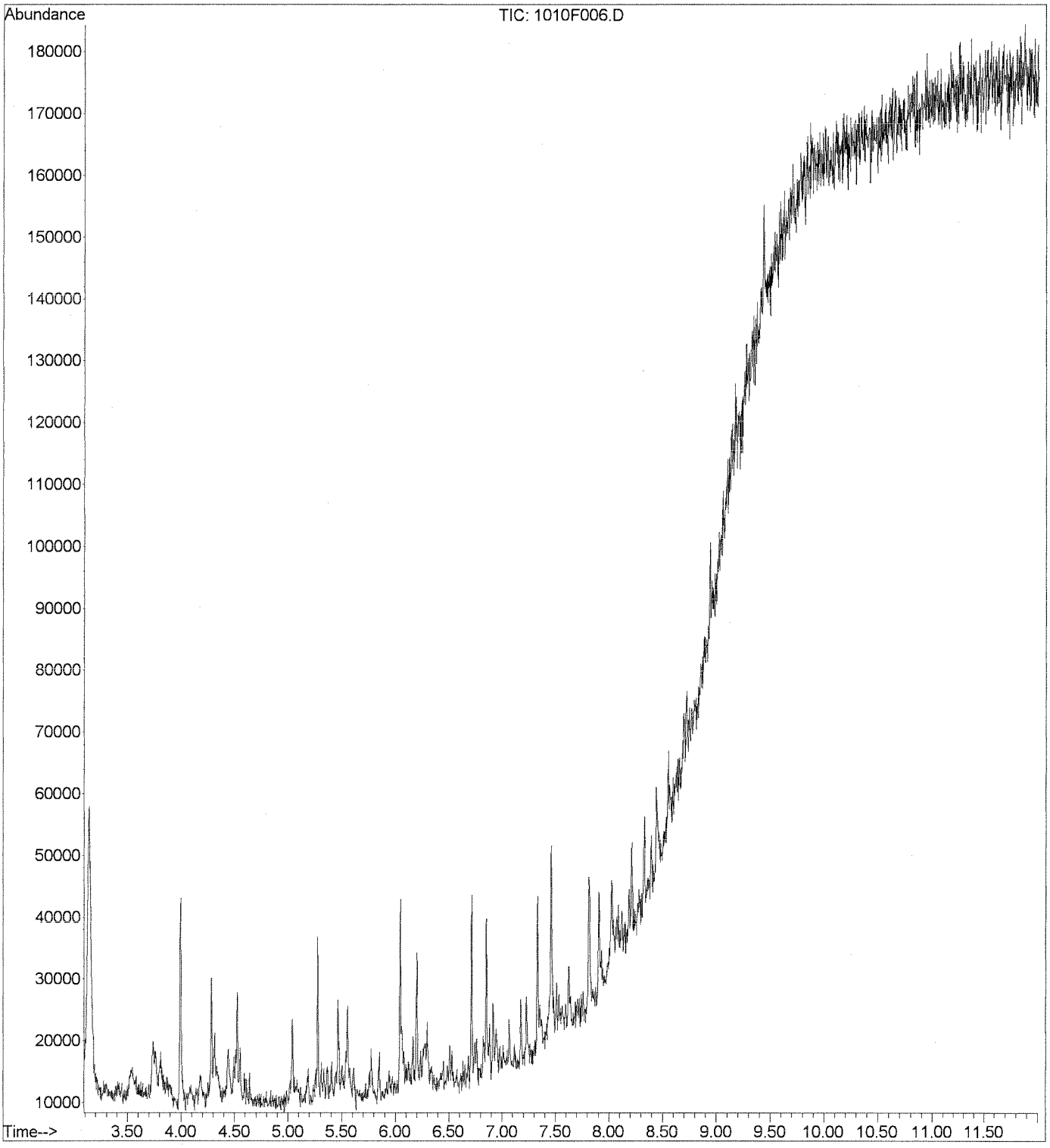
File : J:\MS29\DATA\101013\1010F004.D
Operator : JPeterson
Acquired : 10 Oct 2013 11:02 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: kwg1310066-3 mb
Misc Info :
Vial Number: 4



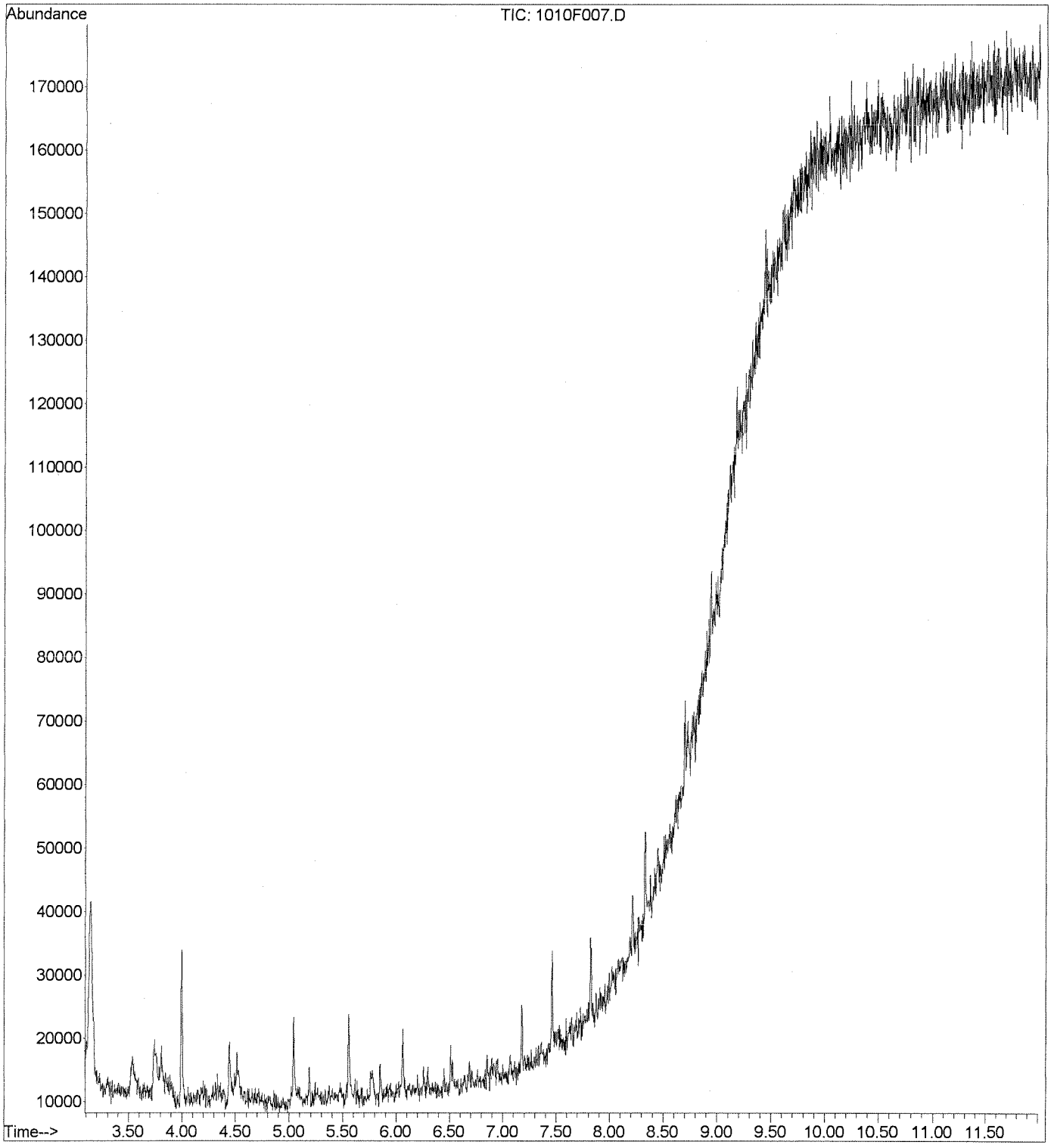
File : J:\MS29\DATA\101013\1010F005.D
Operator : JPeterson
Acquired : 10 Oct 2013 11:18 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-001
Misc Info :
Vial Number: 5



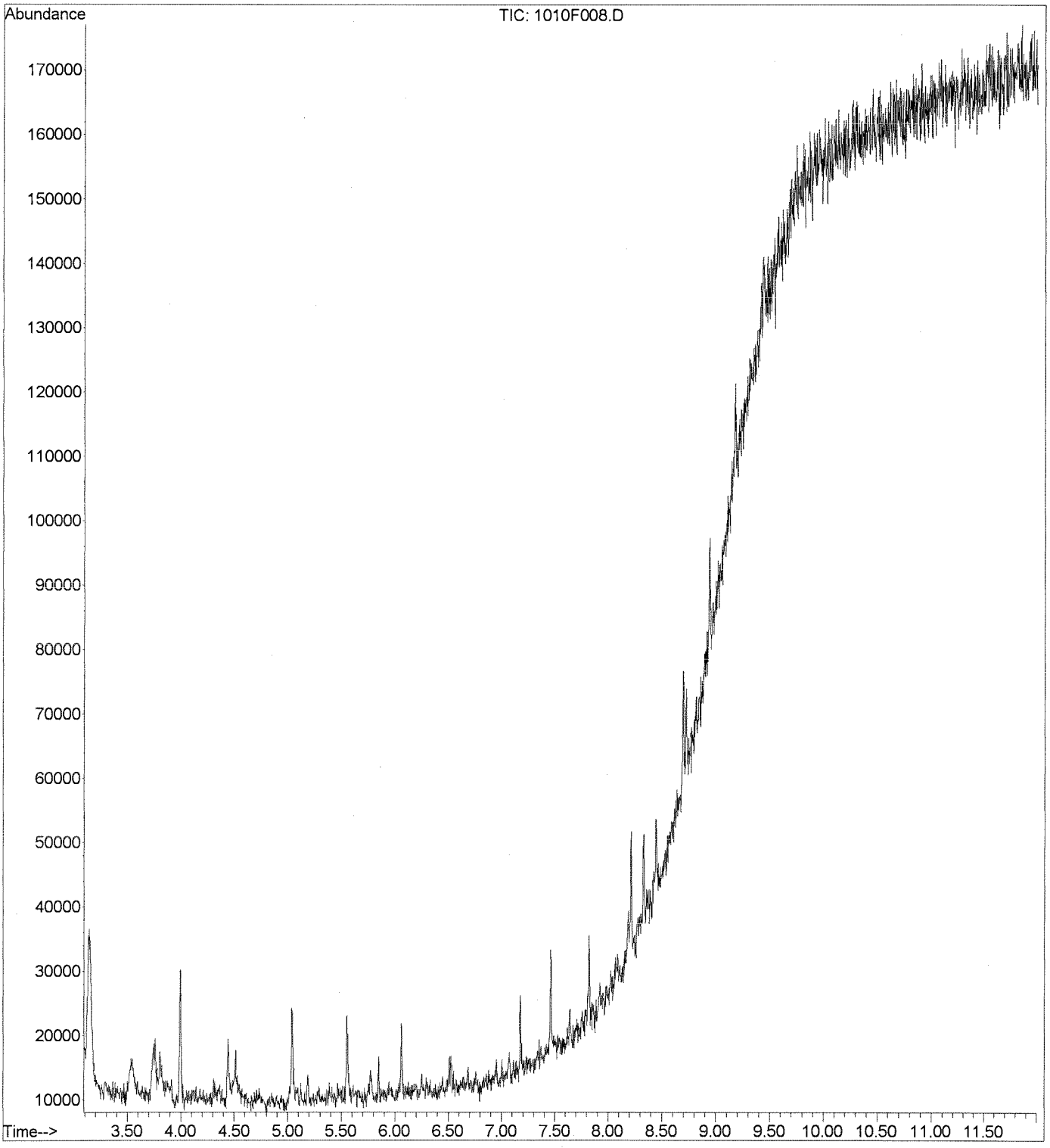
File : J:\MS29\DATA\101013\1010F006.D
Operator : JPeterson
Acquired : 10 Oct 2013 11:35 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-002
Misc Info :
Vial Number: 6



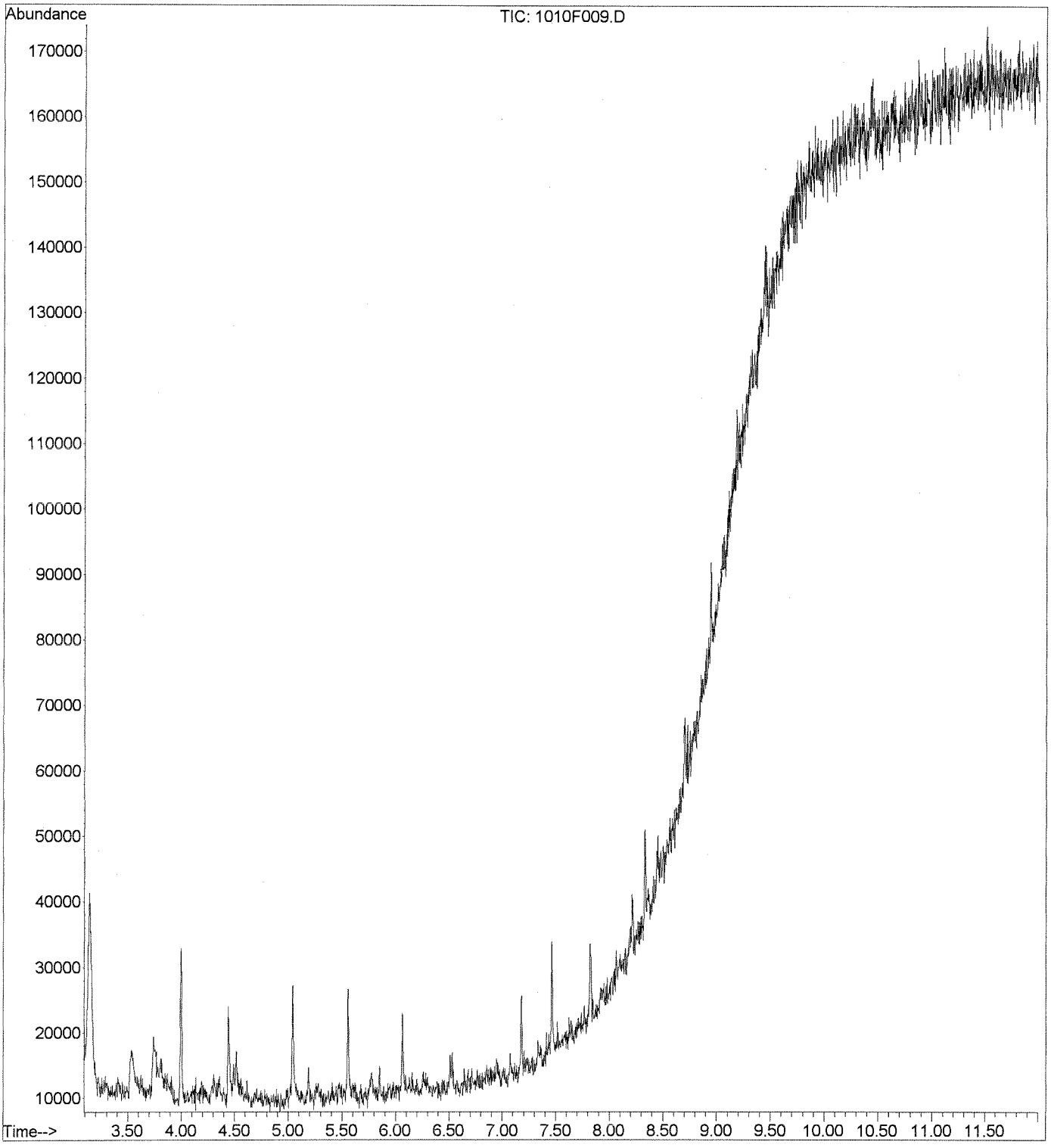
File : J:\MS29\DATA\101013\1010F007.D
Operator : JPeterson
Acquired : 10 Oct 2013 11:51 am using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-004
Misc Info :
Vial Number: 7



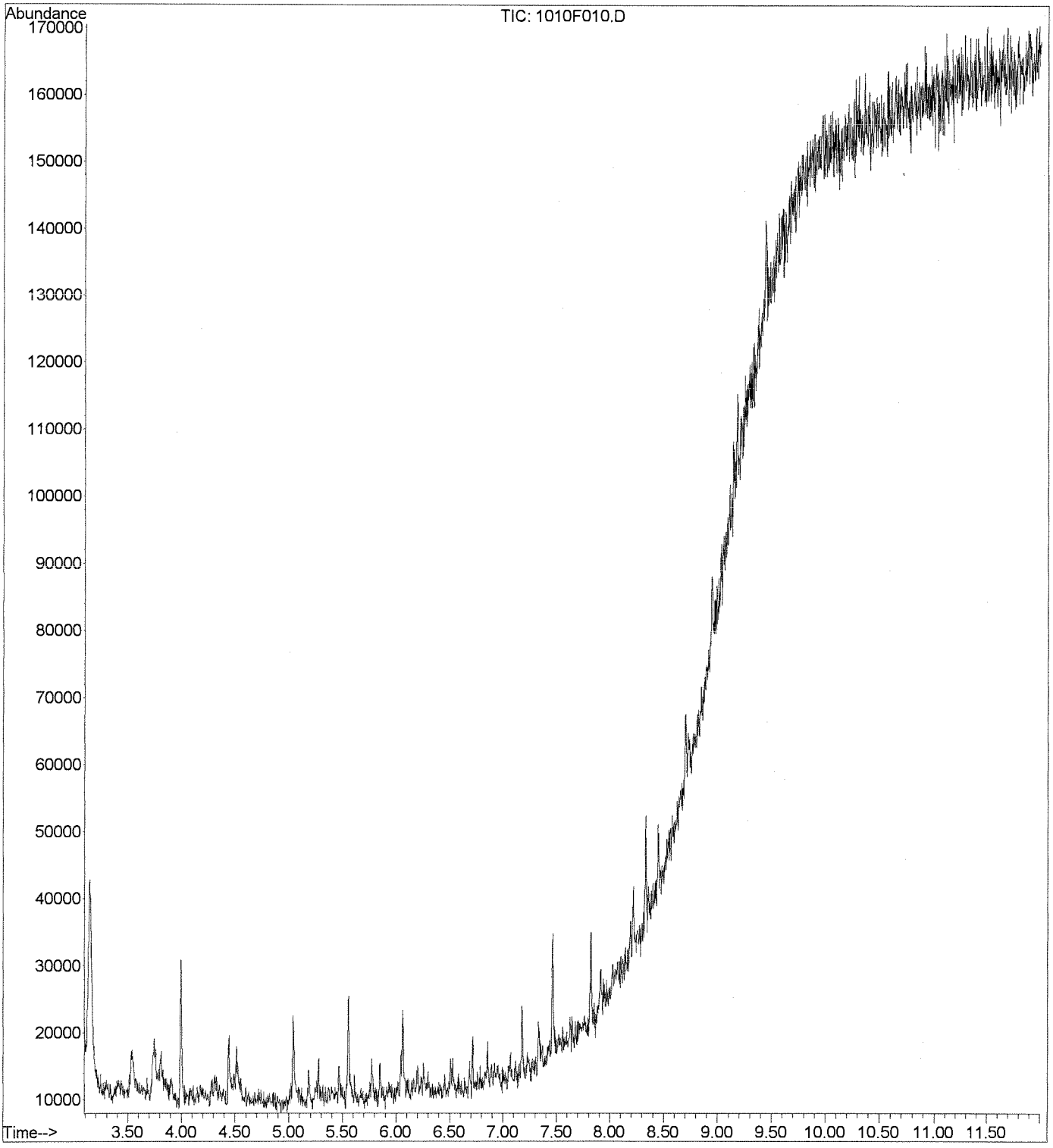
File : J:\MS29\DATA\101013\1010F008.D
Operator : JPeterson
Acquired : 10 Oct 2013 12:08 pm using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-005
Misc Info :
Vial Number: 8



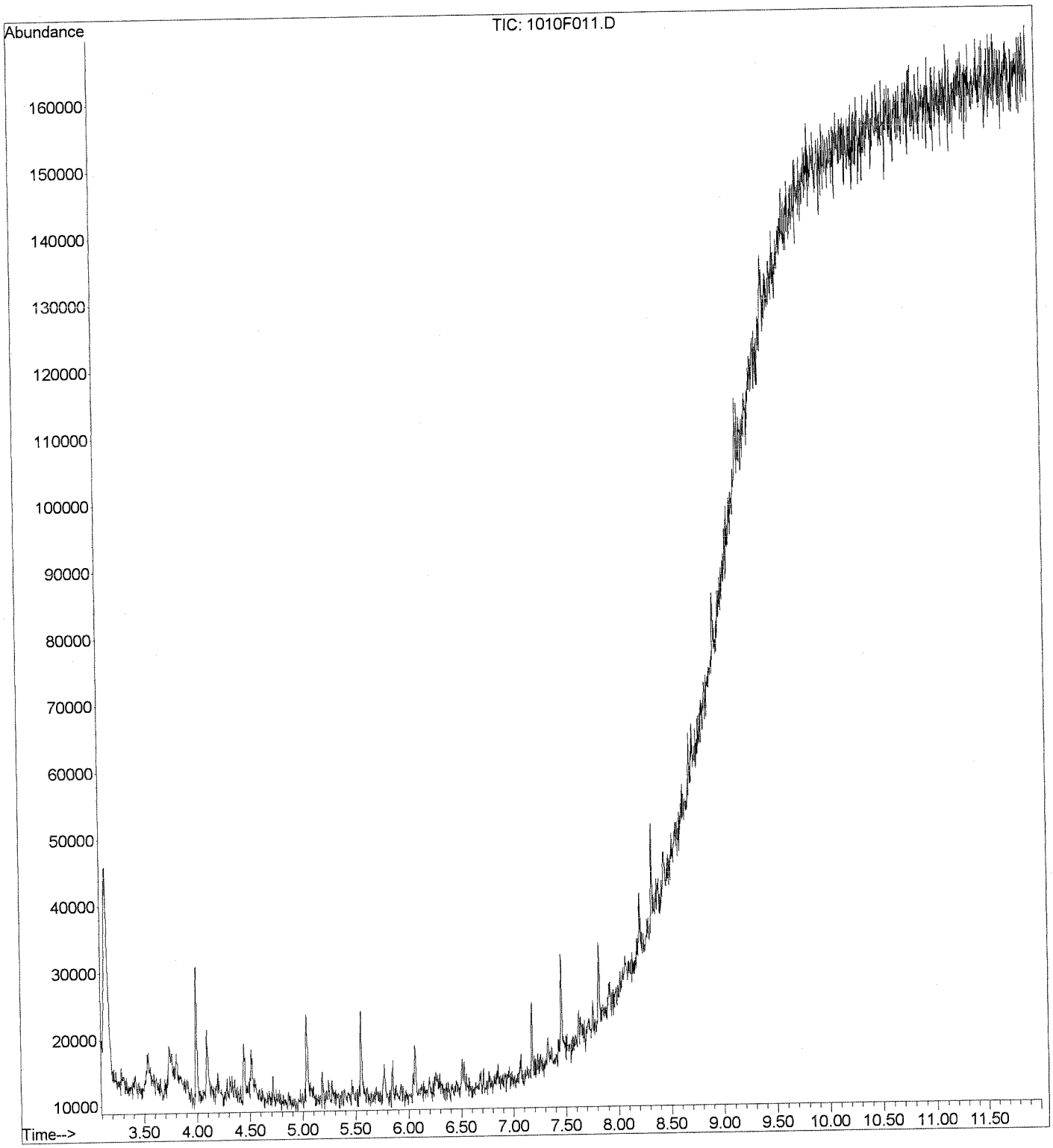
File : J:\MS29\DATA\101013\1010F009.D
Operator : JPeterson
Acquired : 10 Oct 2013 12:24 pm using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-008
Misc Info :
Vial Number: 9



File : J:\MS29\DATA\101013\1010F010.D
Operator : JPeterson
Acquired : 10 Oct 2013 12:41 pm using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-010
Misc Info :
Vial Number: 10



File : J:\MS29\DATA\101013\1010F011.D
Operator : JPeterson
Acquired : 10 Oct 2013 12:57 pm using AcqMethod SCREEN
Instrument : MS29
Sample Name: k1309638-011
Misc Info :
Vial Number: 11



Carbamates and Carbamoyloximes

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

September 23, 2013

Ms. Chris Leaf
ALS Environmental - Kelso
1317 S. 13th Avenue
Kelso, WA 98626

Certificate of Analysis

Project Name:	**SOCs**	Workorder:	**1048418**
Purchase Order:	**K1309638**	Workorder ID:	**K1309638**

Dear Ms. Leaf,

Enclosed are the analytical results for samples received by the laboratory on Tuesday, September 17, 2013.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Kelli Wolfgang (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS York: 978 Loucks Mill Road, York, PA 17402 717-505-5280

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Kelli Wolfgang

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Kelli Wolfgang
Project Coordinator

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 1048418 K1309638 Discard Date: 10/07/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1048418001	K1309638-001	Drinking Water	9/11/13 11:20	9/17/13 09:20	Customer
1048418002	K1309638-002	Drinking Water	9/11/13 15:45	9/17/13 09:20	Customer
1048418003	K1309638-004	Drinking Water	9/10/13 10:30	9/17/13 09:20	Customer
1048418004	K1309638-005	Drinking Water	9/10/13 16:05	9/17/13 09:20	Customer
1048418005	K1309638-008	Drinking Water	9/12/13 14:15	9/17/13 09:20	Customer
1048418006	K1309638-010	Drinking Water	9/12/13 00:00	9/17/13 09:20	Customer
1048418007	K1309638-011	Drinking Water	9/12/13 12:00	9/17/13 09:20	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

ALS Environmental

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418001** Date Collected: 9/11/2013 11:20 Matrix: Drinking Water

Sample ID: **K1309638-001** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 01:10	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418002** Date Collected: 9/11/2013 15:45 Matrix: Drinking Water

Sample ID: **K1309638-002** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 02:30	CGS	A

Sample Comments:

Samples for Method 531.1 are preserved to a pH of 3 at the time of sampling. This sample did not meet this preservation requirement when tested prior to analysis.

Kelli Wolfgang

Kelli Wolfgang
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418003** Date Collected: 9/10/2013 10:30 Matrix: Drinking Water

Sample ID: **K1309638-004** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 03:10	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418004** Date Collected: 9/10/2013 16:05 Matrix: Drinking Water

Sample ID: **K1309638-005** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 03:51	CGS	A

Sample Comments:

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418005** Date Collected: 9/12/2013 14:15 Matrix: Drinking Water

Sample ID: **K1309638-008** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 09:36	CGS	A

Sample Comments:

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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418006** Date Collected: 9/12/2013 00:00 Matrix: Drinking Water

Sample ID: **K1309638-010** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 10:17	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1048418 K1309638

Lab ID: **1048418007** Date Collected: 9/12/2013 12:00 Matrix: Drinking Water

Sample ID: **K1309638-011** Date Received: 9/17/2013 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
CARBAMATES										
Aldicarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Aldicarb Sulfone	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Aldicarb Sulfoxide	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Carbaryl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Carbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
3-Hydroxycarbofuran	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Methiocarb	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Methomyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Oxamyl	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A
Propoxur	ND		ug/L	1.0	EPA 531.1			9/19/13 10:57	CGS	A

Sample Comments:

Kelli Wolfgang
Project Coordinator

APPENDIX E

MONITORING WELL SAMPLING FORMS

Monitoring Well Sampling

Site: Drexel Date: 9/12/13 Sampled By: C. Henry J. Dennis

Well: BW-1 Purge Method: Pump Bailer Pump Type: X Submersible (Teflon X SS Other) Peristaltic

Pump (Make & Model): Geosub 55. Purge Rate: ____ gpm Water Quality Meter (make/model): Horiba U-53

Water Level Meter: Heron Dipper-T Time at start of purging: 1250 Time at end of purging: 1410

Initial Depth of Pump or Intake Tubing: 160 ft (BTOC) Final Depth of Pump or Intake Tubing: 160 ft (BTOC)

Screen interval: ___ ft to ____ ft (BTOC)

DTW

Time	Discharge Volume ~~(liter)~~	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity (%)~~	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	pH Meter	Comments
1320	11 gal	24.59	6.99	0.250	149.36	696	111	7.69	white		
1330	15.0	24.72	7.19	0.248	149.29	450	86	6.91	white		
1340	18.0	26.78	7.32	0.243	149.31	295	76	6.54	cloudy		
1350	21.0	27.70	7.24	0.244	149.30	184	80	6.52	cloudy		
1400	24.0	27.86	7.29	0.244	149.30	73.8	76	6.53	cloudy		
1410	27.0	27.89	7.31	0.244	149.30	81.2	74	6.41	cloudy		

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13255-BW-1 + DUP Time Collected: 1415 Comments: 7.5 well volumes

Well Inspection & Sampling Log

Site: Drexel Date: 9.12.13
Station (Well No.): BW-1 Performed by: G. Henry J. Dennis
Field Conditions/Observations: Sunny, 85°

Well Inspection:

Well Type: X Flush Mount ___ Stick Up ___ Other Well Size (ID): 2 in ___ Steel X PVC
Condition (locked, damaged, etc.):
Good, concrete area.

Well Labeled: ___ Yes X No Well Cap: X Yes ___ No Well Cap: X Tight ___ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

Depth to Water (initial): 14908 ft. (measured from mark on top of riser pipe, otherwise measure from North side) 23.73'
Depth of Well: 172.81 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 149.30 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: 6,22 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: X Yes ___ No Describe: _____

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (___ - ___) x ___ = 3.80 gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 11.40 gallons Purged Volume (actual): 27 gallons

Purge Water Contained? ___Yes___ No Container Used: ___ 55 Gallon drum X Other (Tote)
Labeled: X YES ___ No

Sampling Method: ___Bailer X Peristaltic Pump ___Submersible Pump Sample Rate:___gpm

QA Sample Collected X Yes ___ No X Blind duplicate ___Eq blank ___Field blank ___MS/MSD

QA Sample ID: 13255-DUP QA Sample Time: 1415
Filtered: ___Yes X No Filter size: ___um; ___All analyses ___Metals only

Sample Appearance (color, odor, etc.): _____

Analysis Required: _____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ___250 ml plastic ___500 ml plastic ___(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ___Courier ___Fed ex (Airbill No.___) ___UPS (Airbill No. _____)

Monitoring Well Sampling

Site: Drexel Date: 9.11.13 Sampled By: G. Henry J. Dennis
Well: BW-2 Purge Method: Pump Bailer Pump Type: Submersible (Teflon SS Other) Peristaltic
Pump (Make & Model): Grundfos SQ. Purge Rate: .20 gpm Water Quality Meter (make/model): Horiba U-53
Water Level Meter: Heron Dipper-T Time at start of purging: 1310 Time at end of purging: 1549
Initial Depth of Pump or Intake Tubing: 160 ft (BTOC) Final Depth of Pump or Intake Tubing: 160 ft (BTOC)
Screen interval: ___ ft to ____ft (BTOC)

DTW

Time	Discharge Volume (~~liter~~ gal)	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity (%)~~	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	~~pH Meter~~	Comments
1435	16 gal	27.95	7.56	0.300	153.63	483	85	8.11	cloudy		GET WATER
1440	17 gal	27.71	7.39	0.299	153.63	429	99	7.97			clear before
1445	18 gal	27.79	7.44	0.300	153.63	389	96	7.92			connecting
1450	19 gal	28.10	7.58	0.295	153.63	246	88	7.64			Horiba.
1455	20 gal	28.00	7.57	0.296	153.63	231	89	7.68			
1500	21 gal	27.78	7.53	0.299	153.63	215	91	7.72			
1505	22 gal	27.53	7.53	0.305	153.63	174	91	7.73			
1510	23 gal	27.85	7.55	0.302	153.63	172	92	7.84			
1520	25 gal	27.46	7.60	0.302	153.63	144	93	8.00			
1535	28 gal	27.20	7.66	0.302	153.63	257	89	8.09			
1540	29 gal	27.05	7.67	0.304	153.63	358	90	7.98			

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13254-BW-2 Time Collected: 1545 Comments: 7.5 well volumes

1310

Well Inspection & Sampling Log

Site: Drexel Date: 9.11.13
Station (Well No.): BW-2 Performed by: G. Henry, J. Dennis
Field Conditions/Observations: 75° Sunny

Well Inspection:

Well Type: X Flush Mount ___ Stick Up ___ Other Well Size (ID): 2 in ___ Steel X PVC
Condition (locked, damaged, etc.):

Well Labeled: ___ Yes X No Well Cap: X Yes ___ No Well Cap: X Tight ___ Loose
Comments:

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

27.16

Depth to Water (initial): 153.15 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: 180.31 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 153.63 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: .48 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ___Yes X No Describe:

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (___ - ___) x ___ = 4.35 gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 13.05 gallons Purged Volume (actual): 29 gallons

Purge Water Contained? X Yes ___ No Container Used: ___ 55 Gallon drum X Other (TOTE)
Labeled: X YES ___ No

Sampling Method: ___Bailer ___Peristaltic Pump X Submersible Pump Sample Rate: .25 gpm

QA Sample Collected ___Yes ___ No ___Blind duplicate ___Eq blank ___Field blank ___MS/MSD

QA Sample ID: ___ QA Sample Time: ___
Filtered: ___Yes ___No Filter size: ___um; ___All analyses ___Metals only

Sample Appearance (color, odor, etc.): Clear

Analysis Required:

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ___250 ml plastic ___500 ml plastic ___(___)

Laboratory Performing Analysis:
Method of Shipment: ___Courier ___Fed ex (Airbill No.___) ___UPS (Airbill No. ___)

Monitoring Well Sampling

Site: Drexel Date: 9.10.13 Sampled By: G. Henry, J. Dennis

Well: BW-3 Purge Method: (Pump) Bailer Pump Type: X Submersible (Teflon X SS Other) Peristaltic

Pump (Make & Model): GeoSub SS Purge Rate: ____ gpm Water Quality Meter (make/model): Horiba U53

Water Level Meter: Heron Dipper T Time at start of purging: 0928 Time at end of purging: 1025

Initial Depth of Pump or Intake Tubing: 165 ft (BTOC) Final Depth of Pump or Intake Tubing: 165 ft (BTOC)

Screen interval: ___ ft to ____ ft (BTOC)

DTW 111

Time	Discharge Volume (~~liter~~ gal)	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity (%)~~	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	pH Meter	Comments
	15	22.74	7.23	0.284	153.05	49.4	125	7.82	clear		Purged 10
	17	22.83	7.35	0.285	153.07	20.5	119	7.36	clear		gallons to
	19	22.95	7.36	0.285	153.08	14.0	117	7.50	clear		see if water
1025	21	22.95	7.41	0.285	153.08	5.92	116	7.35	clear		is clearing

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13253-BW-3 Time Collected: 1030 Comments: _____

Well Inspection & Sampling Log

Site: Drexel Date: 9.10.13
Station (Well No.): BW-3 Performed by: C. Henry J. Dennis
Field Conditions/Observations: 80°, Sunny

Well Inspection:

Well Type: Flush Mount X Stick Up ____Other Well Size (ID): 2 in ___ Steel X PVC
Condition (locked, damaged, etc.):
Good, high weeds

Well Labeled: ____ Yes X No Well Cap: X Yes ____ No Well Cap: X Tight ____ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

Depth to Water (initial): 152.63 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: 178.80 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 153.03 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: 0.4 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ____Yes X No Describe: _____ 26.18 4.19

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (____ - ____) x _____ = ____ gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 12.57 gallons Purged Volume (actual): 21 gallons

Purge Water Contained? X Yes____ No Container Used: ___ 55 Gallon drum X Other (TOTE)
Labeled: ____ YES X No

Sampling Method: ___Bailer ____Peristaltic Pump X Submersible Pump Sample Rate:____gpm

QA Sample Collected ___Yes X No ___Blind duplicate ____Eq blank ___Field blank ____MS/MSD

QA Sample ID: _____ QA Sample Time: _____
Filtered: ___Yes ____No Filter size: ___um; ___All analyses ____Metals only

Sample Appearance (color, odor, etc.): _____

Analysis Required:_____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ____250 ml plastic ____500 ml plastic ____(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ____Courier ___Fed ex (Airbill No.____) ___UPS (Airbill No. _____)

Monitoring Well Sampling

Site: Drexel Date: 9.11.13 Sampled By: G. Herring, J. Dennis

Well: BW-4 Purge Method: Pump Bailer Pump Type: X Submersible (Teflon X SS Other) Peristaltic

Pump (Make & Model): Grundfos 5S. Purge Rate: .25 gpm Water Quality Meter (make/model): Horiba U-53

Water Level Meter: Heron Dipper-T Time at start of purging: 0840 Time at end of purging: 1115

Initial Depth of Pump or Intake Tubing: 160 ft (BTOC) Final Depth of Pump or Intake Tubing: 160 ft (BTOC)

Screen interval: ___ ft to ___ ft (BTOC)

DTW 11

Time	Discharge Volume (~~liter~~)	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity (%)~~	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	~~pH Meter~~	Comments
0930	12 gal	26.17	7.47	0.376	153.15	779	76	7.97	slightly cloudy		Purged till
0950	14 gal	27.34	7.47	0.377	153.24	154	43	6.97	clearing		clearing before
1000	Generator	stopped,	had	to refill	gals						hooking up
1045	16 gal	29.16	7.21	0.376	153.35	385	76	7.68	clearing		Horiba.
1050	17 gal	28.23	7.27	0.375	153.35	328	80	7.42	clearing		
1055	18 gal	28.08	7.32	0.374	153.35	126	76	7.25	clearing		
1100	19 gal	27.63	7.33	0.375	153.35	73.3	71	7.31	clearing		
1105	20 gal	27.62	7.35	0.375	153.38	45.5	76	7.24	clear		
1110	21 gal	27.50	7.37	0.376	153.35	46.1	68	7.20	clear		
1115	22	26.82	7.35	0.378	153.35	158	27	7.29			

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13254-BW-4 Time Collected: 1120 Comments: Purged 5 well volumes. not steadily decreasing turbidity. All other parameters stable

Well Inspection & Sampling Log

Site: Drexel Date: 9.11.13
Station (Well No.): BW-4 Performed by: C. Henry J. Dennis
Field Conditions/Observations: Sunny 75°

Well Inspection:

Well Type: X Flush Mount ___ Stick Up ___ Other Well Size (ID): 2 in ___ Steel X PVC
Condition (locked, damaged, etc.):
good condition

Well Labeled: ___ Yes X No Well Cap: X Yes ___ No Well Cap: X Tight ___ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft) 26.54 ft/MP2012

Depth to Water (initial): 153.22 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: 179.76 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 153.35 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: 0.13 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ___Yes X No Describe: _____

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (___ - ___) x ___ = 4.25 gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 12.74 gallons Purged Volume (actual): 22 gallons

Purge Water Contained? X Yes ___ No Container Used: ___ 55 Gallon drum X Other (TOTE)
Labeled: X YES ___ No

Sampling Method: ___Bailer ___Peristaltic Pump X Submersible Pump Sample Rate: 25 gpm

QA Sample Collected ___Yes X No ___Blind duplicate ___Eq blank ___Field blank ___MS/MSD

QA Sample ID: _____ QA Sample Time: ___
Filtered: ___Yes ___No Filter size: ___um; ___All analyses ___Metals only

Sample Appearance (color, odor, etc.): clear

Analysis Required:_____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ___250 ml plastic ___500 ml plastic ___(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ___Courier ___Fed ex (Airbill No.___) ___UPS (Airbill No. _____)

Monitoring Well Sampling

Site: Drexel Date: 9.12.13 Sampled By: G. Henry, J. Dennis

Well: BW-5 Purge Method: ~~Pump~~ Bailer Pump Type: X Submersible (Teflon X SS Other) Peristaltic

Pump (Make & Model): Geosub 55 Purge Rate: .25 gpm Water Quality Meter (make/model): Horiba U53

Water Level Meter: Heron Dipper T Time at start of purging: 0805 Time at end of purging: 1125

Initial Depth of Pump or Intake Tubing: 160 ft (BTOC) Final Depth of Pump or Intake Tubing: 160 ft (BTOC)

Screen interval: ___ ft to ___ ft (BTOC)

DTW 11

Time	Discharge Volume (~~liter~~ gal)	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity~~ (%)	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	pH Meter	Comments
930	11.5	28.09	7.09	0.268	149.78	349	83	5.21			
945	15.0	29.38	7.20	0.266	149.78	237	73	5.23			
955	17.5	27.39	7.18	0.263	150.73	169	34	5.07			
1005	20.0	26.84	7.18	0.264	150.71	127	30	5.13			
1015	22.5	26.08	7.10	0.265	149.75	142	90	7.09			
1050	27.5	28.74	7.15	0.265	150.0	74.3	83	5.81			
1100	30.0	28.27	7.22	0.257	149.98	58.7	80	5.38			
1110	32.5	28.62	7.16	0.253	149.87	52.7	88	4.92			
1120	35.0	31.55	7.18	0.249	149.87	52.9	94	4.97			

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13255-BW-5 Time Collected: 1125 Comments: Bad Pump, Had to switch out Pumps

Restarted @ 8:45

Well Inspection & Sampling Log

Site: Drexel Date: 9.12.13
Station (Well No.): BW 5 Performed by: G Henry & J. Dennis
Field Conditions/Observations: Sunny 75°

Well Inspection:

Well Type: Flush Mount X Stick Up ____Other Well Size (ID): 2 in ___ Steel X PVC
Condition (locked, damaged, etc.):

Well Labeled: X Yes ____ No Well Cap: X Yes ____ No Well Cap: X Tight ____ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

28.36'

Depth to Water (initial): 149.24 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: 177.6 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 149.87 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: .63 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ____Yes X No Describe: _____

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (____ - ____) x _____ = 4.54 gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 13.62 gallons Purged Volume (actual): 35 gallons

Purge Water Contained? X Yes____ No Container Used: ___ 55 Gallon drum X Other (TOTE)
Labeled: X YES ____ No

Sampling Method: ___Bailer ____Peristaltic Pump X Submersible Pump Sample Rate: .25 gpm

QA Sample Collected ___Yes X No ___Blind duplicate ____Eq blank ___Field blank ____MS/MSD

QA Sample ID: N/A QA Sample Time: _____
Filtered: ___Yes ____No Filter size: ___um; ___All analyses ____Metals only

Sample Appearance (color, odor, etc.): _____

Analysis Required:_____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ____250 ml plastic ____500 ml plastic ____(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ____Courier ___Fed ex (Airbill No.____) ___UPS (Airbill No. _____)

Monitoring Well Sampling

Site: Drexel Date: 9.10.13 Sampled By: G Henry, J Dennis

Well: Well D Purge Method: Pump Bailer Pump Type: X Submersible (Teflon X SS Other) Peristaltic

Pump (Make & Model): GeoSub SS Purge Rate: .25 gpm Water Quality Meter (make/model): U53 Horiba

Water Level Meter: Heron Dipper-T Time at start of purging: 1200 Time at end of purging: 1600

Initial Depth of Pump or Intake Tubing: 170 ft (BTOC) Final Depth of Pump or Intake Tubing: 170 ft (BTOC)

Screen interval: ___ ft to ___ ft (BTOC)

DTW

Time	Discharge Volume ~~(liter)~~ gal	Temp (°C)	pH	Conductivity (mS/cm)	~~Salinity (%)~~	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	pH Meter	Comments
	55 gal	24.13	7.22	0.326	160.14	8.18	78	5.47	clear	N/A	
	56 gal	24.12	7.20	0.326	160.14	7.91	64	5.32	clear	N/A	
	57 gal	23.94	7.20	0.329	160.10	7.84	71	5.45	clear	N/A	
	58 gal	23.97	7.26	0.323	160.14	3.00	47	5.23	clear	N/A	
	59 gal	23.83	7.23	0.326	160.09	4.27	60	5.40	clear	N/A	
	60 gal	23.81	7.24	0.327	159.94	8.10	62	5.32	clear	N/A	

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13253-Well D Time Collected: 1605 Comments: _____

11:55

Well Inspection & Sampling Log

Site: Drexel Date: 9-10-13
Station (Well No.): well 17 Performed by: Gitanay D'Zemio
Field Conditions/Observations: 80° Sunny

Well Inspection:

Well Type: Flush Mount X Stick Up ____Other Well Size (ID): 4 in X Steel ____ PVC
Condition (locked, damaged, etc.):

Well Labeled: ____ Yes X No Well Cap: X Yes ____ No Well Cap: X Tight ____ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

Depth to Water (initial): 159.65 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: 190 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): 159.94 ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: .29 ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ____Yes X No Describe: _____

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (____ - ____) x .65 = 19.73 gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = 59.18 gallons Purged Volume (actual): 60 gallons

30.35
19.73

Purge Water Contained? X Yes____ No Container Used: ___ 55 Gallon drum X Other (TOTE)
Labeled: X YES ____ No

Sampling Method: ___Bailer ____Peristaltic Pump X Submersible Pump Sample Rate: .25 gpm

QA Sample Collected ___Yes X No ___Blind duplicate ____Eq blank ___Field blank ____MS/MSD

QA Sample ID: _____ QA Sample Time: _____
Filtered: ___Yes ____No Filter size: ___um; ___All analyses ____Metals only

Sample Appearance (color, odor, etc.): _____

Analysis Required:_____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ____250 ml plastic ____500 ml plastic ____(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ____Courier ___Fed ex (Airbill No.____) ___UPS (Airbill No. _____)

Monitoring Well Sampling

Site: Drexel Date: 9-11-13 Sampled By: G Henry J. Dennis
Well: Stewart Purge Method: Pump Bailer Pump Type: ___Submersible (__Teflon __SS ___Other) ___Peristaltic
Pump (Make & Model): _____ Purge Rate: ____ gpm Water Quality Meter (make/model): _____
Water Level Meter: _____ Time at start of purging: 1500 Time at end of purging: 1520
Initial Depth of Pump or Intake Tubing: unk ft (BTOC) Final Depth of Pump or Intake Tubing: unk ft (BTOC)
Screen interval: ___ ft to ____ft (BTOC)

Time	Discharge Volume (liter)	Temp (°C)	pH	Conductivity (mS/cm)	Salinity (%)	Turbidity (NTU)	Eh (mV)	DO (mg/L)	Color	pH Meter	Comments

Note: Three (3) consecutive readings within specified limits are to be obtained for sampling. pH ± 0.2 standard units; specific conductance: ± 5% of reading; DO is no greater than 20% saturation at field measured temperature, and Turbidity ≤ 20 NTUs. If DO or turbidity cannot meet the above requirements within 5 well volumes; pH, conductivity remains unchanged, however, DO and turbidity must meet the following: DO ± 0.2 mg/L or 10%, whichever is greater, and Turbidity ± 5 NTUs or 10%, whichever is greater

Sample ID: 13254-Stewart Time Collected: 1520 Comments: _____

Well Inspection & Sampling Log

Site: Drexel Date: 9-11-13
Station (Well No.): Stewart Performed by: G. Henry J. Dennis
Field Conditions/Observations: Sunny 75°

Well Inspection: Private Drinking water well

Well Type: Flush Mount ___ Stick Up _X_ Other Well Size (ID): 4 in ___ Steel ___ PVC
Condition (locked, damaged, etc.):
Residential D.W. well

Well Labeled: ___ Yes _X_ No Well Cap: ___ Yes ___ No Well Cap: ___ Tight ___ Loose
Comments: _____

If capped, remove and allow well to stabilize before recording water level.

Well Sampling: (Note: Measure water levels to neares 0.01ft)

Depth to Water (initial): _____ ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth of Well: _____ ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Depth to Water (final): _____ ft. (measured from mark on top of riser pipe, otherwise measure from North side)
Draw down: _____ft (Depth to Water (initial) – Depth to Water (final))
Detectable Odor: ____Yes____ No Describe: _____

1 Well Volume (WV) = (depth of well – depth to water $_{(initial)}$) x well capacity = (____ - ____) x _____ = ____ gal
Well Capacity (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" =1.02; 6" = 1.47

3 Well Volumes = _____ gallons Purged Volume (actual): _____gallons

Purge Water Contained? ____Yes_X_ No Container Used: ___ 55 Gallon drum ___Other (_____)
Labeled: ____ YES ____ No

Sampling Method: ___Bailer ____Peristaltic Pump ___Submersible Pump Sample Rate:____gpm

QA Sample Collected ___Yes ___ No ___Blind duplicate ____Eq blank ___Field blank ____MS/MSD

QA Sample ID: _____ QA Sample Time: _____
Filtered: ___Yes ____No Filter size: ___um; ___All analyses ____Metals only

Sample Appearance (color, odor, etc.): _____

Analysis Required:_____

Sample Bottles Filled: 40 ml vials ___ 1 L amber glass ___125 ml plastic ____250 ml plastic ____500 ml plastic ____(_____)

Laboratory Performing Analysis: _____
Method of Shipment: ____Courier ___Fed ex (Airbill No.____) ___UPS (Airbill No. _____)

EPS

APPENDIX F

INTERPOLATION AND AREA-AVERAGING TECHNIQUE EXAMPLE

INTERPOLATION AND AREA-AVERAGING TECHNIQUE EXAMPLE

Introduction

In order to determine whether or not the property can be certified to RRS, representative concentrations are compared to the selected cleanup criteria. Drexel has selected the Residential RRS as the cleanup criteria for certification. Although the VRP Act defines the representative concentration as an "average concentration," the 95% upper confidence limit (UCL) on the average concentration is more typically used in risk assessment to address potential uncertainties in the site characterization data and to ensure that exposures are not underestimated. The USEPA has developed a software tool called ProUCL specifically for computing these 95% UCL values (USEPA, 2007). However, the statistical models used for computing 95% UCL values are all based on the assumption that site data were generated following a random or systematic sampling strategy. In many cases, including the Drexel site, environmental samples are collected using a biased strategy in which many more samples are collected from areas of known or suspected contamination than from areas without contamination. In these situations, the USEPA acknowledges that it is appropriate to compensate for the sampling bias when computing the mean and the 95% UCL of the mean to avoid overestimating these parameters (USEPA, 2011).

Approaches for compensating for sampling bias typically involve the use of geospatial software tools that can interpolate concentrations such that all areas within an exposure domain contribute equally to the calculated representative concentration. Accordingly, Drexel has selected to use an interpolation method (using ArcGIS 3D Analyst software) to spatially interpolate constituent concentrations and then use ProUCL to determine the average concentration (95% UCL) of the interpolated data, which is referred to in this document as the "area-average." Accordingly, the area-averages will be compared to the cleanup criteria to determine whether or not each exposure domain can be certified to the cleanup criteria.

An interative approach was used to determine the remediation areas by looking at the distribution of different constituents in each depth interval for each exposure domain. In order to illustrate the process, what follows is a description of the interpolation and area-averaging technique using toxaphene as an example.

Interpolation

The first step in the process of determining the remedial action dimensions (depth and lateral extent) for the soils is to perform a spatial analysis of the concentration distribution of chemicals exceeding the RRS. Statistical interpolation can be applied to environmental data taking into consideration the spatial correlations among the data. By correlating distance and direction to the specific constituent concentration being interpolated, interpolation determines how the

constituent concentration at sampled points can be used to estimate the concentration across areas not sampled. ArcGIS 3DAnalyst was used for interpolating the data using the natural neighbor method. Once the concentrations have been interpolated across the exposure domains at each depth interval, the area-average can be computed.

For each depth interval, the average concentration of each constituent at each sample location in that depth interval was calculated. For non-detect results, one half the detection limit was used. [For example, at one hypothetical boring location in the 2-5ft interval there are two toxaphene results: 2mg/kg at 3ft and <1mg/kg at 5ft. The resulting average concentration for this boring for the 2-5ft depth interval would be (2mg/kg + 1/2(1mg/kg))/2 = 1.25 mg/kg.] The natural logarithms[4] of these concentrations were calculated and used as the input for the interpolation analysis. The data collected from the surface impoundments were excluded from this analysis as the surface impoundments are self-contained units and are being addressed separately.

3D Analyst was used to interpolate the concentrations of each constituent in each depth interval. Figures 1-4 show the toxaphene results for the 0-2ft, 2-5ft, 5-15ft, and greater than 15 ft depth intervals. The upper left image on each figure shows the average concentrations at each boring. The upper right image on each figure shows the results of the interpolation. The next step is to determine the area-average (which is shown on the lower left portion of the figures).

Determining Area-Average

Square cells 10x10ft in size were overlaid on the interpolated surface. The interpolated concentrations were then assigned to each 10x10ft cell, as shown on the lower left portion of Figures 1-4. The exponentials of these values were then calculated[5]. Next, the 95% UCL was calculated in ProUCL for each dataset (constituent/depth interval/exposure domain). The results for the interpolated 95% UCLs for toxaphene are shown below.

Area Averages (95% UCL based on Interpolation) for Toxaphene
Pre-Remedial Action

Exposure Domain	0-2ft (mg/kg)	2-5ft (mg/kg)	5-15ft (mg/kg)	>15 ft (mg/kg)
CSX	22	33	24	NC
Drexel East	4.1	2.1	7.9	0.35
Drexel West	NC	ND	NC	NC
North Swale	ND	ND	NA	NA
South Swale	3.1	ND	NA	NA

ND: Not-detected.
NC: Not calculated (maximum concentration is below the Residential RRS).
NA: Not analyzed. Samples not collected at these depth intervals.
Shading indicates area-averages that exceed the Residential RRS (10.88 mg/kg)

[4] Previous analysis completed for the VIRP indicated that the data is log normally distributed and that interpolating the natural log of the concentrations was the most appropriate means of interpolation.
[5] In some instances the results of the interpolation did not extend over the entire domain, thus a value of 0 was automatically assigned to the 10x10 cells outside the interpolation area. When the exponential of 0 is taken the result is a value of 1. However, as the RRS for many constituents is less than 1, a value of 1 does not accurately represent a non-detect condition. Thus, a value of 0 was assigned wherever there was an interpolated value of 0.

Based on the table above, toxaphene needs to be evaluated further in the 0-2ft, 2-5ft, and 5-15ft depth intervals in the CSX exposure domain.

Remediation Simulation

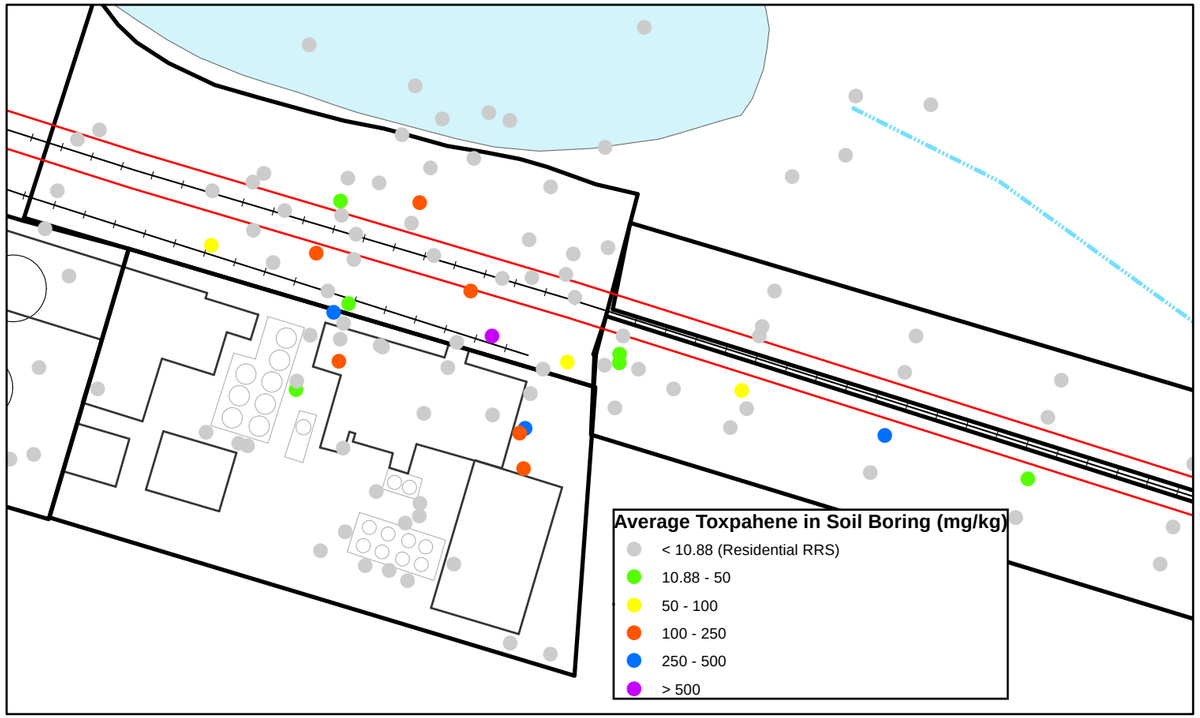
As mentioned above, for each depth interval within each exposure domain it was determined in an iterative fashion the extent of remedial action (excavation) that would result in post-remedial action area averages below the Residential RRSs. Data from the interpolation was exported for mapping in ArcView GIS. Here, remediation polygons were created that allowed for selective export of data outside the remediation polygons so that the area-weighted average concentration could be developed. To simulate excavation, it was determined which 10x10 cells fall within the excavation areas (polygons). These concentrations were then removed from the dataset and the 95% UCL was calculated for the remaining data (outside the excavation footprint). This post-processing of the data was conducted within each depth interval for each exposure domain (as necessary).

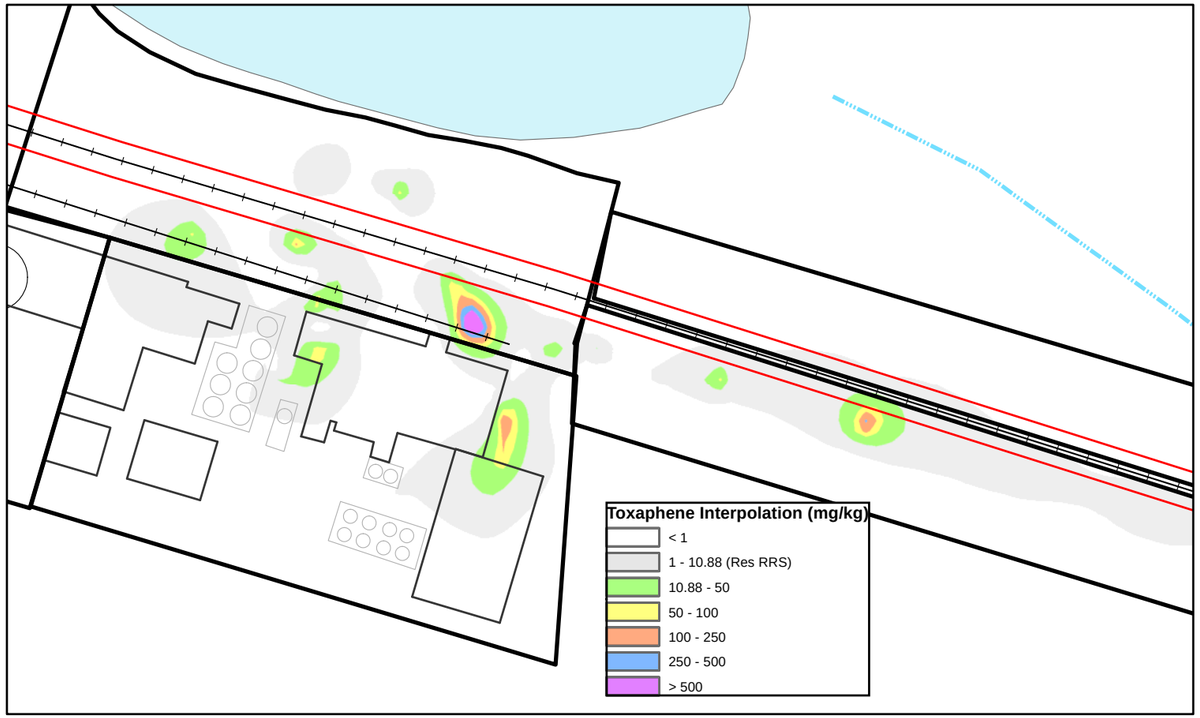
Three additional factors were important in determining the excavation areas. First, as described in the Ecological Remediation Plan (EPS 2012c), certain areas of the site require action to meet ecological goals. These ecological areas were incorporated into the overall excavation footprints. Second, CSX does not allow excavation within 12 ft of the centerline of the main rail line. Thus, this 12 foot corridor was designated as a "no-cut zone" and excavation areas were kept outside of this zone. Third, additional excavations (in addition to those indicated by the area-averaging/interpolation analysis) on CSX property were used to meet specific goals for CSX.

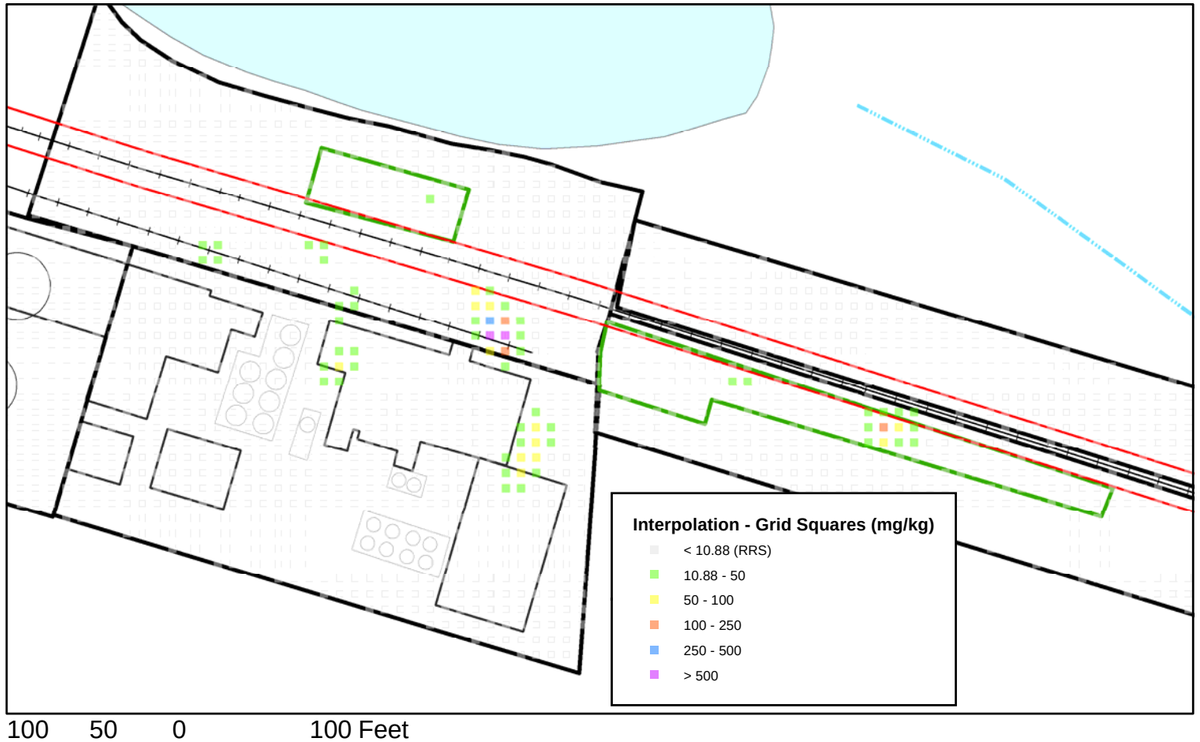
An example of this process using toxaphene is shown on Figures 1-3. The lower left hand image on these figures show the remedial action areas for each depth interval. These figures also show the 95% UCL both pre-remedial action and post-remedial action. This information is also summarized below for the CSX domain:

Depth Interval	Residential RRS	Pre-Remedial Action 95% UCL	Post-Remedial Action 95% UCL
0-2 ft	10.88 mg/kg	22 mg/kg	0.83 mg/kg
2-5 ft	10.88 mg/kg	33 mg/kg	2.9 mg/kg
5-15 ft	10.88 mg/kg	24 mg/kg	6.0 mg/kg

Table 5 of the Fifth Progress Report shows that the post-remedial action condition for all constituents in all exposure domains (with the exception of EDB in deep soils) meets the Residential RRS.







100 50 0 100 Feet

N

Legend

- CSX No-Cut Zone
- Railroad Lines
- Exposure Domains
- Ecological Remedial Action Area
- 0-2ft Remedial Action Area

CSX:
Pre-Remedial Action 95% UCL: 22 ppm
Post-Remedial Action 95% UCL: 0.83 ppm (< RRS)

Drexel East:
Pre-Remedial Action 95% UCL: 4.1 ppm (< RRS)

South Swale:
Pre-Remedial Action 95% UCL: 3.1 ppm (< RRS)

0-2ft Toxaphene

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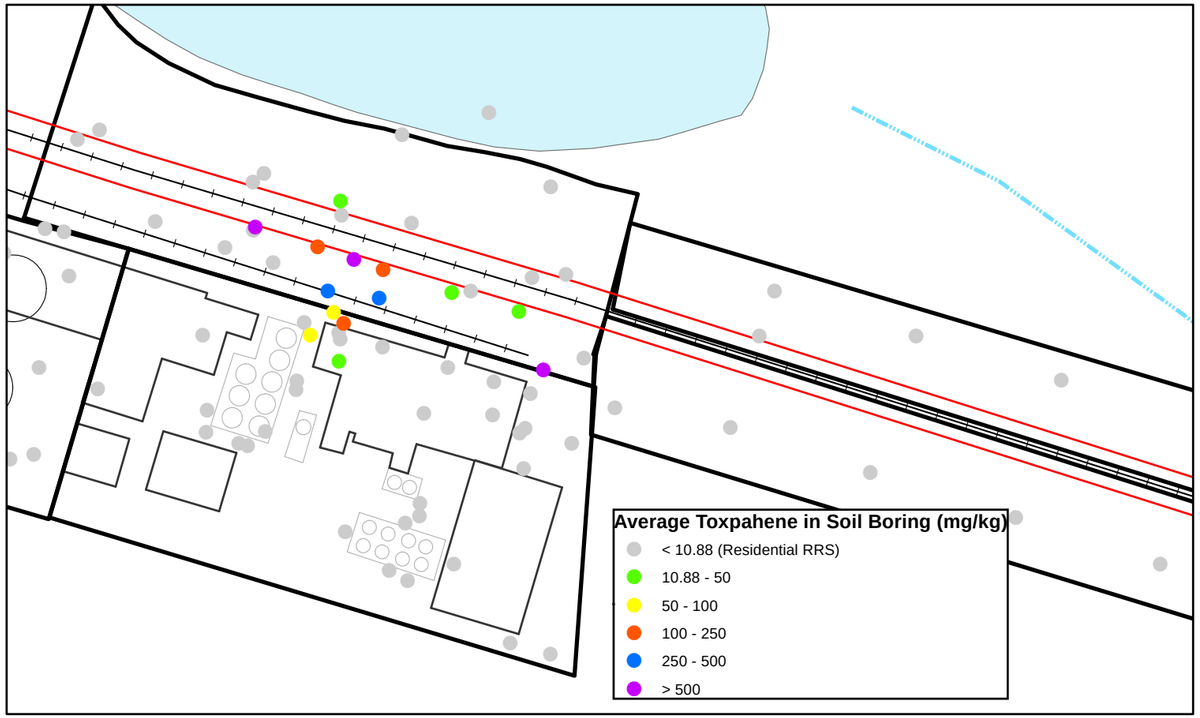
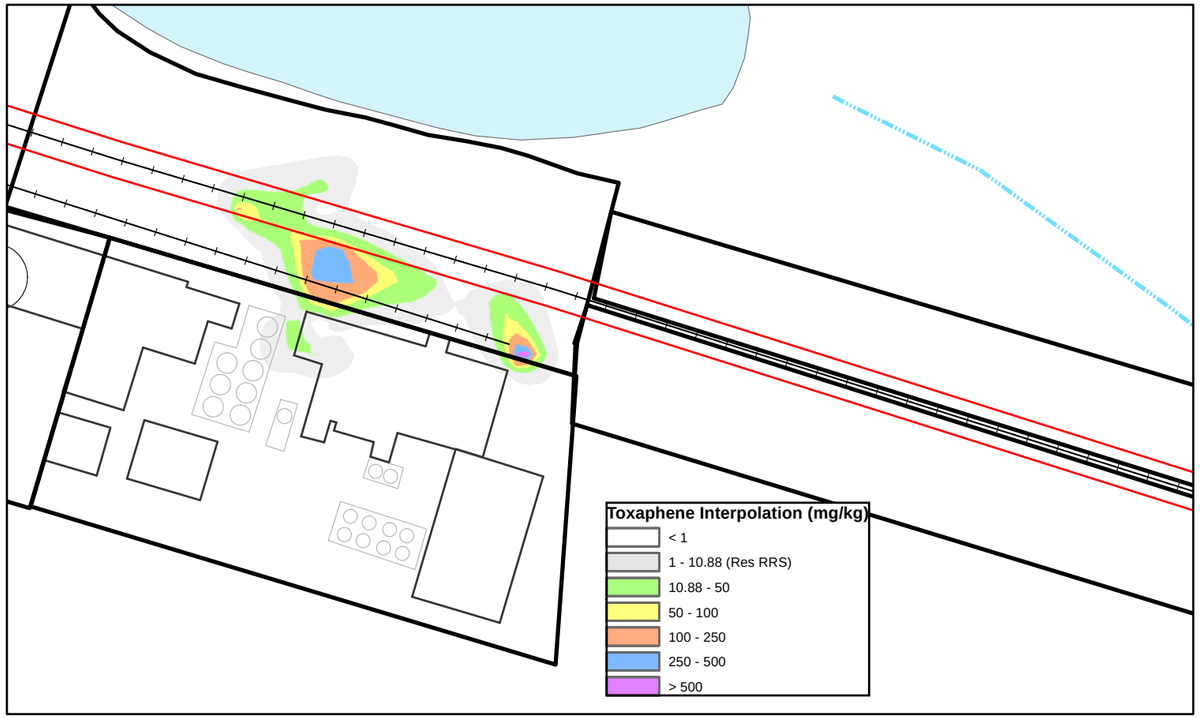
Figure No. F-1





N

100 50 0 100 Feet

Legend

- CSX No-Cut Zone
- Railroad Lines
- 0-5ft Remedial Action Area
- Exposure Domains

CSX:
Pre-Remedial Action 95% UCL: 33 ppm
Post-Remedial Action 95% UCL: 2.69 ppm (< RRS)

Drexel East:
Pre-Remedial Action 95% UCL: 2.1 ppm (< RRS)

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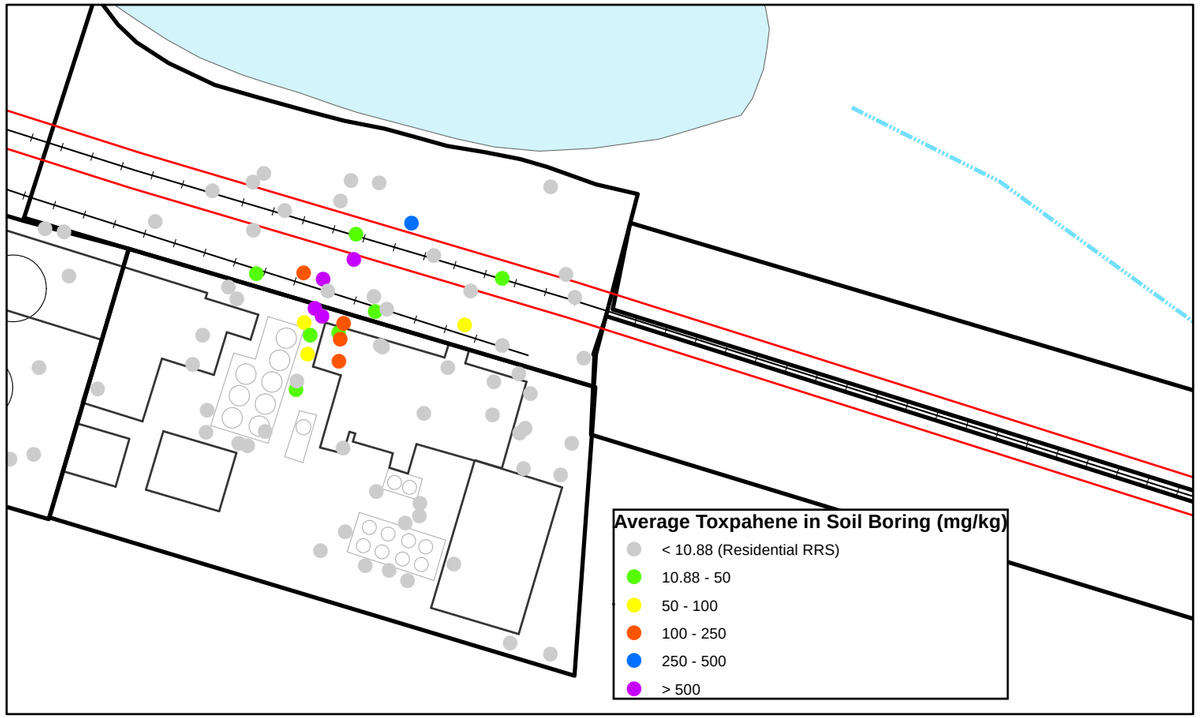
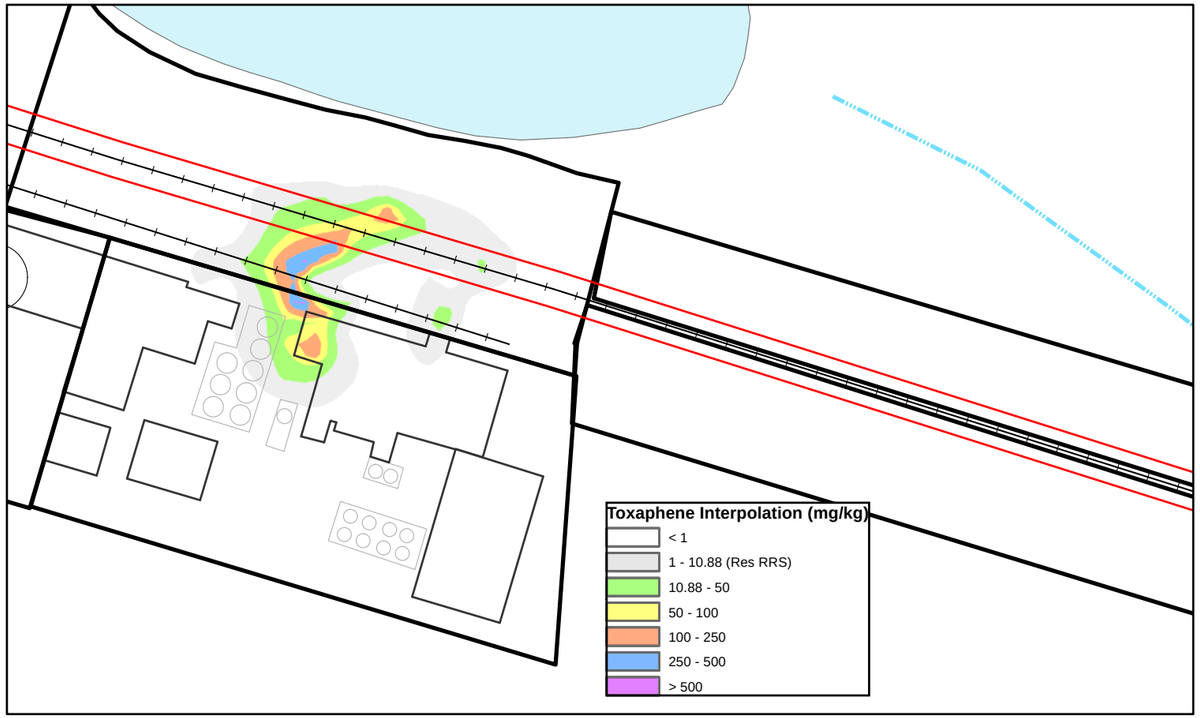
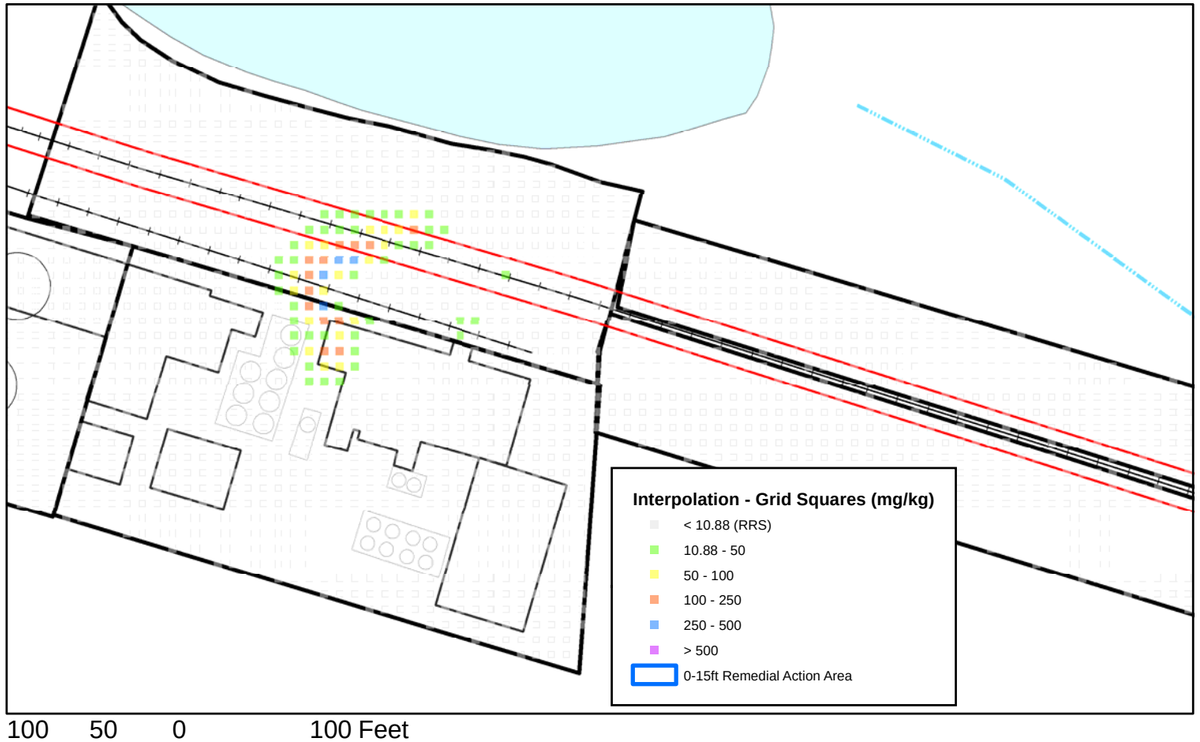
2-5ft Toxaphene

Figure No. F-2







100 50 0 100 Feet

Legend

- CSX No-Cut Zone
- Railroad Lines
- 0-15ft Remedial Action Area
- Exposure Domains

CSX:
Pre-Remedial Action 95% UCL: 24 ppm
Post-Remedial Action 95% UCL: 6.0 ppm (< RRS)

Drexel East:
Pre-Remedial Action 95% UCL: 7.9 ppm (< RRS)

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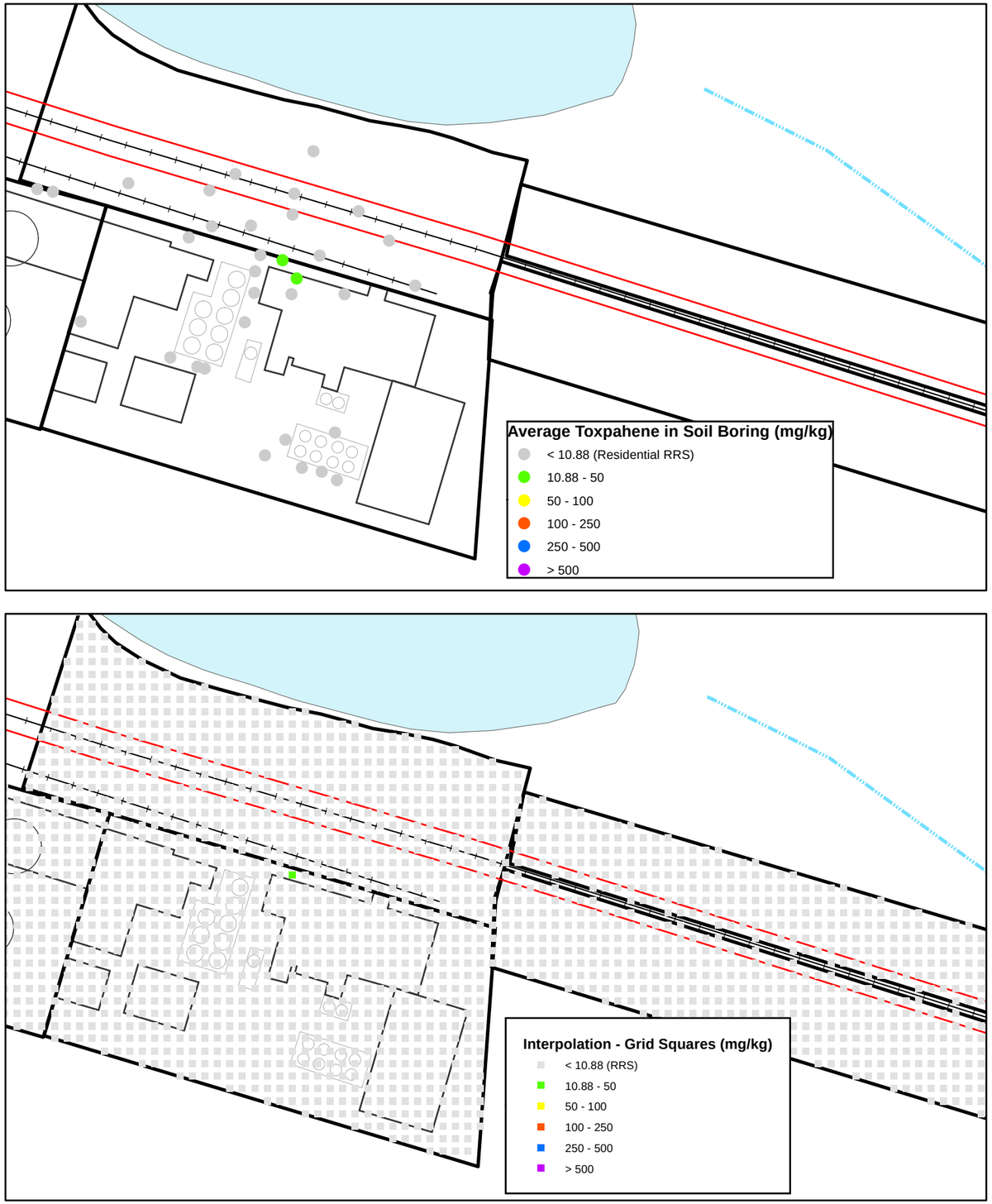
5-15ft Toxaphene

Figure No. F-3



Drexel East:
Pre-Remedial Action 95% UCL: 0.35 ppm (< RRS)

>15 ft Toxaphene

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Figure No. F-4