VOLUNTARY REMEDIATION PROGRAM STATUS REPORT NO. 6

Former Estech General Chemicals Site
Atlanta, Fulton County, Georgia
HSI Site No. 10196
Parcels 17-0191-LL0244 and 17-0191-LL0400

Submitted to:
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
Atlanta Georgia

Submitted by:
BFEL INDEMNITOR INC.
Omaha, Nebraska

Prepared by:
AMEC ENVIRONMENT & INFRASTRUCTURE, INC.
Kennesaw, Georgia

February 8, 2015

AMEC Project No. 6122-08-0154

February 8, 2015

Mr. David Brownlee
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Via: Paper Copy and PDF copy on CD

Subject: **Voluntary Remediation Plan Status Report No. 6**
Former Estech General Chemicals Site - Atlanta, Georgia
HSI Site No. 10196 Parcels 17-0191-LL0244 and 17-0191-LL0400
AMEC Project 6122-08-0154

Dear Mr. Brownlee:

AMEC Environment & Infrastructure, Inc. (AMEC), on behalf of BFEL Indemnitor, Inc. is hereby submitting the attached Status Report No.6 for Voluntary Remediation Program Remediation Activities for the Former Estech General Chemicals Site in Atlanta, Fulton County, Georgia (HSI Site No. 10196, Tax Parcels 17-0191-LL0244 and 17-0191-LL0400). This status report is required by the Voluntary Remediation Program (VRP) statue and requested by the Georgia Environmental Protection Division (EPD) in their approval letter dated February 8, 2012. This status report covers the period from August 2014 to February 2015. The report includes information on the recent site-wide groundwater monitoring, initial evaluation of the M&J Solvent site plume impact on the Estech site, and a summary of professional hours.

BFEL and AMEC appreciate EPD's assistance with this site. Please review the attached report and contact Greg Wrenn at (770) 421-3472 with any questions you may have.

Sincerely,

AMEC Environment & Infrastructure, Inc.

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1.0 PE 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."

Gregory J. Wrenn/ Georgia P.E. #25565
Printed Name and GA PE Number

February 6, 2015
Date



Signature and Stamp

2.0 INTRODUCTION AND BACKGROUND

This Voluntary Remediation Program Semi-Annual Status Report No. 6 (Status Report) was prepared, on behalf of BFEL Indemnitor, Inc. (BFEL), in accordance with the Voluntary Remediation Program (VRP) for the Former Estech General Chemicals site, Hazardous Site Inventory (HSI) No. 10196/Tax Parcel Parcels 17-0191-LL0244 and 17-0191-LL0400. The Georgia Environmental Protection Division (EPD) requested in their February 8, 2012 approval letter that status reports be submitted in August and February. This sixth Status Report covers the activities conducted from August 2014 until shortly before the submittal of this status report (February 8, 2015).

The Former Estech General Chemicals site is located at 1551 Marietta Road in Atlanta, Fulton County, Georgia inside of the Inman Railyards. The CSX Transportation Tilford Yard is within the Inman Railyards and surrounds the Estech property. The site soil and groundwater impacts for site constituents (organochlorine-pesticides, arsenic, lead, and polynuclear aromatic hydrocarbons) were delineated under the Georgia Hazardous Site Response Act (HSRA) and certified to risk reduction standards. The most recent HSRA Compliance Status Report (CSR) was prepared and submitted October 19, 2007. EPD issued comments on the CSR, dated November 18, 2008. BFEL responded to the comments on February 27, 2009. EPD commented on the responses on December 18, 2009 and requested a Corrective Action Plan (CAP). An initial VRP Application, dated March 18, 2010 and an Addendum, dated March 16, 2011, were submitted to EPD to enter the site into the VRP. The VRP Application and Addendum were submitted in lieu of a HSRA CAP. The VRP Application Addendum contained a revised Voluntary Investigation and Remediation Plan (VIRP) and addressed the EPD VRP Application comment letter dated July 23, 2010. On February 8, 2012, EPD approved the VIRP and accepted the Former Estech General Chemicals site into the VRP. The activities conducted subsequent to the date the site was accepted into the VRP have been documented in semi-annual VRP Status Reports.

In accordance with the VIRP, a pilot test was conducted from January 2013 through April 2014 to evaluate the effectiveness of an EHC-M permeable reactive barrier (PRB) to address groundwater impacts. Because the EHC-M injections did not demonstrate that the EHC-M PRB was effective, VRP Status Report No. 5 (August 2014) presented a revised Remediation Plan. The Revised Remediation Plan was discussed with EPD in a meeting on September 18, 2014, and EPD subsequently issued comments on VRP Status Reports No.4 and No. 5 in correspondence dated October 7, 2014 and December 1, 2014. BFEL continues to evaluate the proposed remediation approach based upon the feedback from EPD. A key consideration currently affecting implementation of the revised Remediation Plan is the presence of an up-gradient volatile organic compound (VOC) plume that is impacting a portion of the BFEL site, as discussed in greater detail in this VRP Status Report and responses to EPD comments.

3.0 WORK PERFORMED FROM AUGUST 2014 TO FEBRUARY 2015

The activities currently identified to be performed at the Estech site under the VRP are outlined in the VIRP, dated March 16, 2011, the EPD VIRP approval letter dated February 8, 2012, and the EPD VIRP comment letter dated February 8, 2012. The activities that have been performed from August 2014 through February 2015 have included semi-annual groundwater and surface water sampling and analysis, meeting with EPD, further evaluation of site remediation approach and response to EPD comments on Status Reports Nos. 4 and 5. These activities are described in the following sections.

3.1 Semi-Annual Groundwater Sampling and Analysis

Groundwater samples were collected from 36 permanent monitoring wells located on the Estech and CSX properties in November 2014 (Figure 1). The following monitoring wells were sampled:

MW-22	MW-25	MW-26	MW-1B	MW-101	MW-102
MW-104A	MW-104D	MW-105	MW-106D	MW-107D	MW-108
MW-109	MW-110	MW-111	MW-112	MW-113	MW-114
MW-115	MW-116	MW-117	MW-119	MW-120	MW-121
TW-1	TW-2	TW-3	TW-4	TW-5	TW-6
TW-7	TW-8	TW-9	TW-10	TW-11	TW-12

Well MW-21 was dry and was not sampled in November 2014. The PVC casing for well MW-24 was broken off below the ground surface, was damaged, and could not be sampled. A summary of the groundwater sample data are presented on Table 1. The depth to water was measured in the 39 site monitoring wells including those listed above with the OW wells and the groundwater elevations were calculated. The groundwater elevations are summarized on Table 2 and were used to generate the potentiometric surface map on Figure 2. Groundwater analytical results are summarized on Table 3.

The monitoring wells were purged using low flow/low stress methodology and were sampled following Region 4 USEPA Science and Ecosystem Support Division (SESD) procedure SESDPROC-301-R3. Submersible and peristaltic pumps were used to purge the wells. Three well volumes were purged from each well. Water quality parameters pH, conductivity, temperature, turbidity, dissolved oxygen (DO) and oxidation-reduction potential (ORP) were measured and recorded. Groundwater samples were collected after pH, specific conductivity, turbidity, and temperature parameters had stabilized, and the water was visibly free of sediment (Appendix A). In accordance with SESDPROC-301-R3, the groundwater samples were collected using the submersible and peristaltic pumps. The temporary wells TW-1 through TW-12 are one-inch diameter monitoring wells and are purged and sampled using either a submersible bladder or peristaltic pump. The permanent monitoring wells (MWs) are two-inch diameter wells and were purged and sampled with a submersible Grundfos Redi-Flo2 pump. The groundwater samples were collected and analyzed for the following constituents:

- Organochlorine pesticides using USEPA Method 8081A
- Arsenic, Lead, Copper, and Zinc using USEPA Method 6020 (total and dissolved analyses)
- Nitrate and Sulfate using USEPA Method 9056

To investigate if volatile organic compounds (VOCs) from the upgradient M&J Solvents site is potential impacting the Estech site, groundwater samples from select monitoring wells were analyzed for VOCs using USEPA method 8260B. The wells were selected from upgradient locations (MW-1B and MW-101), locations with previous detections of VOCs (MW-22, MW-104A, and MW-104D), locations along proposed pump and treat recovery well line (MW-110, TW-3, TW-5, and TW-7) and further downgradient of the site (MW-119 and MW-120). The wells sampled and analyzed for VOCs are:

MW-1B	MW-22	MW-101	MW-104A	MW-104D	MW-110
MW-119	MW-120	TW-3	TW-5	TW-7	

3.2 Surface Water Sampling and Analysis

Ten surface water samples were collected in November 2014 from the un-named stream on CSX property. The sample identifications are:

SW-2010-5	SW-2010-10	SW-2010-11	SW-2010-14
SW-2010-15	SW-2010-17	SW2014-20	SW2014-21
Inflow-1 (seep)	Inflow-2 (seep)		

Sample SW-2010-5 was collected adjacent to well location MW-106D/MW-119. Samples SW-2010-10 and SW-2010-11 were collected upstream and downstream, respectively, of the culvert beneath on the “pork-barrel” rail line. Samples SW-2010-14, SW-2010-15, and SW-2010-17 were collected downstream of the culvert and upstream of Marietta Boulevard (Figure 1). Three water samples (SW2014-20, SW2014-21, and Inflow-1) were collected in November 2014 in a drainage feature on the west side of the railroad tracks and upstream of the culvert. The samples were collected from water seeping from the side of the drainage feature. Sample Inflow-2 was collected from a seep along the stream’s main channel downstream of the railroad culvert. The surface water samples were collected by filling the sample containers directly from the stream. The surface water collection data are summarized on Table 1, analytical results are summarized on Table 4, and the laboratory reports are provided in Appendix A. The surface water samples were analyzed for the following constituents:

- Organochlorine pesticides using USEPA Method 8081A
- Dissolved Arsenic, Lead, Copper, and Zinc using USEPA Method 6020
- Nitrate and Sulfate using USEPA Method 9056

During this sampling event, the elevation of the stream’s surface water was measured at the four staff gauge locations to help better evaluate the groundwater/surface water connectivity.

3.3 Results of the Semi-Annual Groundwater and Surface Water Investigation Results

The second semi-annual groundwater and surface-water sampling event for 2014 was conducted in November 2014. The sampling event consisted of measuring the depth to water in monitoring wells, gauging the surface water elevation at four locations along the un-named stream, and sampling and analyzing groundwater samples from monitoring wells and surface water samples from the un-named stream. The interpreted groundwater flow direction and gradients are discussed in the next section. The results of the groundwater and surface water analytical results are discussed afterwards.

3.3.1 Groundwater Flow Direction, Gradients and Velocity

The depth to water was measured in 39 monitoring wells on November 10, 2014 at locations on the Estech and CSX properties. The data were used to generate a potentiometric surface map to evaluate the groundwater flow direction and velocity. The groundwater elevations are summarized on Table 2. The highest elevation was 895.13 feet in well MW-101 and the lowest elevation was 834.66 feet in well MW-107D. The November 2014 groundwater elevations are on average about one foot lower than the November 2013 elevations and are on average three feet lower than the May 2014 groundwater elevations. Figure 2 is a site potentiometric surface map indicating the groundwater flow direction is from the west side of the Estech property to the east and discharging to the un-named stream. The horizontal gradient across the site is estimated to be 0.035 to 0.042 feet per foot based on the November 2014 potentiometric map. The groundwater seepage velocity was estimated using an average hydraulic conductivity of 0.84 ft/day or $3x10^{-4}$ cm/sec from the residuum soils based on slug tests performed in monitoring wells MW-1, MW-4, MW-12, DW-2A, and MW-22 and a site-specific effective porosity of the residuum of 0.23. An average seepage velocity through residual soils is calculated to be 0.13 to 0.15 feet per day or 47 to 55 feet per year.

The vertical gradients were evaluated in monitoring well pairs MW-104A/MW-104D, MW-110/ MW-111, MW-106D/MW-121, and MW-119/MW-120. The vertical gradients were calculated by dividing the difference in the groundwater elevations by the distance between the mid-points of each well's screen. There was very little difference (0.32 feet) in the groundwater elevations in well pair MW-104A/MW-104D and a slight downward gradient of 0.008 feet/foot at the MW-104A/MW-104D nest. A downward gradient (0.2 feet/foot) from the residual soil to the fractured bedrock was present at well pairs MW-110/MW-111 and MW-119/MW-120. There was also a downward gradient (0.3 feet/foot) at well pair MW-106D/MW-121. The groundwater elevation in well MW-121 (862.26 feet), screening the uppermost fractured bedrock next to the un-named stream was about the same as the surface water elevation (862.66 feet) in the stream next to the well pair. The groundwater elevation in well MW-106D (851.18 feet), screening a deeper depth in the fractured bedrock was about 11 feet lower than the surface water elevation. The surface water elevation (838.90 feet) at Staff Gauge #3 was about 10 feet lower than the groundwater elevation in well MW-119 (849.48 feet) and was about 8 feet lower in elevation than the groundwater elevation (847.32 feet) in bedrock well MW-120. The groundwater elevation in well MW-107D (834.66) is a little over a foot lower than the stream elevation at Staff Gauge #4

(836.14 feet). The March 2014 groundwater elevation in M&J Solvent's site deeper bedrock monitoring well MW-CSX-03D, near wells MW-119/MW-120, was 832.40 feet which is below the elevation of the surface water (838.90 feet) at Staff Gauge #3. This data indicates groundwater in the deep residual soil, soil/bedrock interface, and shallow fractured bedrock discharges to the stream. Groundwater in the deeper bedrock does not appear to be in communication with the surface water.

3.3.2 Groundwater Analytical Results for Estech Site Constituents

Groundwater samples were collected from the new and existing monitoring wells and analyzed for organochlorine pesticides, total and dissolved arsenic, copper, lead, zinc, total nitrate and sulfate. The BHC isomers were the predominant pesticides detected with beta-BHC being detected most often in the November samples. Copper and zinc were the predominant metals detected, followed by lead. The dissolved metal concentrations were similar, though lower than the total metals concentrations. Nitrate and sulfate were also detected. Monitoring well TW-8 had the highest pesticide concentrations. Well TW-7 had the highest metals, nitrate, and sulfate concentrations.

The groundwater analytical results are summarized on Table 3 and the laboratory reports are provided in Appendix A. Total copper and zinc concentrations ranged from 0.00298 to 204 mg/L while dissolved copper and zinc ranged from 0.0027 to 228 mg/L. Figure 3 presents the metals data for the new and existing monitoring wells from November 2014. The metals in groundwater are delineated based on the Type 1 RRS as shown on Figure 3. The groundwater plume as indicated on Figure 3 is located on the northern and eastern portions of the Estech property and the CSX property abutting the Estech eastern property boundary. The data indicates the lower pH readings generally correlate to higher metals concentrations, particularly copper and zinc. The lower pH groundwater coincides with groundwater metals concentrations that are greater than the Type 1 RRS. The copper and zinc concentrations above the Type 1 RRS are primarily located on the eastern portion of the Estech property and the western portion of the CSX property adjacent to Estech, and being north of well MW-117 and south of wells MW-104A/MW-104D. Metals concentrations in groundwater on the western and southern portions of the Estech property and on the eastern portion of the CSX property near the stream are either non-detect or below the Type 1 RRS. Downgradient wells (MW-105, MW-106D, MW-107D, MW-117, MW-119, MW-120, and MW-121) adjacent to the stream are less than Type 1 RRS. The area with metal concentrations above the Type 1 RRS is bounded by areas that are either non-detect or below the Type 1 RRS. Generally, the surface water concentrations were less than the site groundwater concentrations.

Total and dissolved arsenic and lead were also analyzed in the groundwater samples. Arsenic and lead concentrations were either non-detect or slightly above the Type 1 RRS and were generally less than the copper and zinc concentrations (Table 3). The total arsenic and lead concentrations ranged from 0.00102 to 0.932 mg/L while the dissolved concentrations ranged from 0.00102 to 0.48 mg/L. The extent of arsenic and lead in groundwater is defined based on Type 1 RRS values (Figure 3).

Pesticides in groundwater are delineated based on Type 1 RRS values, as is shown on Figure 4. One to four of the BHC isomers were detected in 24 wells across the site. Alpha-BHC concentrations ranged from 0.000054 to 0.34 mg/L. Beta-BHC concentrations ranged from 0.0001 to 0.14 mg/L. Delta-BHC concentrations ranged from 0.000063 to 0.16 mg/L while gamma-BHC concentrations ranged from 0.000076 to 0.23 mg/L. The November 2014 BHC concentrations are higher than the May 2014 concentrations. BHC concentrations in well TW-8 increased from May to November 2014, but were less than the 2012 to January 2014 concentrations. There was one detection of dieldrin, two detects of DDD and DDE and three detects of DDT. Wells TW-1, TW-5, and TW-8 had DDD and DDE concentrations ranging from 0.0001 to 0.019 mg/L. Dieldrin was detected at 0.00011 mg/L and slightly above the reporting limit in well TW-4 which has had past detections of dieldrin. DDT was detected in wells TW-1, TW-5, and TW-8 at concentrations of 0.00021 to 0.35 mg/L. Well MW-105 had a trace concentration of delta-BHC in November, this well is sidegradient to the groundwater flow from the Estech property and the soils at this location were non-detect for pesticides. The detection is like due to a laboratory artifact. This well will continue to be monitored. BFEL is looking into sampling monitoring wells located on the upgradient Whitaker property for pesticides which could accomplish the objective of delineating pesticides. The November DDD, DDE, and DDT concentrations were slightly higher than the May 2014 concentrations while the dieldrin concentration was less.

The November 2014 pesticide concentrations showed an increase from the May 2014 concentrations in wells TW-5, TW-6, TW-7, TW-8, MW-25, MW-109, MW-110, MW-111, MW-115, and MW-116. The total metals concentrations in the November 2014 groundwater samples were slightly higher than the May 2014 concentrations in wells TW-1, TW-3, TW-5, TW-8, TW-9, MW-22, MW-106D, MW-108, MW-109, MW-115, MW-117, and MW-1121. There was more rainfall in the months preceding the November sampling event than in the months preceding the May event and may have contributed to increased the amounts of groundwater flow across the site and is attributed to the slight rise in constituent concentrations.

Nitrate and sulfate do not have Type 1 RRS because they are not regulated constituents under HSRA or VRP. The extent of nitrate and sulfate in groundwater is shown on Figure 5. The higher sulfate concentrations generally coincide with lower pH values and higher metals concentrations in the groundwater. Nitrate concentrations in November ranged from 0.33 to 77 mg/L and were slightly less than the May 2014 results. Sulfate concentrations in November ranged from 37 to 5000 mg/L and were slightly higher than the May results with well TW-7 having the highest concentrations.

3.3.3 Groundwater Analytical Results for Volatile Organic Compounds

In November, eleven monitoring wells (MW-1B, MW-22, MW-101, MW-104A, MW-104D, MW-110, MW-119, MW-120, TW-3, TW-5, and TW-7) on the Estech property were sampled and analyzed for VOCs (Table 5). The sampling was conducted at the request of EPD because of their concerns that a pump-and-treat remediation could potentially pull the M&J Solvents site VOC groundwater plume toward or onto the Estech property. The purpose of the investigation was to evaluate if VOCs from the M&J Solvent site were present on Estech property and their

potential impact on the construction of an Estech site pump-and-treat remediation system. Monitoring wells located on the upgradient side of the property, along the downgradient side of the property in the area of the proposed remediation system and wells on the northern portion of the site near the M&J Solvent site groundwater plume were sampled. Wells MW-22, MW-104A, and MW-104D had previously been analyzed for VOCs in September 2010 at the request of EPD to evaluate if the M&J Solvent site plume was impacting the Estech property. Well MW-22, located on the Estech property and screened in residual soil had a low concentration of cis-1,2-dichloroethene in 2010 and 2014. Well MW-104A, located on CSX property and north of the Estech property had a detection of 1,4-dioxane in 2010, but in 2014 was less than the quantitation limit (Table 5). Well MW-104D, also located on CSX property and screened in shallow fractured bedrock, had high concentrations of VOCs (ketones, BTEX, and 1,4-dioxane). Upgradient wells MW-1B and MW-101 (Figure 6) were non-detect for VOCs. Downgradient wells MW-110, screened in the shallow fractured bedrock, and wells TW-5 and TW-7, screened in the residual soil were also non-detect. Northern downgradient well TW-3 had detections of benzene and chlorobenzene with cis-1,2-dichloroethene. Further downgradient wells MW-119, screened in residual soil, was non-detect while shallow fractured bedrock well MW-120 had detections of 1,4-dioxane, chlorobenzene, cis-1,2-dichloroethene, and trichloroethene (Figure 6). Based on this initial data, the M&J Solvent site VOC groundwater plume is present across the northern third of the Estech property, but does not appear to be present south of well TW-3.

As shown on Figure 6, potentiometric surface contours indicate groundwater flow on the Estech property is from the west to the east toward the un-named stream while groundwater flow directions on the M&J Solvents site is radial flowing to the east, southeast, south, and southwest. The M&J site potentiometric surface contours show groundwater flow toward the un-named stream and generally toward the northern Estech property boundary. However, there are no groundwater wells or elevation data from the southern portion of the Whitaker Oil site to confirm the direction of groundwater flow from the southern portion of the Whitaker Oil property in relation to the Estech property. The absence of VOCs in Estech upgradient wells MW-1B and MW-101 indicates the M&J Solvents groundwater VOC plume does not currently extend that far south to the Estech wells. At this time, it cannot be estimated how groundwater pumping will affect the extent of the VOC plume.

3.3.4 Surface Water Analytical Results

Ten surface water samples were collected from the un-named stream in November 2014 and analyzed for site constituents. The four metals were analyzed for dissolved phase concentrations. BHCs, arsenic, copper, lead, zinc, nitrate, and sulfate were detected. The analytical results are summarized on Table 4. The BHCs ranged in concentrations of alpha-BHC 0.083 to 0.3 µg/L, beta-BHC 0.074 to 1.5 µg/L, delta-BHC 0.059 to 0.32 µg/L, and gamma-BHC 0.058 to 0.1 µg/L. The November 2014 BHC concentrations were similar to the May 2014 concentrations. Dissolved arsenic ranged from 0.0007 to 0.00102 mg/L. Dissolved copper was detected at concentrations ranging from 0.00434 to 0.157 mg/L and dissolved zinc was detected at concentrations ranging from 0.435 to 4.24 mg/L. There was one detection of lead at 0.00281

mg/L at seep location SW2014-20. The November 2014 dissolved metals concentrations were slightly lower than the May 2014 concentrations. Nitrate was detected at 1.5 to 8.3 mg/L, sulfate was detected at 92 to 350 mg/L, and both were slightly lower than the May 2014 concentrations. The two additional samples were collected from a drainage feature on the west side of the railroad tracks and upstream of the railroad culvert. The SW-2014-20 and SW2014-21 samples collected in the drainage feature upstream of the culvert had higher concentrations than the seven samples collected downstream from the main channel of the stream.

The concentrations were compared to the National Water Quality Criteria for Human Health (AWQC) (as requested by EPD in February 2012 comments) and the Georgia In-stream Water Quality Criteria (ISWQC) for aquatic life receptors. When compared to the lowest values of the AWQC for human health (Table 4), the concentrations of alpha and beta-BHC and arsenic are greater than the criteria for human consumption of water and organisms. There are no criteria for these BHCs under the Georgia ISWQC.

Dissolved copper and zinc concentrations are greater than the ISWQC for aquatic life receptors (Table 4) and are less than the human health criteria. The nitrate concentrations were less than the AWQC (Table 4). Constituent concentrations in samples (SW2010-5 and SW-2010-10) collected upstream of the railroad culvert on the east side of the railroad track are lower than the concentrations of samples (SW2010-11 to SW2010-17, and Inflow-2) collected downstream of the railroad culvert on the west side of the tracks with the highest concentrations detected at locations Inflow-1, SW2010-14 to SW2010-17. The drainage feature that branches off the main channel upstream of the culvert on the west side of the tracks may be a point of discharge for elevated concentrations of site contaminants, particularly zinc. The un-named stream located on CSX property is not an exposure point for human receptors because the stream is not a source of drinking water, is not accessible to the public, and does not have habitat for a fishery for human consumption. Aquatic receptors are more likely to be exposed to the stream than to humans and the aquatic life water quality criteria are the more appropriate criteria.

3.4 Revised Remediation Approach

BFEL and AMEC representatives met with EPD representatives on September 18, 2014 to discuss the proposed revised Remediation Plan presented in VRP Status Report No. 5. The revised Remediation Plan called for a groundwater recirculating system with a limestone infiltration gallery treatment process. The recirculating system would capture contaminated groundwater, treat the water by raising the pH and re-inject the treated water back into the upgradient soil to help flush contaminants in soil and groundwater toward the pumping-induced capture zone while raising the pH in the subsurface soil and groundwater to reduce solubility and mobility of dissolved constituents, particularly zinc. A surficial limestone PRB was also proposed to be installed at the seep area and drainage feature near the unnamed stream on CSX property. A Type 5 Risk Reduction Standard was proposed to address impacted soil via engineering and institutional controls to limit human exposure potential until a viable re-use for the property is identified. EPD expressed concerns that a pump-and-treat system on the Estech property could pull the M&J Solvents site VOCs groundwater plume toward/onto the downgradient Estech property. Currently, groundwater remediation to control migration is not

being conducted at the M&J site. In the meeting and subsequent comment letters, EPD suggested reviewing current groundwater data from the M&J site and careful evaluation of the Estech proposed groundwater recovery wells location, depths and screened intervals. As discussed earlier, additional groundwater sampling for VOCs was conducted on the Estech property in November 2014 and confirmed VOC impacts on the western and northern portion of the Estech property. On October 7, 2014, EPD provided comments on VRP Status Reports Nos. 4 and 5, and on December 1, 2014, EPD provided comments on the updated RRS, UCLs and EPCs. The comments and responses are included in Appendix B.

BFEL continues to evaluate the most appropriate plan for implementation of remediation so as not to exacerbate the up-gradient VOC impacts. At this time, BFEL intends to proceed with a laboratory bench-scale treatability study to evaluate the feasibility and effectiveness of the limestone treatment process for reducing site metals and pesticide concentrations. If the results of the bench-scale treatability study appear favorable, then the surficial limestone PRB installation could proceed, as it will not negatively affect migration of the VOC plume. A pilot scale field test of the groundwater recirculation concept may also proceed in the eastern portion of the site where the VOC plume will not interfere with its implementation. However, BFEL also continues to evaluate other potential in-situ remedies.

4.0 WORK TO BE PERFORMED

On-going activities include semi-annual groundwater and surface water monitoring and reporting. Additional activities include treatability testing and further evaluation of the design for the proposed active remedial measures previously proposed in light of the upgradient VOC groundwater plume. The sections below describe the status of the activities yet to be performed. Figure 7 is the updated Gantt Chart Schedule of VRP Activities.

4.1 Groundwater and Surface Sampling and Analysis

Groundwater and surface water samples will be collected in May 2015 as part of the next semi-annual monitoring event for the site. The following existing and new monitoring wells located on CSX property will be sampled and analyzed for site constituents:

MW-21	MW-22	MW-25	MW-26	MW-1B	MW-101
MW-102	MW-104A	MW-104D	MW-105	MW-106D	MW-107D
MW-108	MW-109	MW-110	MW-111	MW-112	MW-113
MW-114	MW-115	MW-116	MW-117	MW-119	MW-120
MW-121	TW-1 to TW-12		OW-1 to OW-3		

Constituents to be analyzed: Organochlorine Pesticides, Total and Dissolved Metals (Arsenic, Lead, Copper, Zinc), Nitrate, and Sulfate and VOCs.

Surface Water Sampling and Analysis

Eight surface water locations in the un-named stream located on CSX property will be sampled and analyzed for the site constituents:

SW2010-5 SW2010-10 SW2010-11 SW2010-14 SW2010-15 SW2010-17

SW2014-20 SW2014-21

Constituents analyzed: Organochlorine Pesticides, Dissolved Metals (Arsenic, Lead, Copper, and Zinc), Nitrate, and Sulfate.

4.2 Treatability Testing

Treatability testing will be performed on site groundwater from on-site monitoring wells and/or surface water collected from the downgradient seep/stream interface to evaluate the effectiveness of the limestone reinfiltration process and surficial limestone PRB to reduce or remove heavy metals (arsenic, copper, lead, and zinc) and site-specific pesticides. Samples of groundwater will be prepared in jars with approximately 50% limestone and 50% groundwater by volume. Sampling will occur at three to five intervals thereafter to simulate the contact time estimated to be achieved through the reinfiltration basin and surficial limestone PRB.

5.0 PROFESSIONAL SERVICES HOURS THIS PERIOD

Approximately 485.2 professional service hours have been provided by AMEC Foster Wheeler Environment & Infrastructure, Inc. from July 12, 2014 through January 23, 2015. A table of the breakdown of AMEC hours by month along with a description of the services provided is presented on Table 6. The registered professional engineer responsible for implementation of the VRP at this site is Mr. Gregory Wrenn. Mr. Wrenn has personally charged 43.5 labor hours to the project to direct and review the various aspects of implementation of the VRP during this reporting period.

TABLES

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

AREA SAMPLED	BORINGS	TOTAL BORING DEPTH (FT, BGS)	GROUND SURFACE ELEVATION (FT, NGVD)	SAMPLE DEPTHS PER BORING (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES PER SAMPLE	SAMPLE DATE	RATIONALE
TW-1	Well TW-1	23.0	890.8/892.99*	12.5-22.5	TW-1-053012	Groundwater	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2012	New well to investigate Copper and Zinc in groundwater
TW-1	Well TW-1	23.0 24.9 btoc	890.8/892.99*	12.5-22.5	TW-1		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/29/2013	Well to monitor site constituents in groundwater
TW-1	Well TW-1	23.0 24.9 btoc	890.8/892.99*	12.5-22.5	TW-1		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/13/2013	Well to monitor site constituents in groundwater
TW-1	Well TW-1	23.0 24.9 btoc	890.8/892.99*	12.5-22.5	TW-1		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/14/2014	Well to monitor site constituents in groundwater
TW-1	Well TW-1	23.0 24.9 btoc	890.8/892.99*	12.5-22.5	TW-1		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/12/2014	site-wide groundwater monitoring
TW-2	Well TW-2	27.2	895.5/897.90*	17-27	TW-2-053012	Groundwater	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2012	New well to investigate Copper and Zinc in groundwater
TW-2	Well TW-2	27.2 29.2 btoc	895.5/897.90*	17-27	TW-2		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/29/2013	Well to monitor site constituents in groundwater
TW-2	Well TW-2	27.2 29.1 btoc	895.5/897.90*	17-27	TW-2		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/14/2013	Well to monitor site constituents in groundwater
TW-2	Well TW-2	27.2 29.1 btoc	895.5/897.90*	17-27	TW-2		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/14/2014	Well to monitor site constituents in groundwater
TW-2	Well TW-2	27.2 29.1 btoc	895.5/897.90*	17-27	TW-2		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/12/2014	Well to monitor site constituents in groundwater
TW-3	Well TW-3	36.6	893.9/897.44*	26.4-36.4	TW-3-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/31/2012	New well to investigate Copper and Zinc in groundwater
TW-3	Well TW-3	36.6 39.9 btoc	893.9/897.44*	26.4-36.4	TW-3		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Well to monitor site constituents in groundwater
TW-3	Well TW-3	36.6 39.8 btoc	893.9/897.44*	26.4-36.4	TW-3		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/14/2013	Well to monitor site constituents in groundwater
TW-3	Well TW-3	36.6 39.8 btoc	893.9/897.44*	26.4-36.4	TW-3		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/15/2014	Well to monitor site constituents in groundwater
TW-3	Well TW-3	36.6 39.8 btoc	893.9/897.44*	26.4-36.4	TW-3		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate Site-Specific VOCs	11/13/2014	Well to monitor site constituents in groundwater and M&J Solvents site plume impact on BFEL
TW-4	Well TW-4	32.3	897.2/899.36*	21.8-31.8	TW-4-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/31/2012	New well to investigate Copper and Zinc in groundwater
TW-4	Well TW-4	32.3 33.6 btoc	897.2/899.36*	21.8-31.8	TW-4		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Well to monitor site constituents in groundwater
TW-4	Well TW-4	32.3 33.5 btoc	897.2/899.36*	21.8-31.8	TW-4		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/15/2013	Well to monitor site constituents in groundwater
TW-4	Well TW-4	32.3 33.5 btoc	897.2/899.36*	21.8-31.8	TW-4		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/15/2014	Well to monitor site constituents in groundwater
TW-4	Well TW-4	32.3 33.5 btoc	897.2/899.36*	21.8-31.8	TW-4		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/13/2014	Well to monitor site constituents in groundwater

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

AREA SAMPLED	BORINGS	TOTAL BORING DEPTH (FT, BGS)	GROUND SURFACE ELEVATION (FT, NGVD)	SAMPLE DEPTHS PER BORING (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES PER SAMPLE	SAMPLE DATE	RATIONALE
TW-5	Well TW-5	30.0	888.8/891.89*	19.8-29.8	TW-5-053012	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/30/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-5	Well TW-5	30.0	888.8/891.89*	19.8-29.8	TW-5		Total and Dissolved As, Cu, Pb, and Zn	5/29/2013	Well to monitor site constituents in groundwater
		29.8 btoc					Pesticides		
							Nitrate and Sulfate		
TW-5	Well TW-5	30.0	888.8/891.89*	19.8-29.8	TW-5		Total and Dissolved As, Cu, Pb, and Zn	11/15/2013	Well to monitor site constituents in groundwater
		32.5 btoc					Pesticides		
							Nitrate and Sulfate		
TW-5	Well TW-5	30.0	888.8/891.89*	19.8-29.8	TW-5		Total and Dissolved As, Cu, Pb, and Zn	5/21/2014	Well to monitor site constituents in groundwater
		31.5 btoc					Pesticides		
							Nitrate and Sulfate		
TW-5	Well TW-5	30.0	888.8/891.89*	19.8-29.8	TW-5		Total and Dissolved As, Cu, Pb, and Zn	11/13/2014	Well to monitor site constituents in groundwater and M&J Solvents site plume impact on BFEL
		31.9 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
TW-6	Well TW-6	37.9	905.8/908.33*	27.7-37.7	TW-6-053012	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/30/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-6	Well TW-6	37.9	905.8/908.33*	27.7-37.7	TW-6		Total and Dissolved As, Cu, Pb, and Zn	5/29/2013	Well to monitor site constituents in groundwater
		39.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-6	Well TW-6	37.9	905.8/908.33*	27.7-37.7	TW-6		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	Well to monitor site constituents in groundwater
		39.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-6	Well TW-6	37.9	905.8/908.33*	27.7-37.7	TW-6		Total and Dissolved As, Cu, Pb, and Zn	5/21/2014	Well to monitor site constituents in groundwater
		39.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-6	Well TW-6	37.9	905.8/908.33*	27.7-37.7	TW-6		Total and Dissolved As, Cu, Pb, and Zn	11/14/2014	Well to monitor site constituents in groundwater
		39.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-7	Well TW-7	31.0	897.9/899.22*	20.8-30.8	TW-7-060112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	6/1/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-7	Well TW-7	31.0	897.9/899.22*	20.8-30.8	TW-7		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	Well to monitor site constituents in groundwater
		32.3 btoc					Pesticides		
							Nitrate and Sulfate		
TW-7	Well TW-7	31.0	897.9/899.22*	20.8-30.8	TW-7		Total and Dissolved As, Cu, Pb, and Zn	11/19/2013	Well to monitor site constituents in groundwater
		32.3 btoc					Pesticides		
							Nitrate and Sulfate		
TW-7	Well TW-7	31.0	897.9/899.22*	20.8-30.8	TW-7		Total and Dissolved As, Cu, Pb, and Zn	5/22/2014	Well to monitor site constituents in groundwater
		32.3 btoc					Pesticides		
							Nitrate and Sulfate		
TW-7	Well TW-7	31.0	897.9/899.22*	20.8-30.8	TW-7		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	Well to monitor site constituents in groundwater and M&J Solvents site plume impact on BFEL
		32.3 btoc					Pesticides		
							Site-Specific VOCs		
							Nitrate and Sulfate		
TW-8	Well TW-8	29.2	899.3/900.36*	19-29	TW-8-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/31/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides	5/31/2012	
							Nitrate and Sulfate	5/31/2012	
TW-8	Well TW-8	29.2	899.3/900.36*	19-29	TW-8-12113		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	1/21/2013	Well to monitor copper and zinc in groundwater and parameters for EHC injection pilot study Base line sampling prior to EHC injection
							Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
TW-8	Well TW-8	29.5	899.2/900.36*	19-29	TW-8-04-15-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	4/15/2013	Well to monitor copper and zinc in groundwater and parameters for EHC injection pilot study 1st quarter sampling after EHC injection
							Pesticides	4/15/2013	
							Chloride, Nitrate, Nitrite, and Sulfate	4/15/2013	
							Total and Dissolved Organic Cabon	4/15/2013	
							Total Alkalinity	4/15/2013	
TW-8	Well TW-8	29.5	899.2/900.36*	19-29	TW-8-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	7/16/2013	Well to monitor copper and zinc in groundwater and parameters for EHC injection pilot study 2nd quarter sampling after EHC injection
							Pesticides	7/16/2013	
							Chloride, Nitrate, Nitrite, and Sulfate	7/16/2013	
							Total and Dissolved Organic Cabon	7/16/2013	
							Total Alkalinity	7/16/2013	

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
TW-8	Well TW-8	29.5	899.2/900.36*	19-29	TW-8-10-9-2013	Groundwater	Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	10/9/2013	Well to monitor copper and zinc in groundwater and parameters for EHC injection pilot study 3rd quarter sampling after EHC injection
							Pesticides	10/9/2013	
							Chloride, Nitrate, Nitrite, and Sulfate	10/9/2013	
							Total and Dissolved Organic Cabon	10/9/2013	
							Total Alkalinity	10/9/2013	
TW-8	Well TW-8	29.5	899.2/900.36*	19-29	TW-8-10814		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	1/8/2014	Well to monitor copper and zinc in groundwater and parameters for EHC injection pilot study 4th quarter sampling after EHC injection
							Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Carbon		
							Total Alkalinity		
TW-8	Well TW-8	29.9	899.2/900.36*	19-29	TW-8		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	Well to monitor site constituents in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-8	Well TW-8	29.9	899.2/900.36*	19-29	TW-8		Total and Dissolved As, Cu, Pb, and Zn	11/14/2014	Well to monitor site constituents in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-9	Well TW-9	33.2	899.2/901.56*	23-33	TW-9-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/31/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-9	Well TW-9	33.2	899.2/901.56*	23-33	TW-9		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	Well to monitor site constituents in groundwater
		35.0 btoc					Pesticides		
							Nitrate and Sulfate		
TW-9	Well TW-9	33.2	899.2/901.56*	23-33	TW-9		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	Well to monitor site constituents in groundwater
		34.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-9	Well TW-9	33.2	899.2/901.56*	23-33	TW-9		Total and Dissolved As, Cu, Pb, and Zn	5/22/2014	Well to monitor site constituents in groundwater
		34.5 btoc					Pesticides		
							Nitrate and Sulfate		
TW-9	Well TW-9	33.2	899.2/901.56*	23-33	TW-9		Total and Dissolved As, Cu, Pb, and Zn	11/17/2014	Well to monitor site constituents in groundwater
		34.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-10	Well TW-10	29.4	895.6/896.56*	19.2-29.2	TW-10-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/31/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-10	Well TW-10	29.4	895.6/896.56*	19.2-29.2	TW-10		Total and Dissolved As, Cu, Pb, and Zn	5/24/2013	Well to monitor site constituents in groundwater
		30.0 btoc					Pesticides		
							Nitrate and Sulfate		
TW-10	Well TW-10	29.4	895.6/896.56*	19.2-29.2	TW-10		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	Well to monitor site constituents in groundwater
		29.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-10	Well TW-10	29.4	895.6/896.56*	19.2-29.2	TW-10		Total and Dissolved As, Cu, Pb, and Zn	5/22/2014	Well to monitor site constituents in groundwater
		29.4 btoc					Pesticides		
							Nitrate and Sulfate		
TW-10	Well TW-10	29.4	895.6/896.56*	19.2-29.2	TW-10		Total and Dissolved As, Cu, Pb, and Zn	11/17/2014	Well to monitor site constituents in groundwater
		29.4 btoc					Pesticides		
							Nitrate and Sulfate		
TW-11	Well TW-11	42.0	914.7/918.08*	31.8-41.8	TW-11-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/31/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-11	Well TW-11	42.0	914.7/918.08*	31.8-41.8	TW-11		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	Well to monitor site constituents in groundwater
		44.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-11	Well TW-11	42.0	914.7/918.08*	31.8-41.8	TW-11		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	Well to monitor site constituents in groundwater
		44.8 btoc					Pesticides		
							Nitrate and Sulfate		
TW-11	Well TW-11	42.0	914.7/918.08*	31.8-41.8	TW-11		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	Well to monitor site constituents in groundwater
		44.8 btoc					Pesticides		
							Nitrate and Sulfate		
TW-11	Well TW-11	42.0	914.7/918.08*	31.8-41.8	TW-11		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	Well to monitor site constituents in groundwater
		44.8 btoc					Pesticides		
							Nitrate and Sulfate		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
TW-12	Well TW-12	44.0	927.6/929.03*	33.8-43.8	TW-12-053112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/31/2012	New well to investigate Copper and Zinc in groundwater
							Pesticides		
							Nitrate and Sulfate		
TW-12	Well TW-12	44.0	927.6/929.03*	33.8-43.8	TW-12		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	Well to monitor site constituents in groundwater
		44.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-12	Well TW-12	44.0	927.6/929.03*	33.8-43.8	TW-12		Total and Dissolved As, Cu, Pb, and Zn	11/12/2013	Well to monitor site constituents in groundwater
		44.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-12	Well TW-12	44.0	927.6/929.03*	33.8-43.8	TW-12		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	Well to monitor site constituents in groundwater
		44.9 btoc					Pesticides		
							Nitrate and Sulfate		
TW-12	Well TW-12	44.0	927.6/929.03*	33.8-43.8	TW-12		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	Well to monitor site constituents in groundwater
		44.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-1B	MW-1B	30.0	913.5/915.95*	20-29	MW-1B-1112		Total and Dissolved As, Cu, Pb, and Zn	11/13/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-1B	MW-1B	30.0	913.5/915.95*	20-29	MW-1B		Total and Dissolved As, Cu, Pb, and Zn	5/21/2013	site-wide groundwater monitoring
		32.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-1B	MW-1B	30.0	913.5/915.95*	20-29	MW-1B		Total and Dissolved As, Cu, Pb, and Zn	11/12/2013	site-wide groundwater monitoring
		32.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-1B	MW-1B	30.0	913.5/915.95*	20-29	MW-1B		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	site-wide groundwater monitoring
		32.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-1B	MW-1B	30.0	913.5/915.95*	20-29	MW-1B		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		32.46 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-21	MW-21	27.5	905.70*	17.5-27.5	Well was dry and could not be sampled		November 2012, May and November 2013, May and November 2014		
MW-22	MW-22	27.0	894.23*	17-27	MW-22-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/14/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-22	MW-22	27.0	894.23*	17-27	MW-22		Total and Dissolved As, Cu, Pb, and Zn	5/22/2013	site-wide groundwater monitoring
		28.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-22	MW-22	27.0	894.23*	17-27	MW-22		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		28.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-22	MW-22	27.0	894.23*	17-27	MW-22		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	site-wide groundwater monitoring
		28.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-22	MW-22	27.0	894.23*	17-27	MW-22		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		28.9 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-24	MW-24	30.0	897.31*	20-30	Well was damaged and could not be sampled				
MW-25	MW-25	28.0	895.05*	18-28	Well was dry and could not be sampled		November and May 2012		
MW-25	MW-25	28.0	895.05*	18-28	MW-25	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	5/24/2013	site-wide groundwater monitoring
		29.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-25	MW-25				Well was dry and could not be sampled		November 2013 and May 2014		
MW-25	MW-25	28.0	895.05*	18-28	MW-25	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring
		29.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-26	MW-26	19.0	905.11*	9-19	MW-26-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/14/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-26	MW-26	19.0	905.11*	9-19	MW-26		Total and Dissolved As, Cu, Pb, and Zn	5/22/2013	site-wide groundwater monitoring
		20.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-26	MW-26	19.0	905.11*	9-19	MW-26		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		20.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-26	MW-26	19.0	905.11*	9-19	MW-26		Total and Dissolved As, Cu, Pb, and Zn	5/14/2014	site-wide groundwater monitoring
		20.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-26	MW-26	19.0	905.11*	9-19	MW-26		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring
		20.9 btoc					Pesticides		
							Nitrate and Sulfate		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-101	MW-101	25.0	912.55*	14.4-24.4	MW-101-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/12/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-101	MW-101	25.0	912.55*	14.4-24.4	MW-101		Total and Dissolved As, Cu, Pb, and Zn	5/21/2013	site-wide groundwater monitoring
		27.1 btoc					Pesticides		
							Nitrate and Sulfate		
MW-101	MW-101	25.0	912.55*	14.4-24.4	MW-101		Total and Dissolved As, Cu, Pb, and Zn	11/12/2013	site-wide groundwater monitoring
		27.0 btoc					Pesticides		
							Nitrate and Sulfate		
MW-101	MW-101	25.0	912.55*	14.4-24.4	MW-101		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	site-wide groundwater monitoring
		26.98 btoc					Pesticides		
							Nitrate and Sulfate		
MW-101	MW-101	25.0	912.55*	14.4-24.4	MW-101		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		27.20 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-102	MW-102	31.2	915.19*	21.1-30.1	MW-102-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/13/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-102	MW-102	31.2	915.19*	21.1-30.1	MW-102		Total and Dissolved As, Cu, Pb, and Zn	5/21/2013	site-wide groundwater monitoring
		32.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-102	MW-102	31.2	915.19*	21.1-30.1	MW-102		Total and Dissolved As, Cu, Pb, and Zn	11/12/2013	site-wide groundwater monitoring
		32.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-102	MW-102	31.2	915.19*	21.1-30.1	MW-102		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	site-wide groundwater monitoring
		32.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-102	MW-102	31.2	915.19*	21.1-30.1	MW-102		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	site-wide groundwater monitoring
		32.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104A	MW-104A	40.0	898.00*	30.0-39.5	MW-104A-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/14/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-104A	MW-104A	40.0	898.00*	30.0-39.5	MW-104A		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	site-wide groundwater monitoring
		39.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104A	MW-104A	40.0	898.00*	30.0-39.5	MW-104A		Total and Dissolved As, Cu, Pb, and Zn	11/14/2013	site-wide groundwater monitoring
		39.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104A	MW-104A	40.0	898.00*	30.0-39.5	MW-104A		Total and Dissolved As, Cu, Pb, and Zn	5/14/2014	site-wide groundwater monitoring
		39.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104A	MW-104A	40.0	898.00*	30.0-39.5	MW-104A		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		39.6 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-104D	MW-104D	80.0	901.59*	69.5-79.5	MW-104B-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/14/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-104D	MW-104D	80.0	901.59*	69.5-79.5	MW-104B		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	site-wide groundwater monitoring
		82.5 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104D	MW-104D	80.0	901.59*	69.5-79.5	MW-104B		Total and Dissolved As, Cu, Pb, and Zn	11/14/2013	site-wide groundwater monitoring
		82.5 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104D	MW-104D	80.0	901.59*	69.5-79.5	MW-104B		Total and Dissolved As, Cu, Pb, and Zn	5/15/2014	site-wide groundwater monitoring
		82.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-104D	MW-104D	80.0	901.59*	69.5-79.5	MW-104B		Total and Dissolved As, Cu, Pb, and Zn	11/13/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		82.7 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-105	MW-105	25.0	904.55*	14.8-23.8	MW-105-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
					MW-105-1212		Pesticides	12/5/2012	confirmation sampling of pesticides
MW-105	MW-105	25.0	904.55*	14.8-23.8	MW-105		Total and Dissolved As, Cu, Pb, and Zn	5/21/2013	site-wide groundwater monitoring
		27.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-105	MW-105	25.0	904.55*	14.8-23.8	MW-105		Total and Dissolved As, Cu, Pb, and Zn	11/14/2013	site-wide groundwater monitoring
		27.1 btoc					Pesticides		
							Nitrate and Sulfate		
MW-105	MW-105	25.0	904.55*	14.8-23.8	MW-105		Total and Dissolved As, Cu, Pb, and Zn	5/13/2014	site-wide groundwater monitoring
		27.1 btoc					Pesticides		
							Nitrate and Sulfate		
MW-105	MW-105	25.0	904.55*	14.8-23.8	MW-105		Total and Dissolved As, Cu, Pb, and Zn	11/14/2014	site-wide groundwater monitoring
		27.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-106D	MW-106D	70.0	878.6*	60-69	MW-106D-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-106D	MW-106D	70.0	878.6*	60-69	MW-106D		Total and Dissolved As, Cu, Pb, and Zn	5/29/2013	site-wide groundwater monitoring
		72.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-106D	MW-106D	70.0	878.6*	60-69	MW-106D		Total and Dissolved As, Cu, Pb, and Zn	11/15/2013	site-wide groundwater monitoring
		72.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-106D	MW-106D	70.0	878.6*	60-69	MW-106D		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	site-wide groundwater monitoring
		72.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-106D	MW-106D	70.0	878.6*	60-69	MW-106D		Total and Dissolved As, Cu, Pb, and Zn	11/13/2014	site-wide groundwater monitoring
		72.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-107D	MW-107D	50.0	857.14*	40.0-49.5	MW-107D-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/19/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
							Pesticides	12/5/2012	confirmation sampling of pesticides
MW-107D	MW-107D	50.0	857.14*	40.0-49.5	MW-107D		Total and Dissolved As, Cu, Pb, and Zn	5/22/2013	site-wide groundwater monitoring
		49.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-107D	MW-107D	50.0	857.14*	40.0-49.5	MW-107D		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	site-wide groundwater monitoring
		49.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-107D	MW-107D	50.0	857.14*	40.0-49.5	MW-107D		Total and Dissolved As, Cu, Pb, and Zn	5/21/2014	site-wide groundwater monitoring
		49.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-107D	MW-107D	50.0	857.14*	40.0-49.5	MW-107D		Total and Dissolved As, Cu, Pb, and Zn	11/13/2014	site-wide groundwater monitoring
		49.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-108	MW-108	34.0	901.91*	24-33	MW-108-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/13/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-108	MW-108	34.0	901.91*	24-33	MW-108		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	site-wide groundwater monitoring
		35.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-108	MW-108	34.0	901.91*	24-33	MW-108		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		35.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-108	MW-108	34.0	901.91*	24-33	MW-108		Total and Dissolved As, Cu, Pb, and Zn	5/15/2014	site-wide groundwater monitoring
		35.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-108	MW-108	34.0	901.91*	24-33	MW-108		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring
		35.7 btoc					Pesticides		
							Nitrate and Sulfate		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-109	MW-109	31.5	895.90*	21.5-30.5	MW-109-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/16/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-109	MW-109	31.5	895.90*	21.5-30.5	MW-109		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	site-wide groundwater monitoring
		33.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-109	MW-109	31.5	895.90*	21.5-30.5	MW-109		Total and Dissolved As, Cu, Pb, and Zn	11/15/2013	site-wide groundwater monitoring
		33.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-109	MW-109	31.5	895.90*	21.5-30.5	MW-109		Total and Dissolved As, Cu, Pb, and Zn	5/15/2014	site-wide groundwater monitoring
		33.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-109	MW-109	31.5	895.90*	21.5-30.5	MW-109		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring
		33.3 btoc					Pesticides		
							Nitrate and Sulfate		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110-1112		Total and Dissolved As, Cu, Pb, and Zn	11/14/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110-12113		Total and Dissolved Fe and Mn	1/21/2013	Monitor parameters for EHC injection pilot study Base line sampling prior to EHC injection
							Chloride and Nitrite		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110-04-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	4/16/2013	Monitor parameters for EHC injection pilot study 1st quarter sampling after injection
		78.9 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	7/16/2013	Monitor parameters for EHC injection pilot study 2nd quarter sampling after injection
		78.9 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110-10-9-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	10/9/2013	Monitor parameters for EHC injection pilot study 3rd quarter sampling after injection
		78.9 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	1/8/2014	Monitor parameters for EHC injection pilot study 4th quarter sampling after injection
		78.9 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110		Total Alkalinity	5/15/2014	site-wide groundwater monitoring
		78.9 btoc					Total and Dissolved As, Cu, Pb, and Zn		
							Pesticides		
							Nitrate and Sulfate		
MW-110	MW-110	76.6	900.52*	66.5-75.5	MW-110		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		78.9 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/16/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111-12113		Total and Dissolved Fe and Mn	1/21/2013	Monitor parameters for EHC injection pilot study Base line sampling prior to EHC injection
							Chloride and Nitrite		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111-04-17-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	4/17/2013	Monitor parameters for EHC injection pilot study 1st quarter sampling after injection
		46.3 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	7/16/2013	Monitor parameters for EHC injection pilot study 2nd quarter sampling after injection
		46.3 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111-10-9-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	10/9/2013	Monitor parameters for EHC injection pilot study 3rd quarter sampling after injection
		46.3 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn	1/8/2014	Monitor parameters for EHC injection pilot study 4th quarter sampling after injection
		46.3 btoc					Pesticides		
							Chloride, Nitrate, Nitrite, and Sulfate		
							Total and Dissolved Organic Cabon		
							Total Alkalinity		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	site-wide groundwater monitoring
		46.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-111	MW-111	43.2	900.10*	33.2-42.2	MW-111		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring
		46.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-112	MW-112	22.0	904.90*	12-21	MW-112-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/13/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-112	MW-112	22.0	904.90*	12-21	MW-112		Total and Dissolved As, Cu, Pb, and Zn	5/22/2013	site-wide groundwater monitoring
		25.1 btoc					Pesticides		
							Nitrate and Sulfate		
MW-112	MW-112	22.0	904.90*	12-21	MW-112		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		25.1 btoc					Pesticides		
							Nitrate and Sulfate		
MW-112	MW-112	22.0	904.90*	12-21	MW-112		Total and Dissolved As, Cu, Pb, and Zn	5/14/2014	site-wide groundwater monitoring
		25.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-112	MW-112	22.0	904.90*	12-21	MW-112		Total and Dissolved As, Cu, Pb, and Zn	11/11/2014	site-wide groundwater monitoring
		25.2 btoc					Pesticides		
							Nitrate and Sulfate		

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WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-113	MW-113	41.6	900.06*	31.6-40.6	MW-113-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-113	MW-113	41.6	900.06*	31.6-40.6	MW-113		Total and Dissolved As, Cu, Pb, and Zn	5/24/2013	site-wide groundwater monitoring
		43.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-113	MW-113	41.6	900.06*	31.6-40.6	MW-113		Total and Dissolved As, Cu, Pb, and Zn	11/15/2013	site-wide groundwater monitoring
		43.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-113	MW-113	41.6	900.06*	31.6-40.6	MW-113		Total and Dissolved As, Cu, Pb, and Zn	5/15/2014	site-wide groundwater monitoring
		43.7 btoc					Pesticides		
							Nitrate and Sulfate		
MW-113	MW-113	41.6	900.06*	31.6-40.6	MW-113		Total and Dissolved As, Cu, Pb, and Zn	11/17/2014	site-wide groundwater monitoring
		43.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-114	MW-114	43.8	892.96*	33.8-42.8	MW-114-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-114	MW-114	43.8	892.96*	33.8-42.8	MW-114		Total and Dissolved As, Cu, Pb, and Zn	5/24/2013	site-wide groundwater monitoring
		46 btoc					Pesticides		
							Nitrate and Sulfate		
MW-114	MW-114	43.8	892.96*	33.8-42.8	MW-114		Total and Dissolved As, Cu, Pb, and Zn	11/14/2013	site-wide groundwater monitoring
		45.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-114	MW-114	43.8	892.96*	33.8-42.8	MW-114		Total and Dissolved As, Cu, Pb, and Zn	5/15/2014	site-wide groundwater monitoring
		45.95 btoc					Pesticides		
							Nitrate and Sulfate		
MW-114	MW-114	43.8	892.96*	33.8-42.8	MW-114		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring
		45.95 btoc					Pesticides		
							Nitrate and Sulfate		
MW-115	MW-115	20.5	893.40*	10.5-19.5	MW-115-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-115	MW-115	20.5	893.40*	10.5-19.5	MW-115		Total and Dissolved As, Cu, Pb, and Zn	5/24/2013	site-wide groundwater monitoring
		21.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-115	MW-115	20.5	893.40*	10.5-19.5	MW-115		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		21.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-115	MW-115	20.5	893.40*	10.5-19.5	MW-115		Total and Dissolved As, Cu, Pb, and Zn	5/16/2014	site-wide groundwater monitoring
		21.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-115	MW-115	20.5	893.40*	10.5-19.5	MW-115		Total and Dissolved As, Cu, Pb, and Zn	11/14/2014	site-wide groundwater monitoring
		22.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-116	MW-116	31.6	905.62*	21.6-30.6	Well had insufficent amount of water in casing and could not be sampled			11/15/2012	
						Groundwater			
MW-116	MW-116	31.6	905.62*	21.6-30.6	MW-116		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	site-wide groundwater monitoring
		33.5 btoc					Pesticides		
							Nitrate and Sulfate		
MW-116	MW-116	31.6	905.62*	21.6-30.6	MW-116		Total and Dissolved As, Cu, Pb, and Zn	11/13/2013	site-wide groundwater monitoring
		33.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-116	MW-116	31.6	905.62*	21.6-30.6	MW-116		Total and Dissolved As, Cu, Pb, and Zn	5/16/2014	site-wide groundwater monitoring
		33.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-116	MW-116	31.6	905.62*	21.6-30.6	MW-116		Total and Dissolved As, Cu, Pb, and Zn	11/12/2014	site-wide groundwater monitoring
		33.4 btoc					Pesticides		
							Nitrate and Sulfate		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
MW-117	MW-117	22.0	892.42*	12-22	MW-117-1112	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	11/15/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-117	MW-117	22.0	892.42*	12-22	MW-117		Total and Dissolved As, Cu, Pb, and Zn	5/23/2013	site-wide groundwater monitoring
		24.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-117	MW-117	22.0	892.42*	12-22	MW-117		Total and Dissolved As, Cu, Pb, and Zn	11/15/2013	site-wide groundwater monitoring
		24.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-117	MW-117	22.0	892.42*	12-22	MW-117		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	site-wide groundwater monitoring
		24.9 btoc					Pesticides		
							Nitrate and Sulfate		
MW-117	MW-117	22.0	892.42*	12-22	MW-117		Total and Dissolved As, Cu, Pb, and Zn	11/17/2014	site-wide groundwater monitoring
		25.2 btoc					Pesticides		
							Nitrate and Sulfate		
MW-119	MW-119	52.0	889.8/892.16*	36.5-51.5	MW-119-1212		Total and Dissolved As, Cu, Pb, and Zn	12/6/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-119	MW-119	52.0	889.8/892.16*	36.5-51.5	MW-119		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	site-wide groundwater monitoring
		54.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-119	MW-119	52.0	889.8/892.16*	36.5-51.5	MW-119		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	site-wide groundwater monitoring
		54.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-119	MW-119	52.0	889.8/892.16*	36.5-51.5	MW-119		Total and Dissolved As, Cu, Pb, and Zn	5/21/2014	site-wide groundwater monitoring
		54.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-119	MW-119	52.0	889.8/892.16*	36.5-51.5	MW-119		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		54.6 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-120	MW-120	64.5	890.1/892.44*	54-64	MW-120-1212	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	12/7/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-120	MW-120	64.5	890.1/892.44*	54-64	MW-120		Total and Dissolved As, Cu, Pb, and Zn	5/28/2013	site-wide groundwater monitoring
		65.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-120	MW-120	64.5	890.1/892.44*	54-64	MW-120		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	site-wide groundwater monitoring
		65.8 btoc					Pesticides		
							Nitrate and Sulfate		
MW-120	MW-120	64.5	890.1/892.44*	54-64	MW-120		Total and Dissolved As, Cu, Pb, and Zn	5/21/2014	site-wide groundwater monitoring
		65.6 btoc					Pesticides		
							Nitrate and Sulfate		
MW-120	MW-120	64.5	890.1/892.44*	54-64	MW-120		Total and Dissolved As, Cu, Pb, and Zn	11/18/2014	site-wide groundwater monitoring and M&J Solvents site plume impact on BFEL
		65.6 btoc					Pesticides		
							Nitrate and Sulfate		
							Site-Specific VOCs		
MW-121	MW-121	35.0	876.9/879.45*	22-32	MW-121-1212	Groundwater	Total and Dissolved As, Cu, Pb, and Zn	12/6/2012	site-wide groundwater monitoring
							Pesticides		
							Nitrate and Sulfate		
MW-121	MW-121	35.0	876.9/879.45*	22-32	MW-121		Total and Dissolved As, Cu, Pb, and Zn	5/29/2013	site-wide groundwater monitoring
		35.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-121	MW-121	35.0	876.9/879.45*	22-32	MW-121		Total and Dissolved As, Cu, Pb, and Zn	11/18/2013	site-wide groundwater monitoring
		35.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-121	MW-121	35.0	876.9/879.45*	22-32	MW-121		Total and Dissolved As, Cu, Pb, and Zn	5/19/2014	site-wide groundwater monitoring
		35.4 btoc					Pesticides		
							Nitrate and Sulfate		
MW-121	MW-121	35.0	876.9/879.45*	22-32	MW-121		Total and Dissolved As, Cu, Pb, and Zn	11/13/2014	site-wide groundwater monitoring
		35.4 btoc					Pesticides		
							Nitrate and Sulfate		

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
OW-1	OW-1	40.5	898.7/901.13*	20-40	OW-1-12013	Groundwater	Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/20/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study Base line sampling prior to EHC injection
OW-1	OW-1	40.5 42.2 btoc	898.7/901.13*	20-40	OW-1-04-15-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	4/15/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 1st quarter sampling after EHC injection
OW-1	OW-1	40.5 42.2 btoc	898.7/901.13*	20-40	OW-1-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	7/16/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 2nd quarter sampling after EHC injection
OW-1	OW-1	40.5 42.2 btoc	898.7/901.13*	20-40	OW-1-10-9-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	10/9/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 3rd quarter sampling after EHC injection
OW-1	OW-1	40.5 42.2 btoc	898.7/901.13*	20-40	OW-1-1082014		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/8/2014	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 4th quarter sampling after EHC injection
OW-1	OW-1	40.5 42.2 btoc	898.7/901.13*	20-40	OW-1		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/19/2014	site-wide monitoring
OW-2	OW-2	40.5	898.5/901.14*	20-40	OW-2-12013	Groundwater	Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/20/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study Base line sampling prior to EHC injection
OW-2	OW-2	40.5 42.9 btoc	898.5/901.14*	20-40	OW-2-04-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	4/16/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 1st quarter sampling after EHC injection
OW-2	OW-2	40.5 42.9 btoc	898.5/901.14*	20-40	OW-2-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	7/16/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 2nd quarter sampling after EHC injection

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

WELL LOCATION	WELL NUMBER	TOTAL WELL DEPTH (FT BGS)	Ground Surface and Top of Casing Elevations (FT, NGVD)	SCREENED INTERVAL (FT, BGS)	SAMPLE IDENTIFICATION	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
OW-2	OW-2	40.5 42.9 btoc	898.5/901.14*	20-40	OW-2-10-9-2013	Groundwater	Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	10/9/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 3rd quarter sampling after EHC injection
OW-2	OW-2	40.5 42.9 btoc	898.5/901.14*	20-40	OW-2-1082014		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/8/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 4th quarter sampling after EHC injection
OW-2	OW-2	40.5 42.9 btoc	898.5/901.14*	20-40	OW-2		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	site-wide monitoring
OW-3	OW-3	41.0	899.1/901.47*	20.5-40.5	OW-3-12013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/20/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study Base line sampling prior to EHC injection
OW-3	OW-3	41.0 42.9 btoc	899.1/901.47*	20.5-40.5	OW-3-04-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	4/16/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 1st quarter sampling after EHC injection
OW-3	OW-3	41.0 42.9 btoc	899.1/901.47*	20.5-40.5	OW-3-07-16-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	7/16/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 2nd quarter sampling after EHC injection
OW-3	OW-3	41.0 42.9 btoc	899.1/901.47*	20.5-40.5	OW-3-10-9-2013		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	10/9/2013	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 3rd quarter sampling after EHC injection
OW-3	OW-3	41.0 42.9 btoc	899.1/901.47*	20.5-40.5	OW-3-1082014		Total and Dissolved As, Cu, Fe, Pb, Mn, and Zn Pesticides Chloride, Nitrate, Nitrite, and Sulfate Total and Dissolved Organic Cabon Total Alkalinity	1/8/2014	Observation well downgradient of injection points Monitor parameters for EHC injection pilot study 4th quarter sampling after EHC injection
OW-3	OW-3	41.0 42.9 btoc	899.1/901.47*	20.5-40.5	OW-3		Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/21/2014	site-wide monitoring

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

SURFACE WATER LOCATION	SURFACE WATER SAMPLE IDENTIFICATION	Sample Depth	Sample Identification	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
SW-2010-5	SW-2010-5	N/A	SW-2010-5-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-5	SW-2010-5	N/A	SW-2010-5	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-5	SW-2010-5	N/A	SW-2010-5	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-5	SW-2010-5	N/A	SW-2010-5	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-5	SW-2010-5	N/A	SW-2010-5	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW-2010-10	SW-2010-10	N/A	SW-2010-10-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-10	SW-2010-10	N/A	SW-2010-10	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-10	SW-2010-10	N/A	SW-2010-10	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-10	SW-2010-10	N/A	SW-2010-10	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-10	SW-2010-10	N/A	SW-2010-10	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW-2010-11	SW-2010-11	N/A	SW-2010-11-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-11	SW-2010-11	N/A	SW-2010-11	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-11	SW-2010-11	N/A	SW-2010-11	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-11	SW-2010-11	N/A	SW-2010-11	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-11	SW-2010-11	N/A	SW-2010-11	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW-2010-14	SW-2010-14	N/A	SW-2010-14-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-14	SW-2010-14	N/A	SW-2010-14	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-14	SW-2010-14	N/A	SW-2010-14	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-14	SW-2010-14	N/A	SW-2010-14	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-14	SW-2010-14	N/A	SW-2010-14	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring

TABLE 1: SUMMARY OF SOIL AND WATER COLLECTION DATA

SURFACE WATER LOCATION	SURFACE WATER SAMPLE IDENTIFICATION	Sample Depth	Sample Identification	MEDIA	ANALYSES	SAMPLE DATE	RATIONALE
SW-2010-15	SW-2010-15	N/A	SW-2010-15-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-15	SW-2010-15	N/A	SW-2010-15	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-15	SW-2010-15	N/A	SW-2010-15	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-15	SW-2010-15	N/A	SW-2010-15	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-15	SW-2010-15	N/A	SW-2010-15	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW-2010-17	SW-2010-17	N/A	SW-2010-17-1112	Surface Water	Total and Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/16/2012	Surface water quality monitoring
SW-2010-17	SW-2010-17	N/A	SW-2010-17	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/30/2013	Surface water quality monitoring
SW-2010-17	SW-2010-17	N/A	SW-2010-17	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2013	Surface water quality monitoring
SW-2010-17	SW-2010-17	N/A	SW-2010-17	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW-2010-17	SW-2010-17	N/A	SW-2010-17	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW2014-20	SW2014-20	N/A	SW2014-20	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW2014-20	SW2014-20	N/A	SW2014-20	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
SW2014-21	SW2014-21	N/A	SW2014-21	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	5/20/2014	Surface water quality monitoring
SW2014-21	SW2014-21	N/A	SW2014-21	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
INFLOW-1	INFLOW-1	N/A	INFLOW-1	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	3/31/2014	Surface water quality monitoring
INFLOW-1	INFLOW-1	N/A	INFLOW-1	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring
INFLOW-2	INFLOW-2	N/A	INFLOW-2	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	3/31/2014	Surface water quality monitoring
INFLOW-2	INFLOW-2	N/A	INFLOW-2	Surface Water	Dissolved As, Cu, Pb, and Zn Pesticides Nitrate and Sulfate	11/19/2014	Surface water quality monitoring

Notes:
Arsenic, Lead, Copper, Iron, Manganese, and Zinc analyzed using USEPA Method 6020
Pesticides analyzed using USEPA Method 8081A
Nitrate and Sulfate, Chloride and Nitrite analyzed using USEPA Method 9056
As = arsenic, Cu = Copper, Fe = iron, Pb = lead, Mn = Managanese, Zn = zinc
bgs = below ground surface
na or N/A = not applicable
ft = feet
* top of well casing elevation

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) 8/20/2007	Ground-Water Elevation (ft., NGVD) 8/20/2007	Depth to Ground Water (ft., btoc) 9/20/2007	Ground-Water Elevation (ft., NGVD) 9/20/2007	Depth to Ground Water (ft., btoc) 7/29/2010	Ground-Water Elevation (ft., NGVD) 7/29/2010	Depth to Ground Water (ft., btoc) 9/14/2010	Ground-Water Elevation (ft., NGVD) 9/14/2010
MW-1B	893.5	-	884.5	fine sandy silt to silty fine sand	915.95	28.47	887.48	22.98	892.97	23.60	892.35	26.40	889.55
MW-21	885.9	-	875.9	clayey silt to silty clay	905.70	dry		dry		24.57	881.13	dry	
MW-22	875.3	-	865.3	silty clay and clayey silt	894.23	20.88	873.35			18.16	876.07	19.46	874.77
MW-24	874.8	-	864.8	silty clay to clayey silt	897.31	dry		dry		not measured		24.01	873.30
MW-25	875.1	-	865.1	silty clay to clayey silt	895.05	28.31	866.74	not measured				25.56	869.49
MW-26	893.5	-	883.5	clayey silt	904.99	13.57	891.42	not measured		10.04	894.95	11.75	893.24
DW-1B	843.8	-	833.8	bedrock	915.50	not measured		not measured		34.42	881.08	36.40	879.10
MW-101	895.6	-	885.6	silty fine sand	912.55	18.11	894.44	not measured		15.12	897.43	16.80	895.75
MW-102	892.4	-	883.4	silty fine sand and PWR	915.19	26.17	889.02	not measured		23.58	891.61	24.82	890.37
MW-104A	868.3		858.8	silty very fine sand	898.00	16.73	881.27	not measured		not measured		14.63	883.37
MW-104D	829.9	-	819.9	bedrock	901.59	21.80	879.79	20.77	880.82	not measured		16.77	884.82
MW-105	887.7		878.7	silty fine to medium sand	904.55	15.96	888.59	not measured		not measured		15.00	889.55
MW-106D	816.1	-	807.1	bedrock	878.60	32.90	845.70	33.08	845.52	not measured		25.78	852.82
MW-107D	817.5		808.0	bedrock	857.14	25.63	831.51	26.07	831.07	not measured		22.99	834.15
MW-108	875.8	-	866.8	silty fine sand	901.91	22.50	879.41	not measured		19.69	882.22	21.23	880.68
MW-109	872.1	-	863.1	silty fine sand with brick fragments (fill)	895.90	17.25	878.65	not measured		not measured		15.57	880.33
MW-110	831.9	-	822.9	bedrock	900.52	31.35	869.17	not measured		27.11	873.41	28.31	872.21
MW-111	864.3	-	855.3	silty sand and PWR	900.10	21.86	878.24	not measured		not measured		20.33	879.77
MW-112	890.7	-	881.7	silty very fine sand	904.90	18.13	886.77	not measured		14.31	890.59	16.35	888.55
MW-113	866.2	-	857.2	sandy clayey silt	900.06	30.85	869.21	not measured		not measured		29.21	870.85
MW-114	856.8	-	847.8	silty clayey fine sand to silty fine sand	892.96	26.91	866.05	not measured		not measured		25.14	867.82
MW-115	880.5	-	871.5	silty sand with concrete fragments (fill)	893.40	16.00	877.40	not measured		not measured		15.16	878.24
MW-116	881.8	-	872.8	fine sand	905.62	30.61	875.01	not measured		23.20	882.42	25.44	880.18
MW-117	878.1	-	868.1	very sandy silt to very silty fine sand	892.42	13.91	878.51	not measured		not measured		13.17	879.25
MW-119	853.3	-	838.3	PWR and bedrock	892.16	not installed							
MW-120	836.1	-	826.1	bedrock	892.44								
MW-121	854.9	-	844.9	bedrock	879.45								
TW-1	878.3	-	868.3	sandy silt	893.00								
TW-2	878.5	-	868.5	sandy silt	897.89								
TW-3	867.5	-	857.5	sandy silt	897.44								
TW-4	875.4	-	865.4	sandy silt	899.36								
TW-5	869.0	-	859.0	silty sand	891.90								
TW-6	878.1	-	868.1	silty sand to sandy silt	908.34								
TW-7	877.1	-	867.1	clay to silty fine sand	899.22								
TW-8	880.3	-	870.3	silty sand to sandy silt	900.36								
TW-9	876.3	-	866.3	silt to sandy silt	901.56								
TW-10	876.4	-	866.4	sandy silt	896.56								
TW-11	882.9	-	872.9	sandy silty with rock fragments	918.08								
TW-12	893.8	-	883.8	silty sand with quartz fragments	929.03								

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) May 30-31, 2012	Ground-Water Elevation (ft., NGVD) June 2012	Depth to Ground Water (ft., btoc) 12/7/2012	Ground-Water Elevation (ft., NGVD) 12/7/2012	Depth to Ground Water (ft., btoc) 5/20/2013 & 5/30/2013[2]	Ground-Water Elevation (ft., NGVD) 5/20/2013 & 5/30/2013[2]
MW-1B	893.5	-	884.5	fine sandy silt to silty fine sand	915.95	not measured		29.65	886.30	23.93	892.02
MW-21	885.9	-	875.9	clayey silt to silty clay	905.70	not measured		dry		dry	
MW-22	875.3	-	865.3	silty clay and clayey silt	894.23	not measured		22.52	871.71	18.35	875.88
MW-24	874.8	-	864.8	silty clay to clayey silt	897.31	not measured		damaged		damaged	
MW-25	875.1	-	865.1	silty clay to clayey silt	895.05	not measured		dry		27.87	867.18
MW-26	893.5	-	883.5	clayey silt	904.99	not measured		15.48	889.51	9.30	895.69
DW-1B	843.8	-	833.8	bedrock	915.50	not measured		not measured		39.85	875.65
MW-101	895.6	-	885.6	silty fine sand	912.55	not measured		20.21	892.34	14.68	897.87
MW-102	892.4	-	883.4	silty fine sand and PWR	915.19	not measured		26.46	888.73	22.59	892.60
MW-104A	868.3		858.8	silty very fine sand	898.00	not measured		17.35	880.65	12.82	885.18
MW-104D	829.9	-	819.9	bedrock	901.59	not measured		20.91	880.68	16.52	885.07
MW-105	887.7		878.7	silty fine to medium sand	904.55	not measured		17.11	887.44	12.15	892.40
MW-106D	816.1	-	807.1	bedrock	878.60	not measured		28.49	850.11	26.85	851.75
MW-107D	817.5		808.0	bedrock	857.14	not measured		24.23	832.91	20.49	836.65
MW-108	875.8	-	866.8	silty fine sand	901.91	not measured		25.24	876.67	18.91	883.00
MW-109	872.1	-	863.1	silty fine sand with brick fragments (fill)	895.90	not measured		20.41	875.49	13.63	882.27
MW-110	831.9	-	822.9	bedrock	900.52	not measured		31.63	868.89	26.74	873.78
MW-111	864.3	-	855.3	silty sand and PWR	900.10	not measured		24.53	875.57	18.74	881.36
MW-112	890.7	-	881.7	silty very fine sand	904.90	not measured		20.12	884.78	12.43	892.47
MW-113	866.2	-	857.2	sandy clayey silt	900.06	not measured		32.19	867.87	28.53	871.53
MW-114	856.8	-	847.8	silty clayey fine sand to silty fine sand	892.96	not measured		29.20	863.76	26.21	866.75
MW-115	880.5	-	871.5	silty sand with concrete fragments (fill)	893.40	not measured		18.46	874.94	13.22	880.18
MW-116	881.8	-	872.8	fine sand	905.62	not measured		32.83	872.79	29.25	876.37
MW-117	878.1	-	868.1	very sandy silt to very silty fine sand	892.42	not measured		15.54	876.88	12.40	880.02
MW-119	853.3	-	838.3	PWR and bedrock	892.16			42.28	849.88	42.19	849.97
MW-120	836.1	-	826.1	bedrock	892.44	not installed		45.47	846.97	45.19	847.25
MW-121	854.9	-	844.9	bedrock	879.45	not installed		17.66	861.79	16.35	863.10
TW-1	878.3	-	868.3	sandy silt	893.00	16.00	877.00	17.44	875.56	13.86	879.14
TW-2	878.5	-	868.5	sandy silt	897.89	22.44	875.45	24.90	872.99	20.48	877.41
TW-3	867.5	-	857.5	sandy silt	897.44	26.85	870.59	29.85	867.59	25.21	872.23
TW-4	875.4	-	865.4	sandy silt	899.36	27.70	871.66	30.65	868.71	27.14	872.22
TW-5	869.0	-	859.0	silty sand	891.90	22.57	869.33	25.28	866.62	21.61	870.29
TW-6	878.1	-	868.1	silty sand to sandy silt	908.34	25.71	882.63	29.19	879.15	23.11	885.23
TW-7	877.1	-	867.1	clay to silty fine sand	899.22	21.48	877.74	24.59	874.63	18.97	880.25
TW-8	880.3	-	870.3	silty sand to sandy silt	900.36	19.98	880.38	23.66	876.70	17.21	883.15
TW-9	876.3	-	866.3	silt to sandy silt	901.56	21.49	880.07	24.68	876.88	18.2	883.36
TW-10	876.4	-	866.4	sandy silt	896.56	18.35	878.21	21.42	875.14	15.36	881.20
TW-11	882.9	-	872.9	sandy silty with rock fragments	918.08	30.75	887.33	33.71	884.37	29.85	888.23
TW-12	893.8	-	883.8	silty sand with quartz fragments	929.03	34.80	894.23	37.52	891.51	33.51	895.52

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) 11/11-12/2013	Ground-Water Elevation (ft., NGVD) 11/11-12/2013	Depth to Ground Water (ft., btoc) 5/12/2014	Ground-Water Elevation (ft., NGVD) 5/12/2014	Depth to Ground Water (ft., btoc) 11/10/2014	Ground-Water Elevation (ft., NGVD) 11/10/2014
MW-1B	893.5	-	884.5	fine sandy silt to silty fine sand	915.95	24.97	890.98	22.40	893.55	26.37	889.58
MW-21	885.9	-	875.9	clayey silt to silty clay	905.70	dry		23.78	881.92	dry	
MW-22	875.3	-	865.3	silty clay and clayey silt	894.23	19.71	874.52	17.40	876.83	20.40	873.83
MW-24	874.8	-	864.8	silty clay to clayey silt	897.31	damaged		damaged		damaged	
MW-25	875.1	-	865.1	silty clay to clayey silt	895.05	29.20	865.85	could not locate-not measured		28.35	866.70
MW-26	893.5	-	883.5	clayey silt	904.99	10.76	894.23	8.13	896.86	12.42	892.57
DW-1B	843.8	-	833.8	bedrock	915.50	not measured-could not locate		could not locate-not measured		40.04	875.46
MW-101	895.6	-	885.6	silty fine sand	912.55	15.95	896.60	13.75	898.80	17.42	895.13
MW-102	892.4	-	883.4	silty fine sand and PWR	915.19	23.95	891.24	22.03	893.16	25.08	890.11
MW-104A	868.3		858.8	silty very fine sand	898.00	13.53	884.47	12.08	885.92	14.85	883.15
MW-104D	829.9	-	819.9	bedrock	901.59	17.21	884.38	15.79	885.80	18.76	882.83
MW-105	887.7		878.7	silty fine to medium sand	904.55	14.65	889.90	11.63	892.92	15.38	889.17
MW-106D	816.1	-	807.1	bedrock	878.60	26.97	851.63	26.07	852.53	27.42	851.18
MW-107D	817.5		808.0	bedrock	857.14	21.54	835.60	19.74	837.40	22.48	834.66
MW-108	875.8	-	866.8	silty fine sand	901.91	20.85	881.06	18.03	883.88	22.09	879.82
MW-109	872.1	-	863.1	silty fine sand with brick fragments (fill)	895.90	15.76	880.14	12.88	883.02	17.11	878.79
MW-110	831.9	-	822.9	bedrock	900.52	27.59	872.93	25.32	875.20	28.76	871.76
MW-111	864.3	-	855.3	silty sand and PWR	900.10	20.29	879.81	17.52	882.58	21.46	878.64
MW-112	890.7	-	881.7	silty very fine sand	904.90	15.23	889.67	10.98	893.92	17.16	887.74
MW-113	866.2	-	857.2	sandy clayey silt	900.06	29.64	870.42	27.24	872.82	30.30	869.76
MW-114	856.8	-	847.8	silty clayey fine sand to silty fine sand	892.96	26.74	866.22	24.45	868.51	27.06	865.90
MW-115	880.5	-	871.5	silty sand with concrete fragments (fill)	893.40	14.85	878.55	12.11	881.29	15.91	877.49
MW-116	881.8	-	872.8	fine sand	905.62	29.41	876.21	25.33	880.29	29.95	875.67
MW-117	878.1	-	868.1	very sandy silt to very silty fine sand	892.42	13.16	879.26	10.91	881.51	13.81	878.61
MW-119	853.3	-	838.3	PWR and bedrock	892.16	41.51	850.65	41.21	850.95	42.68	849.48
MW-120	836.1	-	826.1	bedrock	892.44	44.75	847.69	44.45	847.99	45.12	847.32
MW-121	854.9	-	844.9	bedrock	879.45	16.69	862.76	16.31	863.14	17.19	862.26
TW-1	878.3	-	868.3	sandy silt	893.00	15.05	877.95	13.05	879.95	15.69	877.31
TW-2	878.5	-	868.5	sandy silt	897.89	21.71	876.18	18.93	878.96	22.48	875.41
TW-3	867.5	-	857.5	sandy silt	897.44	25.89	871.55	22.52	874.92	26.51	870.93
TW-4	875.4	-	865.4	sandy silt	899.36	26.95	872.41	23.61	875.75	27.05	872.31
TW-5	869.0	-	859.0	silty sand	891.90	21.71	870.19	18.06	873.84	21.91	869.99
TW-6	878.1	-	868.1	silty sand to sandy silt	908.34	24.17	884.17	20.50	887.84	25.53	882.81
TW-7	877.1	-	867.1	clay to silty fine sand	899.22	20.01	879.21	16.63	882.59	21.15	878.07
TW-8	880.3	-	870.3	silty sand to sandy silt	900.36	18.85	881.51	15.68	884.68	20.03	880.33
TW-9	876.3	-	866.3	silt to sandy silt	901.56	20.15	881.41	16.94	884.62	21.39	880.17
TW-10	876.4	-	866.4	sandy silt	896.56	17.45	879.11	14.19	882.37	18.62	877.94
TW-11	882.9	-	872.9	sandy silty with rock fragments	918.08	29.58	888.50	26.93	891.15	30.41	887.67
TW-12	893.8	-	883.8	silty sand with quartz fragments	929.03	32.99	896.04	30.75	898.28	34.25	894.78

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) 8/20/2007	Ground-Water Elevation (ft., NGVD) 8/20/2007	Depth to Ground Water (ft., btoc) 9/20/2007	Ground-Water Elevation (ft., NGVD) 9/20/2007	Depth to Ground Water (ft., btoc) 7/29/2010	Ground-Water Elevation (ft., NGVD) 7/29/2010	Depth to Ground Water (ft., btoc) 9/14/2010	Ground-Water Elevation (ft., NGVD) 9/14/2010
OW-1	878.7	-	858.7	silt to partially weathered rock	901.13	not installed							
OW-2	878.5	-	858.5	silt with quartz veins to partially weathered rock	901.14								
OW-3	878.6	-	858.6	silt with quartz veins to partially weathered rock	901.47								
Surface Water Location	**Screened Interval (ft NGVD)**			**Lithology Screened**	**Top of Staff Gauge Elevation (ft., NGVD)**	**Depth to Surface Water (ft., btoc) 8/20/2007**	**Surface Water Elevation (ft., NGVD) 8/20/2007**	**Depth to SurfaceWater (ft., btoc) 9/20/2007**	**SurfaceWater Elevation (ft., NGVD) 9/20/2007**	**Depth to Surface Water (ft., btoc) 7/29/2010**	**Surface Water Elevation (ft., NGVD) 7/29/2010**	**Depth to Surface Water (ft., btoc) 9/14/2010**	**Surface Water Elevation (ft., NGVD) 9/14/2010**
Upstream Staff Gauge@ MW-106D/MW-121[(1)] [Staff Gauge #1]	NA			un-named stream on CSX	865.80	2.12	860.91	2.13	860.90	not measured		2.1	860.9
Downstream Staff Gauge at railroad culvert [(1)] [Staff Gauge #2]	NA				858.90	8.10	850.52	7.89	850.73	not measured		7.8	850.8
Downstream Staff Gauge at at well MW-119/MW-120[(1)] [Staff Gauge #3]	NA				841.55	not installed							
Downstream Staff Gauge at well MW-107D[(1)] [Staff Gauge #4]	NA				837.66	not installed							

Well Number	Ground Surface Elevation (ft, NGVD)*	Depth to Ground Water (ft, bgs)**	Ground-Water Elevation (ft., NGVD)
MW-1 (BFI)	889	29	860
MW-2 (BFI)	894	24	870
MW-3 (BFI)	899	27	872

Notes:
ft. = feet
NGVD = National Geodetic Vertical Datum
Monitoring wells MW-1, MW-1A, MW-2 through MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, MW-103A, MW-103D, MW-104, and MW-118 have been abandoned.
Monitoring wells MW-7, MW-103, MW-106 and MW-107 were not installed.
Monitoring wells MW-5, MW-10, MW-16 and MW-17 could not be located and assumed to have been destroyed.
* Ground surface elevations are from Fulton County, Georgia GIS website www.wms.co.fulton.ga.us/ms/master
** Depth to ground water is from Jordan, Jones & Goulding, Inc., 1993b, Phase II Investigation of the CSX Site Located on Marietta Boulevard, Atlanta, Georgia, June 1993.
(1) new staff gauges installed and surveyed on 5/24/2013
(2) Monitoring wells MW-106D, MW-107D, MW-119, MW-120, and MW-121 were remeasured on 5/30/2013 when new staff gauges were surveyed and measured.

2013 Groundwater levels in OW-1, OW-2, and OW-3 were measured on 4/15/2013 and 10/19/2013 as part of the quarterly EHC-M pilot test study (shown under 5/20/2013 and 11/11-12/2013, respectively)

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) May 30-31, 2012	Ground-Water Elevation (ft., NGVD) June 2012	Depth to Ground Water (ft., btoc) 12/7/2012	Ground-Water Elevation (ft., NGVD) 12/7/2012	Depth to Ground Water (ft., btoc) 5/20/2013 & 5/30/2013[2]	Ground-Water Elevation (ft., NGVD) 5/20/2013 & 5/30/2013[2]
OW-1	878.7	-	858.7	silt to partially weathered rock	901.13	not installed				19.97	881.16
OW-2	878.5	-	858.5	silt with quartz veins to partially weathered rock	901.14					20.47	880.67
OW-3	878.6	-	858.6	silt with quartz veins to partially weathered rock	901.47					20.83	880.64
Surface Water Location	**Screened Interval (ft NGVD)**			**Lithology Screened**	**Top of Staff Gauge Elevation (ft., NGVD)**	**Depth to Surface Water (ft., btoc) May 30-31, 2012**	**Surface Water Elevation (ft., NGVD) June 2012**	**Depth to Surface Water (ft., btoc) 12/7/2012**	**Surface Water Elevation (ft., NGVD) 12/7/2012**	**Depth to Surface Water (ft., btoc) 5/30/2013**	**Surface Water Elevation (ft., NGVD) 5/30/2013**
Upstream Staff Gauge@ MW-106D/MW-121[1] [Staff Gauge #1]	NA			un-named stream on CSX	865.80	not measured		3.02	860.01	3.11	862.69
Downstream Staff Gauge at railroad culvert [1] [Staff Gauge #2]	NA				858.90	not measured		7.96	850.66	8.05	850.85
Downstream Staff Gauge at at well MW-119/MW-120[1] [Staff Gauge #3]	NA				841.55	not installed				2.5	839.05
Downstream Staff Gauge at well MW-107D[1] [Staff Gauge #4]	NA				837.66	not installed				1.64	836.02

TABLE 2: SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Screened Interval (ft NGVD)			Lithology Screened	Top of Casing Elevation (ft., NGVD)	Depth to Ground Water (ft., btoc) 11/11-12/2013	Ground-Water Elevation (ft., NGVD) 11/11-12/2013	Depth to Ground Water (ft., btoc) 5/12/2014	Ground-Water Elevation (ft., NGVD) 5/12/2014	Depth to Ground Water (ft., btoc) 11/10/2014	Ground-Water Elevation (ft., NGVD) 11/10/2014
OW-1	878.7	-	858.7	silt to partially weathered rock	901.13	19.80	881.33	16.98	884.15	21.20	879.93
OW-2	878.5	-	858.5	silt with quartz veins to partially weathered rock	901.14	20.37	880.77	17.52	883.62	21.70	879.44
OW-3	878.6	-	858.6	silt with quartz veins to partially weathered rock	901.47	20.7	880.77	17.74	883.73	22.00	879.47
Surface Water Location	**Screened Interval (ft NGVD)**			**Lithology Screened**	**Top of Staff Gauge Elevation (ft., NGVD)**	**Depth to Surface Water (ft., btoc) 11/19/2013**	**Surface Water Elevation (ft., NGVD) 11/19/2013**	**Depth to Surface Water (ft., btoc) 5/20/2014**	**Surface Water Elevation (ft., NGVD) 5/20/2014**	**Depth to Surface Water (ft., btoc) 11/19/2014**	**Surface Water Elevation (ft., NGVD) 11/19/2014**
Upstream Staff Gauge@ MW-106D/MW-121[(1)] [Staff Gauge #1]	NA			un-named stream on CSX	865.80	3.86	861.94	3.06	862.74	3.14	862.66
Downstream Staff Gauge at railroad culvert [(1)] [Staff Gauge #2]	NA				858.90	7.90	851.00	8.03	850.87	8.02	850.88
Downstream Staff Gauge at at well MW-119/MW-120[(1)] [Staff Gauge #3]	NA				841.55	2.21	839.34	2.35	839.20	2.65	838.90
Downstream Staff Gauge at well MW-107D[(1)] [Staff Gauge #4]	NA				837.66	1.15	836.51	1.25	836.41	1.52	836.14

Prepared by: MHA 1/6/2015
Checked by: RNQ 1/20/2015

TABLE 3 SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-1**	**TW-2**	**TW-2**	**TW-2**	**TW-2**	**TW-2**
Sample Date	*Concentrations*	**11/12/2014**	**5/14/2014**	**11/13/2013**	**05/29/2013**	**05/30/2012**	**11/12/14**	**5/14/2014**	**11/14/2013**	**05/29/2013**	**05/30/2012**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.00495**	**0.00312**	**0.00247**	**0.0132**	<0.002	<0.002	<0.002	<0.002	**0.0137**	<0.002
Total Lead	0.015	**0.00102**	**0.00119**	<0.001	**0.0118**	<0.001	<0.001	<0.001	<0.001	**0.00445**	<0.001
Total Zinc	2	**0.319**	**0.300**	**0.361**	**0.373**	**0.178**	<0.010	<0.010	**0.0102**	**0.0273**	**0.0109**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.0027**	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**0.283**	**0.270**	**0.318**	**0.333**	**0.180**	<0.010	<0.01	<0.01	<0.01	<0.01
Total of Total Metals Concentrations		0.32497	0.30431	0.36347	0.398	0.1781	BDL	BDL	0.0102	0.04545	0.01091
Total of Dissolved Metals Concentrations		0.2857	0.27	0.318	0.333	0.1802	BDL	BDL	BDL	BDL	BDL
Inorganics mg/L											
Nitrate	10 (NR)	<0.25	<0.25	<0.25	**0.29**	<0.25	**3.5**	**4.1**	**5.6**	**4.6**	**4.3**
Sulfate	250 (NR)	**46**	**63**	**54**	**61**	**60**	**66**	**81**	**93**	**88**	**68**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	**0.00087**	**0.00054**	**0.00040**	**0.00059**	**0.00042**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	**0.0031**	**0.0019**	**0.0013**	**0.0047**	**0.00050**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	**0.0052**	**0.0043**	**0.0025**	**0.0037**	**0.00049**	<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.0002**	**0.0015**	**0.00041**	**0.00043**	**0.0037**	<0.00005	<0.00005	<0.00005	<0.00005	**0.000070**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0041**	**0.018**	**0.0081**	**0.0200**	**0.0087**	<0.00005	<0.00005	<0.00005	<0.00005	**0.00014**
delta-BHC	0.00005(DL)	**0.00023**	**0.0016**	**0.00056**	**0.0013**	**0.00047**	<0.00005	<0.00005	<0.00005	<0.00005	**0.000057**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	**0.0017**	<0.0001	<0.0001	<0.0001	<0.0001	**0.00044**	<0.0001	<0.0001
gamma-BHC	0.0002	**0.00016**	**0.00076**	**0.00025**	**0.00026**	**0.00030**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	**0.0056**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.01386	0.03420	0.01522	0.03098	0.01452	BDL	BDL	0.00054	BDL	0.00026
pH (std units)		5.81	5.73	5.92	5.6	6.19	5.51	5.71	5.56	5.43	6.03
Specific Conductance (mS/cm)		0.449	0.416	0.445	0.383	0.36	0.412	0.356	0.405	0.386	0.38
Turbidity (NTUs)		10.7	2	9.81	48.1	0.75	1.5	8.5	9.89	9.8	2.27
DO (mg/L)		0.95	1.84	1.09	10.15		0.93	1.43	1.89	5.86	
ORP (mV)		-33	114	77	170		-40	135	139	246	

TABLE 3 SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-3**	**TW-3**	**TW-3**	**TW-3**	**TW-3**	**TW-4**	**TW-4**	**TW-4**	**TW-4**	**TW-4**
Sample Date	*Concentrations*	**11/13/14**	**5/15/2014**	**11/14/2013**	**05/30/2013**	**05/31/2012**	**11/13/14**	**5/15/2014**	**11/15/2013**	**05/30/2013**	**05/31/2012**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.820**	**0.695**	**0.933**	**1.12**	**1.09**	**0.166**	**0.166**	**0.234**	**0.127**	**0.139**
Total Lead	0.015	**0.00301**	**0.00407**	**0.00499**	**0.00466**	**0.00266**	<0.001	<0.001	<0.001	**0.0116**	<0.001
Total Zinc	2	**2.120**	**1.95**	**2.55**	**2.92**	**2.14**	**0.884**	**0.968**	**1.27**	**0.847**	**0.902**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.842**	**0.672**	**0.845**	**1.05**	**1.01**	**0.151**	**0.161**	**0.216**	**0.113**	**0.128**
Dissolved Lead	0.015	**0.00308**	**0.00336**	**0.00334**	**0.00346**	**0.00175**	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**2.19**	**1.9**	**2.04**	**2.74**	**2.00**	**0.836**	**0.944**	**1.14**	**0.879**	**0.847**
Total of Total Metals Concentrations		2.94301	2.64907	3.48799	4.04466	3.231657	1.05	1.134	1.504	0.9856	1.0416
Total of Dissolved Metals Concentrations		3.03508	2.57536	2.88834	3.79346	3.005752	0.987	1.105	1.356	0.992	0.9745
Inorganics mg/L											
Nitrate	10 (NR)	**6.2**	**7.4**	**11**	**12**	**9.5**	**1.8**	**3.0**	**2.8**	**1.4**	<1.2
Sulfate	250 (NR)	**600**	**600**	**640**	**600**	**550**	**160**	**190**	**220**	**190**	**160**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.000870**	**0.00095**	**0.00055**	**0.00049**	**0.00063**	<0.00005	<0.00005	<0.00005	**0.000093**	**0.00012**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0011**	**0.0012**	**0.00072**	**0.00077**	**0.0010**	**0.00062**	**0.0077**	**0.0091**	**0.0094**	**0.014**
delta-BHC	0.00005(DL)	**0.000360**	**0.00040**	**0.00019**	**0.00017**	**0.00027**	**0.000083**	**0.00021**	**0.00026**	**0.00044**	**0.00092**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.00011**	**0.00017**	**0.00015**	**0.00026**	**0.00021**
gamma-BHC	0.0002	0.00035	**0.00042**	**0.00022**	**0.00021**	**0.00026**	<0.00005	<0.00005	<0.00005	<0.00005	**0.00013**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.00268	0.00297	0.00168	0.00164	0.00219	0.00081	0.00808	0.00951	0.01019	0.01545
pH (std units)		3.69	4.03	3.75	3.9	4.33	4.07	4.24	4.34	4.84	4.62
Specific Conductance (mS/cm)		1.44	1.27	1.49	1.51	1.43	0.45	0.481	0.564	0.48	0.45
Turbidity (NTUs)		7.7	1.8	9.56	35.5	8.82	0.0	0.7	8.9	56.6	1.73
DO (mg/L)		1.88	2.17	0.63	1.38		2.79	4.01	2.24	6.03	
ORP (mV)		428	227	441	486		300	219	399	360	

TABLE 3 SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-5**	**TW-5**	**TW-5**	**TW-5**	**TW-5**	**TW-6**	**TW-6**	**TW-6**	**TW-6**	**TW-6**
Sample Date	*Concentrations*	**11/13/14**	**05/21/2014**	**11/15/2013**	**05/29/2013**	**05/30/2012**	**11/14/14**	**5/21/2014**	**11/18/2013**	**05/29/2013**	**05/30/2012**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	**0.0125**	**0.0087**	<0.005	<0.005	<0.005	<0.005	**0.00821**	<0.005
Total Copper	1.3	**1.400**	**1.48**	**1.71**	**1.58**	**0.865**	**0.0656**	**0.380**	**0.111**	**0.917**	**0.195**
Total Lead	0.015	0.0025	**0.00198**	**0.0716**	**0.0257**	**0.0029**	<0.001	<0.001	**0.00158**	**0.00115**	<0.001
Total Zinc	2	**17.4**	**14.5**	**18.9**	**11.6**	**13.7**	**0.375**	**14.9**	**0.55**	**40.6**	**0.790**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.00799**	<0.005
Dissolved Copper	1.3	**1.290**	**1.66**	**1.080**	**1.57**	**0.751**	**0.079**	**0.401**	**0.0907**	**0.987**	**0.163**
Dissolved Lead	0.015	0.00169	**0.00228**	**0.00687**	**0.00276**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**19.6**	**15.8**	**15.1**	**11.0**	**8.6**	**0.456**	**15.6**	**0.460**	**40.90**	**0.788**
Total of Total Metals Concentrations		18.8025	15.98198	20.6941	13.2144	14.5678	0.4406	15.28	0.66258	41.52636	0.9853
Total of Dissolved Metals Concentrations		20.8917	17.46228	16.18687	12.57276	9.351	0.535	16.001	0.5507	41.89499	0.9504
Inorganics mg/L											
Nitrate	10 (NR)	**29**	**37**	**26**	**31**	**30**	**8.5**	**27**	**17**	**25**	**74**
Sulfate	250 (NR)	**810**	**480**	**600**	**500**	**430**	**230**	**460**	**260**	**960**	**440**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	**0.0001**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	**0.00021**	<0.0001	**0.00026**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.00012**	**0.00011**	**0.000053**	**0.00011**	**0.00021**	<0.00005	**0.00059**	<0.00005	**0.0029**	**0.00013**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.001**	**0.00066**	**0.00049**	**0.00051**	**0.00042**	**0.0013**	**0.00012**	**0.00098**	**0.0021**	**0.0011**
delta-BHC	0.00005(DL)	**0.000063**	**0.000083**	<0.00005	<0.00005	**0.00026**	<0.00005	**0.00019**	<0.00005	**0.00054**	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	**0.00013**	**0.00011**	**0.00007**	**0.000098**	**0.00023**	<0.00005	**0.00024**	<0.00005	**0.0012**	**0.000066**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.00172	0.00096	0.00087	0.00072	0.00112	0.00130	0.00114	0.00098	0.00674	0.00126
pH (std units)		3.92	4.13	4.12	4.36	5.35	4.09	4.6	4.22	4.83	4.51
Specific Conductance (mS/cm)		1.61	1.36	1.51	1.54	1.31	0.986	1.32	1.08	2.27	2.04
Turbidity (NTUs)		10.3	17.5	43	10.1	7.76	10.7	8.3	9.56	0	3.58
DO (mg/L)		2.02	3.84	0.69	1.73		2.53	3.63	3.06	1.87	
ORP (mV)		389	191	363	348		370	173	3.77	301	

TABLE 3 SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-7**	**TW-7**	**TW-7**	**TW-7**	**TW-7**	**TW-8**	**TW-8**	**TW-8**	**TW-8**	**TW-8**
Sample Date	*Concentrations*	**11/18/14**	**5/22/2014**	**11/19/2013**	**05/28/2013**	**06/01/2012**	**11/14/14**	**5/19/2014**	**1/8/2014**	**10/9/2013**	**7/16/2013**
Metals mg/L											
Total Arsenic	0.01	**0.0152**	**0.0126**	**0.0136**	**0.0139**	<0.05	**0.121**	**0.104**	**0.128**	**0.101**	**0.135**
Total Copper	1.3	**124**	**153**	**256**	**170**	**95.0**	**0.0106**	**0.00847**	**0.013**	**0.0110**	**0.0085**
Total Lead	0.015	**0.0286**	<0.001	**0.0941**	**0.0117**	**0.0391**	<0.001	<0.001	**0.00134**	**0.00211**	<0.001
Total Zinc	2	**204**	**322**	**515**	**310**	**226**	**3.590**	**2.54**	**2.60**	**1.52**	**1.72**
Dissolved Arsenic	0.01	**0.0147**	**0.011**	<0.005	**0.0127**	<0.100	**0.0146**	**0.0738**	**0.121**	**0.0831**	**0.0857**
Dissolved Copper	1.3	**99.2**	**125**	**191**	**175**	**88.4**	**0.0035**	<0.002	<0.002	<0.002	<0.002
Dissolved Lead	0.015	**0.0275**	**0.0353**	**0.0750**	**0.00829**	**0.0404**	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**228**	**258**	**370**	**323**	**237**	**2.980**	**2.07**	**1.47**	**1.12**	**1.08**
Total of Total Metals Concentrations		328.0438	475.0126	771.1077	480.0256	320.68909	3.722	2.652	2.742	1.634	1.863
Total of Dissolved Metals Concentrations		327.2422	383.0463	561.075	498.02099	325.7004	2.9981	2.1438	1.5910	1.2031	1.1657
Inorganics mg/L											
Nitrate	10 (NR)	**77**	**110**	**73**	**60**	**140**	<12	<0.25	<2.5	<12	<12
Sulfate	250 (NR)	**5000**	**3900**	**5700**	**5000**	**2900**	**630**	**600**	**980**	**890**	**990**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.019**	<0.0001	**0.007**	**0.0057**	**0.0051**
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	**0.0013**	**0.00049**	<0.001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.350**	<0.0001	**0.15**	**0.0500**	**0.0085**
alpha-BHC	0.00005(DL)	**0.00045**	**0.00031**	**0.00040**	**0.00021**	**0.00029**	**0.340**	**0.007**	**0.760**	**0.310**	**0.740**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.005	<0.00005	**0.00031**	**0.00015**	<0.0005
beta-BHC	0.00005(DL)	**0.0014**	**0.0013**	**0.00040**	**0.00039**	**0.0013**	**0.140**	**0.0022**	**0.22**	**0.092**	**0.11**
delta-BHC	0.00005(DL)	**0.00011**	**0.000058**	<0.000050	**0.000074**	**0.00017**	**0.160**	**0.008**	**2.40**	**2.40**	**2.20**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.01	<0.0001	**0.0074**	**0.0074**	**0.0062**
gamma-BHC	0.0002	**0.00032**	**0.00025**	**0.00018**	**0.00015**	**0.00029**	**0.230**	**0.0034**	**2.0**	**1.2**	**1.8**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.005	<0.00005	**0.0018**	**0.0011**	**0.0011**
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.005	<0.00005	<0.00005	<0.0005	<0.0005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.00228	0.00192	0.00098	0.00082	0.00201	1.23900	0.02060	5.54781	4.06684	4.871
pH (std units)		3.88	3.72	3.39	3.73	4.02	5.81	6.18	6.35	6.19	6.34
Specific Conductance (mS/cm)		5.73	5.2	8.14	5.62	6.15	1.97	1.76	2.503	2.893	2.689
Turbidity (NTUs)		8.38	0	9.80	16.8	3.48	67.0	0	4.05	14.5	1.2
DO (mg/L)		5.45	2.53	2.20	1.87		2.35	2.4	1.35	1.57	0.58
ORP (mV)		275	315	286	309		-41	20	-109.6	-87.5	-87.4

TABLE 3 SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-8**	**TW-8**	**TW-9**	**TW-9**	**TW-9**	**TW-9**	**TW-9**	**TW-10**	**TW-10**	**TW-10**
Sample Date	*Concentrations*	**4/15/2013**	**05/31/2012**	**11/17/2014**	**5/22/2014**	**11/18/2013**	**05/28/2013**	**05/31/2012**	**11/17/14**	**5/22/2014**	**11/18/2013**
Metals mg/L											
Total Arsenic	0.01	**0.164**	**0.101**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.0903**	**0.0668**	**0.110**	**0.0599**	**0.0701**	**0.0407**	**0.0168**	**16.90**	**17.10**	**9.66**
Total Lead	0.015	<0.001	<0.001	<0.001	<0.001	**0.00161**	<0.001	<0.001	<0.001	**0.0143**	**0.00161**
Total Zinc	2	**4.05**	**4.43**	**4.51**	**3.09**	**2.42**	**2.20**	**1.26**	**18.20**	**21.9**	**16.2**
Dissolved Arsenic	0.01	**0.0457**	**0.0174**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.0234**	**0.0278**	**0.0921**	**0.04850**	**0.00950**	**0.0343**	**0.0158**	**19.2**	**15.4**	**11.5**
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**3.04**	**4.16**	**4.54**	**3.01**	**2.26**	**1.92**	**1.18**	**21.2**	**18.9**	**14.4**
Total of Total Metals Concentrations		4.3043	4.59973	4.620	3.150	2.492	2.2407	1.27475	35.1	39.0143	25.86161
Total of Dissolved Metals Concentrations		3.1091	4.20515	4.6321	3.0585	2.2695	1.9543	1.19178	40.40	34.30000	25.90000
Inorganics mg/L											
Nitrate	10 (NR)	<2.5	<2.5	<0.25	<2.5	<1.2	<1.2	**0.49**	**1.8**	<2.5	<2.5
Sulfate	250 (NR)	**1100**	**750**	**340**	**250**	**170**	**170**	**170**	**600**	**900**	**530**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	**0.0019**	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	**0.0013**	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.410**	**0.64**	**0.0088**	**0.014**	**0.0015**	**0.0009**	**0.0074**	<0.00005	<0.00005	<0.00005
alpha-Chlordane	0.002	<0.0025	<0.005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.05**	**0.11**	**0.0044**	**0.0014**	**0.00056**	**0.00091**	**0.0054**	<0.00005	<0.00005	<0.00005
delta-BHC	0.00005(DL)	**1.30**	**1.6**	**0.0077**	**0.0066**	**0.00073**	**0.00048**	**0.0043**	<0.00005	<0.00005	<0.00005
Dieldrin	0.0001(DL)	**0.0027**	<0.01	<0.0001	<0.0001	**0.00041**	<0.00010	**0.00010**	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	**1.2**	**1.3**	**0.0011**	**0.00035**	**0.000094**	**0.000069**	**0.0011**	<0.00005	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.0025	<0.005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.0025	**0.041**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		2.966	3.6385	0.022000	0.0224	0.0033	0.00236	0.01826	BDL	BDL	BDL
pH (std units)		6.36	6.18	5.26	5.53	5.33	5.4	5.78	3.46	3.67	3.69
Specific Conductance (mS/cm)		2.749	1.91	0.918	0.637	0.565	0.878	0.61	1.27	1.12	1.06
Turbidity (NTUs)		4.8	2.01	2.21	1.66	0.0	7.83	0.47	9.89	3.42	0.00
DO (mg/L)		0.79		2.12	0.7	0.77	3.8		2.74	2.17	2.50
ORP (mV)		-41.2		231	199	157	230		430	445	412

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**TW-10**	**TW-10**	**TW-11**	**TW-11**	**TW-11**	**TW-11**	**TW-11**	**TW-12**	**TW-12**	**TW-12**
Sample Date	*Concentrations*	**05/24/2013**	**05/31/2012**	**11/11/14**	**5/13/2014**	**11/13/2013**	**05/23/2013**	**05/31/2012**	**11/11/14**	**5/13/2014**	**11/12/2013**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**11.4**	**6.98**	**0.130**	**0.147**	**0.146**	**0.145**	**0.132**	**0.0041**	**0.00258**	<0.002
Total Lead	0.015	**0.00182**	**0.00271**	**0.00104**	**0.00148**	**0.00195**	**0.00233**	**0.00252**	<0.001	<0.001	<0.001
Total Zinc	2	**13.6**	**9.24**	**0.514**	**0.591**	**0.513**	**0.566**	**0.738**	**0.204**	**0.134**	**0.182**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**10.5**	**6.43**	**0.135**	**0.134**	**0.144**	**0.126**	**0.121**	<0.002	<0.002	<0.002
Dissolved Lead	0.015	**0.00113**	**0.00228**	<0.001	**0.00144**	**0.00154**	**0.00209**	**0.00212**	<0.001	<0.001	<0.001
Dissolved Zinc	2	**12.5**	**8.66**	**0.501**	**0.514**	**0.47**	**0.495**	**0.688**	**0.191**	**0.178**	**0.195**
Total of Total Metals Concentrations		25.00182	16.221709	0.64504	0.73948	0.66095	0.71333	0.872222	0.2081	0.13658	0.182
Total of Dissolved Metals Concentrations		23.00113	15.09528	0.636	0.64944	0.61554	0.62309	0.811023	0.191	0.178	0.195
Inorganics mg/L											
Nitrate	10 (NR)	**3.6**	**2.9**	**2.8**	**4.4**	**3.7**	**3.5**	**3.7**	<1.2	**1.7**	**3.0**
Sulfate	250 (NR)	**620**	**490**	**150**	**170**	**180**	**160**	**170**	**60**	**69**	**75**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	<0.00005	**0.000091**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
delta-BHC	0.00005(DL)	<0.00005	**0.00023**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	**0.00012**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		BDL	0.00045	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
pH (std units)		3.87	4.1	4.10	4.24	4.27	4.37	4.78	4.5	4.83	5.19
Specific Conductance (mS/cm)		1.28	0.92	0.519	0.476	0.464	0.7	0.51	0.292	0.215	0.238
Turbidity (NTUs)		9.57	6.43	9.53	1.9	6.16	9.81	0.81	4.1	3.6	9.89
DO (mg/L)		6.23		3.83	3.35	3.6	3.48		6.48	6.43	4.41
ORP (mV)		454		-30	232	357	350		266	334	165

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	TW-12	TW-12	MW-1B	MW-1B	MW-1B	MW-1B	MW-1B	MW-1B	MW-22	MW-22
Sample Date	*Concentrations*	**05/23/2013**	**05/31/2012**	**11/11/14**	**5/13/2014**	**11/12/2013**	**05/21/2013**	**11/13/2012**	**7/29/2010 & 9/13/2010**	**11/12/2014**	**5/19/2014**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005
Total Copper	1.3	<0.002	**0.00291**	**0.00585**	**0.0209**	**0.0167**	**0.0124**	**0.0232**	<0.005	**2.30**	**2.23**
Total Lead	0.015	<0.001	<0.001	<0.0010	**0.00491**	**0.00408**	**0.00348**	**0.00113**	<0.0015	**0.00306**	**0.00518**
Total Zinc	2	**0.263**	**0.0715**	**0.019**	**0.0876**	**0.0403**	**0.0547**	**0.0679**	<0.02	**4.290**	**3.73**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	na	<0.005	<0.005
Dissolved Copper	1.3	<0.002	<0.002	**0.00305**	<0.002	**0.00266**	<0.002	**0.0258**	na	**2.16**	**2.02**
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	**0.00342**	**0.00294**
Dissolved Zinc	2	**0.231**	**0.0529**	**0.0174**	**0.0349**	<0.01	<0.01	**0.0767**	na	**3.74**	**4.33**
Total of Total Metals Concentrations		0.263	0.074373	0.02485	0.11341	0.06108	0.07058	0.09223	BDL	6.59306	5.96518
Total of Dissolved Metals Concentrations		0.231	0.05291	0.02045	0.0349	0.00266	BDL	0.1025		5.90342	6.35294
Inorganics mg/L											
Nitrate	10 (NR)	**3.2**	**2.7**	**6.2**	**3.5**	**7.0**	**3.0**	**3.6**	**4.5**	**1.7**	**1.6**
Sulfate	250 (NR)	**68**	**67**	**37**	**38**	**34**	**35**	**32**	**35**	**310**	**400**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	**0.00019**	**0.00027**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00048	<0.00005	<0.00005
beta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	**0.00054**	**0.00079**
delta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	**0.000091**	**0.00013**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	**0.00016**	**0.00023**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000095	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0048	<0.005	<0.005
Total Pesticides		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.00098	0.00142
pH (std units)		5.47	6.15	5.14	5.81	6.13	6.16	6.25	5.92/5.17	3.81	4.52
Specific Conductance (mS/cm)		0.493	0.36	0.474	0.401	0.418	0.57	0.983	0.36/0.35	0.760	0.806
Turbidity (NTUs)		8.7	15.2	0.0	2.3	0.99	8.03	6.35	6.4/2.76	2.2	10.7
DO (mg/L)		5.2		2.10	5.73	4.35	4.78	3.5		2.1	1.85
ORP (mV)		220		205	197	202	137	163		437	2.86

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	HSRA Type 1 RRS	MW-22	MW-22	MW-22	MW-22	MW-25	MW-25	MW-25	MW-25	MW-25	MW-25
Sample Date	*Concentrations*	**11/13/2013**	**5/22/2013**	**11/14/2012**	**7/28/2010 & 9/13/2010**	**11/18/2014**	**5/1/2014**	**11/18/2013**	**5/24/2013**	**2012**	**9/14/2010**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	**0.0038**	<0.005	Well could	Well was	**0.0327**	Well was	**0.0027**
Total Copper	1.3	**2.93**	**0.354**	**2.01**	**4.0**	**0.204**	not be located	dry and	**0.363**	dry and	**0.32**
Total Lead	0.015	**0.00446**	<0.001	**0.00553**	**0.004**	**0.025**	and was not	was not	**0.314**	was not	**0.02**
Total Zinc	2	**4.90**	**1.48**	**4.23**	**8.3**	**2.88**	sampled	sampled	**3.26**	sampled	**2.9**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	na	<0.005			<0.005		na
Dissolved Copper	1.3	**1.90**	**0.308**	**1.68**	na	**0.195**			**0.317**		na
Dissolved Lead	0.015	**0.00446**	<0.001	**0.0049**	na	**0.0181**			**0.0283**		na
Dissolved Zinc	2	**3.05**	**1.44**	**2.97**	na	**2.86**			**3.43**		na
Total of Total Metals Concentrations		7.83446	1.834	6.24553	12.3078	3.109			3.9697		3.2427
Total of Dissolved Metals Concentrations		4.95446	1.748	4.6549		3.0731			3.7753		
Inorganics mg/L											
Nitrate	10 (NR)	<2.5	**3.7**	<2.5	**1.5**	**0.33**			**1.9**		**4.7**
Sulfate	250 (NR)	**380**	**470**	**380**	**750**	**190**			**240**		**200**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001			<0.0001		<0.000095
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001			<0.0001		<0.000095
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001			<0.0001		<0.000095
alpha-BHC	0.00005(DL)	**0.00019**	**0.00018**	**0.00022**	**0.00079**	**0.00014**			**0.00026**		**0.00019**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00049	<0.00005			<0.00005		<0.00048
beta-BHC	0.00005(DL)	**0.00043**	**0.001**	**0.00052**	**0.00096**	**0.0074**			**0.0021**		**0.00095**
delta-BHC	0.00005(DL)	<0.00005	**0.00016**	**0.00013**	**0.00026**	**0.00010**			**0.000075**		**0.00013**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001			<0.0001		<0.000095
gamma-BHC	0.0002	**0.00016**	**0.00015**	**0.00021**	**0.00047**	<0.00005			**0.00008**		**0.00012**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	na	<0.00005			<0.00005		na
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005			<0.00005		<0.000048
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.000097	<0.0005			<0.0005		<0.000095
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.0049	<0.005			<0.005		<0.0048
Total Pesticides		0.00078	0.00149	0.00108	0.00248	0.00764			0.002515		0.00139
pH (std units)		4.12	5.77	3.98	3.97/4.01	4.49	DRY	DRY	4.46	DRY	4.07
Specific Conductance (mS/cm)		0.662	1.03	0.682	0.76/1.03	0.578			0.776		0.49
Turbidity (NTUs)		1.23	0.27	0.9	6.8/1.98	0.0			354		9.7
DO (mg/L)		0.71	1.25	1.09		4.51			7.99		
ORP (mV)		241	167	319		150			282		

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	HSRA Type 1 RRS	MW-26	MW-26	MW-26	MW-26	MW-26	MW-26	MW-101	MW-101	MW-101	MW-101
Sample Date	*Concentrations*	**11/12/2014**	**5/14/2014**	**11/13/2013**	**5/22/2013**	**11/14/2012**	**7/28/2010 & 9/13/2010**	**11/11/2014**	**5/13/2014**	**11/12/2013**	**5/21/2013**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.0126**	**0.0193**	**0.144**	**0.0146**	**0.0204**	**0.01**	**0.00850**	**0.0156**	**0.0112**	**0.00866**
Total Lead	0.015	**0.00139**	**0.00247**	**0.00122**	**0.00136**	**0.00799**	<0.0015	**0.00161**	**0.00679**	**0.00308**	**0.00251**
Total Zinc	2	**0.168**	**0.166**	**0.164**	**0.209**	**0.228**	**0.16**	**0.263**	**0.977**	**0.909**	**0.937**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	na	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.0109**	**0.0137**	**0.00811**	**0.00873**	**0.00814**	na	**0.00791**	**0.00427**	**0.00404**	**0.00585**
Dissolved Lead	0.015	<0.001	<0.001	**0.00100**	<0.001	<0.001	na	<0.001	<0.001	**0.00210**	<0.001
Dissolved Zinc	2	**0.179**	**0.149**	**0.16**	**0.175**	**0.219**	na	**0.275**	**0.788**	**0.977**	**0.928**
Total of Total Metals Concentrations		0.18199	0.18777	0.30922	0.22496	0.25639	0.17	0.27311	0.99939	0.92328	0.94817
Total of Dissolved Metals Concentrations		0.1899	0.1627	0.16911	0.18373	0.22714		0.28291	0.79227	0.98314	0.93385
Inorganics mg/L											
Nitrate	10 (NR)	**1.0**	**0.73**	<1.2	**3.0**	**6.4**	**4.8**	**5.5**	**9.7**	**10**	**9.9**
Sulfate	250 (NR)	**190**	**230**	**190**	**170**	**85**	**210**	**66**	**74**	**76**	**70**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.000071**	**0.00009**	**0.000056**	**0.000081**	<0.00005	**0.00011**	<0.00005	<0.00005	<0.00005	<0.00005
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00048	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.00051**	**0.00052**	**0.00039**	**0.00036**	**0.000096**	**0.00054**	<0.00005	<0.00005	<0.00005	<0.00005
delta-BHC	0.00005(DL)	<.000050	**0.00009**	**0.000074**	**0.000067**	<0.00005	**0.00014**	<0.00005	<0.00005	<0.00005	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	**0.00007**	<0.00005	<0.00005	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000095	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0048	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.0006	0.0007	0.000520	0.000508	0.000096	0.00086	BDL	BDL	BDL	BDL
pH (std units)		3.95	4.84	5.03	5.02	5.54	4.47/4.99	3.84	4.43	4.65	4.71
Specific Conductance (mS/cm)		0.573	0.517	0.460	0.657	0.339	0.51/0.42	0.254	0.295	0.275	0.402
Turbidity (NTUs)		3.9	9.51	2.46	60.3	101	7.1/5.14	1.1	0.7	7.2	10.2
DO (mg/L)		0.25	1.77	0.49	1.35	1.02		0.96	2.39	0.97	2.08
ORP (mV)		306	295	230	231	205		330	223	3	272

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-101**	**MW-101**	**MW-102**	**MW-102**	**MW-102**	**MW-102**	**MW-102**	**MW-102**	**MW-104A**	**MW-104A**
Sample Date	*Concentrations*	**11/12/2012**	**7/28/2010 & 9/13/2010**	**11/11/2014**	**5/13/2014**	**11/12/2013**	**5/21/2013**	**11/13/2012**	**7/29/2010 & 9/14/2010**	**11/12/2014**	**5/14/2014**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005
Total Copper	1.3	**0.0331**	**0.022**	**0.00626**	**0.0152**	**0.0115**	**0.00836**	**0.00934**	<0.005	<0.002	**0.0244**
Total Lead	0.015	**0.00252**	**0.0035**	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0025**	<0.001	**0.00548**
Total Zinc	2	**0.158**	**0.66**	**0.0276**	**0.377**	**0.0342**	**0.0407**	**0.0245**	<0.02	<0.010	**0.0503**
Dissolved Arsenic	0.01	<0.005	na	<0.005	<0.005	<0.005	<0.005	<0.005	na	<0.005	<0.005
Dissolved Copper	1.3	**0.0328**	na	**0.00433**	**0.00565**	<0.002	<0.002	**0.0089**	na	<0.002	<0.002
Dissolved Lead	0.015	**0.00201**	na	<0.001	<0.001	<0.001	<0.001	<0.001	na	<0.001	<0.001
Dissolved Zinc	2	**0.151**	na	**0.0277**	**0.293**	**0.0257**	**0.0227**	**0.0247**	na	<0.01	<0.01
Total of Total Metals Concentrations		0.19362	0.6855	0.03386	0.3922	0.0457	0.04906	0.03384	0.0025	BDL	0.08018
Total of Dissolved Metals Concentrations		0.18581		0.03203	0.29865	0.0257	0.0227	0.0336		BDL	BDL
Inorganics mg/L											
Nitrate	10 (NR)	**1.5**	**11**	<2.5	**2.5**	**3.0**	**4.0**	**2.3**	**5.1**	<0.25	<0.25
Sulfate	250 (NR)	**46**	**84**	**190**	**270**	**280**	**58**	**45**	**160**	**84**	**89**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.000097	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.000097	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.000097	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	<0.00005	<0.000049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005	<0.00005
alpha-Chlordane	0.002	<0.00005	<0.00049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00049	<0.00005	<0.00005
beta-BHC	0.00005(DL)	<0.00005	<0.000049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005	<0.00005
delta-BHC	0.00005(DL)	<0.00005	<0.000049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.000097	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000097	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.000049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.000049	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000049	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.000097	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000097	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.0049	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0049	<0.005	<0.005
Total Pesticides		BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
pH (std units)		4.62	4.32/4.5	5.01	4.82	4.38	5.37	5.62	4.84/5.54	5.79	6.45
Specific Conductance (mS/cm)		0.161	0.22/0.26	0.366	0.713	0.923	0.251	0.227	0.41/0.37	0.870	0.874
Turbidity (NTUs)		7.73	2.44/0.89	0.3	499	215	6.9	0	1.11/0.03	3.6	15.7
DO (mg/L)		0.49		0.0	3.46	3.43	4.39	3.07		0.18	0.32
ORP (mV)		289		222	312	205	228	202		-95	-92

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-104A**	**MW-104A**	**MW-104A**	**MW-104A**	**MW-104D**	**MW-104D**	**MW-104D**	**MW-104D**	**MW-104D**	**MW-104D**
Sample Date	*Concentrations*	**11/14/2013**	**5/28/2013**	**11/14/2012**	**9/15/2010**	**11/13/2014**	**5/15/2014**	**11/15/2013**	**5/28/2013**	**11/14/2012**	**9/15/2010**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0042**
Total Copper	1.3	**0.00411**	**0.00427**	<0.002	<0.005	**0.00367**	**0.00560**	<0.002	**0.0107**	**0.00816**	<0.005
Total Lead	0.015	**0.00158**	<0.001	<0.001	<0.0015	<0.001	<0.001	<0.001	<0.001	**0.00114**	<0.0015
Total Zinc	2	**0.0126**	**0.0112**	<0.01	<0.02	<0.010	**0.0152**	**0.0327**	**0.0181**	**0.0164**	<0.02
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	na	<0.005	<0.005	<0.005	<0.005	<0.005	na
Dissolved Copper	1.3	<0.002	<0.002	<0.002	na	<0.002	<0.002	<0.002	<0.002	<0.002	na
Dissolved Lead	0.015	<0.001	<0.001	<0.001	na	<0.001	<0.001	<0.001	<0.001	<0.001	na
Dissolved Zinc	2	<0.01	<0.01	<0.01	na	<0.01	<0.01	<0.01	<0.01	<0.01	na
Total of Total Metals Concentrations		0.01829	0.01547	BDL	BDL	0.00367	0.0208	0.0327	0.0288	0.0257	BDL
Total of Dissolved Metals Concentrations		BDL	BDL	BDL		BDL	BDL	BDL	BDL	BDL	
Inorganics mg/L											
Nitrate	10 (NR)	<0.25	<0.25	<0.25	<0.25	<2.5	<1.2	<0.25	<1.2	<2.5	<0.25
Sulfate	250 (NR)	**93**	**87**	**73**	**93**	<10	<5.0	<1	<5	<10	<5
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
alpha-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00047
beta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047
delta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
gamma-BHC	0.0002	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	**0.000069**	<0.00005	<0.00005	<0.000047
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.000094	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000094
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.0047	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0047
Total Pesticides		BDL	BDL	BDL	BDL	BDL	BDL	0.000069	BDL	BDL	BDL
pH (std units)		6.41	6.41	6.48	6.24	6.06	6.41	6.25	6.38	6.44	6.51
Specific Conductance (mS/cm)		0.797	0.859	0.876	0.74	3.19	2.77	3.1	2.61	2.93	3.13
Turbidity (NTUs)		9.13	0	0	1.49	20.2	429	8.2	21.2	27.7	18
DO (mg/L)		0.35	1.03	2		0.0	0.24	0.41	1.59	2.27	
ORP (mV)		-128	-111	-98		-67	-54	-69	-71	-67	

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	MW-105	MW-105	MW-105	MW-105	MW-105	MW-105	MW-105	MW-106D	MW-106D	MW-106D
Sample Date	*Concentrations*	**11/14/2014**	**5/13/2014**	**11/14/2013**	**5/21/2013**	**12/5/2012**	**11/15/2012**	**9/15/2010**	**11/13/2014**	**5/19/2014**	**11/15/2013**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	**0.00552**	<0.005	na	<0.005	<0.0025	<0.005	<0.005	<0.005
Total Copper	1.3	**0.00404**	**0.0134**	**0.0112**	**0.00564**	na	**0.0114**	**0.0057**	**0.00298**	**0.00456**	**0.00897**
Total Lead	0.015	**0.00154**	**0.00131**	**0.00487**	<0.001	na	<0.001	<0.0015	<0.001	<0.001	**0.00146**
Total Zinc	2	**0.0109**	**0.0443**	**0.0217**	**0.0265**	na	**0.0475**	**0.024**	**0.182**	**0.167**	**0.239**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	na	<0.005	na	<0.005	<0.005	<0.005
Dissolved Copper	1.3	<0.002	**0.00676**	<0.002	<0.002	na	**0.00851**	na	<0.002	**0.00347**	**0.00492**
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	na	<0.001	na	<0.001	<0.001	<0.001
Dissolved Zinc	2	<0.01	**0.0381**	<0.01	**0.0216**	na	**0.0108**	na	**0.172**	**0.178**	**0.168**
Total of Total Metals Concentrations		0.01648	0.05901	0.04329	0.03214		0.0589	0.0297	0.18498	0.17156	0.24943
Total of Dissolved Metals Concentrations		BDL	0.04486	BDL	0.0216		0.01931		0.172	0.18147	0.17292
Inorganics mg/L											
Nitrate	10 (NR)	<0.25	<0.25	<0.25	**0.28**	na	<0.25	<0.25	**0.47**	**0.37**	<2.5
Sulfate	250 (NR)	**97**	**220**	**160**	**230**	na	**71**	**97**	**440**	**340**	**390**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	**0.00014**	<0.000047	**0.0063**	**0.0066**	**0.0059**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00047	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047	**0.0024**	**0.0022**	**0.0022**
delta-BHC	0.00005(DL)	**0.000075**	<0.00005	<0.00005	<0.00005	<0.00005	**0.0002**	<0.000047	<0.000050	**0.008**	**0.0079**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047	**0.0035**	**0.0033**	**0.0031**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000094	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0047	<0.005	<0.005	<0.005
Total Pesticides		0.000075	BDL	BDL	BDL	BDL	0.00034	BDL	0.0122	0.0201	0.0191
pH (std units)		5.13	5.22	5.31	5.69	6	6.13	5.57	5.84	6.1	6.05
Specific Conductance (mS/cm)		0.514	0.570	0.442	0.619	0.514	0.477	0.36	1.29	1.04	1.15
Turbidity (NTUs)		188	23.6	13.2	9.61	15.1	9.91	9.7	0.0	0	0
DO (mg/L)		1.1	2.36	1.48	0.95	2.98	4.37		7.88	1.43	3.54
ORP (mV)		131	129	127	107	63.3	75		-73	206	111

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	MW-106D	MW-106D	MW-106D	MW-107D	MW-107D	MW-107D	MW-107D	MW-107D	MW-107D	MW-107D
Sample Date	*Concentrations*	**5/29/2013**	**11/15/2012**	**9/15/2010**	**11/13/2014**	**5/21/2014**	**11/18/2013**	**5/22/2013**	**12/5/2012**	**11/19/2012**	**9/15/2010**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	na	<0.005	<0.0025
Total Copper	1.3	**0.00481**	**0.00471**	<0.005	**0.00407**	**0.00754**	**0.0101**	**0.00257**	na	**0.00614**	<0.005
Total Lead	0.015	**0.00124**	<0.001	<0.0015	<0.001	<0.001	**0.00203**	<0.001	na	<0.001	<0.0015
Total Zinc	2	**0.183**	**0.16**	**0.11**	**0.0235**	**0.0231**	**0.0176**	**0.0155**	na	**0.0151**	<0.02
Dissolved Arsenic	0.01	<0.005	<0.005	na	<0.005	<0.005	<0.005	<0.005	na	<0.005	na
Dissolved Copper	1.3	**0.00427**	**0.00233**	na	<0.002	**0.00458**	**0.012**	**0.00295**	na	**0.00574**	na
Dissolved Lead	0.015	<0.001	<0.001	na	<0.001	<0.001	**0.00213**	<0.001	na	<0.001	na
Dissolved Zinc	2	**0.162**	**0.149**	na	**0.0197**	**0.0141**	**0.0179**	<0.01	na	**0.0151**	na
Total of Total Metals Concentrations		0.18905	0.16471	0.11	0.02757	0.03064	0.02973	0.01807		0.02124	BDL
Total of Dissolved Metals Concentrations		0.16627	0.15133		0.0197	0.01868	0.03203	0.00295		0.02084	
Inorganics mg/L											
Nitrate	10 (NR)	<1.2	**1.4**	**1.4**	**4.2**	**5.2**	**4.5**	**6.0**	na	**5.0**	**4.7**
Sulfate	250 (NR)	**400**	**380**	**430**	**200**	**180**	**210**	**230**	na	**200**	**190**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
alpha-BHC	0.00005(DL)	**0.0076**	**0.0068**	**0.0082**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00048
beta-BHC	0.00005(DL)	**0.0021**	**0.0019**	**0.0019**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048
delta-BHC	0.00005(DL)	**0.0075**	**0.0082**	**0.01**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	**0.000056**	<0.000048
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
gamma-BHC	0.0002	**0.0042**	**0.0043**	**0.0051**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048
gamma-Chlordane	0.002	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na
Heptachlor	0.0004	<0.00005	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048
Methoxychlor	0.04	<0.0005	<0.0005	<0.000094	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000095
Toxaphene	0.003	<0.005	<0.005	<0.0047	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0048
Total Pesticides		0.0214	0.0212	0.0252	BDL	BDL	BDL	BDL	BDL	0.000056	BDL
pH (std units)		6.09	6.2	6.28	5.21	5.6	5.60	5.68	5.53	5.76	5.52
Specific Conductance (mS/cm)		1.25	1.27	1.25	0.641	0.678	0.678	0.699	0.646	0.643	0.58
Turbidity (NTUs)		0	0.9	0	0.2	4	0	0	0	0.02	0
DO (mg/L)		2.25	0.49		2.28	2.35	1.67	1.65	0.95	0.06	
ORP (mV)		129	-53		216	208	223	200	213.8	202	

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	HSRA Type 1 RRS	MW-108	MW-108	MW-108	MW-108	MW-108	MW-108	MW-109	MW-109	MW-109	MW-109
Sample Date	*Concentrations*	**11/12/2014**	**5/15/2014**	**11/13/2013**	**5/23/2013**	**11/13/2012**	**7/29/2010 &9/14/2010**	**11/18/2014**	**5/15/2014**	**11/15/2013**	**5/23/2013**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	**0.0342**	**0.292**	**0.0533**	**0.253**
Total Copper	1.3	**0.174**	**0.155**	**0.241**	**0.225**	**0.242**	**0.3**	**0.178**	**0.0817**	**0.0737**	**0.00569**
Total Lead	0.015	<0.001	<0.001	**0.00253**	<0.001	<0.001	<0.0015	**0.932**	**3.83**	**0.738**	**0.358**
Total Zinc	2	**2.470**	**2.24**	**2.86**	**2.75**	**2.81**	**3.6**	**25.3**	**21.2**	**35.5**	**14.3**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	na	**0.0258**	**0.208**	**0.0382**	**0.22**
Dissolved Copper	1.3	**0.138**	**0.158**	**0.208**	**0.2**	**0.239**	na	**0.241**	**0.0103**	**0.0693**	**0.00505**
Dissolved Lead	0.015	<0.001	<0.001	**0.00222**	<0.001	<0.001	na	**0.480**	**0.224**	**0.285**	**0.0175**
Dissolved Zinc	2	**2.3**	**2.33**	**2.33**	**2.44**	**2.58**	na	**25.1**	**22.2**	**25.6**	**12.4**
Total of Total Metals Concentrations		2.644	2.395	3.10353	2.975	3.052	3.9	26.4442	25.4037	36.365	14.91669
Total of Dissolved Metals Concentrations		2.438	2.488	2.54022	2.64	2.819		25.8468	22.6423	25.9925	12.64255
Inorganics mg/L											
Nitrate	10 (NR)	**<0.25**	**0.35**	<1.2	<1.2	**0.66**	**0.42**	<12	<1.2	**9.6**	<12
Sulfate	250 (NR)	**200**	**260**	**93**	**220**	**210**	**320**	**1200**	**1500**	**1500**	**1300**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.0029**	**0.0048**	**0.0021**	**0.0028**	**0.0009**	**0.0058**	**0.033**	**0.033**	**0.024**	**0.03**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00048	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0011**	**0.0018**	**0.00081**	**0.00077**	**0.00051**	**0.0024**	**0.0046**	**0.0033**	**0.0038**	**0.0035**
delta-BHC	0.00005(DL)	**0.0072**	**0.0059**	**0.0006**	**0.00044**	**0.00033**	**0.0018**	**0.0058**	**0.0039**	**0.004**	**0.0037**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	**0.00035**	<0.0001	<0.0001	**0.000098 P**	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	**0.00018**	**0.00025**	**0.00017**	**0.00022**	**0.000085**	**0.0002 P**	**0.022**	**0.019**	**0.015**	**0.017**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000095	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0048	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.01138	0.01275	0.00403	0.00423	0.001825	0.0103	0.0654	0.0592	0.0468	0.0542
pH (std units)		5.15	5.27	4.55	4.71	4.74	4.3/5.14	4.31	4.19	4.8	4.65
Specific Conductance (mS/cm)		0.334	0.684	0.566	0.566	0.533	0.72/0.68	2.86	2.86	2.94	2.72
Turbidity (NTUs)		8.7	10.1	4.64	0	9	2.15/0.8	0	4.8	0	3.95
DO (mg/L)		0	1.92	0.46	0.84	0.98		2.08	0.88	0.72	0.7
ORP (mV)		333	257	238	299	251		229	179	190	73

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-109**	**MW-109**	**MW-110**	**MW-110**	**MW-110**	**MW-110**	**MW-110**	**MW-110**	**MW-110**	**MW-110**
Sample Date	*Concentrations*	**11/16/2012**	**9/14/2010**	**11/12/2014**	**5/15/2014**	**1/8/2014**	**10/9/2013**	**7/16/2013**	**4/16/2013**	**11/14/2012**	**7/29/2010 & 9/14/2010**
Metals mg/L											
Total Arsenic	0.01	**0.211**	**0.061**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025
Total Copper	1.3	**0.0735**	**0.079**	**0.352**	**0.323**	**0.395**	**0.376**	**0.396**	**0.4**	**0.372**	**0.39**
Total Lead	0.015	**1.53**	**0.61**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0015**
Total Zinc	2	**18.7**	**25**	**5.1**	**5.29**	**6.29**	**5.05**	**5.69**	**6.92**	**5.9**	**5.7**
Dissolved Arsenic	0.01	**0.16**	na	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	na
Dissolved Copper	1.3	**0.0218**	na	**0.291**	**0.31**	**0.405**	**0.323**	**0.381**	**0.38**	**0.375**	na
Dissolved Lead	0.015	**0.436**	na	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na
Dissolved Zinc	2	**17.6**	na	**4.89**	**4.54**	**5.28**	**4.47**	**5.19**	**6.25**	**4.81**	na
Total of Total Metals Concentrations		20.5145	25.75	5.452	5.613	6.685	5.426	6.086	7.32	6.272	6.0915
Total of Dissolved Metals Concentrations		18.2178		5.181	4.85	5.685	4.793	5.571	6.63	5.185	
Inorganics mg/L											
Nitrate	10 (NR)	<0.25	**0.38**	**3.5**	**4**	**4.1**	**2.9**	**4.0**	**4.4**	**4.8**	**9.8**
Sulfate	250 (NR)	**1100**	**1300**	**250**	**300**	**330**	**270**	**310**	**340**	**300**	**310**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
4,4´-DDE	0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
4,4´-DDT	0.0001	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
alpha-BHC	0.00005(DL)	**0.03**	**0.0028**	**0.0005**	**0.00043**	**0.00088**	**0.00045**	**0.0006**	**0.0012**	**0.00069**	**0.00047**
alpha-Chlordane	0.002	<0.00005	<0.00048	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00048
beta-BHC	0.00005(DL)	**0.0037**	<0.00048	**0.00033**	**0.00031**	**0.00035**	**0.00027**	**0.0004**	**0.00036**	**0.00044**	**0.00043**
delta-BHC	0.00005(DL)	**0.0049**	<0.00048	**0.0014**	**0.0011**	**0.0017**	**0.00089**	**0.0014**	**0.0022**	**0.0013**	**0.00088**
Dieldrin	0.0001(DL)	<0.0001	<0.000095	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000095
gamma-BHC	0.0002	**0.024**	**0.0019**	**0.0006**	**0.00057**	**0.0012**	**0.00054**	**0.0008**	**0.0013**	**0.00067**	**0.00055**
gamma-Chlordane	0.002	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na
Heptachlor	0.0004	<0.00005	<0.000048	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000048
Methoxychlor	0.04	<0.0005	<0.000095	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000095
Toxaphene	0.003	<0.005	<0.0048	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0048
Total Pesticides		0.0626	0.0047	0.0028	0.0024	0.0041	0.0022	0.0032	0.00506	0.0031	0.00233
pH (std units)		4.74	4.56	5.27	5.19	5.16	4.85	5.13	5.19	5.30	5.03/5.04
Specific Conductance (mS/cm)		2.81	2.71	0.498	0.844	0.697	0.731	0.765	0.84	1.02	0/0.94
Turbidity (NTUs)		0	0.1	4.1	0	0.92	0.22	10.7	1.2	0	0.22/0.6
DO (mg/L)		0.58		0	1.07	0.58	0.58	0.44	0.51	0.41	
ORP (mV)		130		310	149	177.7	208	219.4	235.3	143	

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	MW-111	MW-111	MW-111	MW-111	MW-111	MW-111	MW-111	MW-111	MW-112	MW-112
Sample Date	*Concentrations*	**11/18/2014**	**5/19/2014**	**1/8/2014**	**10/9/2013**	**7/16/2013**	**4/17/2013**	**11/16/2012**	**7/29/2010 & 9/14/2010**	**11/11/2014**	**5/14/2014**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	**0.0117**	**0.00684**
Total Copper	1.3	**0.0351**	**0.0357**	**0.0242**	**0.0197**	**0.0231**	**0.0276**	**0.0255**	**0.039**	**0.0462**	**0.0536**
Total Lead	0.015	<0.001	**0.0011**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0015	<0.001	**0.00109**
Total Zinc	2	**4.96**	**7.17**	**7.3**	**4.75**	**5.42**	**6.44**	**5.1**	**4.4**	**1.10**	**1.62**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	na	**0.0121**	**0.00651**
Dissolved Copper	1.3	**0.0336**	**0.0299**	**0.0237**	**0.0153**	**0.0218**	**0.0271**	**0.0206**	na	**0.0415**	**0.0521**
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	na	<0.001	<0.001
Dissolved Zinc	2	**4.55**	**5.47**	**5.40**	**4.31**	**4.96**	**6.0**	**4.83**	na	**1.130**	**1.65**
Total of Total Metals Concentrations		4.9951	7.2068	7.3242	4.7697	5.4431	6.4676	5.1255	4.439	1.1579	1.6815
Total of Dissolved Metals Concentrations		4.5836	5.4999	5.4237	4.3253	4.9818	6.0271	4.8506		1.1836	1.70861
Inorganics mg/L											
Nitrate	10 (NR)	<5.0	**0.3**	<1.2	<2.5	<1.2	<1.2	**0.4**	<0.25	<2.5	**0.43**
Sulfate	250 (NR)	**450**	**500**	**510**	**440**	**440**	**480**	**440**	**240**	**170**	**620**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.030**	**0.039**	**0.014**	**0.015**	**0.02**	**0.012**	**0.012**	**0.014**	**0.00091**	**0.0021**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0069**	**0.0058**	**0.0069**	**0.0048**	**0.0051**	**0.0045**	**0.0051**	<0.01	**0.0021**	**0.022**
delta-BHC	0.00005(DL)	**0.11**	**0.1**	**0.052**	**0.065**	**0.049**	**0.021**	**0.021**	**0.03**	**0.00021**	**0.0026**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.0001	<0.0001	**0.00014**	<0.00010	**0.00026**
gamma-BHC	0.0002	**0.06**	**0.078**	**0.029**	**0.028**	**0.035**	**0.014**	**0.0082**	<0.01	**0.00013**	**0.0007**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	na	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005	<0.005	<0.005	<0.100	<0.100
Total Pesticides		0.2069	0.2228	0.10190	0.11280	0.10910	0.0515	0.0463	0.04414	0.00335	0.02766
pH (std units)		5.34	5.76	5.74	5.55	5.74	5.81	5.88	5.79	5.87	5.53
Specific Conductance (mS/cm)		1.43	1.39	1.052	1.079	1.113	1.207	1.32	1.22	0.354	1.23
Turbidity (NTUs)		0.7	0	0.12	0.26	3.7	1.2	0	0.81	3.0	3
DO (mg/L)		0.0	1.21	0.73	0.94	0.65	0.6	0.46		0.0	2.07
ORP (mV)		104	107	129.1	167.9	180.1	151.6	69		189	177

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	HSRA Type 1 RRS	MW-112	MW-112	MW-112	MW-112	MW-113	MW-113	MW-113	MW-113	MW-113	MW-113
Sample Date	*Concentrations*	**11/13/2013**	**5/22/2013**	**11/13/2012**	**7/28/2010 & 9/13/2010**	**11/17/2014**	**5/15/2014**	**11/15/2013**	**5/24/2013**	**11/15/2012**	**9/15/2010**
Metals mg/L											
Total Arsenic	0.01	**0.013**	**0.0115**	**0.0144**	**0.015**	**0.039**	<0.005	**0.0135**	**0.0235**	<0.005	**0.023**
Total Copper	1.3	**0.0775**	**0.0794**	**0.0546**	**0.054**	**19.5**	**26.7**	**19.4**	**20.3**	**12.9**	**15**
Total Lead	0.015	**0.00132**	**0.0026**	**0.0011**	<0.0015	**0.00931**	**0.0111**	**0.0166**	**0.0052**	**0.00812**	**0.0019**
Total Zinc	2	**1.61**	**2.45**	**0.563**	**1**	**124**	**134**	**99.9**	**114**	**69.5**	**95**
Dissolved Arsenic	0.01	**0.0106**	**0.00747**	**0.0134**	na	**0.05**	<0.005	<0.005	**0.0234**	<0.025	na
Dissolved Copper	1.3	**0.0655**	**0.0499**	**0.0441**	na	**25.2**	**26.4**	**12.9**	**21.8**	**11.9**	na
Dissolved Lead	0.015	<0.001	<0.001	<0.001	na	**0.0116**	**0.0104**	**0.0104**	**0.00387**	**0.00785**	na
Dissolved Zinc	2	**1.26**	**2.35**	**0.559**	na	**146**	**132**	**92.3**	**124**	**71.4**	na
Total of Total Metals Concentrations		1.7018	2.5435	0.6331	1.069	143.54831	160.7111	119.3301	134.3287	82.40812	110.0249
Total of Dissolved Metals Concentrations		1.3361	2.40737	0.6165		171.2616	158.4104	105.2104	145.82727	83.30785	
Inorganics mg/L											
Nitrate	10 (NR)	<2.5	**1.8**	**1.5**	**0.89**	**1.2**	<1.2	<2.5	<25	**1.8**	**1.6**
Sulfate	250 (NR)	**480**	**580**	**100**	**220**	**2000**	**2600**	**2500**	**2100**	**1700**	**2100**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
alpha-BHC	0.00005(DL)	**0.00034**	**0.013**	**0.000076**	<0.0025	**0.00032**	**0.00048**	**0.00029**	**0.00042**	**0.0004**	**0.0014**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00047
beta-BHC	0.00005(DL)	**0.0063**	**0.016**	**0.00039**	**0.031**	**0.00093**	**0.0010**	**0.00067**	**0.00087**	**0.00078**	**0.0018**
delta-BHC	0.00005(DL)	**0.0002**	**0.015**	<0.00005	<0.0025	**0.00026**	**0.00029**	**0.00018**	**0.00018**	**0.00027**	**0.0016**
Dieldrin	0.0001(DL)	<0.0001	**0.0005**	<0.0001	**0.00012**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000094
gamma-BHC	0.0002	**0.000093**	**0.0056**	<0.00005	**0.00059**	**0.00033**	**0.00045**	**0.00029**	**0.00041**	**0.00037**	**0.0012**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000047
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.000094
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0047
Total Pesticides		0.006933	0.0501	0.000466	0.03171	0.00184	0.00222	0.00143	0.00188	0.00182	0.006
pH (std units)		5.50	5.51	5.49	5.52/5.51	3.45	3.31	3.56	3.65	3.7	3.69
Specific Conductance (mS/cm)		1.18	1.6	0.731	0.55/0.57	3.37	3.47	3.36	3.0	2.69	2.58
Turbidity (NTUs)		5.81	9.9	9.89	5.1/4.04	3.3	16.1	15.1	110	26.5	5.21
DO (mg/L)		0.47	1.58	0.78		0.0	0.47	0.42	2.95	0.48	
ORP (mV)		185	149	143		378	404	349	201	226	

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-114**	**MW-114**	**MW-114**	**MW-114**	**MW-114**	**MW-114**	**MW-115**	**MW-115**	**MW-115**	**MW-115**
Sample Date	*Concentrations*	**11/18/2014**	**5/15/2014**	**11/14/2013**	**5/24/2013**	**11/15/2012**	**9/14/2010**	**11/14/2014**	**5/16/2014**	**11/13/2013**	**5/24/2013**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**1.55**	**1.28**	**1.80**	**1.93**	**1.6**	**2.2**	**4.3**	**6.07**	**3.91**	**3.45**
Total Lead	0.015	**0.00200**	**0.00388**	**0.00325**	<0.001	**0.00299**	**0.004**	**0.00632**	**0.00116**	**0.0132**	**0.00124**
Total Zinc	2	**6.26**	**8.12**	**9.04**	**9.74**	**8.66**	**8.7**	**18.6**	**15.1**	**12.3**	**9.56**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.01	na	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**1.53**	**1.15**	**1.51**	**1.82**	**1.55**	na	**4.210**	**4.22**	**2.78**	**3.37**
Dissolved Lead	0.015	**0.00200**	**0.00252**	**0.00223**	<0.001	**0.00281**	na	**0.00862**	<0.001	**0.0126**	**0.0011**
Dissolved Zinc	2	**6.00**	**6.00**	**6.25**	**9.17**	**7.96**	na	**18.20**	**16.4**	**7.66**	**10.7**
Total of Total Metals Concentrations		7.812	9.40388	10.84325	11.67	10.26299	10.904	22.90632	21.17116	16.2232	13.01124
Total of Dissolved Metals Concentrations		7.532	7.15252	7.76223	10.99	9.51281		22.41862	20.62	10.4526	14.0711
Inorganics mg/L											
Nitrate	10 (NR)	**16**	**29**	**69**	**35**	**31**	**19**	**1.7**	<5.0	<2.5	<2.5
Sulfate	250 (NR)	**380**	**440**	**850**	**450**	**460**	**290**	**650**	**880**	**720**	**580**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.0001**	**0.00022**	**0.00023**	**0.00024**	**0.00018**	**0.00024**	**0.00026**	**0.00027**	**0.00016**	**0.00016**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0022**	**0.0022**	**0.0011**	**0.00064**	**0.00074**	**0.0046**	**0.00026**	**0.00019**	**0.00018**	**0.00026**
delta-BHC	0.00005(DL)	**0.00013**	**0.00011**	**0.000095**	<0.00005	**0.000077**	**0.00011 P**	**0.000073**	<0.00005	<0.00005	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	**0.000091**	**0.00011**	**0.00012**	**0.00012**	**0.00012**	**0.00027**	**0.000076**	**0.000078**	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.003	0.003	0.002	0.001	0.001117	0.00522	0.00067	0.00054	0.00034	0.00042
pH (std units)		3.43	3.62	3.92	4.04	4.08	4.05	3.30	3.7	3.63	3.75
Specific Conductance (mS/cm)		1.23	1.28	1.31	1.36	1.38	1.13	1.51	1.39	1.20	1.13
Turbidity (NTUs)		4.2	5.6	3.72	1.72	5.3	4.97	0.1	8.5	8.9	0
DO (mg/L)		0.0	0.54	0.43	0.87	0.65		0.0	1.72	0.58	1.06
ORP (mV)		325	298	269	352	244		422	236	290	409

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	MW-115	MW-115	MW-116	MW-116	MW-116	MW-116	MW-116	MW-116	MW-117	MW-117
Sample Date	*Concentrations*	**11/15/2012**	**9/14/2010**	**11/12/2014**	**5/16/2014**	**11/13/2013**	**5/23/2013**	**2012**	**7/28/2010 & 9/13/2010**	**11/17/2014**	**5/19/2014**
Metals mg/L											
Total Arsenic	0.01	<0.005	<0.0025	<0.005	<0.005	<0.005	<0.005	Well was	<0.0025	<0.005	<0.005
Total Copper	1.3	**4.04**	**6.7**	**2.54**	**2.45**	**3.25**	**1.91**	dry and	**4.1**	**0.0678**	**0.0362**
Total Lead	0.015	**0.00292**	<0.0015	**0.00112**	**0.00386**	**0.00533**	**0.00162**	was not	**0.0073**	**0.00282**	**0.00109**
Total Zinc	2	**9.96**	**20**	**7.06**	**8.90**	**8.66**	**4.62**	sampled	**12**	**1.01**	**0.809**
Dissolved Arsenic	0.01	<0.01	na	<0.005	<0.005	<0.005	<0.005		na	<0.005	<0.005
Dissolved Copper	1.3	**3.57**	na	**3.25**	**2.15**	**2.65**	**1.47**		na	**0.0761**	**0.0378**
Dissolved Lead	0.015	**0.00601**	na	**0.00102**	**0.00359**	**0.00409**	<0.001		na	**0.00178**	<0.001
Dissolved Zinc	2	**9.76**	na	**8.85**	**6.53**	**6.25**	**3.56**		na	**0.991**	**0.95**
Total of Total Metals Concentrations		14.00292	26.7	9.60112	11.35386	11.91533	6.53162		16.1073	1.08062	0.84629
Total of Dissolved Metals Concentrations		13.33601		12.10102	8.68359	8.90409	5.03			1.06888	0.9878
Inorganics mg/L											
Nitrate	10 (NR)	**2.2**	**3.2**	**28**	**18**	**72**	**16**		**91**	**3.1**	**3.3**
Sulfate	250 (NR)	**730**	**430**	**430**	**660**	**570**	**400**		**710**	**130**	**140**
Organochlorine Pesticides mg/L											
4,4´-DDD	0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001		<0.000095	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001		<0.000095	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001		<0.000095	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.00028**	**0.00024**	<0.00005	<0.00005	<0.00005	<0.00005		**0.00019**	<0.00005	<0.00005
alpha-Chlordane	0.002	<0.00005	<0.00047	<0.00005	<0.00005	<0.00005	<0.00005		<0.00048	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.00026**	**0.00013**	**0.00055**	**0.00019**	**0.00025**	**0.00026**		**0.00063**	<0.00005	<0.00005
delta-BHC	0.00005(DL)	**0.000074**	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005		<0.000048	<0.00005	<0.00005
Dieldrin	0.0001(DL)	<0.0001	<0.000094	<0.0001	<0.0001	<0.0001	<0.0001		<0.000095	<0.0001	<0.0001
gamma-BHC	0.0002	**0.000065**	**0.000073**	<0.00005	<0.00005	<0.00005	<0.00005		**0.00027**	<0.00005	<0.00005
gamma-Chlordane	0.002	<0.00005	na	<0.00005	<0.00005	<0.00005	<0.00005		na	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.000047	<0.00005	<0.00005	<0.00005	<0.00005		<0.000048	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.000094	<0.0005	<0.0005	<0.0005	<0.0005		<0.000095	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.0047	<0.005	<0.005	<0.005	<0.005		<0.0048	<0.005	<0.005
Total Pesticides		0.00068	0.00044	0.00055	0.00019	0.00025	0.00026		0.00109	BDL	BDL
pH (std units)		3.71	3.76	4.05	4.06	3.55	4.24		3.92/3.94	3.52	4.21
Specific Conductance (mS/cm)		1.32	1.18	0.999	1.48	0.652	1.17		2.06/2.3	0.414	0.408
Turbidity (NTUs)		0	0.21	7.1	2.1	148	9.16		3.75/4.95	1.3	7.2
DO (mg/L)		0.38		0	3.87	1.42	6.1			1.40	2.95
ORP (mV)		389		393	300	332	249			421	382

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-117**	**MW-117**	**MW-117**	**MW-117**	**MW-119**	**MW-119**	**MW-119**
Sample Date	*Concentrations*	**11/15/2013**	**5/23/2013**	**11/15/2012**	**9/14/2010**	**11/18/2014**	**5/21/2014**	**11/18/2013**
Metals mg/L								
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.0025	<0.005	<0.005	<0.005
Total Copper	1.3	**0.0438**	**0.0318**	**0.0453**	**0.038**	**0.00514**	**0.00386**	**0.00391**
Total Lead	0.015	**0.00172**	**0.00107**	**0.00193**	<0.0015	<0.00100	**0.00183**	**0.00276**
Total Zinc	2	**1.01**	**1.05**	**0.794**	**1.6**	**0.677**	**1.38**	**0.778**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	na	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.033**	**0.0272**	**0.0410**	na	**0.00369**	<0.002	**0.00530**
Dissolved Lead	0.015	<0.001	<0.001	**0.00115**	na	<0.001	<0.001	<0.001
Dissolved Zinc	2	**0.878**	**0.879**	**0.775**	na	**0.689**	**1.36**	**0.677**
Total of Total Metals Concentrations		1.05552	1.08287	0.84123	1.638	0.68214	1.38569	0.78467
Total of Dissolved Metals Concentrations		0.911	0.9062	0.81715		0.69269	1.36	0.6823
Inorganics mg/L								
Nitrate	10 (NR)	**3.9**	**4.0**	**3.8**	**2.5**	<0.25	<0.25	<0.25
Sulfate	250 (NR)	**140**	**140**	**130**	**260**	**170**	**120**	**94**
Organochlorine Pesticides mg/L								
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	**0.00064**	**0.00140**	**0.00050**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.0005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	<0.00005	<0.00005	<0.00005	<0.00005	**0.00062**	**0.0011**	**0.00042**
delta-BHC	0.00005(DL)	<0.00005	<0.00005	**0.000056**	<0.00005	**0.001**	**0.0016**	**0.00051**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.00005	<0.00005	<0.00005	**0.00013**	**0.00025**	**0.0001**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	na	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		BDL	BDL	0.000056	BDL	0.002390	0.004350	0.001530
pH (std units)		4.17	4.23	4.18	4.24	5.64	5.44	6.25
Specific Conductance (mS/cm)		0.416	0.419	0.396	0.51	0.740	0.719	0.731
Turbidity (NTUs)		8.78	9.79	10.41	8.19	6.8	6.1	7.4
DO (mg/L)		1.43	1.42	6.8		7.45	0.52	0.43
ORP (mV)		353	364	398		-21	44	-59

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-119**	**MW-119**	**MW-120**	**MW-120**	**MW-120**	**MW-120**	**MW-120**
Sample Date	*Concentrations*	**5/28/2013**	**12/6/2012**	**11/19/2014**	**5/21/2014**	**11/18/2013**	**5/28/2013**	**12/7/2012**
Metals mg/L								
Total Arsenic	0.01	<0.005	<0.005	**0.00117 J**	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.0158**	<0.005	**0.0108**	**0.0584**	**0.0124**	**0.0129**	**0.0289**
Total Lead	0.015	**0.0059**	**0.0012**	**0.00197**	**0.04600**	**0.0018**	**0.00418**	**0.0295**
Total Zinc	2	**1.18**	**0.656**	**0.690**	**1.41**	**1.23**	**0.894**	**1.88**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.000536	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.00697**	<0.002	**0.0042**	**0.0029**	**0.00554**	**0.0067**	**0.00223**
Dissolved Lead	0.015	<0.001	<0.001	<0.0000990	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**0.877**	**0.532**	**0.667**	**1.18**	**1.07**	**0.737**	**1.74**
Total of Total Metals Concentrations		1.2017	0.6572	0.70277	1.5144	1.2442	0.91108	1.9384
Total of Dissolved Metals Concentrations		0.88397	0.532	0.6712	1.1829	1.07554	0.7437	1.74223
Inorganics mg/L								
Nitrate	10 (NR)	<1.2	<0.25	<0.14	<0.25	<1.2	<1.2	<0.25
Sulfate	250 (NR)	**110**	**150**	**170**	**150**	**150**	**160**	**410**
Organochlorine Pesticides mg/L								
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	**0.00018**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.00060**	**0.00087**	**0.00096**	**0.00095**	**0.00090**	**0.00063**	**0.0035**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.00051**	**0.00066**	**0.0011**	**0.00099**	**0.00089**	**0.00075**	**0.0042**
delta-BHC	0.00005(DL)	**0.00053**	**0.00073**	**0.001**	**0.0014**	**0.00071**	**0.00046**	**0.0031**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	**0.00012**	**0.00013**	<0.00005	**0.000084**	<0.00005	<0.00005	**0.0011**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.00176	0.00257	0.00306	0.00342	0.00250	0.0018	0.0119
pH (std units)		5.75	5.99	5.59	5.61	5.57	5.38	6.3
Specific Conductance (mS/cm)		0.647	0.646	0.85	0.693	0.640	0.645	0.95
Turbidity (NTUs)		107	3.1	82	279	8.3	78.9	76.1
DO (mg/L)		4.78	0.6	6.05	0.53	8.93	3.06	6.42
ORP (mV)		49	40.4	82	93	85	175	58.6

Notes:
<0.00005 = constituent not detected above laboratory quantitation limit
Bolded concentrations indicate detection above laboratory quantitation limit
Concentration above the Type 1 RRS
NR = not regulated under HSRA or VRP
DL = Detection limit
mg/L = milligrams per liter
P = Indentification of target analytes using gas chromatography (GC) is based on retention time. Although 2 dissimilar GC columns confirmed the presence of the target anlyte in the sample, relative percent difference is >40%.

TABLE 3: SUMMARY of GROUNDWATER ANALYTICAL RESULTS

Well Number	*HSRA Type 1 RRS*	**MW-121**	**MW-121**	**MW-121**	**MW-121**	**MW-121**
Sample Date	*Concentrations*	**11/13/2014**	**5/19/2014**	**11/18/2013**	**5/29/2013**	**12/6/2012**
Metals mg/L						
Total Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Total Copper	1.3	**0.0113**	**0.00695**	**0.00330**	**0.00429**	**0.0295**
Total Lead	0.015	<0.001	**0.00136**	<0.001	<0.001	**0.0012**
Total Zinc	2	**0.0434**	**0.0194**	**0.0112**	**0.0313**	**1.59**
Dissolved Arsenic	0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Copper	1.3	**0.00286**	**0.00223**	**0.00469**	**0.0106**	**0.0112**
Dissolved Lead	0.015	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc	2	**0.0196**	**0.0125**	**0.0692**	**0.0153**	**1.25**
Total of Total Metals Concentrations		0.0547	0.02771	0.0145	0.03559	1.6207
Total of Dissolved Metals Concentrations		0.02246	0.01473	0.07389	0.0259	1.2612
Inorganics mg/L						
Nitrate	10 (NR)	**0.43**	**0.4**	**0.45**	**0.32**	**0.59**
Sulfate	250 (NR)	**50**	**42**	**64**	**56**	**220**
Organochlorine Pesticides mg/L						
4,4´-DDD	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDE	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
4,4´-DDT	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
alpha-BHC	0.00005(DL)	**0.000054**	**0.00012**	**0.00030**	**0.00018**	**0.0027**
alpha-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
beta-BHC	0.00005(DL)	**0.0001**	**0.00012**	**0.00023**	**0.00015**	**0.0011**
delta-BHC	0.00005(DL)	<0.000050	**0.00011**	**0.00023**	**0.000078**	**0.0023**
Dieldrin	0.0001(DL)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
gamma-BHC	0.0002	<0.00005	<0.00005	**0.00009**	<0.00005	**0.0014**
gamma-Chlordane	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Heptachlor	0.0004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Methoxychlor	0.04	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Toxaphene	0.003	<0.005	<0.005	<0.005	<0.005	<0.005
Total Pesticides		0.0002	0.0004	0.0009	0.000408	0.0075
pH (std units)		6.36	6.03	6.10	5.85	5.97
Specific Conductance (mS/cm)		0.251	0.369	0.425	0.395	0.633
Turbidity (NTUs)		1.8	0	1.45	0.47	3.6
DO (mg/L)		0	0.71	0.74	2.18	3.9
ORP (mV)		43	167	82	154	79.6

Prepared by: DP 1/9/2015
Checked by: MHA 1/13/2015

TABLE 4: SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

Sample Location						SW2010-1	SW2010-2	SW2010-3	SW2010-4	SW2010-5	SW2010-5	SW2010-5	SW2010-5	SW2010-5	SW2010-5	SW2010-6	SW2010-7	SW2010-8	SW2010-9	SW2010-10	SW2010-10	SW2010-10	SW2010-10	SW2010-10	SW2010-10	SW2010-11	SW2010-11	SW2010-11	SW2010-11
Sample Date						9/23/2010	9/23/2010	9/23/2010	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013	11/16/2012	9/23/2010	9/23/2010	9/23/2010	9/23/2010	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013	11/16/2012	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013
PARAMETER, UNITS	**Distance Along Stream (ft)**					0	141	328	478	735	735	735	735	735	735	886	963	1040	1092	1152	1152	1152	1152	1152	1152	1222	1222	1222	1222
	GA Instream	**National AWQC**	**National AWQC Human Consumption of Water +Organism**		**GA Instream Human Health**	(a)	(a)	(a)	(a)						(a)	(a)	(a)	(a)	(a)						(a)				
Total Organochlorine Pesticides (ug/L)																													
	Ecological Exposure			**Human Health Exposure**																									
alpha-BHC	not established		0.0026	0.0049	0.0049	<0.0057	0.13	0.057	0.039 J	**0.083**	**0.075**	**0.085**	**0.092**	**0.11**	0.13	0.094	0.09	0.18	0.16	**0.097**	**0.12**	**0.17**	**0.18**	**0.15**	0.13	**0.13**	**0.17**	**0.24**	**0.24**
beta-BHC	not established		0.0091	0.017	0.017	<0.0067	0.16 P	0.15	0.14	**0.074**	**0.12**	**0.073**	**0.089**	**0.071**	0.23	0.15	0.16	0.19 P	0.14 P	**0.081**	**0.12**	**0.092**	**0.13**	**0.092**	0.18	**0.091**	**0.3**	**0.29**	**0.29**
gamma-BHC (lindane)	0.95 (acute)	0.95 (acute)	0.98	1.8	1.8	<0.0059	0.058 P	0.06	0.028 JP	**0.0092 J**	**0.014 J**	<0.050	**0.0087 J**	<0.05	0.037 P	0.043 J	0.029 P	0.12	0.1	**0.028 J**	**0.046 J**	**0.060**	**0.066**	<0.05	0.084	**0.044 J**	**0.074**	**0.091**	**0.097**
delta-BHC	not established			not established		<0.0048	0.22 P	0.13 P	0.11 P	<0.0031	**0.014**	**0.051**	**0.078**	**0.12**	0.2	0.14	0.091 P	0.19 P	0.2	**0.059**	**0.16**	**0.077**	**0.16**	**0.14**	0.11 P	**0.077**	**0.27**	**0.11**	**0.19**
Chlordane	0.0043	0.0043	0.0008	0.00081	0.00081	<0.1	<0.1	<0.094	<0.094	<0.0022	<0.0022	<0.050	<0.0066	<0.05	<0.1	<0.094	<0.094	<0.1	<0.095	<0.0022	<0.0022	<0.050	<0.0066	<0.05	<0.094	<0.0022	<0.0022	<0.050	<0.0066
gamma-Chlordane			0.0008	0.00081	0.00081	NA	NA	NA	NA	<0.005	<0.005	<0.050	<0.0047	<0.05	NA	NA	NA	NA	NA	<0.005	<0.005	<0.050	<0.0047	<0.05	NA	<0.005	<0.005	<0.050	<0.0047
4,4'-DDD	not established		0.00031	0.00031	0.00031	<0.0065	<0.0065	<0.0061	<0.0061	<0.0091	<0.0091	<0.10	<0.014	<0.1	<0.0065	<0.0061	0.014 J	<0.0065	<0.0062	<0.0091	<0.0091	<0.10	<0.014	<0.1	<0.0061	<0.0091	<0.0091	<0.10	<0.014
4,4'-DDE	not established		0.00022	0.00022	0.00022	<0.0077	<0.0077	<0.0073	<0.0073	<0.006	<0.006	<0.10	<0.0075	<0.1	<0.0077	<0.0073	<0.0073	<0.0077	<0.0073	<0.006	<0.006	<0.10	<0.0075	<0.1	<0.0073	<0.006	<0.006	<0.10	<0.0075
4,4'-DDT	0.001	0.001	0.00022	0.00022	0.00022	<0.0097	<0.0097	<0.0092	<0.0092	<0.0069	<0.0069	<0.10	<0.014	<0.1	<0.0097	<0.0092	<0.0092	<0.0097	<0.0092	<0.0069	<0.0069	<0.10	<0.014	<0.1	<0.0092	<0.0069	<0.0069	<0.10	<0.014
Dieldrin	0.056	0.056	0.000052	0.000054	0.000054	<0.0091	<0.0091	<0.0086	<0.0086	<0.0091	<0.0091	<0.10	<0.013	<0.1	<0.0091	<0.0086	<0.0086	0.014 J	<0.0087	<0.0091	<0.0091	<0.10	<0.013	<0.1	0.011 J	<0.0091	<0.0091	<0.10	<0.013
Heptachlor	0.0038	0.0038	0.000079	0.000079	0.000079	<0.007	<0.007	<0.0066	<0.0066	<0.0072	<0.0072	<0.050	<0.0038	<0.05	<0.007	<0.0066	<0.0066	<0.007	<0.0067	<0.0072	<0.0072	<0.050	<0.0038	<0.05	<0.0066	<0.0072	<0.0072	<0.050	<0.0038
Methoxychlor	0.03	0.03	100	not established		<0.013	<0.013	<0.012	<0.012	<0.043	<0.043	<.50	<0.08	<0.5	<0.013	<0.012	<0.012	<0.013	<0.012	<0.043	<0.043	<0.50	<0.08	<0.5	<0.012	<0.043	<0.043	<0.50	<0.08
Toxaphene	0.0002	0.0002	0.00028	0.00028	0.00028	<0.5	<0.5	<0.47	<0.47	<0.16	<0.16	<5.0	<0.085	<5	<0.5	<0.47	<0.47	<0.5	<0.48	<0.16	<0.16	<5.0	<0.085	<5	<0.47	<0.16	<0.16	<5.0	<0.085
Total Metals (mg/L)																													
Arsenic	0.15	0.15	0.000018	0.00014	0.01	0.09	0.043	0.025	0.016	NA	NA	NA	NA	<0.005	0.008	0.0059	0.0082	0.0053	0.0049	NA	NA	NA	NA	<0.005	0.0041	NA	NA	NA	NA
Copper	0.0158 *	0.0158 *	1.3	not established		0.0043J	0.0065	0.0071	0.016	NA	NA	NA	NA	**0.0161**	0.016	0.012	0.015	0.013	0.011	NA	NA	NA	NA	**0.00796**	0.01	NA	NA	NA	NA
Lead	0.0052 *	0.0052 *		not established		0.0024	0.0015	0.00096 J	0.0046	NA	NA	NA	NA	<0.001	0.00067 J	0.00055 J	0.0032	0.0022	0.00064 J	NA	NA	NA	NA	<0.001	<0.0005	NA	NA	NA	NA
Zinc	0.208*	0.208*	7.4	26	not established	0.016 J	0.027	0.084	0.54	NA	NA	NA	NA	**1.16**	0.97	0.87	0.81	0.65	0.62	NA	NA	NA	NA	**0.736**	0.5	NA	NA	NA	NA
Dissolved Metals (mg/L)																													
Arsenic	0.15	0.15	0.000018	0.00014	0.01	0.025	0.0074	0.0014 J	<0.0013	**0.000704 J**	**0.00175 J**	<0.005	**0.00156 J**	<0.005	0.0015 J	0.0018 J	0.0019 J	0.002 J	0.0023 J	**0.000954 J**	**0.00188 J**	<0.005	**0.00172 J**	<0.005	0.0023 J	**0.00102 J**	**0.00174 J**	<0.005	**0.00121 J**
Copper	0.0158 *	0.0158 *	1.3	not established		0.0012 J	0.0034 J	0.0031 J	0.0073	**0.00471**	**0.00684**	**0.101**	**0.007**	**0.00365**	0.0074	0.0056	0.006	0.0055	0.0059	**0.00442**	**0.00663**	**0.0149**	**0.00616**	**0.00404**	0.0054	**0.00434**	**0.00567**	**0.0932**	**0.0564**
Lead	0.0052 *	0.0052 *		not established		<0.0002	<0.0002	<0.0002	<0.0002	<0.000099	<0.0001	<0.001	<0.00014	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000099	<0.0001	<0.001	<0.00014	<0.001	<0.0002	<0.000099	<0.0001	<0.001	<0.00014
Zinc	0.208*	0.208*	7.4	26	not established	<0.0083	0.012 J	0.038	0.56	**0.469**	**0.434**	**0.840**	**0.706**	**1.03**	0.89	0.72	0.76	0.5	0.54	**0.456**	**0.427**	**0.706**	**0.593**	**0.629**	0.44	**0.435**	**0.377**	**1.68**	**1.6**
Total Trichlorobenzenes (ug/L)																													
1,2,3-Trichlorobenzene	not established			not established		<1	NA	NA	NA	NA	NA	NA	NA	NA	<0.97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	not established		35	70	70	<0.56	NA	NA	NA	NA	NA	NA	NA	NA	<0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate and Sulfate (mg/L)																													
Nitrate as N	not established		10 (nitrates)		not established	0.65	NA	NA	NA	**1.8**	**1.7**	**0.72**	**1.3**	**0.55**	0.74	NA	NA	NA	NA	**1.6**	**1.8**	**0.86**	**1.5**	0.79	NA	**1.6**	**1.7**	**2.2**	**3.0**
Sulfate	not established		not established			64	NA	NA	NA	**100**	**85**	**83**	**93**	**87**	110	NA	NA	NA	NA	**92**	**89**	**95**	**97**	91	NA	**94**	**88**	**120**	**140**
Hardness as CaCo3 (mg/L)	not established		not established			200	NA	NA	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (std units)										6.96	7.35	5.62	6.61							7.12	7.44	6.42	6.98			7.93	7.33	6.43	6.94
Specific Conductance (mS/cm)										0.443	0.501	0.683	0.812							0.465	0.615	0.66	0.849			0.553	0.615	0.66	0.963
Turbidity (NTUs)										5.88	0	0	0							37.4	0	75.1	0			3.67	0	67.1	14.2
DO (mg/L)										10.65	8.03	7.33	9.68							4.51	7.54	10.1	8.59			9.2	8.16	9.98	7.07
ORP (mV)										27	57	127	51							47	122	140	119			82	150	134	186

Notes:

(a) = Total and dissolved pesticide results are reported to the method detection limits (MDLs) in an effort to report the lowest possible value obtained by the method.
Results reported between the MDL and the reporting limits (RLs) are considered quantitative estimates.
<0.025 = Constituent not detected above the detection limit shown.
ug/L = micrograms per liter
mg/L = milligrams per liter

J = Result reported between the MDL and RL. Result is a quantitative estimate.

P = Identification of target analytes using gas chromatography (GC) is based on retention time. Although 2 dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40%.
NA = constituent not analyzed
* = criteria is based on a hardness of 195 mg/L

Bolded = indicates a positive detection in the 2012 through 2014

2012 through 2014 Sampling Result that exceeded Georgia Instream Concentrations (GEPD 2013)

2012 through 2014 Sampling Result that exceeded National Ambient Water Quality Criteria (AWQC) (USEPA 2009)

TABLE 4: SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

Sample Location						SW2010-11	SW2010-11	SW2010-12	SW2010-13	SW2010-14	SW2010-14	SW2010-14	SW2010-14	SW2010-14	SW2010-14	SW2010-15	SW2010-15	SW2010-15	SW2010-15	SW2010-15	SW2010-15	SW2010-16	SW2010-17	SW2010-17	SW2010-17	SW2010-17	SW2010-17
Sample Date						11/16/2012	9/23/2010	9/23/2010	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013	11/16/2012	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013	11/16/2012	9/23/2010	9/23/2010	11/19/2014	5/20/2014	11/19/2013	5/30/2013	11/16/2012
PARAMETER, UNITS	**Distance Along Stream (ft)**					1222	1222	1367	1511		1667	1667	1667	1667	1667	1761	1761	1761	1761	1761	1761	1907	2099	2099	2099	2099	2099
Total Organochlorine Pesticides (ug/L)	**GA Instream**	**National AWQC**	**National AWQC Human Consumption of Water +Organism**		**GA Instream Human Health**		(a)	(a)	(a)						(a)						(a)	(a)					
	Ecological Exposure		**Human Health Exposure**																								
alpha-BHC	not established		0.0026	0.0049	0.0049	**0.23**	0.19	0.25	0.5	**0.30**	**0.31**	**0.40**	**0.38**	**0.53**	0.62	**0.29**	**0.27**	**0.36**	**0.32**	**0.53**	0.62	0.37	**0.29**	**0.24**	**0.33**	**0.32**	**0.45**
beta-BHC	not established		0.0091	0.017	0.017	**0.27**	0.45	0.46	0.63	**0.41**	**0.38**	**0.44**	**0.47**	**0.46**	0.73	**0.4**	**0.36**	**0.40**	**0.41**	**0.46**	0.75	0.6	**0.37**	**0.33**	**0.40**	**0.39**	**0.39**
gamma-BHC (lindane)	0.95 (acute)	0.95 (acute)	0.98	1.8	1.8	**0.098**	0.11	0.13	0.2	**0.086**	**0.093**	**0.12**	**0.12**	**0.15**	0.22	**0.082**	**0.087**	**0.11**	**0.1**	**0.15**	0.22	0.15	**0.082**	**0.075**	**0.098**	**0.096**	**0.13**
delta-BHC	not established		not established			**0.16**	0.13 P	0.15 P	0.32 P	**0.32**	**0.46**	**0.29**	**0.37**	**0.53**	0.48 P	**0.28**	**0.43**	**0.27**	**0.34**	**0.48**	0.44 P	0.33 P	**0.26**	**0.4**	**0.24**	**0.36**	**0.42**
Chlordane	0.0043	0.0043	0.0008	0.00081	0.00081	<0.05	<0.094	<0.094	<0.095	<0.0022	<0.0022	<0.050	<0.0066	<0.05	<0.095	<0.0022	<0.0022	<0.050	<0.0066	<0.05	<0.095	<0.094	<0.0022	<0.0022	<0.050	<0.0066	<0.05
gamma-Chlordane			0.0008	0.00081	0.00081	<0.05	NA	NA	NA	<0.005	<0.005	<0.050	<0.0047	<0.05	NA	<0.005	<0.005	<0.050	<0.0047	<0.05	NA	NA	<0.005	<0.005	<0.050	<0.0047	<0.05
4,4'-DDD	not established		0.00031	0.00031	0.00031	<0.1	<0.0061	<0.0061	<0.0062	<0.0091	<0.0091	<0.10	<0.014	<0.1	<0.0062	<0.0091	<0.0091	<0.10	<0.014	<0.1	<0.0062	<0.0061	<0.0091	<0.0091	<0.10	<0.014	<0.1
4,4'-DDE	not established		0.00022	0.00022	0.00022	<0.1	<0.0073	<0.0073	<0.0073	<0.006	<0.006	<0.10	<0.0075	<0.1	<0.0073	<0.006	<0.006	<0.10	<0.0075	<0.1	<0.0073	<0.0073	<0.006	<0.006	<0.10	<0.0075	<0.1
4,4'-DDT	0.001	0.001	0.00022	0.00022	0.00022	<0.1	<0.0092	<0.0092	<0.0092	<0.0069	<0.0069	<0.10	<0.014	<0.1	<0.0092	<0.0069	<0.0069	<0.10	<0.014	<0.1	<0.0092	<0.0092	<0.0069	<0.0069	<0.10	<0.014	<0.1
Dieldrin	0.056	0.056	0.000052	0.000054	0.000054	<0.1	0.012 J	0.012 J	0.015 J	<0.0091	<0.0091	<0.10	<0.013	<0.1	0.015 J	<0.0091	<0.0091	<0.10	<0.013	<0.1	0.017 J	0.012 J	<0.0091	<0.0091	<0.10	<0.013	<0.1
Heptachlor	0.0038	0.0038	0.000079	0.000079	0.000079	<0.05	<0.0066	<0.0066	<0.0067	<0.0072	<0.0072	<0.050	<0.0038	<0.05	<0.0067	<0.0072	<0.0072	<0.050	<0.0038	<0.05	<0.0067	<0.0066	<0.0072	<0.0072	<0.050	<0.0038	<0.05
Methoxychlor	0.03	0.03	100	not established		<0.5	<0.012	<0.012	<0.012	<0.043	<0.043	<0.50	<0.08	<0.5	<0.012	<0.043	<0.043	<0.50	<0.08	<0.5	<0.012	<0.012	<0.043	<0.043	<0.50	<0.08	<0.5
Toxaphene	0.0002	0.0002	0.00028	0.00028	0.00028	<5	<0.47	<0.47	<0.48	<0.16	<0.16	<5.0	<0.085	<5	<0.48	<0.16	<0.16	<5.0	<0.085	<5	<0.48	<0.47	<0.16	<0.16	<5.0	<0.085	<5
Total Metals (mg/L)																											
Arsenic	0.15	0.15	0.000018	0.00014	0.01	<0.005	0.0059	0.0067	0.0029	NA	NA	NA	NA	<0.005	0.028	NA	NA	NA	NA	<0.005	0.0025	0.0055	NA	NA	NA	NA	<0.005
Copper	0.0158 *	0.0158 *	1.3	not established		**0.128**	0.22	0.31	0.11	NA	NA	NA	NA	**0.0918**	0.78	NA	NA	NA	NA	**0.0701**	0.084	0.12	NA	NA	NA	NA	**0.0544**
Lead	0.0052 *	0.0052 *	not established			**0.00356**	0.012	0.0019	<0.0005	NA	NA	NA	NA	<0.001	0.014	NA	NA	NA	NA	<0.001	<0.0005	0.0047	NA	NA	NA	NA	<0.001
Zinc	0.208*	0.208*	7.4	26	not established	**2.09**	3	3.2	2.3	NA	NA	NA	NA	**2.46**	15	NA	NA	NA	NA	**2.18**	2.4	2.8	NA	NA	NA	NA	**1.83**
Dissolved Metals (mg/L)																											
Arsenic	0.15	0.15	0.000018	0.00014	0.01	<0.005	0.0016 J	0.0016 J	0.0013 J	**0.000716 J**	**0.0009 J**		**0.00086 J**	<0.01	<0.0013	**0.000827 J**	**0.00096 J**	<0.005	**0.00098 J**	<0.01	<0.0013	<0.0013	**0.000935 J**	**0.00122 J**	<0.005	**0.00096 J**	<0.01
Copper	0.0158 *	0.0158 *	1.3	not established		**0.0572**	0.097	0.092	0.053	**0.0183**	**0.0244**	**0.0463**	**0.0393**	**0.0215**	0.048	**0.018**	**0.0181**	**0.0382**	**0.0275**	**0.0179**	0.038	0.03	**0.014**	**0.017**	**0.0314**	**0.0225**	**0.0127**
Lead	0.0052 *	0.0052 *	not established			<0.001	<0.0002	<0.0002	<0.0002	<0.000099	<0.0001	<0.001	<0.00014	<0.002	<0.0002	<0.000099	<0.0001	<0.001	<0.00014	<0.002	<0.0002	<0.0002	<0.000099	<0.0001	**0.00126**	<0.00014	<0.002
Zinc	0.208*	0.208*	7.4	26	not established	**1.74**	2.7	2.6	2.1	**1.27**	**1.11**	**1.89**	**1.62**	**1.96**	2.5	**1.23**	**0.965**	**1.91**	**1.51**	**1.77**	2.2	2.3	**1.12**	**0.956**	**1.75**	**1.31**	**1.47**
Total Trichlorobenzenes (ug/L)																											
1,2,3-Trichlorobenzene	not established		not established			NA	<1	NA	<0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.95	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	not established		35	70	70	NA	<0.56	NA	<0.53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.53	NA	NA	NA	NA	NA	NA
Nitrate and Sulfate (mg/L)																											
Nitrate as N	not established		10 (nitrates)		not established	**3.1**	4.1	NA	3.3	**1.9**	**2.2**	**1.9**	**2.5**	**2.3**	NA	**1.8**	**2.2**	**1.8**	**2.4**	**2.2**	530	NA	**1.8**	**2.1**	**1.8**	**2.3**	**1.9**
Sulfate	not established		not established			**130**	220	NA	180	**140**	**130**	**130**	**140**	**140**	NA	**150**	**130**	**130**	**140**	**150**	330	NA	**150**	**120**	**130**	**140**	**130**
Hardness as CaCo3 (mg/L)	not established		not established			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH (std units)										6.98	7.19	6.43	7.03			6.87	7.36	6.71	7.19				6.26	6.59	6.82	7.38	
Specific Conductance (mS/cm)										0.593	0.58	0.734	1.05			0.606	0.641	0.722	1.05				0.593	0.643	0.734	1.04	
Turbidity (NTUs)										13.2	0	25.7	0			3.89	9.81	22.8	25.7				8.74	0	0	10.1	
DO (mg/L)										10.44	10.44	9.49	10.02			11.09	9.93	4.03	8.93				13.76	14.19	6.99	7.6	
ORP (mV)										64	139	134	189			85	130	137	181				145	92	52	181	

Notes:

(a) = Total and dissolved pesticide results are reported to the method detection limits (MDLs) in an effort to report the lowest possible value obtained by the method.
Results reported between the MDL and the reporting limits (RLs) are considered quantitative estimates.
<0.025 = Constituent not detected above the detection limit shown.
ug/L = micrograms per liter
mg/L = milligrams per liter

J = Result reported between the MDL and RL. Result is a quantitative estimate.

P = Identification of target analytes using gas chromatography (GC) is based on retention time. Although 2 dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40%.
NA = constituent not analyzed
* = criteria is based on a hardness of 195 mg/L

Bolded = indicates a positive detection in the 2012 through 2014

2012 through 2014 Sampling Result that exceeded Georgia Instream Concentrations (GEPD 2013)

2012 through 2014 Sampling Result that exceeded National Ambient Water Quality Criteria (AWQC) (USEPA 2009)

TABLE 4: SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

Sample Location						SW2010-17	SW2010-18	Allied Outfall	Main Point	INFLOW 1	INFLOW 1	INFLOW 2	INFLOW 2	SW2014-20	SW2014-20	SW2014-21	SW2014-21
Sample Date						9/23/2010	9/23/2010	5/26/2004	5/26/2004	11/19/2014	3/31/2014	11/19/2014	3/31/2014	11/19/2014	5/20/2014	11/19/2014	5/20/2014
PARAMETER, UNITS	Distance Along Stream (ft)					2099	2275	downstream from the Allied Ready-Mix outfall on the east side of the tracks	in drainage feature on the west side of the tracks and upstream of railroad culvert	side seep inflowing into drainage feature located on west side of track and upstream of railroad culvert location SW-2010-11		side seep inflowing into main channel of unnamed stream located on west side of track and downstream of railroad culvert		side seep inflowing into drainage feature located on west side of track and upstream of railroad culvert location SW-2010-11		85 ft upstream of location SW2014-20 in the drainage feature	
	GA Instream	National AWQC	National AWQC Human Consumption of Water +Organism		GA Instream Human Health	(a)	(a)										
Total Organochlorine Pesticides (ug/L)																	
	Ecological Exposure		**Human Health Exposure**														
alpha-BHC	not established		0.0026	0.0049	0.0049	0.31	0.45	<0.05	**0.75**	**0.12**	**0.22**	**0.17**	<0.05	**0.14**	**0.28**	**0.2**	**0.22**
beta-BHC	not established		0.0091	0.017	0.017	0.48	0.64	**0.078 P**	**2.4**	**0.079**	**1.2**	**0.28**	**0.12**	**1.5**	**1.0**	**1.2**	**1.2**
gamma-BHC (lindane)	0.95 (acute)	0.95 (acute)	0.98	1.8	1.8	0.11	0.17	<0.05	**0.52**	**0.038 J**	**0.11**	**0.058**	<0.05	**0.078**	**0.13**	**0.10**	**0.11**
delta-BHC	not established		not established			0.21 P	0.3 P	<0.05	**0.46 P**	**0.072**	**0.38**	**0.13**	<0.05	**0.18**	**0.49**	**0.15**	**0.53**
Chlordane	0.0043	0.0043	0.0008	0.00081	0.00081	<0.094	<0.095	<0.5	<0.5	<0.0022	<0.05	<0.0022	<0.05	<0.0022	<0.0022	<0.0022	<0.0022
gamma-Chlordane			0.0008	0.00081	0.00081	NA	NA	NA	NA	<0.0050	<0.05	<0.0050	<0.05	<0.005	<0.005	<0.0050	<0.005
4,4'-DDD	not established		0.00031	0.00031	0.00031	<0.0061	<0.0062	<0.1	<0.4	<0.0091	<0.1	<0.0091	<0.1	<0.0091	<0.0091	<0.0091	<0.0091
4,4'-DDE	not established		0.00022	0.00022	0.00022	<0.0073	<0.0073	<0.1	<0.4	<0.0060	<0.1	<0.0060	<0.1	<0.006	<0.006	<0.006	<0.006
4,4'-DDT	0.001	0.001	0.00022	0.00022	0.00022	<0.0092	<0.0092	<0.1	<0.4	<0.0069	<0.1	<0.0069	<0.1	<0.0069	<0.0069	<0.0069	<0.0069
Dieldrin	0.056	0.056	0.000052	0.000054	0.000054	<0.0086	<0.0087	<0.1	<0.4	<0.0091	<0.1	<0.0091	<0.1	<0.0091	**0.021 J**	<0.0091	**0.020 J**
Heptachlor	0.0038	0.0038	0.000079	0.000079	0.000079	<0.0066	<0.0067	<0.05	<0.2	<0.0072	<0.05	<0.0072	<0.05	<0.0072	<0.0072	<0.0072	<0.0072
Methoxychlor	0.03	0.03	100	not established		<0.012	<0.012	<0.5	<2.0	<0.043	<0.5	<0.043	<0.5	<0.043	<0.043	<0.043	<0.043
Toxaphene	0.0002	0.0002	0.00028	0.00028	0.00028	<0.47	<0.48	<5.0	<20	<0.16	<5	<0.16	<5	<0.16	<0.16	<0.16	<0.16
Total Metals (mg/L)																	
Arsenic	0.15	0.15	0.000018	0.00014	0.01	0.0029	0.0032	**0.016**	<0.01	NA	<0.005	NA	<0.005	NA	NA	NA	NA
Copper	0.0158 *	0.0158 *	1.3	not established		0.054	0.052	<0.02	**1.6**	NA	**0.476**	NA	**0.0021**	NA	NA	NA	NA
Lead	0.0052 *	0.0052 *	not established			<0.0005	<0.0005	<0.005	**0.0094**	NA	<0.001	NA	<0.001	NA	NA	NA	NA
Zinc	0.208*	0.208*	7.4	26	not established	1.9	2	**0.68**	**13**	NA	**6.28**	NA	**0.219**	NA	NA	NA	NA
Dissolved Metals (mg/L)																	
Arsenic	0.15	0.15	0.000018	0.00014	0.01	0.0013 J	0.0014 J	NA	NA	**0.000917 J**	<0.005	**0.000923 J**	<0.005	<0.000536	<0.00054	<0.000536	<0.00054
Copper	0.0158 *	0.0158 *	1.3	not established		0.024	0.02	NA	NA	**0.00492**	**0.256**	**0.0136**	<0.002	**0.157**	**0.229**	**0.0714**	**0.296**
Lead	0.0052 *	0.0052 *	not established			<0.0002	<0.0002	NA	NA	<0.000099	<0.001	<0.000099	<0.001	**0.00281**	<0.0001	<0.000099	<0.0001
Zinc	0.208*	0.208*	7.4	26	not established	1.6	1.7	NA	NA	**0.482**	**6.08**	**0.847**	**0.221**	**4.24**	**5.65**	**3.75**	**6.13**
Total Trichlorobenzenes (ug/L)																	
1,2,3-Trichlorobenzene	not established		not established			NA	<0.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	not established		35	70	70	NA	<0.53	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate and Sulfate (mg/L)																	
Nitrate as N	not established		10 (nitrates)		not established	NA	3.1	NA	NA	**1.5**	**9.1**	**2.1**	**0.34**	**8.3**	**9.5**	**8.1**	**9.9**
Sulfate	not established		not established			NA	190	**85**	**510**	**92**	**390**	**130**	**96**	**350**	**330**	**280**	**360**
Hardness as CaCo3 (mg/L)	not established		not established			NA	NA	**120**	**32**	NA	NA	NA	NA	NA	NA	NA	NA
pH (std units)										6.9		6.99		6.57	6.74	6.58	6.75
Specific Conductance (mS/cm)										0.465		0.535		0.867	1.09	0.876	1.14
Turbidity (NTUs)										11.5		4.88		13.5	0	62.5	0
DO (mg/L)										12.31		8.82		7.14	7.62	8.02	7.09
ORP (mV)										70		103		120	179	115	156

Notes:

(a) = Total and dissolved pesticide results are reported to the method detection limits (MDLs) in an effort to report the lowest possible value obtained by the method.
Results reported between the MDL and the reporting limits (RLs) are considered quantitative estimates.
<0.025 = Constituent not detected above the detection limit shown.
ug/L = micrograms per liter
mg/L = milligrams per liter

J = Result reported between the MDL and RL. Result is a quantitative estimate.

P = Identification of target analytes using gas chromatography (GC) is based on retention time. Although 2 dissimilar GC columns confirmed the presence of the target analyte in the sample, relative percent difference is >40%.
NA = constituent not analyzed
* = criteria is based on a hardness of 195 mg/L

Bolded = indicates a positive detection in the 2012 through 2014

2012 through 2014 Sampling Result that exceeded Georgia Instream Concentrations (GEPD 2013)

2012 through 2014 Sampling Result that exceeded National Ambient Water Quality Criteria (AWQC) (USEPA 2009)

Prepared by: MHA 5/29/2014
Checked by: RNQ 6/20/2014

TABLE 5: SUMMARY OF M & J SOLVENTS SITE-SPECIFIC VOCs and SVOCs ANALYZED IN BFEL MONITORING WELLS

Well		MW-1B	MW-22	MW-22	MW-101	MW-104A	MW-104A	MW-104D
Date Sampled		11/11/2014	11/12/2014	9/13/2010	11/11/2014	11/12/2014	9/15/2010	11/13/2014
Lithology Screened		Residual Soil	Residual Soil	Residual Soil	Residual Soil	Residual Soil	Residual Soil	Shallow Fractured Bedrock
Constituent	**Units**							
1,1,1,2-Tetrachloroethane	ug/L			<1			<1	
1,1,1-Trichloroethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,1,2,2-Tetrachloroethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,1,2-Trichloroethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,1-Dichloroethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,1-Dichloroethene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,1-Dichloropropene	ug/L			<1			<1	
1,2,3-Trichlorobenzene	ug/L			<9.5			<9.4	
1,2,3-Trichloropropane	ug/L			<1			<1	
1,2,4-Trichlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2,4-Trichlorobenzene	ug/L	<5.0	<5.0	<9.5	<5.0	<5.0	<9.4	<250
1,2,4-Trichlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2-Dibromoethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2-Dibromo-3-chloropropane	ug/L	<5.0	<5.0		<5.0	<5.0		<250
1,2-Dichlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2-Dichlorobenzene	ug/L	<5.0	<5.0	<9.5	<5.0	<5.0	<9.4	<250
1,2-Dichloroethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2-Dichloropropane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,2-Diphenylhydrazine	ug/L			<9.5			<9.4	
1,3-Dichlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,3-Dichlorobenzene	ug/L	<5.0	<5.0	<9.5	<5.0	<5.0	<9.4	<250
1,3-Dichloropropane	ug/L			<1			<1	
1,4-Dichlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
1,4-Dichlorobenzene	ug/L			<9.5			<9.4	
1,4-Dioxane	ug/L	<150	<150	<9.5	<150	<150	**73**	
2,4,5-Trichlorophenol	ug/L			<9.5			<9.4	
2,4,6-Trichlorophenol	ug/L			<9.5			<9.4	
2,4-Dichlorophenol	ug/L			<9.5			<9.4	
2,4-Dimethylphenol	ug/L			<9.5			<9.4	
2,4-Dinitrophenol	ug/L			<48			<47	
2,4-Dinitrotoluene	ug/L			<9.5			<9.4	
2,6-Dinitrotoluene	ug/L			<9.5			<9.4	
2-Butanone	ug/L	<50	<50	<10	<50	<50	<10	**260,000**
2-Chloronaphthalene	ug/L			<9.5			<9.4	
2-Chlorophenol	ug/L			<9.5			<9.4	
2-Hexanone	ug/L	<10	<10		<10	<10		**1900**
2-Methylphenol	ug/L			<9.5			<9.4	
2-Nitrophenol	ug/L			<9.5			<9.4	
3 & 4 Methylphenol	ug/L			<9.5			<9.4	
3,3'-Dichlorobenzidine	ug/L			<57			<57	
4,6-Dinitro-2-methylphenol	ug/L			<48			<47	
4-Bromophenyl phenyl ether	ug/L			<9.5			<9.4	
4-Chloro-3-methylphenol	ug/L			<9.5			<9.4	
4-Chloroaniline	ug/L			<19			<19	
4-Chlorophenyl phenyl ether	ug/L			<9.5			<9.4	
4-Methyl-2-pentanone	ug/L	<10	<10	<10	<10	<10	<10	**120,000**
4-Nitroaniline	ug/L			<48			<47	
4-Nitrophenol	ug/L			<48			<47	
Acenaphthene	ug/L			<9.5			<9.4	
Acenaphthylene	ug/L			<9.5			<9.4	
Acetone	ug/L	<50	<50	<25	<50	<50	<25	**290,000**
Anthracene	ug/L			<9.5			<9.4	
Benzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	**290**
Benzo[a]anthracene	ug/L			<9.5			<9.4	
Benzo[a]pyrene	ug/L			<9.5			<9.4	
Benzo[b]fluoranthene	ug/L			<9.5			<9.4	
Benzo[g,h,i]perylene	ug/L			<9.5			<9.4	
Benzo[k]fluoranthene	ug/L			<9.5			<9.4	
Benzoic acid	ug/L			<48			<47	
Bis(2-chloroethoxy)methane	ug/L			<9.5			<9.4	
Bis(2-chloroethyl)ether	ug/L			<9.5			<9.4	
Bis(2-ethylhexyl) phthalate	ug/L			<9.5			<9.4	
bis(chloroisopropyl) ether	ug/L			<9.5			<9.4	
Bromoform	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Bromomethane	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Butyl benzyl phthalate	ug/L			<9.5			<9.4	

TABLE 5: SUMMARY OF M & TABLE 5: SUMMARY OF M & J SOLVENTS SITE-SPECIFIC VOCs and SVOCs ANALYZED IN BFEL MONITORING WELLS

Well	MW-104D	MW-110	MW-119	MW-120	TW-3	TW-5	TW-7
Date Sampled	9/15/2010	11/12/2014	11/18/2014	11/19/2014	11/13/2014	11/13/2014	11/18/2014
Lithology Screened	Shallow Fractured Bedrock	Shallow Fractured Bedrock	Residual Soil	Shallow Fractured Bedrock	Residual Soil	Residual Soil	Residual Soil
Constituent							
1,1,1,2-Tetrachloroethane	<200						
1,1,1-Trichloroethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloropropene	<200						
1,2,3-Trichlorobenzene	<1000						
1,2,3-Trichloropropane	<200						
1,2,4-Trichlorobenzene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2,4-Trichlorobenzene	<1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromoethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dibromo-3-chloropropane		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	<1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Diphenylhydrazine	<1000						
1,3-Dichlorobenzene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	<1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichloropropane	<200						
1,4-Dichlorobenzene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	<1000						
1,4-Dioxane	**11000**	<150		**420**			
2,4,5-Trichlorophenol	<1000						
2,4,6-Trichlorophenol	<1000						
2,4-Dichlorophenol	<1000						
2,4-Dimethylphenol	<1000						
2,4-Dinitrophenol	<5000						
2,4-Dinitrotoluene	<1000						
2,6-Dinitrotoluene	<1000						
2-Butanone	**380000**	<50	<50	<50	<50	<50	<50
2-Chloronaphthalene	<1000						
2-Chlorophenol	<1000						
2-Hexanone		<10	<10	<10	<10	<10	<10
2-Methylphenol	<1000						
2-Nitrophenol	<1000						
3 & 4 Methylphenol	<1000						
3,3'-Dichlorobenzidine	<6000						
4,6-Dinitro-2-methylphenol	<5000						
4-Bromophenyl phenyl ether	<1000						
4-Chloro-3-methylphenol	<1000						
4-Chloroaniline	<2000						
4-Chlorophenyl phenyl ether	<1000						
4-Methyl-2-pentanone	**140000**	<10	<10	<10	<10	<10	<10
4-Nitroaniline	<5000						
4-Nitrophenol	<5000						
Acenaphthene	<1000						
Acenaphthylene	<1000						
Acetone	**370000**	<50	<50	<50	<50	<50	<50
Anthracene	<1000						
Benzene	**330**	<5.0	<5.0	<5.0	**8.6**	<5.0	<5.0
Benzo[a]anthracene	<1000						
Benzo[a]pyrene	<1000						
Benzo[b]fluoranthene	<1000						
Benzo[g,h,i]perylene	<1000						
Benzo[k]fluoranthene	<1000						
Benzoic acid	<5000						
Bis(2-chloroethoxy)methane	<1000						
Bis(2-chloroethyl)ether	<1000						
Bis(2-ethylhexyl) phthalate	<1000						
bis(chloroisopropyl) ether	<1000						
Bromoform		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	<1000						

TABLE 5: SUMMARY OF M & J SOLVENTS SITE-SPECIFIC VOCs and SVOCs ANALYZED IN BFEL MONITORING WELLS

Well		MW-1B	MW-22	MW-22	MW-101	MW-104A	MW-104A	MW-104D
Date Sampled		11/11/2014	11/12/2014	9/13/2010	11/11/2014	11/12/2014	9/15/2010	11/13/2014
Lithology Screened		Residual Soil	Residual Soil	Residual Soil	Residual Soil	Residual Soil	Residual Soil	Shallow Fractured Bedrock
Carbon tetrachloride	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Carbon Disulfide	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Chlorobenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Chloroethane	ug/L	<10	<10	<1	<10	<10	<1	<500
Chloroform	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Chloromethane	ug/L	<10	<10	<1	<10	<10	<1	<500
Chrysene	ug/L			<9.5			<9.4	
cis-1,2-Dichloroethene	ug/L	<5.0	**9.2**	**2.7**	<5.0	<5.0	<1	<250
cis-1,3-Dichloropropene		<5.0	<5.0		<5.0	<5.0		<250
Cyclohexane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Dibenz(a,h)anthracene	ug/L			<9.5			<9.4	
Dibromochloromethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Dibromomethane	ug/L			<1			<1	
Dichlorobromomethane	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Dichlorodifluoromethane	ug/L	<10	<10	<1	<10	<10	<1	<500
Diethyl phthalate	ug/L			<9.5			<9.4	
Dimethyl phthalate	ug/L			<9.5			<9.4	
Di-n-octyl phthalate	ug/L			<9.5			<9.4	
Ethylbenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	**4300**
Fluoranthene	ug/L			<9.5			<9.4	
Fluorene	ug/L			<9.5			<9.4	
Freon-113	ug/L	<10	<10		<10	<10		<500
Hexachloro-1,3-butadiene	ug/L			<1			<1	
Hexachloro-1,3-butadiene	ug/L			<9.5			<9.4	
Hexachlorobenzene	ug/L			<9.5			<9.4	
Hexachlorocyclopentadiene	ug/L			<9.5			<9.4	
Hexachloroethane	ug/L			<9.5			<9.4	
Indeno[1,2,3-cd]pyrene	ug/L			<9.5			<9.4	
Isophorone	ug/L			<9.5			<9.4	
Isopropylbenzene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Methyl acetate	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Methyl tert-butyl ether	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Methylcyclohexane	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Methylene Chloride	ug/L	<5.0	<5.0	<5	<5.0	<5.0	<5	<250
Naphthalene	ug/L			<5			<5	
Naphthalene	ug/L			<9.5			<9.4	
Nitrobenzene	ug/L			<9.5			<9.4	
Pentachlorophenol	ug/L			<48			<47	
Phenanthrene	ug/L			<9.5			<9.4	
Phenol	ug/L			<9.5			<9.4	
Pyrene	ug/L			<9.5			<9.4	
Styrene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Tetrachloroethene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Tetrahydrofuran	ug/L			<10			<10	
Toluene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	**67000**
trans-1,2-Dichloroethene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
trans-1,3-Dichloropropene	ug/L	<5.0	<5.0		<5.0	<5.0		<250
Trichloroethene	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Trichlorofluoromethane	ug/L	<5.0	<5.0	<1	<5.0	<5.0	<1	<250
Vinyl chloride	ug/L	<2.0	<2.0	<1	<2.0	<2.0	<1	<100
Xylenes, Total	ug/L			<1			<2	
m&p-Xylenes	ug/L	<5.0	<5.0		<5.0	<5.0		**15000**
o-Xylenes	ug/L	<5.0	<5.0		<5.0	<5.0		**4700**
Total VOCs	ug/L	BDL	9.2	2.7	BDL	BDL	73	763,190

TABLE 5: SUMMARY OF M & TABLE 5: SUMMARY OF M & J SOLVENTS SITE-SPECIFIC VOCs and SVOCs ANALYZED IN BFEL MONITORING WELLS

Well	MW-104D	MW-110	MW-119	MW-120	TW-3	TW-5	TW-7
Date Sampled	9/15/2010	11/12/2014	11/18/2014	11/19/2014	11/13/2014	11/13/2014	11/18/2014
Lithology Screened	Shallow Fractured Bedrock	Shallow Fractured Bedrock	Residual Soil	Shallow Fractured Bedrock	Residual Soil	Residual Soil	Residual Soil
Carbon tetrachloride	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Carbon Disulfide		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chlorobenzene	<200	<5.0	<5.0	**0.87 J**	**14**	<5.0	<5.0
Chloroethane	**390**	<10	<10	<10	<10	<10	<10
Chloroform	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloromethane	<200	<10	<10	<10	<10	<10	<10
Chrysene	<1000						
cis-1,2-Dichloroethene	<200	<5.0	<5.0	**7.6**	**200**	<5.0	<5.0
cis-1,3-Dichloropropene		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cyclohexane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,h)anthracene	<1000						
Dibromochloromethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibromomethane	<200						
Dichlorobromomethane		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dichlorodifluoromethane	<200	<10	<10	<10	<10	<10	<10
Diethyl phthalate	<1000						
Dimethyl phthalate	<1000						
Di-n-octyl phthalate	<1000						
Ethylbenzene	**3900**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Fluoranthene	<1000						
Fluorene	<1000						
Freon-113		<10	<10	<10	<10	<10	<10
Hexachloro-1,3-butadiene	<200						
Hexachloro-1,3-butadiene	<1000						
Hexachlorobenzene	<1000						
Hexachlorocyclopentadiene	<1000						
Hexachloroethane	<1000						
Indeno[1,2,3-cd]pyrene	<1000						
Isophorone	<1000						
Isopropylbenzene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl acetate		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methylcyclohexane		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride	<1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	<1000						
Naphthalene	<1000						
Nitrobenzene	<1000						
Pentachlorophenol	<5000						
Phenanthrene	<1000						
Phenol	<1000						
Pyrene	<1000						
Styrene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrahydrofuran	**69000**						
Toluene	**62000**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene	<200	<5.0	<5.0	**3.4 J**	<5.0	<5.0	<5.0
Trichlorofluoromethane	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	<200	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Xylenes, Total	**18000**						
m&p-Xylenes		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
o-Xylenes		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Total VOCs	1,054,620	BDL	BDL	431.87	222.6	BDL	BDL

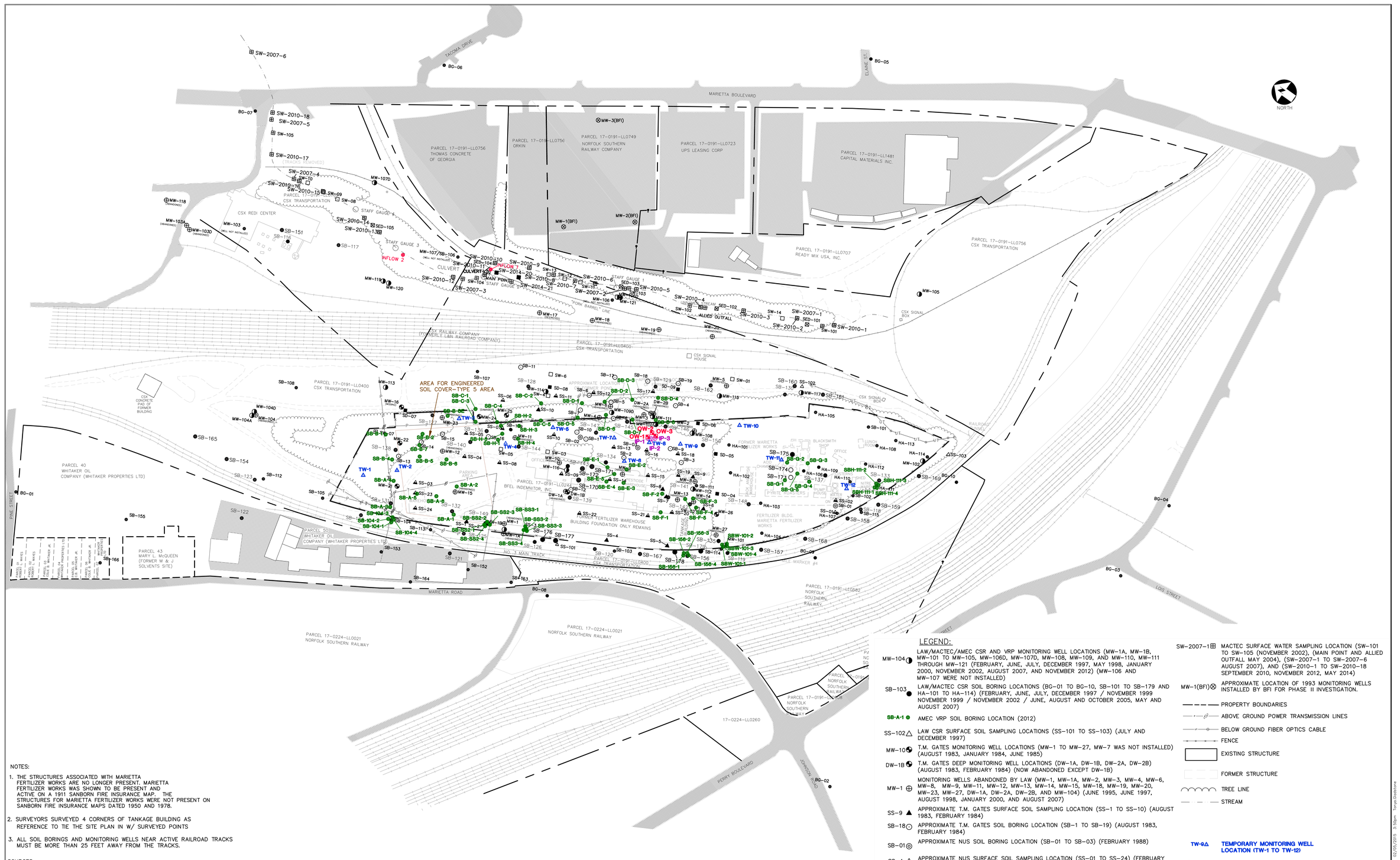
Notes:
ug/L = micrograms per liter
Bolded concentrations are detected constituents
VOCs = volatile organic compounds analyzed by USEPA method 8260B
SVOCs = Semi-volatile organic compounds analyzed by USEPA method 8270C

Prepared by: DP 1/16/2015
Checked by: RNQ 1/21/2015

TABLE 6: SUMMARY OF HOURS INVOICED AND DESCRIPTION OF SERVICES FOR DOCUMENTATION OF PE DIRECT OVERSIGHT FOR VOLUNTARY REMEDIATION PROGRAM ACTIVITIES

	Hours Invoiced	Billing Period	Invoice #	Description of Services
Gregory J. Wrenn, P.E.	15	07/12/2014-08/22/2014	H081001390	Prepared final version of August 2014 VRP Status Report. Prepared for meeting with client and EPD. Initiated work plan for pumping test and limestone treatability testing.
Total Project Hours for Billing Period	76.3		8/29/2014	
Gregory J. Wrenn, P.E.	15.0	08/23/2014-09/19/2014	H081001507	Prepared updated schedule for VRP Implementation. Conducted site walk with BFEL representatives. Prepared for and attended September 18 meeting with EPD to discuss Revised voluntary Remediation Plan.
Total Project Hours for Billing Period	37		9/25/2014	
Gregory J. Wrenn, P.E.	4.5	09/20/2014-10/17/2014	H081001601	Reviewed EPD's October 7 comment letter on Status Reports Nos. 4 and 5. Follow-up discussions on path forward after September 18 EPD meetingt and receipt of EPD comment letter. Obtained and evaluated recent data from upgradient M&J Solvents/Whitaker Oil properties as initial step to evaluating the potential of a VOC impact on the Estech property.
Total Project Hours for Billing Period	23.4		10/29/2014	
Gregory J. Wrenn, P.E.	4.0	10/18/2014-11/14/2014	H081001666	Coordinated and conducted second semi-annual groundwater and surface water sampling event, including additional VOC constituents to evaluate impacts from M&J Solvents/Whitaker Oil properties. Discussed EPD October 7 comment letter with BFEL. Obtained and evaluated concentrationa nd groudnwater flow data from upgradient M&J Solvents/Whitaker Oil properties and created combined site map with all known well locations.
Total Project Hours for Billing Period	163.9		12/1/2014	
Gregory J. Wrenn, P.E.	2	11/15/2014-12/12/2014	H081001697	Coordinated and conducted second semi-annual groundwater and surface water sampling event including additiona VOC constituents. Reviewed EPD's December 1 comment letter on RRS, UCLs and EPC values from recent VRP Status Reports. Obtained and evaluated VOC concentrations and groundwater flow data and prepared site plan showing groundwater flow and VOC concentrations on M&J Solvents site and Estech property.
Total Project Hours for Billing Period	78.8		12/18/2014	
Gregory J. Wrenn, P.E.	3.0	12/13/2014-1/23/2015	H081001783	Evaluation of field and laboratory data, preparation of potentiometric and delineation maps for VRP Status Report No. 6. Preparation of responses to EPD October 7 and December 1, 2014 comments on Status Reports Nos. 4 and 5.
Total Project Hours for Billing Period	105.8		1/30/2015	
Total Hours for PE Gregory J. Wrenn	**43.5**			
Total Project Hours	**485.2**			

FIGURES



NOTES:

1. THE STRUCTURES ASSOCIATED WITH MARIETTA FERTILIZER WORKS ARE NO LONGER PRESENT. MARIETTA FERTILIZER WORKS WAS SHOWN TO BE PRESENT AND ACTIVE ON A 1911 SANBORN FIRE INSURANCE MAP. THE STRUCTURES FOR MARIETTA FERTILIZER WORKS WERE NOT PRESENT ON SANBORN FIRE INSURANCE MAPS DATED 1950 AND 1978.
2. SURVEYORS SURVEYED 4 CORNERS OF TANKAGE BUILDING AS REFERENCE TO TIE THE SITE PLAN IN W/ SURVEYED POINTS
3. ALL SOIL BORINGS AND MONITORING WELLS NEAR ACTIVE RAILROAD TRACKS MUST BE MORE THAN 25 FEET AWAY FROM THE TRACKS.

SOURCES:

1. T.M. GATES REPORTS 1986
2. NUS CORPORATION SITE INVESTIGATION REPORT, AUGUST 1988.
3. TOPOGRAPHIC SURVEY MAP PREPARED FOR BFEL BY TRAVIS PRUITT AND ASSOCIATES, DECEMBER 19, 1989.
4. AERIAL PHOTOGRAPH AND COMPOSITE PLAT BY BLUE RIDGE ENGINEERING, DECEMBER 10, 1996.
5. BOUNDARY SURVEY BY W.L. JORDEN AND COMPANY, APRIL 2, 1997. LAW CSR SOIL BORINGS AND MONITORING WELLS SURVEYED BY W.L. JORDEN IN 1997, 1998, 1999, AND 2000.
6. MARIETTA FERTILIZER WORKS STRUCTURES FROM SANBORN FIRE INSURANCE MAP 1911.
7. MACTEC/LAW CSR SOIL BORINGS AND MONITORING WELLS (2002-2007) AND SURFACE WATER LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING INC.
8. PROPERTY OWNERS SHOWN ARE BASED ON 1996 FULTON COUNTY TAX RECORDS
9. WHITAKER AND MARY L. McQUEEN PROPERTY BOUNDARIES WERE REVISED AND ARE APPROXIMATE AND ARE BASED ON FULTON COUNTY BOARD OF ASSESSORS RECORDS 2004-2005 AT www.fultonassessor.org

CADD NOTE: DRAWING XREFS ROTATED @ 0,0; 55° FROM SURVEY FILE COORDINATE POSITION.

LEGEND:

- MW-104 ◑ LAW/MACTEC/AMEC CSR AND VRP MONITORING WELL LOCATIONS (MW-1A, MW-1B, MW-101 TO MW-105, MW-106D, MW-107D, MW-108, MW-109, AND MW-110, MW-111 THROUGH MW-121 (FEBRUARY, JUNE, JULY, DECEMBER 1997, MAY 1998, JANUARY 2000, NOVEMBER 2002, AUGUST 2007, AND NOVEMBER 2012) (MW-106 AND MW-107 WERE NOT INSTALLED)
- SB-103 ● LAW/MACTEC CSR SOIL BORING LOCATIONS (BG-01 TO BG-10, SB-101 TO SB-179 AND HA-101 TO HA-114) (FEBRUARY, JUNE, JULY, DECEMBER 1997 / NOVEMBER 1999 NOVEMBER 1999 / NOVEMBER 2002 / JUNE, AUGUST AND OCTOBER 2005, MAY AND AUGUST 2007)
- SB-A-1 ● AMEC VRP SOIL BORING LOCATION (2012)
- SS-102 △ LAW CSR SURFACE SOIL SAMPLING LOCATIONS (SS-101 TO SS-103) (JULY AND DECEMBER 1997)
- MW-10 ◔ T.M. GATES MONITORING WELL LOCATIONS (MW-1 TO MW-27, MW-7 WAS NOT INSTALLED) (AUGUST 1983, JANUARY 1984, JUNE 1985)
- DW-1B ◔ T.M. GATES DEEP MONITORING WELL LOCATIONS (DW-1A, DW-1B, DW-2A, DW-2B) (AUGUST 1983, FEBRUARY 1984) (NOW ABANDONED EXCEPT DW-1B)
- MW-1 ⊕ MONITORING WELLS ABANDONED BY LAW (MW-1, MW-1A, MW-2, MW-3, MW-4, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, AND MW-104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AND AUGUST 2007)
- SS-9 ▲ APPROXIMATE T.M. GATES SURFACE SOIL SAMPLING LOCATION (SS-1 TO SS-10) (AUGUST 1983, FEBRUARY 1984)
- SB-18 ⊙ APPROXIMATE T.M. GATES SOIL BORING LOCATION (SB-1 TO SB-19) (AUGUST 1983, FEBRUARY 1984)
- SB-01 ◎ APPROXIMATE NUS SOIL BORING LOCATION (SB-01 TO SB-03) (FEBRUARY 1988)
- SS-4 ▲ APPROXIMATE NUS SURFACE SOIL SAMPLING LOCATION (SS-01 TO SS-24) (FEBRUARY 1988)
- SD-4 ■ APPROXIMATE NUS SEDIMENT SAMPLING LOCATION (SD-01 TO SD-03 OFF-SITE, SD-04 TO SD-09 ON-SITE) (FEBRUARY 1988)
- SW-4 □ APPROXIMATE T.M. GATES SURFACE WATER SAMPLING LOCATION (SW-01 TO SW-14 ON-SITE, SW-15 TO SW-17 OFF-SITE) (APRIL 1985)
- ○ STAFF GAUGE
- SED-101 ⊠ MACTEC SEDIMENT SAMPLING LOCATION (SED-101 TO SED-105 AND APPROXIMATE LOCATION OF MAIN POINT) (JANUARY 2000 AND MAY 2004)
- SW-2007-1 ⊞ MACTEC SURFACE WATER SAMPLING LOCATION (SW-101 TO SW-105 (NOVEMBER 2002), (MAIN POINT AND ALLIED OUTFALL MAY 2004), (SW-2007-1 TO SW-2007-6 AUGUST 2007), AND (SW-2010-1 TO SW-2010-18 SEPTEMBER 2010, NOVEMBER 2012, MAY 2014)
- MW-1(BFI) ⊗ APPROXIMATE LOCATION OF 1993 MONITORING WELLS INSTALLED BY BFI FOR PHASE II INVESTIGATION.
- PROPERTY BOUNDARIES
- ABOVE GROUND POWER TRANSMISSION LINES
- BELOW GROUND FIBER OPTICS CABLE
- FENCE
- EXISTING STRUCTURE
- FORMER STRUCTURE
- TREE LINE
- STREAM
- TW-9△ TEMPORARY MONITORING WELL LOCATION (TW-1 TO TW-12)
- OW-3⊠ OBSERVATION WELL FOR INJECTION PILOT STUDY (OW-1 - OW-3)
- IP-3 ① INJECTION POINT
- ● APPROXIMATE LOCATION INFLOW SAMPLES

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED G. WRENN
IN CHARGE G. WRENN
DATE 8/4/2014

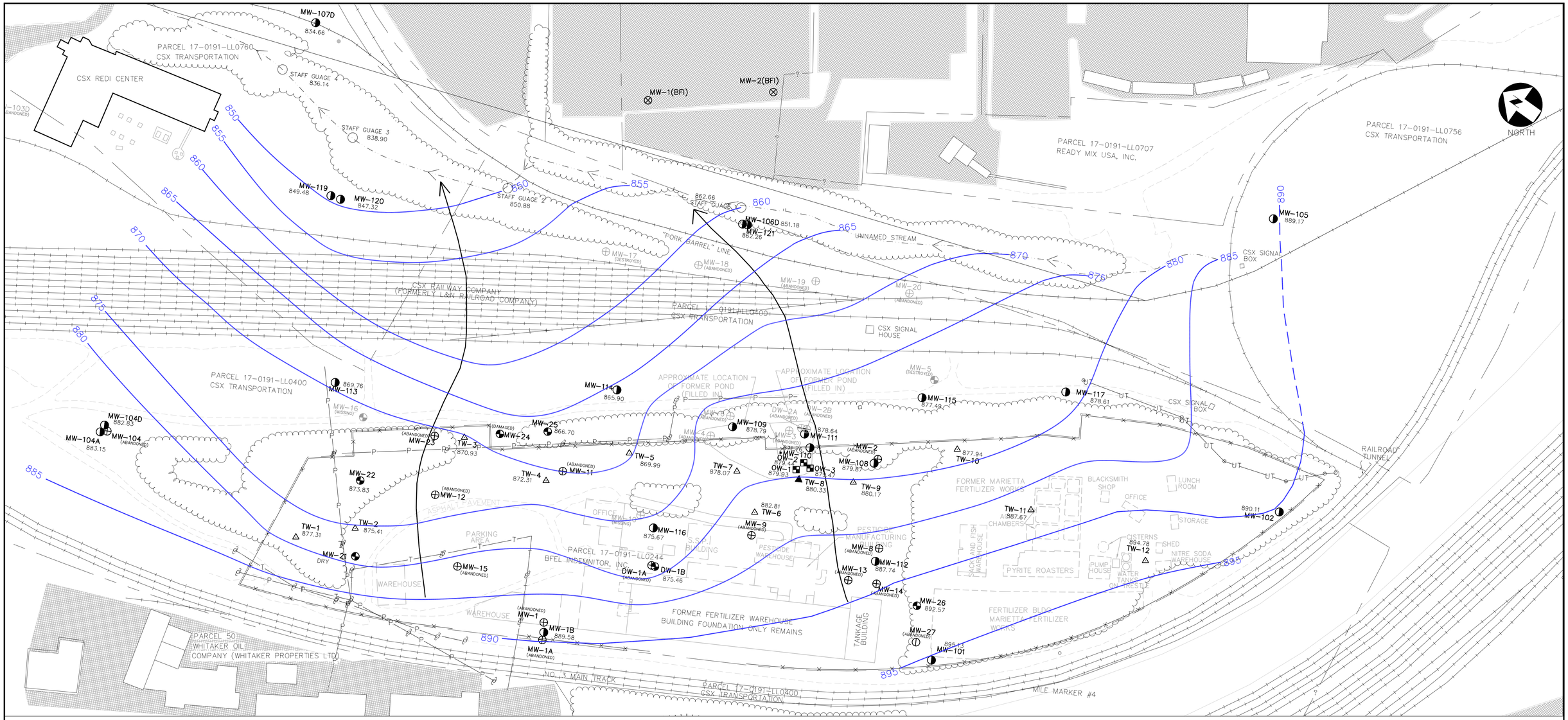
FORMER ESTECH GENERAL CHEMICALS SITE
ATLANTA, GEORGIA

AMEC Environment & Infrastructure, Inc.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

SOIL AND GROUNDWATER SAMPLING LOCATIONS

SCALE AS SHOWN
CONTRACT 6122-08-0154
DWG NO. 1 REV PAGE NO

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NOTES:

1. THE STRUCTURES ASSOCIATED WITH MARIETTA FERTILIZER WORKS ARE NO LONGER PRESENT. MARIETTA FERTILIZER WORKS WAS SHOWN TO BE PRESENT AND ACTIVE ON A 1911 SANBORN FIRE INSURANCE MAP. THE STRUCTURES FOR MARIETTA FERTILIZER WORKS WERE NOT PRESENT ON SANBORN FIRE INSURANCE MAPS DATED 1950 AND 1978.
2. SURVEYORS SURVEYED 4 CORNERS OF TANKAGE BUILDING AS REFERENCE TO TIE THE SITE PLAN IN W/ SURVEYED POINTS
3. ALL SOIL BORINGS AND MONITORING WELLS NEAR ACTIVE RAILROAD TRACKS MUST BE AT LEAST 25 FEET AWAY FROM THE TRACKS.

SOURCES:

1. T.M. GATES REPORTS 1986
2. NUS CORPORATION SITE INVESTIGATION REPORT, AUGUST 1988.
3. TOPOGRAPHIC SURVEY MAP PREPARED FOR BFEL BY TRAVIS PRUITT AND ASSOCIATES, DECEMBER 19, 1989.
4. AERIAL PHOTOGRAPH AND COMPOSITE PLAT BY BLUE RIDGE ENGINEERING, DECEMBER 10, 1996.
5. BOUNDARY SURVEY BY W.L. JORDEN AND COMPANY, APRIL 2, 1997. LAW CSR SOIL BORINGS AND MONITORING WELLS SURVEYED BY W.L. JORDEN IN 1997, 1998, 1999, AND 2000.
6. MARIETTA FERTILIZER WORKS STRUCTURES FROM SANBORN FIRE INSURANCE MAP 1911.
7. AMEC/MACTEC/LAW CSR AND VRP SOIL BORINGS AND MONITORING WELLS (2002–2012) AND SURFACE WATER LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING INC. AND AMEC
8. PROPERTY OWNERS SHOWN ARE BASED ON 1996 FULTON COUNTY TAX RECORDS
9. WHITAKER AND MARY L. McQUEEN PROPERTY BOUNDARIES WERE REVISED AND ARE APPROXIMATE AND ARE BASED ON FULTON COUNTY BOARD OF ASSESSORS RECORDS 2004–2005 AT www.fultonassessor.org

CADD NOTE: DRAWING XREFS ROTATED @ 0,0; 55° FROM SURVEY FILE COORDINATE POSITION.

LEGEND:

MW-104 — LAW/MACTEC/AMEC/ CSR AND VRP MONITORING WELL LOCATIONS (MW-1A, MW-1B, MW-101 TO MW-105, MW-106D, MW-107D, MW-108, MW-109, AND MW-110, MW-111 THROUGH MW-121 (FEBRUARY, JUNE, JULY, DECEMBER 1997, MAY 1998, JANUARY 2000, NOVEMBER 2002, AND AUGUST 2007, AND NOVEMBER–DECEMBER 2012, (MW-106 AND MW-107 WERE NOT INSTALLED)

MW-10 — T.M. GATES MONITORING WELL LOCATIONS (MW-1 TO MW-27, MW-7 WAS NOT INSTALLED) (AUGUST 1983, JANUARY 1984, JUNE 1985)

DW-1B — T.M. GATES DEEP MONITORING WELL LOCATIONS (DW-1A, DW-1B, DW-2A, DW-2B) (AUGUST 1983, FEBRUARY 1984)

TW-10 — TEMPORARY MONITORING WELL LOCATIONS (TW-1 THROUGH TW-12) (MAY 2012) AND (OW-1 THROUGH OW-3) (JANUARY 2013)

MW-19 — MONITORING WELLS ABANDONED (MW-1, MW-1A, MW-2, MW-3, MW-4, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, AND MW-104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AUGUST 2007). MW-103A, MW-103D AND MW-118 ABANDONED BY CSX, FEBRUARY 2008.

- EXISTING STRUCTURE
- FORMER STRUCTURE
- TREE LINE
- STREAM
- 890 — POTENTIOMETRIC SURFACE CONTOUR (FEET, NGVD)
- INTERPRETED GROUND-WATER FLOW DIRECTION
- 866.05 — GROUNDWATER ELEVATION (FEET, NGVD)
- * 860.92 — GROUNDWATER ELEVATIONS IN WELLS NOT USED TO CALCULATE POTENTIOMETRIC SURFACE
- MW-1(BFI) — MONITORING WELLS INSTALLED FOR 1993 PHASE II INVESTIGATION CSX PROPERTY.
- STREAM GAUGE
- PROPERTY BOUNDARIES
- ABOVEGROUND POWER TRANSMISSION LINES
- BELOWGROUND FIBER OPTICS CABLE
- FENCE

SCALE IN FEET
0 100 200

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DESIGNED M. ANDREWS
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE G. WRENN
DATE 2/4/2015

FORMER ESTECH GENERAL CHEMICALS SITE

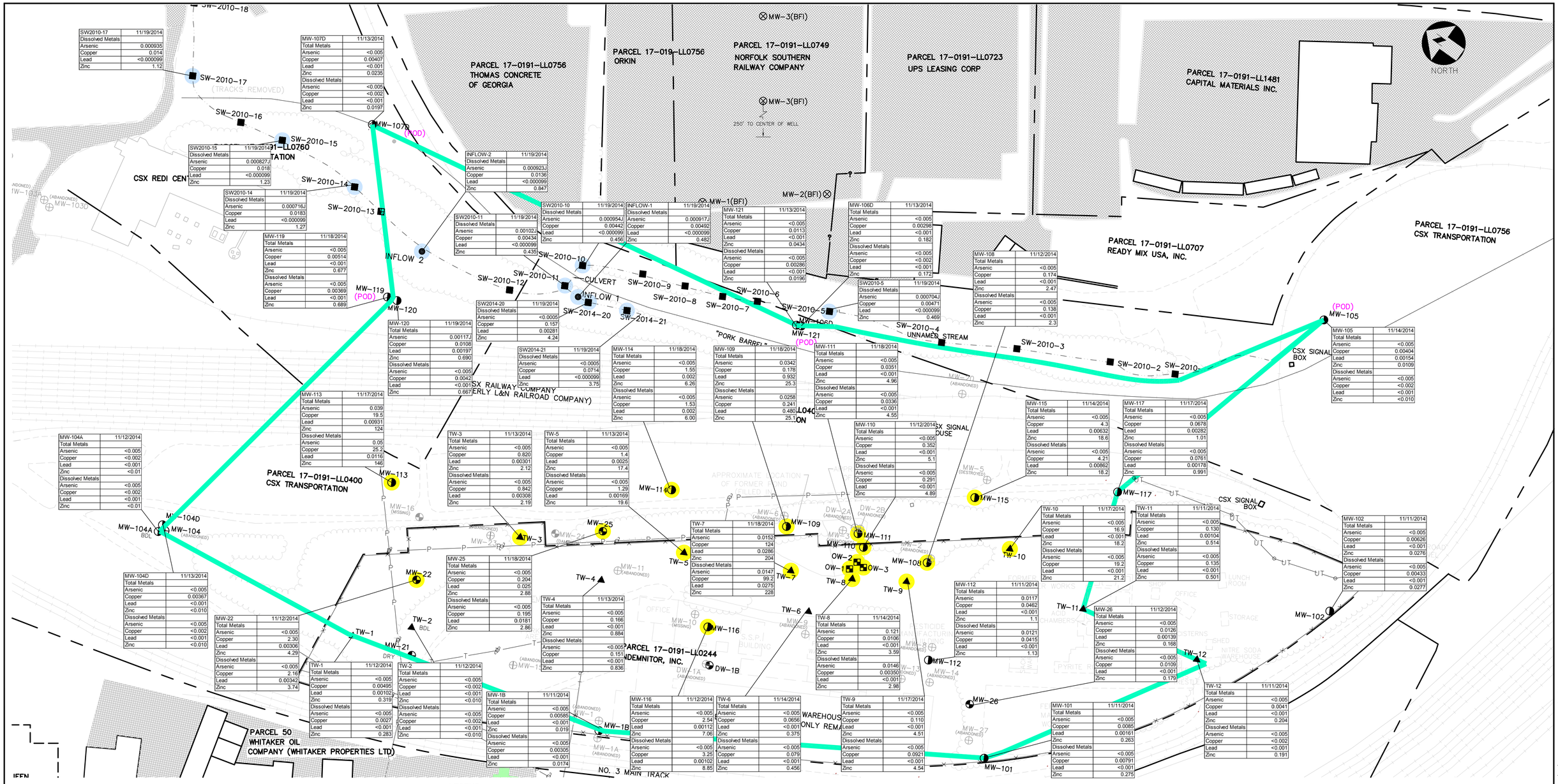
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1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

POTENTIOMETRIC SURFACE OCTOBER 2014

SCALE: AS SHOWN
CONTRACT: 6122-08-0154
DWG. NO.: FIG. 2
REV:
PAGE NO.:

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SW2010-17	11/19/2014
Dissolved Metals	
Arsenic	0.000935
Copper	0.014
Lead	<0.000099
Zinc	<0.01

MW-107D	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.00407
Lead	<0.001
Zinc	0.0235
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	0.0197

SW2010-15	11/19/2014
Dissolved Metals	
Arsenic	0.000827J
Copper	0.018
Lead	<0.000099
Zinc	1.23

SW2010-14	11/19/2014
Dissolved Metals	
Arsenic	0.000716J
Copper	0.0183
Lead	<0.000099
Zinc	1.27

MW-119	11/18/2014
Total Metals	
Arsenic	<0.005
Copper	0.00514
Lead	<0.001
Zinc	0.677
Dissolved Metals	
Arsenic	<0.005
Copper	0.00369
Lead	<0.001
Zinc	0.689

INFLOW-2	11/19/2014
Dissolved Metals	
Arsenic	0.000923J
Copper	0.0136
Lead	<0.000099
Zinc	0.847

SW2010-11	11/19/2014
Dissolved Metals	
Arsenic	0.00102J
Copper	0.00434
Lead	<0.000099
Zinc	0.435

SW2010-10	11/19/2014
Dissolved Metals	
Arsenic	0.000954J
Copper	0.00442
Lead	<0.000099
Zinc	0.456

INFLOW-1	11/19/2014
Dissolved Metals	
Arsenic	0.000917J
Copper	0.00492
Lead	<0.000099
Zinc	0.482

MW-121	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.0113
Lead	<0.001
Zinc	0.0434
Dissolved Metals	
Arsenic	<0.005
Copper	0.00286
Lead	<0.001
Zinc	0.0196

MW-106D	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.00298
Lead	<0.001
Zinc	0.182
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	0.172

MW-108	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	0.174
Lead	<0.001
Zinc	2.47
Dissolved Metals	
Arsenic	<0.005
Copper	0.138
Lead	<0.001
Zinc	2.3

SW2010-5	11/19/2014
Dissolved Metals	
Arsenic	0.000704J
Copper	0.00471
Lead	<0.000099
Zinc	0.469

MW-105	11/14/2014
Total Metals	
Arsenic	<0.005
Copper	0.00404
Lead	0.00154
Zinc	0.0109
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.010

MW-120	11/19/2014
Total Metals	
Arsenic	0.00117J
Copper	0.0108
Lead	0.00197
Zinc	0.690
Dissolved Metals	
Arsenic	<0.005
Copper	0.0042
Lead	<0.001
Zinc	0.667

SW2014-20	11/19/2014
Dissolved Metals	
Arsenic	<0.0005
Copper	0.157
Lead	0.00281
Zinc	4.24

SW2014-21	11/19/2014
Dissolved Metals	
Arsenic	<0.0005
Copper	0.0714
Lead	<0.000099
Zinc	3.75

MW-114	11/18/2014
Total Metals	
Arsenic	<0.005
Copper	1.55
Lead	0.002
Zinc	6.26
Dissolved Metals	
Arsenic	<0.005
Copper	1.53
Lead	0.002
Zinc	6.00

MW-109	11/18/2014
Total Metals	
Arsenic	0.0342
Copper	0.178
Lead	0.932
Zinc	25.3
Dissolved Metals	
Arsenic	0.0258
Copper	0.241
Lead	0.480
Zinc	25.1

MW-111	11/18/2014
Total Metals	
Arsenic	<0.005
Copper	0.0351
Lead	<0.001
Zinc	4.96
Dissolved Metals	
Arsenic	<0.005
Copper	0.0336
Lead	<0.001
Zinc	4.55

MW-110	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	0.352
Lead	<0.001
Zinc	5.1
Dissolved Metals	
Arsenic	<0.005
Copper	0.291
Lead	<0.001
Zinc	4.89

MW-115	11/14/2014
Total Metals	
Arsenic	<0.005
Copper	4.3
Lead	0.00632
Zinc	18.6
Dissolved Metals	
Arsenic	<0.005
Copper	4.21
Lead	0.00862
Zinc	18.2

MW-117	11/17/2014
Total Metals	
Arsenic	<0.005
Copper	0.0678
Lead	0.00282
Zinc	1.01
Dissolved Metals	
Arsenic	<0.005
Copper	0.0761
Lead	0.00178
Zinc	0.991

MW-113	11/17/2014
Total Metals	
Arsenic	0.039
Copper	19.5
Lead	0.00931
Zinc	124
Dissolved Metals	
Arsenic	0.05
Copper	25.2
Lead	0.0116
Zinc	146

TW-3	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.820
Lead	0.00301
Zinc	2.12
Dissolved Metals	
Arsenic	<0.005
Copper	0.842
Lead	0.00308
Zinc	2.19

TW-5	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	1.4
Lead	0.0025
Zinc	17.4
Dissolved Metals	
Arsenic	<0.005
Copper	1.29
Lead	0.00169
Zinc	19.6

MW-104A	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.01
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.01

MW-104D	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.00367
Lead	<0.001
Zinc	<0.010
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.010

MW-22	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	2.30
Lead	0.00306
Zinc	4.29
Dissolved Metals	
Arsenic	<0.005
Copper	2.16
Lead	0.00342
Zinc	3.74

TW-1	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	0.00495
Lead	0.00102
Zinc	0.319
Dissolved Metals	
Arsenic	<0.005
Copper	0.0027
Lead	<0.001
Zinc	0.283

TW-2	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.010
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	<0.010

MW-25	11/18/2014
Total Metals	
Arsenic	<0.005
Copper	0.204
Lead	0.025
Zinc	2.88
Dissolved Metals	
Arsenic	<0.005
Copper	0.195
Lead	0.0181
Zinc	2.86

TW-4	11/13/2014
Total Metals	
Arsenic	<0.005
Copper	0.166
Lead	<0.001
Zinc	0.884
Dissolved Metals	
Arsenic	<0.005
Copper	0.151
Lead	<0.001
Zinc	0.836

MW-1B	11/11/2014
Total Metals	
Arsenic	<0.005
Copper	0.00585
Lead	<0.001
Zinc	0.019
Dissolved Metals	
Arsenic	<0.005
Copper	0.00305
Lead	<0.001
Zinc	0.0174

MW-116	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	2.54
Lead	0.00112
Zinc	7.06
Dissolved Metals	
Arsenic	<0.005
Copper	3.25
Lead	0.00102
Zinc	8.85

TW-6	11/14/2014
Total Metals	
Arsenic	<0.005
Copper	0.0656
Lead	<0.001
Zinc	0.375
Dissolved Metals	
Arsenic	<0.005
Copper	0.079
Lead	<0.001
Zinc	0.456

TW-7	11/18/2014
Total Metals	
Arsenic	0.0152
Copper	124
Lead	0.0286
Zinc	204
Dissolved Metals	
Arsenic	0.0147
Copper	99.2
Lead	0.0275
Zinc	228

TW-8	11/14/2014
Total Metals	
Arsenic	0.121
Copper	0.0106
Lead	<0.001
Zinc	3.59
Dissolved Metals	
Arsenic	0.0146
Copper	0.00350
Lead	<0.001
Zinc	2.98

TW-9	11/17/2014
Total Metals	
Arsenic	<0.005
Copper	0.110
Lead	<0.001
Zinc	4.51
Dissolved Metals	
Arsenic	<0.005
Copper	0.0921
Lead	<0.001
Zinc	4.54

TW-10	11/17/2014
Total Metals	
Arsenic	<0.005
Copper	16.9
Lead	<0.001
Zinc	18.2
Dissolved Metals	
Arsenic	<0.005
Copper	19.2
Lead	<0.001
Zinc	21.2

TW-11	11/11/2014
Total Metals	
Arsenic	<0.005
Copper	0.130
Lead	0.00104
Zinc	0.514
Dissolved Metals	
Arsenic	<0.005
Copper	0.135
Lead	<0.001
Zinc	0.501

MW-112	11/11/2014
Total Metals	
Arsenic	0.0117
Copper	0.0462
Lead	<0.001
Zinc	1.1
Dissolved Metals	
Arsenic	0.0121
Copper	0.0415
Lead	<0.001
Zinc	1.13

MW-26	11/12/2014
Total Metals	
Arsenic	<0.005
Copper	0.0126
Lead	0.00139
Zinc	0.168
Dissolved Metals	
Arsenic	<0.005
Copper	0.0109
Lead	<0.001
Zinc	0.179

MW-101	11/11/2014
Total Metals	
Arsenic	<0.005
Copper	0.0085
Lead	0.00161
Zinc	0.263
Dissolved Metals	
Arsenic	<0.005
Copper	0.00791
Lead	<0.001
Zinc	0.275

MW-102	11/11/2014
Total Metals	
Arsenic	<0.005
Copper	0.00626
Lead	<0.001
Zinc	0.0276
Dissolved Metals	
Arsenic	<0.005
Copper	0.00433
Lead	<0.001
Zinc	0.0277

TW-12	11/11/2014
Total Metals	
Arsenic	<0.005
Copper	0.0041
Lead	<0.001
Zinc	0.204
Dissolved Metals	
Arsenic	<0.005
Copper	<0.002
Lead	<0.001
Zinc	0.191

LEGEND:

LAW/MACTEC/AMEC CSR AND VRP MONITORING WELL LOCATIONS (MW–1A, MW–1B, MW–101 TO MW–105, MW–104A, MW–104D, MW–106D, MW–107D, MW–108, MW–109, AND MW–110, MW–111 THROUGH MW–121 (FEBRUARY, JUNE, JULY, DECEMBER 1997, MAY 1998, JANUARY 2000, NOVEMBER 2002, AUGUST 2007, AND NOVEMBER 2012) (MW–106 AND MW–107 WERE NOT INSTALLED)

MW–104 — MONITORING WELLS ABANDONED (MW–1, MW–1A, MW–2, MW–3, MW–4, MW–6, MW–8, MW–9, MW–11, MW–12, MW–13, MW–14, MW–15, MW–18, MW–19, MW–20, MW–23, MW–27, DW–1A, DW–2A, DW–2B, AND MW–104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AND AUGUST 2007)
CSX ABANDONED WELLS MW–103A, MW–103D AND MW–118

MW–10 — T.M. GATES MONITORING WELL LOCATIONS (MW–1 TO MW–27, MW–7 WAS NOT INSTALLED) (AUGUST 1983, JANUARY 1984, JUNE 1985)

DW–1B — T.M. GATES DEEP MONITORING WELL LOCATIONS (DW–1A, DW–1B, DW–2A, DW–2B) (AUGUST 1983, FEBRUARY 1984)

TW–1 — TEMPORARY WELLS (MAY 2012)

INFLOW 1 — SEEP ALONG STREAM

SW–2010–1 — MACTEC/AMEC SURFACE WATER SAMPLING LOCATIONS (SW–2010–1 TO SW–2010–18, SW–2014–20 AND SW–2014–21)

MW–1(BFI) — APPROXIMATE LOCATION OF MONITORING WELLS INSTALLED FOR 1993 PHASE II INVESTIGATION.

(POD) — POINT OF DEMONSTRATION WELL

ARSENIC, LEAD, COPPER, AND ZINC IN GROUNDWATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12–8–108(E) DEFAULT RESIDENTIAL CLEANUP STANDARDS (TYPE I RRS)

ARSENIC	0.01 MG/L
LEAD	0.015 MG/L
COPPER	1.3 MG/L
ZINC	2 MG/L

HORIZONTAL DELINEATION OF GROUND–WATER CONTAMINATION BASED ON TYPE I RRS

PROPERTY BOUNDARIES

ABOVEGROUND POWER TRANSMISSION LINES

BELOWGROUND FIBER OPTICS CABLE

FENCE

EXISTING STRUCTURE

FORMER STRUCTURE

TREE LINE

STREAM

NA — CONSTITUENT NOT ANALYZED

ALL CONCENTRATIONS EXPRESSED IN MILLIGRAMS PER LITER (mg/L)

GROUNDWATER CONCENTRATION IS GREATER THAN TYPE I RRS

SURFACE WATER CONCENTRATION IS GREATER THAN GEORGIA INSTREAM WATER QUALITY CRITERIA FOR AQUATIC RECEPTORS (COPPER AND ZINC)

OBSERVATION WELL FOR PILOT INJECTION STUDY

BDL — BELOW DETECTION LIMIT

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REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED M. ANDREWS
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE G. WRENN
DATE 1/14/2015

FORMER ESTECH GENERAL CHEMICALS SITE

ATLANTA, GEORGIA

AMEC Environment & Infrastructure, Inc.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421–3400

DISTRIBUTION AND DELINEATION OF ARSENIC, LEAD, COPPER AND ZINC DETECTED IN GROUND WATER

SCALE AS SHOWN
CONTRACT 6122–08–0154
DWG. NO. 3
REV
PAGE NO

J:\BFEL ATLANTA\JAN 2015\DELINEATION OF LEAD COPPER ZINC.dwg – Layout1 02/05/2015 4:09pm TonyaGladstone

SW2010-17	11/19/2014
alpha- BHC	0.00029
beta-BHC	0.00037
delta-BHC	0.00026
gamma-BHC (lindane)	0.000082

SW2010-15	11/19/2014
alpha- BHC	0.00029
beta-BHC	0.00040
delta-BHC	0.00028
gamma-BHC (lindane)	0.000082

SW2010-14	11/19/2014
alpha- BHC	0.00030
beta-BHC	0.00041
delta-BHC	0.00032
gamma-BHC (lindane)	0.000086

INFLOW-2	11/19/2014
alpha- BHC	0.00017
beta-BHC	0.00028
delta-BHC	0.00013
gamma-BHC (lindane)	0.000058

SW2010-10	11/19/2014
alpha- BHC	0.000097
beta-BHC	0.000081
delta-BHC	0.000059
gamma-BHC (lindane)	0.000028J

SW2010-11	11/19/2014
alpha- BHC	0.00013
beta-BHC	0.000091
delta-BHC	0.000077
gamma-BHC (lindane)	0.000044J

MW-106D	11/13/2014
alpha- BHC	0.0063
beta-BHC	0.0024
delta-BHC	<0.000050
gamma-BHC (lindane)	0.0035

SW2010-5	11/19/2014
alpha- BHC	0.000083
beta-BHC	0.000074
delta-BHC	<0.0000031
gamma-BHC (lindane)	0.0000092J

MW-119	11/18/2014
alpha- BHC	0.00064
beta-BHC	0.00062
delta-BHC	0.0010
gamma-BHC (lindane)	0.00013

INFLOW-1	11/19/2014
alpha- BHC	0.00012
beta-BHC	0.000079
delta-BHC	0.000072
gamma-BHC (lindane)	0.000038J

SW2014-20	11/19/2014
alpha- BHC	0.00014
beta-BHC	0.0015
delta-BHC	0.00018
gamma-BHC (lindane)	0.000078

SW2014-21	11/19/2014
alpha- BHC	0.0002
beta-BHC	0.0012
delta-BHC	0.00015
gamma-BHC (lindane)	0.0001

MW-121	11/13/2014
alpha- BHC	0.000054
beta-BHC	0.0001
delta-BHC	<0.000050
gamma-BHC (lindane)	<0.000050

MW-120	11/19/2014
alpha- BHC	0.00096
beta-BHC	0.0011
delta-BHC	0.001
gamma-BHC (lindane)	<0.000050

TW-5	11/13/2014
4,4'-DDE	0.0001
4,4'-DDT	0.00021
alpha- BHC	0.00012
beta-BHC	0.001
delta-BHC	0.000063
gamma-BHC (lindane)	0.00013

MW-114	11/18/2014
alpha- BHC	0.0001
beta-BHC	0.0022
delta-BHC	0.00013
gamma-BHC (lindane)	0.000091

TW-7	11/18/2014
alpha- BHC	0.00045
beta-BHC	0.0014
delta-BHC	0.00011
gamma-BHC (lindane)	0.00032

MW-111	11/18/2014
alpha- BHC	0.030
beta-BHC	0.0069
delta-BHC	0.11
gamma-BHC (lindane)	0.06

MW-110	11/12/2014
alpha- BHC	0.0005
beta-BHC	0.00033
delta-BHC	0.0014
gamma-BHC (lindane)	0.0006

MW-115	11/14/2014
alpha- BHC	0.00026
beta-BHC	0.00026
delta-BHC	0.000073
gamma-BHC (lindane)	0.000076

MW-113	11/17/2014
alpha- BHC	0.00032
beta-BHC	0.00093
delta-BHC	0.00026
gamma-BHC (lindane)	0.00033

TW-3	11/13/2014
alpha- BHC	0.00087
beta-BHC	0.0011
delta-BHC	0.00036
gamma-BHC (lindane)	0.00035

MW-25	11/18/2014
alpha- BHC	0.00014
beta-BHC	0.0074
delta-BHC	0.0001
gamma-BHC (lindane)	<0.00005

MW-109	11/18/2014
alpha- BHC	0.033
beta-BHC	0.0046
delta-BHC	0.0058
gamma-BHC (lindane)	0.022

MW-108	11/12/2014
alpha- BHC	0.0029
beta-BHC	0.0011
delta-BHC	0.0072
gamma-BHC (lindane)	0.00018

MW-22	11/12/2014
alpha- BHC	0.00019
beta-BHC	0.00054
delta-BHC	0.000091
gamma-BHC (lindane)	0.00016

TW-4	11/13/2014
alpha- BHC	<0.000050
beta-BHC	0.00062
delta-BHC	0.000083
Dieldrin	0.00011
gamma-BHC (lindane)	<0.000050

TW-8	11/14/2014
4,4'-DDD	0.019
4,4'-DDT	0.350
alpha- BHC	0.340
beta-BHC	0.140
delta-BHC	0.160
gamma-BHC (lindane)	0.230

MW-112	11/11/2014
alpha- BHC	0.00091
beta-BHC	0.0021
delta-BHC	0.00021
gamma-BHC (lindane)	0.00013

TW-1	11/12/2014
4,4'-DDD	0.00087
4,4'-DDE	0.0031
4,4'-DDT	0.0052
alpha- BHC	0.0002
beta-BHC	0.0041
delta-BHC	0.00023
gamma-BHC (lindane)	0.00016

MW-116	11/12/2014
alpha- BHC	<0.000050
beta-BHC	0.00055
delta-BHC	<0.000050
gamma-BHC (lindane)	<0.000050

TW-6	11/14/2014
alpha- BHC	<0.000050
beta-BHC	0.0013
delta-BHC	<0.000050
gamma-BHC (lindane)	<0.000050

TW-9	11/17/2014
alpha- BHC	0.0088
beta-BHC	0.0044
delta-BHC	0.00776
gamma-BHC (lindane)	0.0011

MW-26	11/12/2014
alpha- BHC	0.00071
beta-BHC	0.00051
delta-BHC	<0.00005
gamma-BHC (lindane)	<0.00005

MW-105	11/14/2014
delta-BHC	0.000075

LEGEND:

LAW/MACTEC/AMEC CSR AND VRP MONITORING WELL LOCATIONS (MW-1A, MW-1B, MW-101 TO MW-105, MW-104A, MW-104D, MW-106D, MW-107D, MW-108, MW-109, AND MW-110, MW-111 THROUGH MW-121 (FEBRUARY, JUNE, JULY, DECEMBER 1997, MAY 1998, JANUARY 2000, NOVEMBER 2002, AUGUST 2007, AND NOVEMBER 2012) (MW-106 AND MW-107 WERE NOT INSTALLED)

MW-104 — MONITORING WELLS ABANDONED (MW-1, MW-1A, MW-2, MW-3, MW-4, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, AND MW-104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AND AUGUST 2007)
CSX ABANDONED WELLS MW-103A, MW-103D AND MW-118

MW-10 — T.M. GATES MONITORING WELL LOCATIONS (MW-1 TO MW-27, MW-7 WAS NOT INSTALLED) (AUGUST 1983, JANUARY 1984, JUNE 1985)

DW-1B — T.M. GATES DEEP MONITORING WELL LOCATIONS (DW-1A, DW-1B, DW-2A, DW-2B) (AUGUST 1983, FEBRUARY 1984)

MW-1 — MONITORING WELLS ABANDONED (MW-1, MW-1A, MW-2, MW-3, MW-4, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, AND MW-104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AND AUGUST 2007)
CSX ABANDONED WELLS MW-103A, MW-103D AND MW-118

INFLOW 1 — SEEP ALONG STREAM

SW-2010-1 — MACTEC/AMEC SURFACE WATER SAMPLING LOCATIONS (SW-2010-1 TO SW-2010-18, SW-2014-20 AND SW-2014-21)

MW-1(BFI) — APPROXIMATE LOCATION OF MONITORING WELLS INSTALLED FOR 1993 DUE PHASE II INVESTIGATION.

TW-1 — TEMPORARY WELLS (MAY 2012)

POD — POINT OF DEMONSTRATION WELL

BDL — BELOW DETECTION LIMIT

PROPERTY BOUNDARIES

ABOVEGROUND POWER TRANSMISSION LINES

BELOWGROUND FIBER OPTICS CABLE

FENCE

EXISTING STRUCTURE

FORMER STRUCTURE

TREE LINE

STREAM

PESTICIDES, IN GROUND WATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(E) DEFAULT RESIDENTIAL CLEANUP STANDARDS (TYPE I RRS).

GROUNDWATER CONCENTRATION IS GREATER THAN TYPE I RRS

SURFACE WATER CONCENTRATION IS GREATER THAN NATIONAL WATER QUALITY CRITERIA (HUMAN HEALTH) (ALPHA AND BETA BHC)

HORIZONTAL DELINEATION OF GROUNDWATER CONTAMINATION BASED ON TYPE I RRS

OBSERVATION WELL FOR PILOT INJECTION STUDY

ALL CONCENTRATIONS EXPRESSED IN MILLIGRAMS PER LITER (mg/L)

SCALE IN FEET
0 100 200

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REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED M. ANDREWS
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE L. NEAL
DATE 1/15/2015

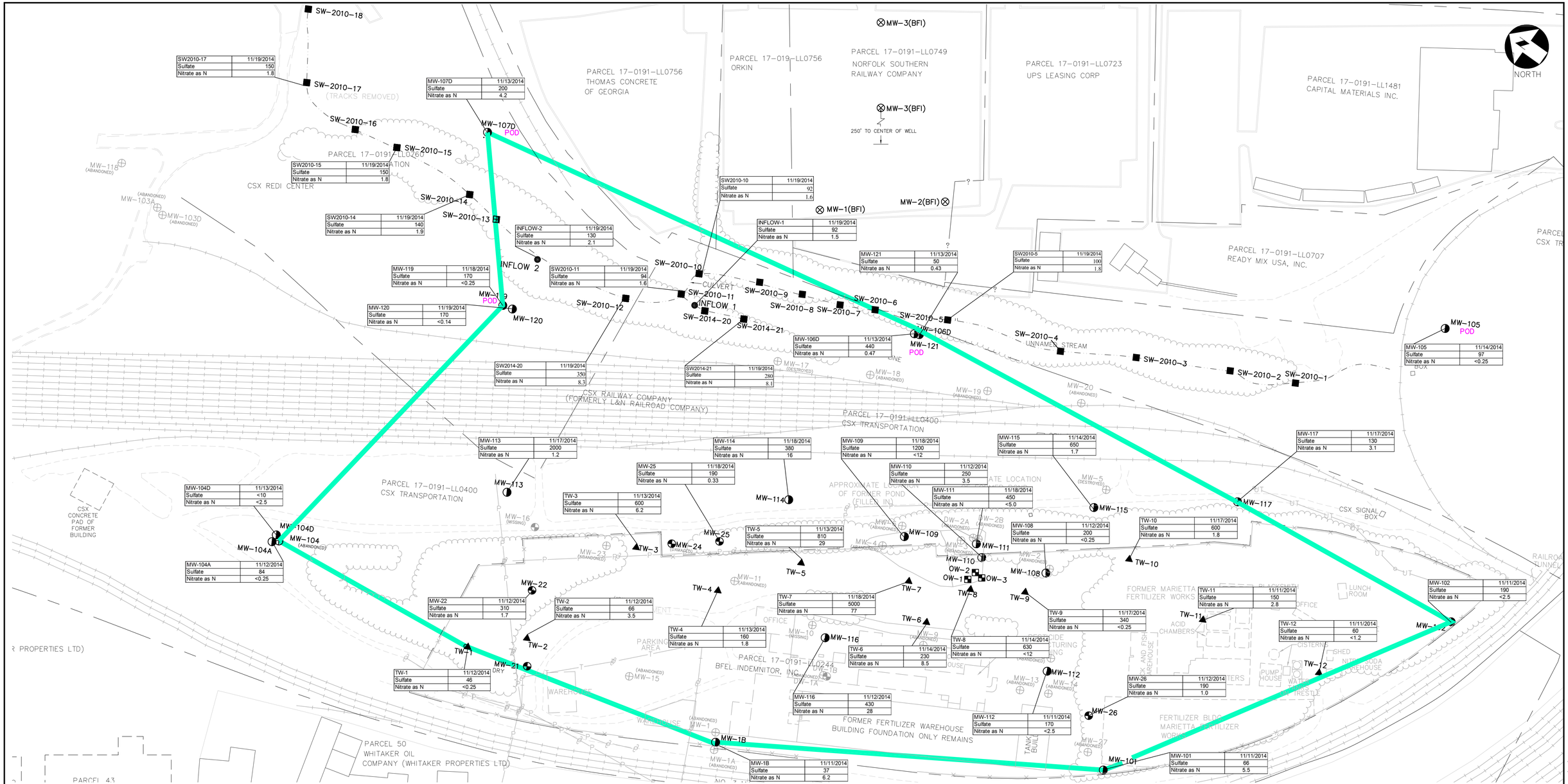
FORMER ESTECH GENERAL CHEMICALS SITE
ATLANTA, GEORGIA

AMEC Environment & Infrastructure, Inc.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

DISTRIBUTION AND DELINEATION OF PESTICIDES DETECTED IN GROUND WATER

SCALE AS SHOWN
CONTRACT 6122-08-0154
DWG. NO. 4
REV
PAGE NO

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LEGEND:

- MW-104 ◑ LAW/MACTEC/AMEC CSR AND VRP MONITORING WELL LOCATIONS (MW-1A, MW-1B, MW-101 TO MW-105, MW-103D, MW-104A, MW-104D, MW-106D, MW-107D, MW-108, MW-109, AND MW-110, MW-111 THROUGH MW-121 (FEBRUARY, JUNE, JULY, DECEMBER 1997, MAY 1998, JANUARY 2000, NOVEMBER 2002, AUGUST 2007, AND NOVEMBER 2012) (MW-106 AND MW-107 WERE NOT INSTALLED)
- MW-10 ◔ T.M. GATES MONITORING WELL LOCATIONS (MW-1 TO MW-27, MW-7 WAS NOT INSTALLED) (AUGUST 1983, JANUARY 1984, JUNE 1985)
- DW-1B ◔ T.M. GATES DEEP MONITORING WELL LOCATIONS (DW-1A, DW-1B, DW-2A, DW-2B) (AUGUST 1983, FEBRUARY 1984)
- MW-1 ⊕ MONITORING WELLS ABANDONED (MW-1, MW-1A, MW-2, MW-3, MW-4, MW-6, MW-8, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15, MW-18, MW-19, MW-20, MW-23, MW-27, DW-1A, DW-2A, DW-2B, AND MW-104) (JUNE 1995, JUNE 1997, AUGUST 1998, JANUARY 2000, AND AUGUST 2007) CSX ABANDONED WELLS, MW-103A, MW-103D AND MW-118
- TW-1 ▲ TEMPORARY WELLS (MAY 2012)
- INFLOW 1 ● SEEP ALONG STREAM
- OW-1 ■ OBSERVATION WELL FOR PILOT INJECTION STUDY
- SW-2010-1 ■ MACTEC/AMEC SURFACE WATER SAMPLING LOCATIONS (SW-2010-1 TO SW-2010-18, SW-2014-20 AND SW-2014-21)
- MW-1(BFI) ⊗ APPROXIMATE LOCATION OF MONITORING WELLS INSTALLED FOR 1993 DUE PHASE II INVESTIGATION.

NITRATE AND SULFATE IN GROUNDWATER ARE DELINEATED PER THE VRP DELINEATION CRITERIA 12-8-108(E) DEFAULT RESIDENTIAL CLEANUP STANDARDS (TYPE I RRS)

NITRATE 10 MG/L
SULFATE 250 MG/L

POD POINT OF DEMONSTRATION WELL

- HORIZONTAL DELINEATION OF GROUND-WATER CONTAMINATION BASED ON TYPE I RRS
- PROPERTY BOUNDARIES
- ABOVEGROUND POWER TRANSMISSION LINES
- BELOWGROUND FIBER OPTICS CABLE
- FENCE
- EXISTING STRUCTURE
- FORMER STRUCTURE
- TREE LINE
- STREAM

ALL CONCENTRATIONS EXPRESSED IN MILLIGRAMS PER LITER (mg/L)

SCALE IN FEET
0 100 200

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REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED M. ANDREWS
DRAWN T. GLADSTONE
CHECKED R. QUINN
IN CHARGE G. WRENN
DATE 1/14/2015

FORMER ESTECH GENERAL CHEMICALS SITE

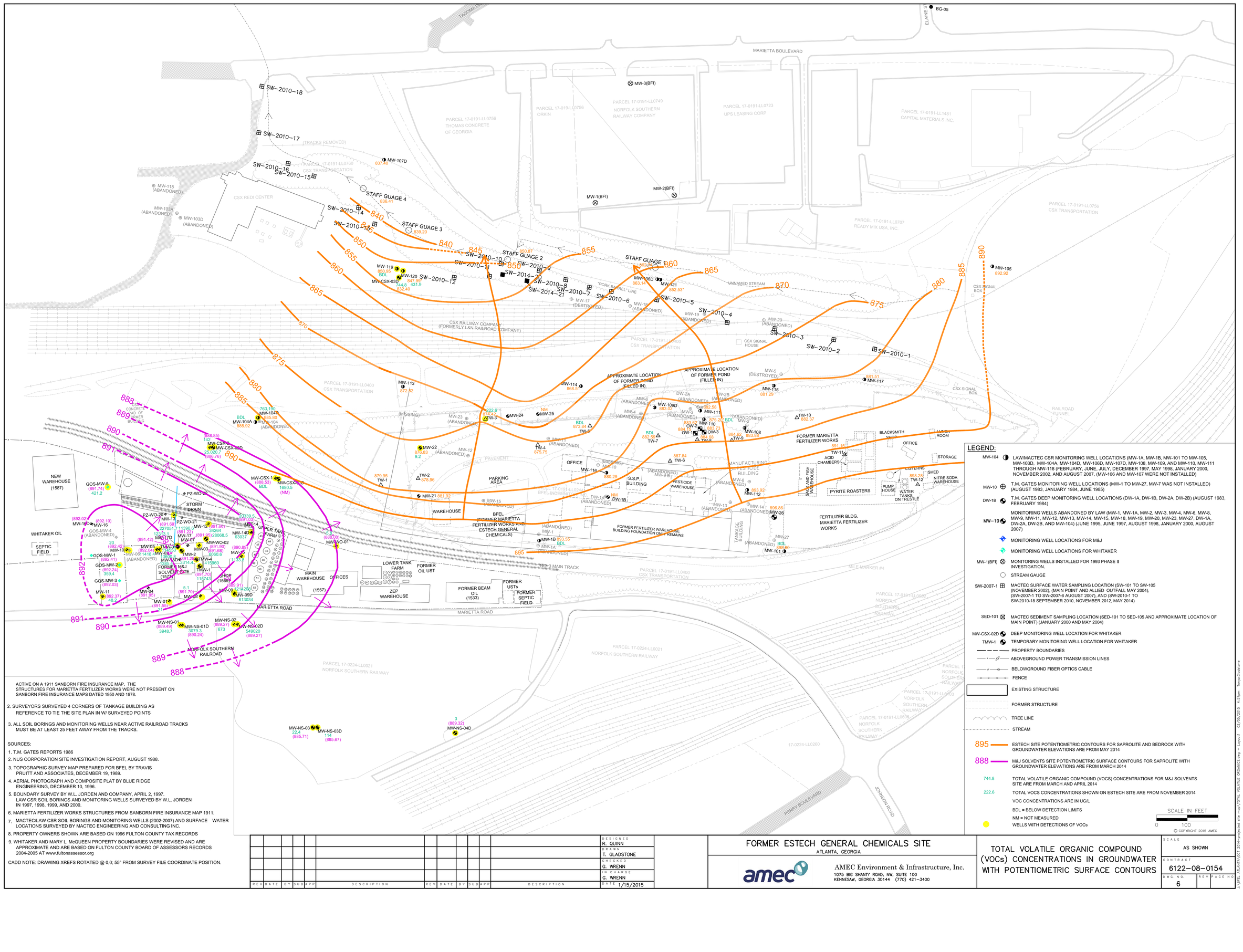
ATLANTA, GEORIGA

amec
AMEC Environment & Infrastructure, Inc.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

DISTRIBUTION AND DELINEATION OF NITRATE AND SULFATE IN GROUND WATER NOVEMBER 2014

SCALE AS SHOWN
CONTRACT 6122-08-0154
DWG. NO. 5
REV
PAGE NO

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ACTIVE ON A 1911 SANBORN FIRE INSURANCE MAP. THE STRUCTURES FOR MARIETTA FERTILIZER WORKS WERE NOT PRESENT ON SANBORN FIRE INSURANCE MAPS DATED 1950 AND 1978.

2. SURVEYORS SURVEYED 4 CORNERS OF TANKAGE BUILDING AS REFERENCE TO TIE THE SITE PLAN IN W/ SURVEYED POINTS

3. ALL SOIL BORINGS AND MONITORING WELLS NEAR ACTIVE RAILROAD TRACKS MUST BE AT LEAST 25 FEET AWAY FROM THE TRACKS.

SOURCES:

1. T.M. GATES REPORTS 1986
2. NUS CORPORATION SITE INVESTIGATION REPORT, AUGUST 1988.
3. TOPOGRAPHIC SURVEY MAP PREPARED FOR BFEL BY TRAVIS PRUITT AND ASSOCIATES, DECEMBER 19, 1989.
4. AERIAL PHOTOGRAPH AND COMPOSITE PLAT BY BLUE RIDGE ENGINEERING, DECEMBER 10, 1996.
5. BOUNDARY SURVEY BY W.L. JORDEN AND COMPANY, APRIL 2, 1997. LAW CSR SOIL BORINGS AND MONITORING WELLS SURVEYED BY W.L. JORDEN IN 1997, 1998, 1999, AND 2000.
6. MARIETTA FERTILIZER WORKS STRUCTURES FROM SANBORN FIRE INSURANCE MAP 1911.
7. MACTEC/LAW CSR SOIL BORINGS AND MONITORING WELLS (2002-2007) AND SURFACE WATER LOCATIONS SURVEYED BY MACTEC ENGINEERING AND CONSULTING INC.
8. PROPERTY OWNERS SHOWN ARE BASED ON 1996 FULTON COUNTY TAX RECORDS
9. WHITAKER AND MARY L. McQUEEN PROPERTY BOUNDARIES WERE REVISED AND ARE APPROXIMATE AND ARE BASED ON FULTON COUNTY BOARD OF ASSESSORS RECORDS 2004-2005 AT www.fultonassessor.org

CADD NOTE: DRAWING XREFS ROTATED @ 0,0; 55° FROM SURVEY FILE COORDINATE POSITION.

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED R. QUINN
DRAWN T. GLADSTONE
CHECKED G. WRENN
IN CHARGE G. WRENN
DATE 1/15/2015

FORMER ESTECH GENERAL CHEMICALS SITE
ATLANTA, GEORGIA

AMEC Environment & Infrastructure, Inc.
1075 BIG SHANTY ROAD, NW, SUITE 100
KENNESAW, GEORGIA 30144 (770) 421-3400

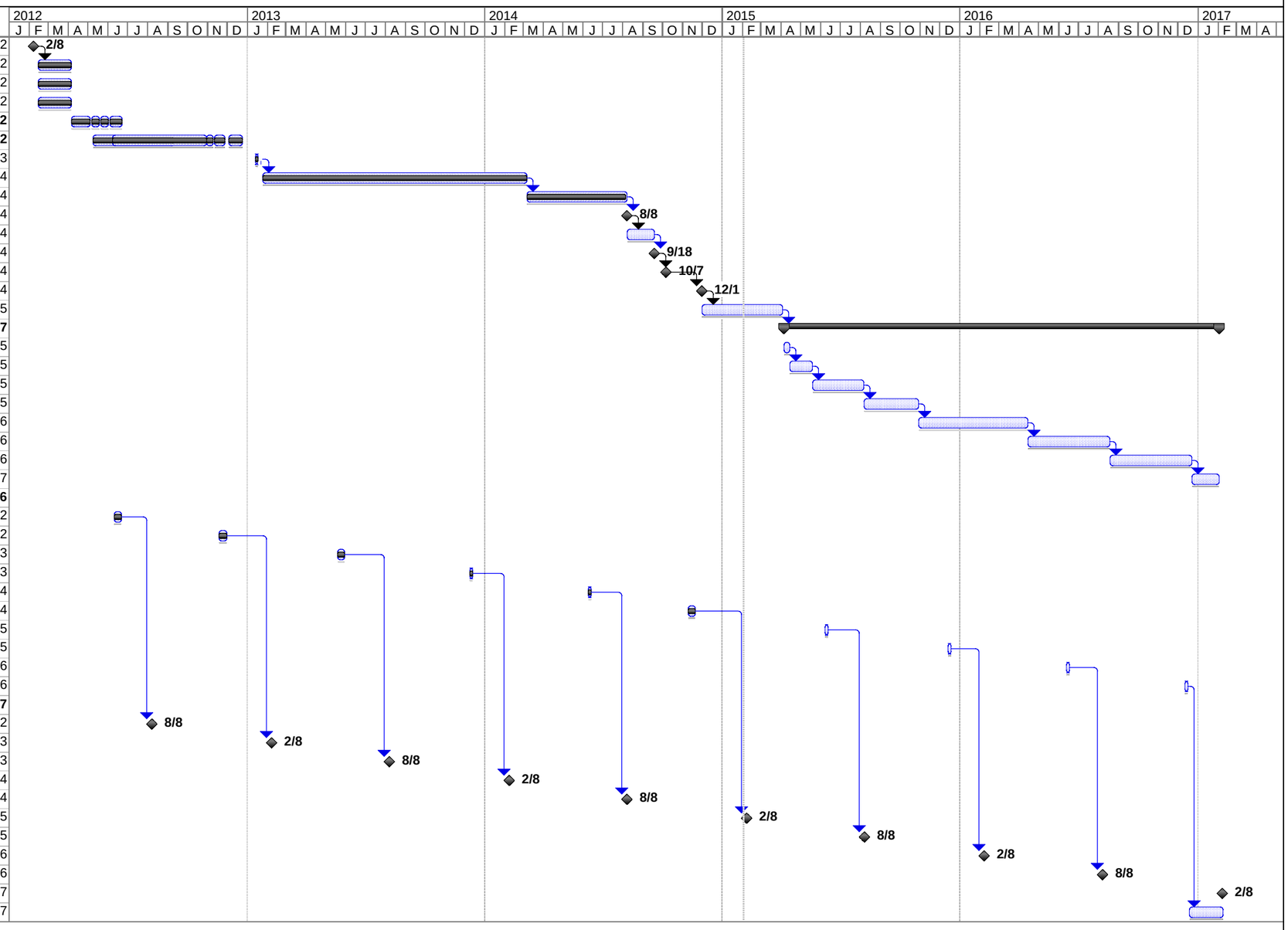
TOTAL VOLATILE ORGANIC COMPOUND (VOCs) CONCENTRATIONS IN GROUNDWATER WITH POTENTIOMETRIC SURFACE CONTOURS

SCALE AS SHOWN
CONTRACT 6122-08-0154
DWG. NO. 6
REV
PAGE NO.

J:\BFEL ATLANTA\OCT 2014-projected site map\TOTAL VOLATILE ORGANICS.dwg - Layout1 02/05/2015 4:57pm Tonya Gladstone

FIGURE 7 - SCHEDULE FOR IMPLEMENTATION OF VOLUNTARY REMEDIATON PLAN
FORMER ESTECH, ATLANTA, GA

ID	Task Name	Start	Finish
1	EPD approves VRP Application and Remediation Plan	Wed 2/8/12	Wed 2/8/12
2	Prepare/File/Submit Affidavit to BFEL Property Deed	Wed 2/15/12	Fri 4/6/12
3	Prepare/Submit Financial Assurance for VRP	Wed 2/15/12	Fri 4/6/12
4	Prepare/Submit Updated VRP Implementation Schedule	Wed 2/15/12	Fri 4/6/12
5	**Copper/Zinc Source ID & Soil Inv on BFEL Property**	**Fri 4/6/12**	**Fri 6/22/12**
10	**Soil/GW Inv on CSX Property**	**Wed 5/9/12**	**Mon 12/24/12**
16	Groundwater EHC-M Injection Pilot Test - BFEL Property	Mon 1/14/13	Fri 1/25/13
17	Pilot Test Performance Monitoring	Fri 1/25/13	Thu 3/6/14
18	Re-Evaluate Remediation Alternatives	Fri 3/7/14	Thu 8/7/14
19	Submit Revised Remediation Plan	Fri 8/8/14	Fri 8/8/14
20	EPD Review Revised Remediation Plan	Fri 8/8/14	Thu 9/18/14
21	BFEL/EPD Site Review Meeting	Thu 9/18/14	Thu 9/18/14
22	EPD Comment Letter (Oct. 7, 2014)	Tue 10/7/14	Tue 10/7/14
23	EPD Comment Letter (Dec. 1, 2014)	Mon 12/1/14	Mon 12/1/14
24	Evaluate Up-Gradient VOC Impact to BFEL Property	Mon 12/1/14	Fri 4/3/15
25	**Remediation Implementation**	**Mon 4/6/15**	**Thu 2/2/17**
26	Collect Treatability Study Samples	Mon 4/6/15	Tue 4/14/15
27	Data Analysis	Wed 4/15/15	Tue 5/19/15
28	Submit Revised Remediation Plan	Wed 5/20/15	Thu 8/6/15
29	EPD Review	Fri 8/7/15	Thu 10/29/15
30	Additional Pllot Testing	Fri 10/30/15	Thu 4/14/16
31	Surficial Limestone Placement	Fri 4/15/16	Thu 8/18/16
32	Soil/Groundwater Remedy Implementation	Fri 8/19/16	Thu 12/22/16
33	Install Fencing / Waste Disposal	Fri 12/23/16	Thu 2/2/17
34	**Semi-Annual GW/SW Sampling**	**Mon 6/11/12**	**Fri 12/16/16**
35	Semi-Annual Sampling Event 1	Mon 6/11/12	Thu 6/21/12
36	Semi-Annual Sampling Event 2	Mon 11/19/12	Fri 11/30/12
37	Semi-Annual Sampling Event 3	Mon 5/20/13	Thu 5/30/13
38	Semi-Annual Sampling Event 4	Mon 12/9/13	Fri 12/13/13
39	Semi-Annual Sampling Event 5	Mon 6/9/14	Fri 6/13/14
40	Semi-Annual Sampling Event 6	Mon 11/10/14	Thu 11/20/14
41	Semi-Annual Sampling Event 7	Mon 6/8/15	Fri 6/12/15
42	Semi-Annual Sampling Event 8	Mon 12/14/15	Fri 12/18/15
43	Semi-Annual Sampling Event 9	Mon 6/13/16	Fri 6/17/16
44	Semi-Annual Sampling Event 10	Mon 12/12/16	Fri 12/16/16
45	**Submit Semi-Annual Status Report**	**Wed 8/8/12**	**Wed 2/8/17**
46	Submit Semi-Annual Status Report 1	Wed 8/8/12	Wed 8/8/12
47	Submit Semi-Annual Status Report 2	Fri 2/8/13	Fri 2/8/13
48	Submit Semi-Annual Status Report 3	Thu 8/8/13	Thu 8/8/13
49	Submit Semi-Annual Status Report 4	Sat 2/8/14	Sat 2/8/14
50	Submit Semi-Annual Status Report 5	Fri 8/8/14	Fri 8/8/14
51	Submit Semi-Annual Status Report 6	Sun 2/8/15	Sun 2/8/15
52	Submit Semi-Annual Status Report 7	Sat 8/8/15	Sat 8/8/15
53	Submit Semi-Annual Status Report 8	Mon 2/8/16	Mon 2/8/16
54	Submit Semi-Annual Status Report 9	Mon 8/8/16	Mon 8/8/16
55	Submit Semi-Annual Status Report 10	Wed 2/8/17	Wed 2/8/17
56	Preparation and Submittal of Post-Remediation CSR	Mon 12/19/16	Wed 2/8/17



Project: BFEL Atlanta VRP Schedule
Date: Mon 2/2/15

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

APPENDIX A

LABORATORY REPORTS AND FIELD SAMPLING FORMS FOR NOVEMBER 2014 GROUNDWATER SAMPLING EVENT

WATER LABORATORY REPORTS

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 19, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411896

Analytical Environmental Services, Inc. received 9 samples on 11/11/2014 6:00:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704

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

CHAIN OF CUSTODY

3 coolers

Work Order: 1411896

Date: 11/11/14 Page ____ of ____

COMPANY: AMEC

ADDRESS: 1075 Big Shanty RD NW Suite 100 Kennesaw, GA

PHONE: 770-421-3400

FAX:

SAMPLED BY: Mark A, Daniel H, Evelyn

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	#	Total Metals	Dissolved Metals	Total Organic Chloride	Nitrate & Sulfate	VOCs List	PRESERVATION (See codes)	REMARKS	No # of Containers
1	EB-1	11/11/14	0936	✓		W	1	X MK	2	1	2				5 X 6
2	EB-2	11/11/14	1023	✓		W	1	X MK	2	1	2				MA X 6
3	TW-12	11/11/14	1233	✓		GW	1	1	2	1					5
4	MW-102	11/11/14	1330	✓		GW	1	1	2	1					5
5	MW-112	11/11/14	1610	✓		GW	1	1	2	1					5
6	MW-1B	11/11/14	1258	✓		GW	1	1	2	1	2				7
7	MW-101	11/11/14	1617	✓		GW	1	1	2	1	2				7
8	TW-11	11/11/14	1546	✓		GW	1	1	2	1					5
9	Trip Blank	11/11/14	0930	✓		W					2				2
10															
11															
12															
13															
14															

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Mark Andrews	11/11/14 1706	1:	11/11/14 17:01
2:	11/11/14 6:00	2:	11/11/14 6:00
3:		3:	

PROJECT INFORMATION

PROJECT NAME: BFEL Atlanta

PROJECT #:

SITE ADDRESS: 1551 Marietta Rd Atlanta GA

SEND REPORT TO: Rhonda Quinn

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers

Turnaround Time Request

- (●) Standard 5 Business Days
- ( ) 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:

Total metals & Dissolved metals site specific list: Arsenic, Lead, copper and Zinc. Dissolved metals to be filtered by lab

Other hold time for Nitrate & sulfate samples

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

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 19-Nov-14

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab ID: 1411896

Case Narrative

Ion Chromatography _Analysis by Method 9056A:

Due to sample matrix, sample(s) 1411896-003C and -004C required a dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	EB-1
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 9:36:00 AM
Lab ID:	1411896-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/17/2014 19:20	MR
Copper	2.05	2.00		ug/L	199207	1	11/17/2014 19:20	MR
Lead	BRL	1.00		ug/L	199207	1	11/17/2014 19:20	MR
Zinc	10.1	10.0		ug/L	199207	1	11/17/2014 19:20	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
2-Butanone	BRL	50		ug/L	199085	1	11/13/2014 16:09	GK
2-Hexanone	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
Acetone	BRL	50		ug/L	199085	1	11/13/2014 16:09	GK
Benzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Bromodichloromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Bromoform	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Bromomethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Carbon disulfide	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Carbon tetrachloride	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Chlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Chloroethane	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
Chloroform	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Chloromethane	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Cyclohexane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Dibromochloromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Dichlorodifluoromethane	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
Ethylbenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Freon-113	BRL	10		ug/L	199085	1	11/13/2014 16:09	GK
Isopropylbenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	EB-1
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 9:36:00 AM
Lab ID:	1411896-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Methyl acetate	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Methylcyclohexane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Methylene chloride	35	5.0		ug/L	199085	1	11/13/2014 16:09	GK
o-Xylene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Styrene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Tetrachloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Toluene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Trichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:09	GK
Vinyl chloride	BRL	2.0		ug/L	199085	1	11/13/2014 16:09	GK
Surr: 4-Bromofluorobenzene	91.5	70.6-123		%REC	199085	1	11/13/2014 16:09	GK
Surr: Dibromofluoromethane	94.8	78.7-124		%REC	199085	1	11/13/2014 16:09	GK
Surr: Toluene-d8	95.1	81.3-120		%REC	199085	1	11/13/2014 16:09	GK
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280030	1	11/12/2014 13:16	ME
Sulfate	BRL	1.0		mg/L	R280030	1	11/12/2014 13:16	ME
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 18:01	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 18:01	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 18:01	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 18:01	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 18:01	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 18:01	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 18:01	BB
Surr: Decachlorobiphenyl	52.8	14.6-130		%REC	199206	1	11/17/2014 18:01	BB
Surr: Tetrachloro-m-xylene	53.7	14.4-116		%REC	199206	1	11/17/2014 18:01	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	EB-2
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 10:23:00 AM
Lab ID:	1411896-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/17/2014 19:51	MR
Copper	BRL	2.00		ug/L	199207	1	11/17/2014 19:51	MR
Lead	BRL	1.00		ug/L	199207	1	11/17/2014 19:51	MR
Zinc	BRL	10.0		ug/L	199207	1	11/17/2014 19:51	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
2-Butanone	BRL	50		ug/L	199085	1	11/13/2014 16:39	GK
2-Hexanone	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
Acetone	BRL	50		ug/L	199085	1	11/13/2014 16:39	GK
Benzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Bromodichloromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Bromoform	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Bromomethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Carbon disulfide	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Carbon tetrachloride	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Chlorobenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Chloroethane	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
Chloroform	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Chloromethane	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Cyclohexane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Dibromochloromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Dichlorodifluoromethane	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
Ethylbenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Freon-113	BRL	10		ug/L	199085	1	11/13/2014 16:39	GK
Isopropylbenzene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	EB-2
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 10:23:00 AM
Lab ID:	1411896-002	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Methyl acetate	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Methylcyclohexane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Methylene chloride	36	5.0		ug/L	199085	1	11/13/2014 16:39	GK
o-Xylene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Styrene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Tetrachloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Toluene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Trichloroethene	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199085	1	11/13/2014 16:39	GK
Vinyl chloride	BRL	2.0		ug/L	199085	1	11/13/2014 16:39	GK
Surr: 4-Bromofluorobenzene	91.7	70.6-123		%REC	199085	1	11/13/2014 16:39	GK
Surr: Dibromofluoromethane	98.1	78.7-124		%REC	199085	1	11/13/2014 16:39	GK
Surr: Toluene-d8	97.3	81.3-120		%REC	199085	1	11/13/2014 16:39	GK
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280030	1	11/12/2014 21:20	ME
Sulfate	BRL	1.0		mg/L	R280030	1	11/12/2014 21:20	ME
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 13:54	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 13:54	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 13:54	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 13:54	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 13:54	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 13:54	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 13:54	BB
Surr: Decachlorobiphenyl	68.3	14.6-130		%REC	199206	1	11/17/2014 13:54	BB
Surr: Tetrachloro-m-xylene	69.8	14.4-116		%REC	199206	1	11/17/2014 13:54	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-12
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 12:33:00 PM
Lab ID:	1411896-003	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/17/2014 19:57	MR
Copper	4.10	2.00		ug/L	199207	1	11/17/2014 19:57	MR
Lead	BRL	1.00		ug/L	199207	1	11/17/2014 19:57	MR
Zinc	204	10.0		ug/L	199207	1	11/17/2014 19:57	MR
ION SCAN SW9056A								
Nitrate	BRL	1.2		mg/L	R280030	5	11/12/2014 21:35	ME
Sulfate	60	5.0		mg/L	R280030	5	11/12/2014 21:35	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 16:04	MR
Copper	BRL	2.00		ug/L	199307	1	11/17/2014 16:04	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 16:04	MR
Zinc	191	10.0		ug/L	199307	1	11/17/2014 16:04	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 14:05	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 14:05	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 14:05	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 14:05	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 14:05	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 14:05	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 14:05	BB
Surr: Decachlorobiphenyl	18.6	14.6-130		%REC	199206	1	11/17/2014 14:05	BB
Surr: Tetrachloro-m-xylene	58	14.4-116		%REC	199206	1	11/17/2014 14:05	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-102
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 1:30:00 PM
Lab ID:	1411896-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/17/2014 20:03	MR
Copper	6.26	2.00		ug/L	199207	1	11/17/2014 20:03	MR
Lead	BRL	1.00		ug/L	199207	1	11/17/2014 20:03	MR
Zinc	27.6	10.0		ug/L	199207	1	11/17/2014 20:03	MR
ION SCAN SW9056A								
Nitrate	BRL	2.5		mg/L	R280030	10	11/12/2014 14:01	ME
Sulfate	190	10		mg/L	R280030	10	11/12/2014 14:01	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 16:35	MR
Copper	4.33	2.00		ug/L	199307	1	11/17/2014 16:35	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 16:35	MR
Zinc	27.7	10.0		ug/L	199307	1	11/17/2014 16:35	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 14:17	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 14:17	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 14:17	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 14:17	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 14:17	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 14:17	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 14:17	BB
Surr: Decachlorobiphenyl	41.4	14.6-130		%REC	199206	1	11/17/2014 14:17	BB
Surr: Tetrachloro-m-xylene	54.4	14.4-116		%REC	199206	1	11/17/2014 14:17	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-112
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 4:10:00 PM
Lab ID:	1411896-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	11.7	5.00		ug/L	199207	1	11/18/2014 13:11	MR
Copper	46.2	2.00		ug/L	199207	1	11/18/2014 13:11	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 13:11	MR
Zinc	1100	10.0		ug/L	199207	1	11/18/2014 13:11	MR
ION SCAN SW9056A								
Nitrate	BRL	2.5		mg/L	R280030	10	11/12/2014 15:17	ME
Sulfate	170	10		mg/L	R280030	10	11/12/2014 15:17	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	12.1	5.00		ug/L	199307	1	11/17/2014 16:41	MR
Copper	41.5	2.00		ug/L	199307	1	11/17/2014 16:41	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 16:41	MR
Zinc	1130	10.0		ug/L	199307	1	11/17/2014 16:41	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 15:24	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 15:24	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 15:24	BB
alpha-BHC	0.91	0.050		ug/L	199206	1	11/17/2014 15:24	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:24	BB
beta-BHC	2.1	0.25		ug/L	199206	5	11/18/2014 15:04	BB
delta-BHC	0.21	0.050		ug/L	199206	1	11/17/2014 15:24	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 15:24	BB
gamma-BHC	0.13	0.050		ug/L	199206	1	11/17/2014 15:24	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:24	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 15:24	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 15:24	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 15:24	BB
Surr: Decachlorobiphenyl	44.5	14.6-130		%REC	199206	1	11/17/2014 15:24	BB
Surr: Tetrachloro-m-xylene	56	14.4-116		%REC	199206	1	11/17/2014 15:24	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-1B
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 12:58:00 PM
Lab ID:	1411896-006	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 13:16	MR
Copper	5.85	2.00		ug/L	199207	1	11/18/2014 13:16	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 13:16	MR
Zinc	19.0	10.0		ug/L	199207	1	11/18/2014 13:16	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
2-Butanone	BRL	50		ug/L	199085	1	11/12/2014 16:45	GK
2-Hexanone	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
Acetone	BRL	50		ug/L	199085	1	11/12/2014 16:45	GK
Benzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Bromodichloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Bromoform	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Bromomethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Carbon disulfide	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Carbon tetrachloride	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Chlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Chloroethane	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
Chloroform	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Chloromethane	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Cyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Dibromochloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Dichlorodifluoromethane	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
Ethylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Freon-113	BRL	10		ug/L	199085	1	11/12/2014 16:45	GK
Isopropylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-1B
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 12:58:00 PM
Lab ID:	1411896-006	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Methyl acetate	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Methylcyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Methylene chloride	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
o-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Styrene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Tetrachloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Toluene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Trichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199085	1	11/12/2014 16:45	GK
Vinyl chloride	BRL	2.0		ug/L	199085	1	11/12/2014 16:45	GK
Surr: 4-Bromofluorobenzene	92.6	70.6-123		%REC	199085	1	11/12/2014 16:45	GK
Surr: Dibromofluoromethane	101	78.7-124		%REC	199085	1	11/12/2014 16:45	GK
Surr: Toluene-d8	98.3	81.3-120		%REC	199085	1	11/12/2014 16:45	GK
ION SCAN SW9056A								
Nitrate	6.2	0.25		mg/L	R280030	1	11/12/2014 21:50	ME
Sulfate	37	1.0		mg/L	R280030	1	11/12/2014 21:50	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 16:48	MR
Copper	3.05	2.00		ug/L	199307	1	11/17/2014 16:48	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 16:48	MR
Zinc	17.4	10.0		ug/L	199307	1	11/17/2014 16:48	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 18:12	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 18:12	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 18:12	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 18:12	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 18:12	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 18:12	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-1B
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 12:58:00 PM
Lab ID:	1411896-006	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 18:12	BB
Surr: Decachlorobiphenyl	44.9	14.6-130		%REC	199206	1	11/17/2014 18:12	BB
Surr: Tetrachloro-m-xylene	73.2	14.4-116		%REC	199206	1	11/17/2014 18:12	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-101
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 4:17:00 PM
Lab ID:	1411896-007	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 13:21	MR
Copper	8.50	2.00		ug/L	199207	1	11/18/2014 13:21	MR
Lead	1.61	1.00		ug/L	199207	1	11/18/2014 13:21	MR
Zinc	263	10.0		ug/L	199207	1	11/18/2014 13:21	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
2-Butanone	BRL	50		ug/L	199085	1	11/12/2014 17:15	GK
2-Hexanone	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
Acetone	BRL	50		ug/L	199085	1	11/12/2014 17:15	GK
Benzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Bromodichloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Bromoform	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Bromomethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Carbon disulfide	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Carbon tetrachloride	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Chlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Chloroethane	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
Chloroform	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Chloromethane	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Cyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Dibromochloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Dichlorodifluoromethane	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
Ethylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Freon-113	BRL	10		ug/L	199085	1	11/12/2014 17:15	GK
Isopropylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-101
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 4:17:00 PM
Lab ID:	1411896-007	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Methyl acetate	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Methylcyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Methylene chloride	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
o-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Styrene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Tetrachloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Toluene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Trichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199085	1	11/12/2014 17:15	GK
Vinyl chloride	BRL	2.0		ug/L	199085	1	11/12/2014 17:15	GK
Surr: 4-Bromofluorobenzene	93.2	70.6-123		%REC	199085	1	11/12/2014 17:15	GK
Surr: Dibromofluoromethane	102	78.7-124		%REC	199085	1	11/12/2014 17:15	GK
Surr: Toluene-d8	98.8	81.3-120		%REC	199085	1	11/12/2014 17:15	GK
ION SCAN SW9056A								
Nitrate	5.5	0.25		mg/L	R280030	1	11/12/2014 22:05	ME
Sulfate	66	1.0		mg/L	R280030	1	11/12/2014 22:05	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 17:39	MR
Copper	7.91	2.00		ug/L	199307	1	11/17/2014 17:39	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 17:39	MR
Zinc	275	10.0		ug/L	199307	1	11/17/2014 17:39	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 15:35	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 15:35	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 15:35	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 15:35	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 15:35	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 15:35	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-101
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 4:17:00 PM
Lab ID:	1411896-007	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 15:35	BB
Surr: Decachlorobiphenyl	37.9	14.6-130		%REC	199206	1	11/17/2014 15:35	BB
Surr: Tetrachloro-m-xylene	63.7	14.4-116		%REC	199206	1	11/17/2014 15:35	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-11
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014 3:46:00 PM
Lab ID:	1411896-008	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 13:26	MR
Copper	130	2.00		ug/L	199207	1	11/18/2014 13:26	MR
Lead	1.04	1.00		ug/L	199207	1	11/18/2014 13:26	MR
Zinc	514	10.0		ug/L	199207	1	11/18/2014 13:26	MR
ION SCAN SW9056A								
Nitrate	2.8	2.5		mg/L	R280030	10	11/12/2014 15:02	ME
Sulfate	150	10		mg/L	R280030	10	11/12/2014 15:02	ME
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 17:45	MR
Copper	135	2.00		ug/L	199307	1	11/17/2014 17:45	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 17:45	MR
Zinc	501	10.0		ug/L	199307	1	11/17/2014 17:45	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 15:47	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 15:47	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 15:47	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 15:47	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 15:47	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 15:47	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 15:47	BB
Surr: Decachlorobiphenyl	38	14.6-130		%REC	199206	1	11/17/2014 15:47	BB
Surr: Tetrachloro-m-xylene	59.4	14.4-116		%REC	199206	1	11/17/2014 15:47	BB

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:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014
Lab ID:	1411896-009	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
2-Butanone	BRL	50		ug/L	199085	1	11/12/2014 15:17	GK
2-Hexanone	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
Acetone	BRL	50		ug/L	199085	1	11/12/2014 15:17	GK
Benzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Bromodichloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Bromoform	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Bromomethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Carbon disulfide	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Carbon tetrachloride	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Chlorobenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Chloroethane	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
Chloroform	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Chloromethane	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Cyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Dibromochloromethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Dichlorodifluoromethane	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
Ethylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Freon-113	BRL	10		ug/L	199085	1	11/12/2014 15:17	GK
Isopropylbenzene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
m,p-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Methyl acetate	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Methylcyclohexane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Methylene chloride	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
o-Xylene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 19-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/11/2014
Lab ID:	1411896-009	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Tetrachloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Toluene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Trichloroethene	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199085	1	11/12/2014 15:17	GK
Vinyl chloride	BRL	2.0		ug/L	199085	1	11/12/2014 15:17	GK
Surr: 4-Bromofluorobenzene	94.1	70.6-123		%REC	199085	1	11/12/2014 15:17	GK
Surr: Dibromofluoromethane	100	78.7-124		%REC	199085	1	11/12/2014 15:17	GK
Surr: Toluene-d8	99.3	81.3-120		%REC	199085	1	11/12/2014 15:17	GK

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 AMEC Work Order Number 1411896

Checklist completed by _____ 11/11/14
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 3.4° Cooler #2 3.4° Cooler #3 3.9° 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 MV

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: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411896

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411896-001A	EB-1	11/11/2014 9:36:00AM	Aqueous	TCL VOLATILE ORGANICS		11/12/2014	11/13/2014
1411896-001B	EB-1	11/11/2014 9:36:00AM	Aqueous	ION SCAN			11/12/2014
1411896-001C	EB-1	11/11/2014 9:36:00AM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-001D	EB-1	11/11/2014 9:36:00AM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/17/2014
1411896-002A	EB-2	11/11/2014 10:23:00AM	Aqueous	TCL VOLATILE ORGANICS		11/12/2014	11/13/2014
1411896-002B	EB-2	11/11/2014 10:23:00AM	Aqueous	ION SCAN			11/12/2014
1411896-002C	EB-2	11/11/2014 10:23:00AM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-002D	EB-2	11/11/2014 10:23:00AM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/17/2014
1411896-003A	TW-12	11/11/2014 12:33:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/17/2014
1411896-003B	TW-12	11/11/2014 12:33:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-003C	TW-12	11/11/2014 12:33:00PM	Aqueous	ION SCAN			11/12/2014
1411896-003D	TW-12	11/11/2014 12:33:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-004A	MW-102	11/11/2014 1:30:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/17/2014
1411896-004B	MW-102	11/11/2014 1:30:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-004C	MW-102	11/11/2014 1:30:00PM	Aqueous	ION SCAN			11/12/2014
1411896-004D	MW-102	11/11/2014 1:30:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-005A	MW-112	11/11/2014 4:10:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411896-005B	MW-112	11/11/2014 4:10:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-005C	MW-112	11/11/2014 4:10:00PM	Aqueous	ION SCAN			11/12/2014
1411896-005D	MW-112	11/11/2014 4:10:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-005D	MW-112	11/11/2014 4:10:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/18/2014
1411896-006A	MW-1B	11/11/2014 12:58:00PM	Aqueous	TCL VOLATILE ORGANICS		11/12/2014	11/12/2014
1411896-006B	MW-1B	11/11/2014 12:58:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-006C	MW-1B	11/11/2014 12:58:00PM	Aqueous	ION SCAN			11/12/2014
1411896-006D	MW-1B	11/11/2014 12:58:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-006E	MW-1B	11/11/2014 12:58:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411896-007A	MW-101	11/11/2014 4:17:00PM	Aqueous	TCL VOLATILE ORGANICS		11/12/2014	11/12/2014
1411896-007B	MW-101	11/11/2014 4:17:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-007C	MW-101	11/11/2014 4:17:00PM	Aqueous	ION SCAN			11/12/2014

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411896

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411896-007D	MW-101	11/11/2014 4:17:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-007E	MW-101	11/11/2014 4:17:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411896-008A	TW-11	11/11/2014 3:46:00PM	Aqueous	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411896-008B	TW-11	11/11/2014 3:46:00PM	Aqueous	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411896-008C	TW-11	11/11/2014 3:46:00PM	Aqueous	ION SCAN			11/12/2014
1411896-008D	TW-11	11/11/2014 3:46:00PM	Aqueous	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411896-009A	TRIP BLANK	11/11/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/12/2014	11/12/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199085

Sample ID: **MB-199085** Client ID: Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5915391**

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	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199085

Sample ID: **MB-199085** Client ID: Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5915391**

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	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	46.78	0	50.00		93.6	70.6	123				
Surr: Dibromofluoromethane	49.37	0	50.00		98.7	78.7	124				
Surr: Toluene-d8	49.04	0	50.00		98.1	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199085

Sample ID: **LCS-199085** Client ID: Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5915319**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	46.04	5.0	50.00		92.1	63.1	140				
Benzene	47.51	5.0	50.00		95.0	74.2	129				
Chlorobenzene	46.18	5.0	50.00		92.4	70	129				
Toluene	47.52	5.0	50.00		95.0	74.2	129				
Trichloroethene	48.47	5.0	50.00		96.9	71.2	135				
Surr: 4-Bromofluorobenzene	47.09	0	50.00		94.2	70.6	123				
Surr: Dibromofluoromethane	48.35	0	50.00		96.7	78.7	124				
Surr: Toluene-d8	49.42	0	50.00		98.8	81.3	120				

Sample ID: **1411823-001AMS** Client ID: Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5916176**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.19	5.0	50.00		96.4	60.2	159				
Benzene	51.26	5.0	50.00		103	70.2	138				
Chlorobenzene	49.97	5.0	50.00		99.9	70.1	133				
Toluene	52.40	5.0	50.00		105	70	139				
Trichloroethene	53.57	5.0	50.00		107	70.1	144				
Surr: 4-Bromofluorobenzene	46.97	0	50.00		93.9	70.6	123				
Surr: Dibromofluoromethane	49.33	0	50.00		98.7	78.7	124				
Surr: Toluene-d8	50.01	0	50.00		100	81.3	120				

Sample ID: **1411823-001AMSD** Client ID: Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5916177**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.83	5.0	50.00		97.7	60.2	159	48.19	1.32	19.2	
Benzene	50.81	5.0	50.00		102	70.2	138	51.26	0.882	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199085

Sample ID: **1411823-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/L** Prep Date: **11/12/2014** Run No: **279800**
BatchID: **199085** Analysis Date: **11/12/2014** Seq No: **5916177**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	49.73	5.0	50.00		99.5	70.1	133	49.97	0.481	20	
Toluene	51.99	5.0	50.00		104	70	139	52.40	0.786	20	
Trichloroethene	53.53	5.0	50.00		107	70.1	144	53.57	0.075	20	
Surr: 4-Bromofluorobenzene	46.60	0	50.00		93.2	70.6	123	46.97	0	0	
Surr: Dibromofluoromethane	49.57	0	50.00		99.1	78.7	124	49.33	0	0	
Surr: Toluene-d8	49.21	0	50.00		98.4	81.3	120	50.01	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **MB-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5924999**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4357	0	0.5000		87.1	14.6	130				
Surr: Tetrachloro-m-xylene	0.3740	0	0.5000		74.8	14.4	116				

Sample ID: **LCS-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925578**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.303	0.10	1.000		130	52.5	140				
Dieldrin	1.209	0.10	1.000		121	59.5	137				
gamma-BHC	1.166	0.050	1.000		117	46	134				
Heptachlor	1.166	0.050	1.000		117	44.7	127				
Surr: Decachlorobiphenyl	0.3744	0	0.5000		74.9	14.6	130				
Surr: Tetrachloro-m-xylene	0.4255	0	0.5000		85.1	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **1411A27-007DMS**	Client ID:		Units: **ug/L**	Prep Date: **11/15/2014**	Run No: **280216**
SampleType: **MS**	TestCode: **CHLORINATED PESTICIDES, TCL SW8081B**		BatchID: **199206**	Analysis Date: **11/17/2014**	Seq No: **5925133**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.036	0.10	1.000		104	27.1	146				
Dieldrin	0.9404	0.10	1.000		94.0	39.4	142				
gamma-BHC	1.553	0.050	1.000	0.6000	95.3	34.5	144				
Heptachlor	0.9363	0.050	1.000		93.6	33	138				
Surr: Decachlorobiphenyl	0.2172	0	0.5000		43.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.3363	0	0.5000		67.3	14.4	116				

Sample ID: **1411A27-007DMSD**	Client ID:		Units: **ug/L**	Prep Date: **11/15/2014**	Run No: **280216**
SampleType: **MSD**	TestCode: **CHLORINATED PESTICIDES, TCL SW8081B**		BatchID: **199206**	Analysis Date: **11/17/2014**	Seq No: **5925135**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.008	0.10	1.000		101	27.1	146	1.036	2.68	21.2	
Dieldrin	0.9387	0.10	1.000		93.9	39.4	142	0.9404	0.179	20	
gamma-BHC	1.562	0.050	1.000	0.6000	96.2	34.5	144	1.553	0.578	23.1	
Heptachlor	0.9445	0.050	1.000		94.4	33	138	0.9363	0.868	26.9	
Surr: Decachlorobiphenyl	0.2132	0	0.5000		42.6	14.6	130	0.2172	0	0	
Surr: Tetrachloro-m-xylene	0.3034	0	0.5000		60.7	14.4	116	0.3363	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199207

Sample ID: **MB-199207** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925692**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199207** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925691**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	104.0	5.00	100.0		104	80	120				
Copper	103.5	2.00	100.0		104	80	120				
Lead	105.8	1.00	100.0		106	80	120				
Zinc	110.8	10.0	100.0		111	80	120				

Sample ID: **1411896-001DMS** Client ID: **EB-1** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925694**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	105.7	5.00	100.0		106	75	125				
Copper	106.6	2.00	100.0	2.046	105	75	125				
Lead	104.1	1.00	100.0		104	75	125				
Zinc	116.4	10.0	100.0	10.14	106	75	125				

Sample ID: **1411896-001DMSD** Client ID: **EB-1** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925695**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	100.4	5.00	100.0		100	75	125	105.7	5.14	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199207

Sample ID: **1411896-001DMSD** Client ID: **EB-1** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925695**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	104.2	2.00	100.0	2.046	102	75	125	106.6	2.28	20	
Lead	101.6	1.00	100.0		102	75	125	104.1	2.43	20	
Zinc	113.2	10.0	100.0	10.14	103	75	125	116.4	2.79	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199307

Sample ID: **MB-199307** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925647**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199307** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925646**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	96.28	5.00	100.0		96.3	80	120				
Copper	95.82	2.00	100.0	1.577	94.2	80	120				
Lead	96.59	1.00	100.0		96.6	80	120				
Zinc	97.89	10.0	100.0		97.9	80	120				

Sample ID: **1411896-003BMS** Client ID: **TW-12** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925649**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.72	5.00	100.0		97.7	75	125				
Copper	103.9	2.00	100.0	1.671	102	75	125				
Lead	103.9	1.00	100.0		104	75	125				
Zinc	304.7	10.0	100.0	191.1	114	75	125				

Sample ID: **1411896-003BMSD** Client ID: **TW-12** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925650**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.48	5.00	100.0		97.5	75	125	97.72	0.246	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: 199307

Sample ID: **1411896-003BMSD** Client ID: **TW-12** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925650**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	107.6	2.00	100.0	1.671	106	75	125	103.9	3.50	20	
Lead	101.2	1.00	100.0		101	75	125	103.9	2.63	20	
Zinc	300.8	10.0	100.0	191.1	110	75	125	304.7	1.29	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: R280030

Sample ID: **MB-R280030**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **280030**	
SampleType: **MBLK**	TestCode: **ION SCAN SW9056A**				BatchID: **R280030**		Analysis Date: **11/12/2014**		Seq No: **5921018**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280030**	Client ID:				Units: **mg/L**		Prep Date:		Run No: **280030**	
SampleType: **LCS**	TestCode: **ION SCAN SW9056A**				BatchID: **R280030**		Analysis Date: **11/12/2014**		Seq No: **5921016**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.109	0.25	5.000		102	90	110				
Sulfate	24.83	1.0	25.00		99.3	90	110				

Sample ID: **1411896-001BMS**	Client ID: **EB-1**				Units: **mg/L**		Prep Date:		Run No: **280030**	
SampleType: **MS**	TestCode: **ION SCAN SW9056A**				BatchID: **R280030**		Analysis Date: **11/12/2014**		Seq No: **5921047**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.679	0.25	5.000		93.6	90	110				
Sulfate	22.81	1.0	25.00		91.3	90	110				

Sample ID: **1411896-002BMS**	Client ID: **EB-2**				Units: **mg/L**		Prep Date:		Run No: **280030**	
SampleType: **MS**	TestCode: **ION SCAN SW9056A**				BatchID: **R280030**		Analysis Date: **11/12/2014**		Seq No: **5921052**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.767	0.25	5.000		95.3	90	110				
Sulfate	23.18	1.0	25.00		92.7	90	110				

Sample ID: **1411896-001BMSD**	Client ID: **EB-1**				Units: **mg/L**		Prep Date:		Run No: **280030**	
SampleType: **MSD**	TestCode: **ION SCAN SW9056A**				BatchID: **R280030**		Analysis Date: **11/12/2014**		Seq No: **5921049**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.683	0.25	5.000		93.7	90	110	4.679	0.070	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411896

ANALYTICAL QC SUMMARY REPORT

BatchID: R280030

Sample ID: **1411896-001BMSD**	Client ID: **EB-1**		Units: **mg/L**	Prep Date:	Run No: **280030**
SampleType: **MSD**	TestCode: **ION SCAN SW9056A**		BatchID: **R280030**	Analysis Date: **11/12/2014**	Seq No: **5921049**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfate	22.98	1.0	25.00		91.9	90	110	22.81	0.735	20	

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 18, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411A27

Analytical Environmental Services, Inc. received 10 samples on 11/12/2014 5:26:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

Revision 12/18/2014

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1411A27

Date: 11/12/14 Page 1 of 1

COMPANY: AMEC

ADDRESS: 1075 Big Shanty RD NW Suite 100 Kennesaw, GA

PHONE: 770-421-3400

FAX:

SAMPLED BY: Mark A, Daniel H, Elver G

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Metals	Dissolved Metals	Total organochlorine pesticides	Nitrate & Sulfate	VOCs List	PRESERVATION (See codes)					REMARKS	No # of Containers
												N	NA	NA	NA	H+I		
1	MW-22	11/12/14	1206	✓		GW	1	1		2	1					2		7
2	TW-1		1402	✓		GW	1	1		2	1							5
3	TW-2		1522	✓		GW	1	1		2	1							5
4	MW-26		1218	✓		GW	1	1		2	1							5
5	MW-104A		1538	✓		GW	1	1		2	1					2		7
6	MW-108		1145	✓		GW	1	1		2	1							5
7	MW-110		1615	✓		GW	1	1		2	1					2		7
8	MW-116		1255	✓		GW	1	1		2	1							5
9	DUP-1		1200	✓		GW										2		2
10	Trip Blank					W										2		2
11																		
12																		
13																		
14																		

ANALYSIS REQUESTED

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Mark Andrews	11/12/14 1700	1:	11-12-14 1726
2:	11-12-14 17:26	2: Joana Pacwar	11/12/14 17:26
3:		3:	

PROJECT INFORMATION

PROJECT NAME: GFEL Atlanta

PROJECT #:

SITE ADDRESS: 1551 Marietta RD Atlanta GA

SEND REPORT TO: Rhonda Quinn

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers:

Turnaround Time Request
- (●) Standard 5 Business Days
- ( ) 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:
All total metals & Dissolved metals site specific list: Arsenic, Lead, copper and Zinc. Dissolved metals to be filtered by lab
All 48 hr hold time Nitrate & Sulfate

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

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 18-Dec-14

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab ID: 1411A27

Case Narrative

Samples 1411A27-004/005 did not match the COC in terms of sample ID. COC indicated that they are MW-26 and MW-104A, while the labels indicated MW-26-1114 and MW-104A-1114. Samples were reported according to the COC.

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-22
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:06:00 PM
Lab ID:	1411A27-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	199151	1	11/13/2014 17:08	GK
Surr: 4-Bromofluorobenzene	91.9	70.6-123		%REC	199151	1	11/13/2014 17:08	GK
Surr: Dibromofluoromethane	97.6	78.7-124		%REC	199151	1	11/13/2014 17:08	GK
Surr: Toluene-d8	96.4	81.3-120		%REC	199151	1	11/13/2014 17:08	GK
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:08	MR
Copper	2300	2.00		ug/L	199207	1	11/18/2014 14:08	MR
Lead	3.06	1.00		ug/L	199207	1	11/18/2014 14:08	MR
Zinc	4290	10.0		ug/L	199207	1	11/18/2014 14:08	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
2-Butanone	BRL	50		ug/L	199151	1	11/13/2014 17:08	GK
2-Hexanone	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
Acetone	BRL	50		ug/L	199151	1	11/13/2014 17:08	GK
Benzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Bromodichloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Bromoform	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Bromomethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Carbon disulfide	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Carbon tetrachloride	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Chlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Chloroethane	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
Chloroform	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Chloromethane	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
cis-1,2-Dichloroethene	9.2	5.0		ug/L	199151	1	11/13/2014 17:08	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-22
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:06:00 PM
Lab ID:	1411A27-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Cyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Dibromochloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Dichlorodifluoromethane	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
Ethylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Freon-113	BRL	10		ug/L	199151	1	11/13/2014 17:08	GK
Isopropylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
m,p-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Methyl acetate	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Methylcyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Methylene chloride	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
o-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Styrene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Tetrachloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Toluene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Trichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199151	1	11/13/2014 17:08	GK
Vinyl chloride	BRL	2.0		ug/L	199151	1	11/13/2014 17:08	GK
Surr: 4-Bromofluorobenzene	91.9	70.6-123		%REC	199151	1	11/13/2014 17:08	GK
Surr: Dibromofluoromethane	97.6	78.7-124		%REC	199151	1	11/13/2014 17:08	GK
Surr: Toluene-d8	96.4	81.3-120		%REC	199151	1	11/13/2014 17:08	GK
ION SCAN SW9056A								
Nitrate	1.7	0.25		mg/L	R280369	1	11/13/2014 11:00	JM
Sulfate	310	20		mg/L	R280369	20	11/13/2014 15:11	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 17:52	MR
Copper	2160	2.00		ug/L	199307	1	11/17/2014 17:52	MR
Lead	3.42	1.00		ug/L	199307	1	11/17/2014 17:52	MR
Zinc	3740	10.0		ug/L	199307	1	11/17/2014 17:52	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 18:23	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 18:23	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 18:23	BB
alpha-BHC	0.19	0.050		ug/L	199206	1	11/17/2014 18:23	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:23	BB
beta-BHC	0.54	0.050		ug/L	199206	1	11/17/2014 18:23	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-22
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:06:00 PM
Lab ID:	1411A27-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
delta-BHC	0.091	0.050		ug/L	199206	1	11/17/2014 18:23	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 18:23	BB
gamma-BHC	0.16	0.050		ug/L	199206	1	11/17/2014 18:23	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:23	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 18:23	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 18:23	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 18:23	BB
Surr: Decachlorobiphenyl	44.6	14.6-130		%REC	199206	1	11/17/2014 18:23	BB
Surr: Tetrachloro-m-xylene	57.6	14.4-116		%REC	199206	1	11/17/2014 18:23	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-1
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 2:02:00 PM
Lab ID:	1411A27-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:13	MR
Copper	4.95	2.00		ug/L	199207	1	11/18/2014 14:13	MR
Lead	1.02	1.00		ug/L	199207	1	11/18/2014 14:13	MR
Zinc	319	10.0		ug/L	199207	1	11/18/2014 14:13	MR
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280369	1	11/13/2014 11:15	JM
Sulfate	46	5.0		mg/L	R280369	5	11/13/2014 15:26	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 17:58	MR
Copper	2.70	2.00		ug/L	199307	1	11/17/2014 17:58	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 17:58	MR
Zinc	283	10.0		ug/L	199307	1	11/17/2014 17:58	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	0.87	0.10		ug/L	199206	1	11/17/2014 15:58	BB
4,4´-DDE	3.1	1.0		ug/L	199206	10	11/18/2014 15:15	BB
4,4´-DDT	5.2	1.0		ug/L	199206	10	11/18/2014 15:15	BB
alpha-BHC	0.20	0.050		ug/L	199206	1	11/17/2014 15:58	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:58	BB
beta-BHC	4.1	0.50		ug/L	199206	10	11/18/2014 15:15	BB
delta-BHC	0.23	0.050		ug/L	199206	1	11/17/2014 15:58	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 15:58	BB
gamma-BHC	0.16	0.050		ug/L	199206	1	11/17/2014 15:58	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 15:58	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 15:58	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 15:58	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 15:58	BB
Surr: Decachlorobiphenyl	66.7	14.6-130		%REC	199206	1	11/17/2014 15:58	BB
Surr: Tetrachloro-m-xylene	63.1	14.4-116		%REC	199206	1	11/17/2014 15:58	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-2
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 3:22:00 PM
Lab ID:	1411A27-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:18	MR
Copper	BRL	2.00		ug/L	199207	1	11/18/2014 14:18	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 14:18	MR
Zinc	BRL	10.0		ug/L	199207	1	11/18/2014 14:18	MR
ION SCAN SW9056A								
Nitrate	3.5	0.25		mg/L	R280369	1	11/13/2014 11:30	JM
Sulfate	66	5.0		mg/L	R280369	5	11/13/2014 15:41	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:04	MR
Copper	BRL	2.00		ug/L	199686	1	11/25/2014 17:55	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 18:04	MR
Zinc	BRL	10.0		ug/L	199307	1	11/17/2014 18:04	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 18:34	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 18:34	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 18:34	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 18:34	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 18:34	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 18:34	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 18:34	BB
Surr: Decachlorobiphenyl	77.2	14.6-130		%REC	199206	1	11/17/2014 18:34	BB
Surr: Tetrachloro-m-xylene	51.8	14.4-116		%REC	199206	1	11/17/2014 18:34	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-26
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:18:00 PM
Lab ID:	1411A27-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:23	MR
Copper	12.6	2.00		ug/L	199207	1	11/18/2014 14:23	MR
Lead	1.39	1.00		ug/L	199207	1	11/18/2014 14:23	MR
Zinc	168	10.0		ug/L	199207	1	11/18/2014 14:23	MR
ION SCAN SW9056A								
Nitrate	1.0	0.25		mg/L	R280369	1	11/13/2014 11:45	JM
Sulfate	190	10		mg/L	R280369	10	11/13/2014 15:56	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:10	MR
Copper	10.9	2.00		ug/L	199307	1	11/17/2014 18:10	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 18:10	MR
Zinc	179	10.0		ug/L	199307	1	11/17/2014 18:10	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 16:09	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 16:09	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 16:09	BB
alpha-BHC	0.071	0.050		ug/L	199206	1	11/17/2014 16:09	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:09	BB
beta-BHC	0.51	0.050		ug/L	199206	1	11/17/2014 16:09	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:09	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 16:09	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:09	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:09	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 16:09	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 16:09	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 16:09	BB
Surr: Decachlorobiphenyl	44.1	14.6-130		%REC	199206	1	11/17/2014 16:09	BB
Surr: Tetrachloro-m-xylene	58.9	14.4-116		%REC	199206	1	11/17/2014 16:09	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104A
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 3:38:00 PM
Lab ID:	1411A27-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	199151	1	11/13/2014 18:36	GK
Surr: 4-Bromofluorobenzene	92.7	70.6-123		%REC	199151	1	11/13/2014 18:36	GK
Surr: Dibromofluoromethane	98.7	78.7-124		%REC	199151	1	11/13/2014 18:36	GK
Surr: Toluene-d8	97.8	81.3-120		%REC	199151	1	11/13/2014 18:36	GK
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:29	MR
Copper	BRL	2.00		ug/L	199207	1	11/18/2014 14:29	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 14:29	MR
Zinc	BRL	10.0		ug/L	199207	1	11/18/2014 14:29	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
2-Butanone	BRL	50		ug/L	199151	1	11/13/2014 18:36	GK
2-Hexanone	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
Acetone	BRL	50		ug/L	199151	1	11/13/2014 18:36	GK
Benzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Bromodichloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Bromoform	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Bromomethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Carbon disulfide	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Carbon tetrachloride	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Chlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Chloroethane	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
Chloroform	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Chloromethane	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104A
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 3:38:00 PM
Lab ID:	1411A27-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Cyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Dibromochloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Dichlorodifluoromethane	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
Ethylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Freon-113	BRL	10		ug/L	199151	1	11/13/2014 18:36	GK
Isopropylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
m,p-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Methyl acetate	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Methylcyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Methylene chloride	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
o-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Styrene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Tetrachloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Toluene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Trichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199151	1	11/13/2014 18:36	GK
Vinyl chloride	BRL	2.0		ug/L	199151	1	11/13/2014 18:36	GK
Surr: 4-Bromofluorobenzene	92.7	70.6-123		%REC	199151	1	11/13/2014 18:36	GK
Surr: Dibromofluoromethane	98.7	78.7-124		%REC	199151	1	11/13/2014 18:36	GK
Surr: Toluene-d8	97.8	81.3-120		%REC	199151	1	11/13/2014 18:36	GK
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280369	1	11/13/2014 12:00	JM
Sulfate	84	10		mg/L	R280369	10	11/13/2014 16:11	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:17	MR
Copper	BRL	2.00		ug/L	199307	1	11/17/2014 18:17	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 18:17	MR
Zinc	BRL	10.0		ug/L	199307	1	11/17/2014 18:17	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 16:20	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 16:20	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 16:20	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104A
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 3:38:00 PM
Lab ID:	1411A27-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 16:20	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 16:20	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 16:20	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 16:20	BB
Surr: Decachlorobiphenyl	70.2	14.6-130		%REC	199206	1	11/17/2014 16:20	BB
Surr: Tetrachloro-m-xylene	65.5	14.4-116		%REC	199206	1	11/17/2014 16:20	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-108
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 11:45:00 AM
Lab ID:	1411A27-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:34	MR
Copper	174	2.00		ug/L	199207	1	11/18/2014 14:34	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 14:34	MR
Zinc	2470	10.0		ug/L	199207	1	11/18/2014 14:34	MR
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280369	1	11/13/2014 12:15	JM
Sulfate	200	10		mg/L	R280369	10	11/13/2014 16:26	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:23	MR
Copper	138	2.00		ug/L	199307	1	11/17/2014 18:23	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 18:23	MR
Zinc	2300	10.0		ug/L	199307	1	11/17/2014 18:23	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 16:31	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 16:31	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 16:31	BB
alpha-BHC	2.9	0.50		ug/L	199206	10	11/18/2014 15:26	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:31	BB
beta-BHC	1.1	0.050		ug/L	199206	1	11/17/2014 16:31	BB
delta-BHC	7.2	0.50		ug/L	199206	10	11/18/2014 15:26	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 16:31	BB
gamma-BHC	0.18	0.050		ug/L	199206	1	11/17/2014 16:31	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:31	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 16:31	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 16:31	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 16:31	BB
Surr: Decachlorobiphenyl	75.7	14.6-130		%REC	199206	1	11/17/2014 16:31	BB
Surr: Tetrachloro-m-xylene	67.8	14.4-116		%REC	199206	1	11/17/2014 16:31	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-110
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 4:15:00 PM
Lab ID:	1411A27-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	199151	1	11/13/2014 19:05	GK
Surr: 4-Bromofluorobenzene	93.7	70.6-123		%REC	199151	1	11/13/2014 19:05	GK
Surr: Dibromofluoromethane	97.6	78.7-124		%REC	199151	1	11/13/2014 19:05	GK
Surr: Toluene-d8	96.9	81.3-120		%REC	199151	1	11/13/2014 19:05	GK
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:39	MR
Copper	352	2.00		ug/L	199207	1	11/18/2014 14:39	MR
Lead	BRL	1.00		ug/L	199207	1	11/18/2014 14:39	MR
Zinc	5100	10.0		ug/L	199207	1	11/18/2014 14:39	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
2-Butanone	BRL	50		ug/L	199151	1	11/13/2014 19:05	GK
2-Hexanone	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
Acetone	BRL	50		ug/L	199151	1	11/13/2014 19:05	GK
Benzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Bromodichloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Bromoform	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Bromomethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Carbon disulfide	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Carbon tetrachloride	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Chlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Chloroethane	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
Chloroform	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Chloromethane	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-110
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 4:15:00 PM
Lab ID:	1411A27-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Cyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Dibromochloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Dichlorodifluoromethane	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
Ethylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Freon-113	BRL	10		ug/L	199151	1	11/13/2014 19:05	GK
Isopropylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
m,p-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Methyl acetate	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Methylcyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Methylene chloride	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
o-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Styrene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Tetrachloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Toluene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Trichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:05	GK
Vinyl chloride	BRL	2.0		ug/L	199151	1	11/13/2014 19:05	GK
Surr: 4-Bromofluorobenzene	93.7	70.6-123		%REC	199151	1	11/13/2014 19:05	GK
Surr: Dibromofluoromethane	97.6	78.7-124		%REC	199151	1	11/13/2014 19:05	GK
Surr: Toluene-d8	96.9	81.3-120		%REC	199151	1	11/13/2014 19:05	GK
ION SCAN SW9056A								
Nitrate	3.5	0.25		mg/L	R280369	1	11/13/2014 12:30	JM
Sulfate	250	20		mg/L	R280369	20	11/13/2014 17:42	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:29	MR
Copper	291	2.00		ug/L	199307	1	11/17/2014 18:29	MR
Lead	BRL	1.00		ug/L	199307	1	11/17/2014 18:29	MR
Zinc	4890	10.0		ug/L	199307	1	11/17/2014 18:29	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 16:42	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 16:42	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 16:42	BB
alpha-BHC	0.50	0.050		ug/L	199206	1	11/17/2014 16:42	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:42	BB
beta-BHC	0.33	0.050		ug/L	199206	1	11/17/2014 16:42	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-110
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 4:15:00 PM
Lab ID:	1411A27-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
delta-BHC	1.4	0.050		ug/L	199206	1	11/17/2014 16:42	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 16:42	BB
gamma-BHC	0.60	0.050		ug/L	199206	1	11/17/2014 16:42	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 16:42	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 16:42	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 16:42	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 16:42	BB
Surr: Decachlorobiphenyl	41.7	14.6-130		%REC	199206	1	11/17/2014 16:42	BB
Surr: Tetrachloro-m-xylene	66	14.4-116		%REC	199206	1	11/17/2014 16:42	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-116
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:55:00 PM
Lab ID:	1411A27-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199207	1	11/18/2014 14:45	MR
Copper	2540	2.00		ug/L	199207	1	11/18/2014 14:45	MR
Lead	1.12	1.00		ug/L	199207	1	11/18/2014 14:45	MR
Zinc	7060	10.0		ug/L	199207	1	11/18/2014 14:45	MR
ION SCAN SW9056A								
Nitrate	28	12		mg/L	R280369	50	11/13/2014 17:57	JM
Sulfate	430	50		mg/L	R280369	50	11/13/2014 17:57	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199307	1	11/17/2014 18:36	MR
Copper	3250	2.00		ug/L	199307	1	11/17/2014 18:36	MR
Lead	1.02	1.00		ug/L	199307	1	11/17/2014 18:36	MR
Zinc	8850	10.0		ug/L	199307	1	11/17/2014 18:36	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 18:46	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 18:46	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 18:46	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
beta-BHC	0.55	0.050		ug/L	199206	1	11/17/2014 18:46	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 18:46	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 18:46	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 18:46	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 18:46	BB
Surr: Decachlorobiphenyl	50.8	14.6-130		%REC	199206	1	11/17/2014 18:46	BB
Surr: Tetrachloro-m-xylene	72.1	14.4-116		%REC	199206	1	11/17/2014 18:46	BB

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	DUP-1
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:00:00 PM
Lab ID:	1411A27-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	199151	1	11/13/2014 19:35	GK
Surr: 4-Bromofluorobenzene	91.9	70.6-123		%REC	199151	1	11/13/2014 19:35	GK
Surr: Dibromofluoromethane	99.6	78.7-124		%REC	199151	1	11/13/2014 19:35	GK
Surr: Toluene-d8	97.6	81.3-120		%REC	199151	1	11/13/2014 19:35	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
2-Butanone	BRL	50		ug/L	199151	1	11/13/2014 19:35	GK
2-Hexanone	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
Acetone	BRL	50		ug/L	199151	1	11/13/2014 19:35	GK
Benzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Bromodichloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Bromoform	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Bromomethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Carbon disulfide	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Carbon tetrachloride	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Chlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Chloroethane	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
Chloroform	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Chloromethane	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
cis-1,2-Dichloroethene	9.1	5.0		ug/L	199151	1	11/13/2014 19:35	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Cyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Dibromochloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Dichlorodifluoromethane	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
Ethylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Freon-113	BRL	10		ug/L	199151	1	11/13/2014 19:35	GK
Isopropylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	DUP-1
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014 12:00:00 PM
Lab ID:	1411A27-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Methyl acetate	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Methylcyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Methylene chloride	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
o-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Styrene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Tetrachloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Toluene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Trichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199151	1	11/13/2014 19:35	GK
Vinyl chloride	BRL	2.0		ug/L	199151	1	11/13/2014 19:35	GK
Surr: 4-Bromofluorobenzene	91.9	70.6-123		%REC	199151	1	11/13/2014 19:35	GK
Surr: Dibromofluoromethane	99.6	78.7-124		%REC	199151	1	11/13/2014 19:35	GK
Surr: Toluene-d8	97.6	81.3-120		%REC	199151	1	11/13/2014 19:35	GK

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:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014
Lab ID:	1411A27-010	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B				**(SW5030B)**				
1,4-Dioxane	BRL	150		ug/L	199151	1	11/13/2014 14:42	GK
Surr: 4-Bromofluorobenzene	92.7	70.6-123		%REC	199151	1	11/13/2014 14:42	GK
Surr: Dibromofluoromethane	96.5	78.7-124		%REC	199151	1	11/13/2014 14:42	GK
Surr: Toluene-d8	96.1	81.3-120		%REC	199151	1	11/13/2014 14:42	GK
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,1-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,1-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2-Dibromoethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2-Dichloroethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,2-Dichloropropane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
2-Butanone	BRL	50		ug/L	199151	1	11/13/2014 14:42	GK
2-Hexanone	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
4-Methyl-2-pentanone	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
Acetone	BRL	50		ug/L	199151	1	11/13/2014 14:42	GK
Benzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Bromodichloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Bromoform	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Bromomethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Carbon disulfide	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Carbon tetrachloride	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Chlorobenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Chloroethane	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
Chloroform	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Chloromethane	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Cyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Dibromochloromethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Dichlorodifluoromethane	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
Ethylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Freon-113	BRL	10		ug/L	199151	1	11/13/2014 14:42	GK
Isopropylbenzene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/12/2014
Lab ID:	1411A27-010	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Methyl acetate	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Methylcyclohexane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Methylene chloride	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
o-Xylene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Styrene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Tetrachloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Toluene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Trichloroethene	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Trichlorofluoromethane	BRL	5.0		ug/L	199151	1	11/13/2014 14:42	GK
Vinyl chloride	BRL	2.0		ug/L	199151	1	11/13/2014 14:42	GK
Surr: 4-Bromofluorobenzene	92.7	70.6-123		%REC	199151	1	11/13/2014 14:42	GK
Surr: Dibromofluoromethane	96.5	78.7-124		%REC	199151	1	11/13/2014 14:42	GK
Surr: Toluene-d8	96.1	81.3-120		%REC	199151	1	11/13/2014 14:42	GK

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 AMEC / Kennesaw Work Order Number 1411A27

Checklist completed by Fana Pacuvar 11/12/14
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.1°C Cooler #2 3.6°C Cooler #3 3.5°C 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 ✓ 11/12 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 IP

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411A27

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411A27-001A	MW-22	11/12/2014 12:06:00PM	Groundwater	TCL VOLATILE ORGANICS		11/13/2014	11/13/2014
1411A27-001B	MW-22	11/12/2014 12:06:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-001C	MW-22	11/12/2014 12:06:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-001D	MW-22	11/12/2014 12:06:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-001E	MW-22	11/12/2014 12:06:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-002A	TW-1	11/12/2014 2:02:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-002B	TW-1	11/12/2014 2:02:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-002C	TW-1	11/12/2014 2:02:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-002C	TW-1	11/12/2014 2:02:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/18/2014
1411A27-002D	TW-1	11/12/2014 2:02:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-003A	TW-2	11/12/2014 3:22:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-003B	TW-2	11/12/2014 3:22:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-003B	TW-2	11/12/2014 3:22:00PM	Groundwater	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411A27-003C	TW-2	11/12/2014 3:22:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-003D	TW-2	11/12/2014 3:22:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-004A	MW-26	11/12/2014 12:18:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-004B	MW-26	11/12/2014 12:18:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-004C	MW-26	11/12/2014 12:18:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-004D	MW-26	11/12/2014 12:18:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-005A	MW-104A	11/12/2014 3:38:00PM	Groundwater	TCL VOLATILE ORGANICS		11/13/2014	11/13/2014
1411A27-005B	MW-104A	11/12/2014 3:38:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-005C	MW-104A	11/12/2014 3:38:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-005D	MW-104A	11/12/2014 3:38:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-005E	MW-104A	11/12/2014 3:38:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-006A	MW-108	11/12/2014 11:45:00AM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-006B	MW-108	11/12/2014 11:45:00AM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-006C	MW-108	11/12/2014 11:45:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-006C	MW-108	11/12/2014 11:45:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/18/2014
1411A27-006D	MW-108	11/12/2014 11:45:00AM	Groundwater	ION SCAN			11/13/2014

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411A27

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411A27-007A	MW-110	11/12/2014 4:15:00PM	Groundwater	TCL VOLATILE ORGANICS		11/13/2014	11/13/2014
1411A27-007B	MW-110	11/12/2014 4:15:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-007C	MW-110	11/12/2014 4:15:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-007D	MW-110	11/12/2014 4:15:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-007E	MW-110	11/12/2014 4:15:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-008A	MW-116	11/12/2014 12:55:00PM	Groundwater	Total Metals by ICP/MS		11/15/2014	11/18/2014
1411A27-008B	MW-116	11/12/2014 12:55:00PM	Groundwater	Dissolved Metals by ICP/MS		11/17/2014	11/17/2014
1411A27-008C	MW-116	11/12/2014 12:55:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411A27-008D	MW-116	11/12/2014 12:55:00PM	Groundwater	ION SCAN			11/13/2014
1411A27-009A	DUP-1	11/12/2014 12:00:00PM	Groundwater	TCL VOLATILE ORGANICS		11/13/2014	11/13/2014
1411A27-010A	TRIP BLANK	11/12/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/13/2014	11/13/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199151

Sample ID: **MB-199151** Client ID: Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5917765**

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	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199151

Sample ID: **MB-199151** Client ID: Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5917765**

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	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	45.97	0	50.00		91.9	70.6	123				
Surr: Dibromofluoromethane	49.03	0	50.00		98.1	78.7	124				
Surr: Toluene-d8	48.97	0	50.00		97.9	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199151

Sample ID: **MB-199151** Client ID: Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5969235**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	150									
Surr: 4-Bromofluorobenzene	45.97	0	50.00		91.9	70.6	123				
Surr: Dibromofluoromethane	49.03	0	50.00		98.1	78.7	124				
Surr: Toluene-d8	48.97	0	50.00		97.9	81.3	120				

Sample ID: **LCS-199151** Client ID: Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5917705**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	47.01	5.0	50.00		94.0	63.1	140				
Benzene	49.28	5.0	50.00		98.6	74.2	129				
Chlorobenzene	48.84	5.0	50.00		97.7	70	129				
Toluene	50.38	5.0	50.00		101	74.2	129				
Trichloroethene	51.14	5.0	50.00		102	71.2	135				
Surr: 4-Bromofluorobenzene	46.79	0	50.00		93.6	70.6	123				
Surr: Dibromofluoromethane	48.90	0	50.00		97.8	78.7	124				
Surr: Toluene-d8	49.19	0	50.00		98.4	81.3	120				

Sample ID: **LCS-199151** Client ID: Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5969234**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	46.79	0	50.00		93.6	70.6	123				
Surr: Dibromofluoromethane	48.90	0	50.00		97.8	78.7	124				
Surr: Toluene-d8	49.19	0	50.00		98.4	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199151

Sample ID: **1411A27-001AMS** Client ID: **MW-22** Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5919735**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	42.91	5.0	50.00		85.8	60.2	159				
Benzene	46.65	5.0	50.00		93.3	70.2	138				
Chlorobenzene	47.05	5.0	50.00		94.1	70.1	133				
Toluene	47.62	5.0	50.00		95.2	70	139				
Trichloroethene	50.62	5.0	50.00	2.080	97.1	70.1	144				
Surr: 4-Bromofluorobenzene	46.37	0	50.00		92.7	70.6	123				
Surr: Dibromofluoromethane	47.44	0	50.00		94.9	78.7	124				
Surr: Toluene-d8	48.63	0	50.00		97.3	81.3	120				

Sample ID: **1411A27-001AMS** Client ID: **MW-22** Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5969253**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	46.37	0	50.00		92.7	70.6	123				
Surr: Dibromofluoromethane	47.44	0	50.00		94.9	78.7	124				
Surr: Toluene-d8	48.63	0	50.00		97.3	81.3	120				

Sample ID: **1411A27-001AMSD** Client ID: **MW-22** Units: **ug/L** Prep Date: **11/13/2014** Run No: **279886**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199151** Analysis Date: **11/13/2014** Seq No: **5919736**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	43.48	5.0	50.00		87.0	60.2	159	42.91	1.32	19.2	
Benzene	46.05	5.0	50.00		92.1	70.2	138	46.65	1.29	20	
Chlorobenzene	46.21	5.0	50.00		92.4	70.1	133	47.05	1.80	20	
Toluene	45.92	5.0	50.00		91.8	70	139	47.62	3.63	20	
Trichloroethene	49.29	5.0	50.00	2.080	94.4	70.1	144	50.62	2.66	20	
Surr: 4-Bromofluorobenzene	47.03	0	50.00		94.1	70.6	123	46.37	0	0	
Surr: Dibromofluoromethane	48.11	0	50.00		96.2	78.7	124	47.44	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199151

Sample ID: **1411A27-001AMSD**	Client ID: **MW-22**	Units: **ug/L**	Prep Date: **11/13/2014**	Run No: **279886**
SampleType: **MSD**	TestCode: **TCL VOLATILE ORGANICS SW8260B**	BatchID: **199151**	Analysis Date: **11/13/2014**	Seq No: **5919736**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Toluene-d8	48.65	0	50.00		97.3	81.3	120	48.63	0	0	

Sample ID: **1411A27-001AMSD**	Client ID: **MW-22**	Units: **ug/L**	Prep Date: **11/13/2014**	Run No: **279886**
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**	BatchID: **199151**	Analysis Date: **11/13/2014**	Seq No: **5969254**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	47.03	0	50.00		94.1	70.6	123	46.37	0	0	
Surr: Dibromofluoromethane	48.11	0	50.00		96.2	78.7	124	47.44	0	0	
Surr: Toluene-d8	48.65	0	50.00		97.3	81.3	120	48.63	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **MB-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5924999**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4357	0	0.5000		87.1	14.6	130				
Surr: Tetrachloro-m-xylene	0.3740	0	0.5000		74.8	14.4	116				

Sample ID: **LCS-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925578**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.303	0.10	1.000		130	52.5	140				
Dieldrin	1.209	0.10	1.000		121	59.5	137				
gamma-BHC	1.166	0.050	1.000		117	46	134				
Heptachlor	1.166	0.050	1.000		117	44.7	127				
Surr: Decachlorobiphenyl	0.3744	0	0.5000		74.9	14.6	130				
Surr: Tetrachloro-m-xylene	0.4255	0	0.5000		85.1	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **1411A27-007DMS** Client ID: **MW-110** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925133**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.036	0.10	1.000		104	27.1	146				
Dieldrin	0.9404	0.10	1.000		94.0	39.4	142				
gamma-BHC	1.553	0.050	1.000	0.6000	95.3	34.5	144				
Heptachlor	0.9363	0.050	1.000		93.6	33	138				
Surr: Decachlorobiphenyl	0.2172	0	0.5000		43.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.3363	0	0.5000		67.3	14.4	116				

Sample ID: **1411A27-007DMSD** Client ID: **MW-110** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925135**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.008	0.10	1.000		101	27.1	146	1.036	2.68	21.2	
Dieldrin	0.9387	0.10	1.000		93.9	39.4	142	0.9404	0.179	20	
gamma-BHC	1.562	0.050	1.000	0.6000	96.2	34.5	144	1.553	0.578	23.1	
Heptachlor	0.9445	0.050	1.000		94.4	33	138	0.9363	0.868	26.9	
Surr: Decachlorobiphenyl	0.2132	0	0.5000		42.6	14.6	130	0.2172	0	0	
Surr: Tetrachloro-m-xylene	0.3034	0	0.5000		60.7	14.4	116	0.3363	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199207

Sample ID: **MB-199207** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925692**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199207** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925691**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	104.0	5.00	100.0		104	80	120				
Copper	103.5	2.00	100.0		104	80	120				
Lead	105.8	1.00	100.0		106	80	120				
Zinc	110.8	10.0	100.0		111	80	120				

Sample ID: **1411896-001DMS** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925694**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	105.7	5.00	100.0		106	75	125				
Copper	106.6	2.00	100.0	2.046	105	75	125				
Lead	104.1	1.00	100.0		104	75	125				
Zinc	116.4	10.0	100.0	10.14	106	75	125				

Sample ID: **1411896-001DMSD** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925695**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	100.4	5.00	100.0		100	75	125	105.7	5.14	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199207

Sample ID: **1411896-001DMSD** Client ID:
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/15/2014** Run No: **280238**
BatchID: **199207** Analysis Date: **11/17/2014** Seq No: **5925695**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	104.2	2.00	100.0	2.046	102	75	125	106.6	2.28	20	
Lead	101.6	1.00	100.0		102	75	125	104.1	2.43	20	
Zinc	113.2	10.0	100.0	10.14	103	75	125	116.4	2.79	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199307

Sample ID: **MB-199307** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925647**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199307** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925646**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	96.28	5.00	100.0		96.3	80	120				
Copper	95.82	2.00	100.0	1.577	94.2	80	120				
Lead	96.59	1.00	100.0		96.6	80	120				
Zinc	97.89	10.0	100.0		97.9	80	120				

Sample ID: **1411896-003BMS** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925649**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.72	5.00	100.0		97.7	75	125				
Copper	103.9	2.00	100.0	1.671	102	75	125				
Lead	103.9	1.00	100.0		104	75	125				
Zinc	304.7	10.0	100.0	191.1	114	75	125				

Sample ID: **1411896-003BMSD** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925650**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.48	5.00	100.0		97.5	75	125	97.72	0.246	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199307

Sample ID: **1411896-003BMSD** Client ID:
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/17/2014** Run No: **280237**
BatchID: **199307** Analysis Date: **11/17/2014** Seq No: **5925650**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	107.6	2.00	100.0	1.671	106	75	125	103.9	3.50	20	
Lead	101.2	1.00	100.0		101	75	125	103.9	2.63	20	
Zinc	300.8	10.0	100.0	191.1	110	75	125	304.7	1.29	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **MB-199686** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939549**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199686** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939546**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.06	5.00	100.0		97.1	80	120				
Copper	100.1	2.00	100.0		100	80	120				
Lead	86.74	1.00	100.0		86.7	80	120				
Zinc	100.6	10.0	100.0		101	80	120				

Sample ID: **1411F52-001BMS** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939551**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	101.3	5.00	100.0	0.7344	101	75	125				
Copper	296.5	2.00	100.0	194.7	102	75	125				
Lead	102.4	1.00	100.0	18.13	84.2	75	125				
Zinc	2997	10.0	100.0	2860	136	75	125				S

Sample ID: **1411F52-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	98.21	5.00	100.0	0.7344	97.5	75	125	101.3	3.08	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **1411F52-001BMSD** Client ID:
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	296.2	2.00	100.0	194.7	101	75	125	296.5	0.111	20	
Lead	101.2	1.00	100.0	18.13	83.0	75	125	102.4	1.16	20	
Zinc	2997	10.0	100.0	2860	137	75	125	2997	0.027	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411A27

ANALYTICAL QC SUMMARY REPORT

BatchID: R280369

Sample ID: **MB-R280369** Client ID: Units: **mg/L** Prep Date: Run No: **280369**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280369** Analysis Date: **11/13/2014** Seq No: **5928544**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280369** Client ID: Units: **mg/L** Prep Date: Run No: **280369**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280369** Analysis Date: **11/13/2014** Seq No: **5928543**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.305	0.25	5.000		106	90	110				
Sulfate	25.10	1.0	25.00		100	90	110				

Sample ID: **1411A81-002AMS** Client ID: Units: **mg/L** Prep Date: Run No: **280369**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280369** Analysis Date: **11/13/2014** Seq No: **5928613**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	87.42	5.0	100.0		87.4	90	110				S
Sulfate	479.6	20	500.0	27.56	90.4	90	110				

Sample ID: **1411A81-002AMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280369**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280369** Analysis Date: **11/13/2014** Seq No: **5928616**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	90.26	5.0	100.0		90.3	90	110	87.42	3.19	20	
Sulfate	493.3	20	500.0	27.56	93.1	90	110	479.6	2.82	20	

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 24, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411B70

Analytical Environmental Services, Inc. received 8 samples on 11/13/2014 5:35:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1411870

Date: 11/13/14 Page 1 of 1

COMPANY:	ADDRESS:
AMEC	1075 Big Shanty RD NW suite 100 Kennesaw, GA
PHONE: 770-421-3400	FAX:
SAMPLED BY: Mark A, David H, Ever G	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total Metals	Dissolved Metals	Total Organochlorine Pesticides	Nitrate Sulfate	VOCs List	No # of Containers
							PRESERVATION (See codes)					
1	TW-3	11/13/14	1130	✓		GW	1	1	2	1	2	7
2	TW-4		1307	✓		GW	1	1	2	1		5
3	TW-5		1540	✓		GW	1	1	2	1	2	7
4	MW-107D		1552	✓		GW	1	1	2	1		5
5	MW-104D		1630	✓		GW	1	1	2	1	2	7
6	MW-121		1210	✓		GW	1	1	2	1		5
7	MW-106		1625	✓		GW	1	1	2	1		5
8	Trip Blank			✓		W					2	2
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:	11/13/14 1700	1:	11-13-14 17:05
2:	11-13-14 1715	2: Ioana Pacurar	11/13/14 17:35
3:		3:	

PROJECT INFORMATION

PROJECT NAME: BFEL Atlanta
PROJECT #:
SITE ADDRESS: 1551 Marietta RD Atlanta, GA
SEND REPORT TO: Rhonda Quinn
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT

Total # of Containers

Turnaround Time Request
- (●) Standard 5 Business Days
- ( ) 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:
* total and dissolved metals site specific list: Arsenic, Lead, Copper, and Zinc, Dissolved metals to be filtered by Lab.
** 48hr hold time Nitrate & Sulfate

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

White Copy - Original; Yellow Copy - Client

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab ID: 1411B70

Case Narrative

Samples 1411B70-004/005/007 did not match the COC in terms of sample ID. For sample 1411B70-004 COC indicates MW-107D, while labels indicate 107D-1114. For sample 1411B70-005 COC inidicates MW-104D, while labels indicate 104D-1114. Sample 1411B70-007 on the COC indicates MW-106, while labels indicate MW-106D. For all the samples mentioned above the date and time matched with the COC.

Samples 1411B70-003B/005B were received outside of the pH range required for 6020 Metals analysis. The pH was not further adjusted due to matrix and project history.

Volatiles Organic Compounds Analysis by Method 8260B:

Due to sample matrix, sample 1411B70-005A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Metals Analysis by Method 6020:

Copper was detected in Method Blank 199473 at 2.65 µg/L which was above reporting limit of 2 µg/L resulting in "B" qualified data for the Batch QC samples and for all samples with final Reporting Limits less than the value detected in the Method Blank. Associated sample values were either greater than approximately 10X the blank value and data was not affected or were less than reporting limit and data is reportable with high bias.

Ion Chromatography Analysis by Method 9056A:

Due to sample matrix, sample 1411B70-005E required a dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc

Date: 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-3
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 11:30:00 AM
Lab ID:	1411B70-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 14:11	MR
Copper	820	2.00		ug/L	199311	1	11/19/2014 14:11	MR
Lead	3.01	1.00		ug/L	199311	1	11/19/2014 14:11	MR
Zinc	2120	10.0		ug/L	199311	1	11/19/2014 14:11	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,1-Dichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,1-Dichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2-Dibromoethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2-Dichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,2-Dichloropropane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
2-Butanone	BRL	50		ug/L	199255	1	11/19/2014 13:04	NP
2-Hexanone	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
4-Methyl-2-pentanone	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
Acetone	BRL	50		ug/L	199255	1	11/19/2014 13:04	NP
Benzene	8.6	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Bromodichloromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Bromoform	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Bromomethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Carbon disulfide	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Carbon tetrachloride	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Chlorobenzene	14	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Chloroethane	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
Chloroform	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Chloromethane	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
cis-1,2-Dichloroethene	200	5.0		ug/L	199255	1	11/19/2014 13:04	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Cyclohexane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Dibromochloromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Dichlorodifluoromethane	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
Ethylbenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Freon-113	BRL	10		ug/L	199255	1	11/19/2014 13:04	NP
Isopropylbenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-3
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 11:30:00 AM
Lab ID:	1411B70-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Methyl acetate	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Methylcyclohexane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Methylene chloride	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
o-Xylene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Styrene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Tetrachloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Toluene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Trichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Trichlorofluoromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:04	NP
Vinyl chloride	BRL	2.0		ug/L	199255	1	11/19/2014 13:04	NP
Surr: 4-Bromofluorobenzene	94	70.6-123		%REC	199255	1	11/19/2014 13:04	NP
Surr: Dibromofluoromethane	97	78.7-124		%REC	199255	1	11/19/2014 13:04	NP
Surr: Toluene-d8	92.7	81.3-120		%REC	199255	1	11/19/2014 13:04	NP
ION SCAN SW9056A								
Nitrate	6.2	1.2		mg/L	R280513	5	11/14/2014 12:14	JM
Sulfate	600	10		mg/L	R280513	10	11/21/2014 10:36	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/20/2014 14:27	MR
Copper	842	2.00	B	ug/L	199473	1	11/20/2014 14:27	MR
Lead	3.08	1.00		ug/L	199473	1	11/20/2014 14:27	MR
Zinc	2190	10.0		ug/L	199473	1	11/20/2014 14:27	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 13:09	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 13:09	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 13:09	BB
alpha-BHC	0.87	0.050		ug/L	199206	1	11/17/2014 13:09	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:09	BB
beta-BHC	1.1	0.050		ug/L	199206	1	11/17/2014 13:09	BB
delta-BHC	0.36	0.050		ug/L	199206	1	11/17/2014 13:09	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 13:09	BB
gamma-BHC	0.35	0.050		ug/L	199206	1	11/17/2014 13:09	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:09	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 13:09	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 13:09	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-3
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 11:30:00 AM
Lab ID:	1411B70-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 13:09	BB
Surr: Decachlorobiphenyl	48.6	14.6-130		%REC	199206	1	11/17/2014 13:09	BB
Surr: Tetrachloro-m-xylene	35.1	14.4-116		%REC	199206	1	11/17/2014 13:09	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-4
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 1:07:00 PM
Lab ID:	1411B70-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 14:37	MR
Copper	166	2.00		ug/L	199311	1	11/20/2014 13:24	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 14:37	MR
Zinc	884	10.0		ug/L	199311	1	11/20/2014 13:24	MR
ION SCAN SW9056A								
Nitrate	1.8	0.25		mg/L	R280513	1	11/14/2014 10:45	JM
Sulfate	160	2.0		mg/L	R280513	2	11/14/2014 12:28	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 18:55	MR
Copper	151	2.00	B	ug/L	199473	1	11/19/2014 18:55	MR
Lead	BRL	1.00		ug/L	199473	1	11/19/2014 18:55	MR
Zinc	836	10.0		ug/L	199473	1	11/19/2014 18:55	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 13:21	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 13:21	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 13:21	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:21	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:21	BB
beta-BHC	0.62	0.050		ug/L	199206	1	11/19/2014 16:39	BB
delta-BHC	0.083	0.050		ug/L	199206	1	11/17/2014 13:21	BB
Dieldrin	0.11	0.10		ug/L	199206	1	11/17/2014 13:21	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:21	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:21	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 13:21	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 13:21	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 13:21	BB
Surr: Decachlorobiphenyl	41.7	14.6-130		%REC	199206	1	11/17/2014 13:21	BB
Surr: Tetrachloro-m-xylene	43.5	14.4-116		%REC	199206	1	11/17/2014 13:21	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-5
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 3:40:00 PM
Lab ID:	1411B70-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 14:42	MR
Copper	1400	2.00		ug/L	199311	1	11/19/2014 14:42	MR
Lead	2.50	1.00		ug/L	199311	1	11/19/2014 14:42	MR
Zinc	17400	100		ug/L	199311	10	11/20/2014 13:29	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,1-Dichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,1-Dichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2-Dibromoethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2-Dichloroethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,2-Dichloropropane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
2-Butanone	BRL	50		ug/L	199255	1	11/19/2014 13:29	NP
2-Hexanone	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
4-Methyl-2-pentanone	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
Acetone	BRL	50		ug/L	199255	1	11/19/2014 13:29	NP
Benzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Bromodichloromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Bromoform	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Bromomethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Carbon disulfide	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Carbon tetrachloride	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Chlorobenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Chloroethane	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
Chloroform	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Chloromethane	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Cyclohexane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Dibromochloromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Dichlorodifluoromethane	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
Ethylbenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Freon-113	BRL	10		ug/L	199255	1	11/19/2014 13:29	NP
Isopropylbenzene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-5
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 3:40:00 PM
Lab ID:	1411B70-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Methyl acetate	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Methylcyclohexane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Methylene chloride	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
o-Xylene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Styrene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Tetrachloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Toluene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Trichloroethene	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Trichlorofluoromethane	BRL	5.0		ug/L	199255	1	11/19/2014 13:29	NP
Vinyl chloride	BRL	2.0		ug/L	199255	1	11/19/2014 13:29	NP
Surr: 4-Bromofluorobenzene	92	70.6-123		%REC	199255	1	11/19/2014 13:29	NP
Surr: Dibromofluoromethane	101	78.7-124		%REC	199255	1	11/19/2014 13:29	NP
Surr: Toluene-d8	98	81.3-120		%REC	199255	1	11/19/2014 13:29	NP
ION SCAN SW9056A								
Nitrate	29	2.5		mg/L	R280513	10	11/14/2014 12:43	JM
Sulfate	810	10		mg/L	R280513	10	11/14/2014 12:43	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 19:00	MR
Copper	1290	2.00	B	ug/L	199473	1	11/19/2014 19:00	MR
Lead	1.69	1.00		ug/L	199473	1	11/19/2014 19:00	MR
Zinc	19600	100		ug/L	199473	10	11/20/2014 14:53	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 13:32	BB
4,4´-DDE	0.10	0.10		ug/L	199206	1	11/17/2014 13:32	BB
4,4´-DDT	0.21	0.10		ug/L	199206	1	11/17/2014 13:32	BB
alpha-BHC	0.12	0.050		ug/L	199206	1	11/17/2014 13:32	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:32	BB
beta-BHC	1.1	0.050		ug/L	199206	1	11/17/2014 13:32	BB
delta-BHC	0.063	0.050		ug/L	199206	1	11/17/2014 13:32	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 13:32	BB
gamma-BHC	0.13	0.050		ug/L	199206	1	11/17/2014 13:32	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:32	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 13:32	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 13:32	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-5
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 3:40:00 PM
Lab ID:	1411B70-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 13:32	BB
Surr: Decachlorobiphenyl	24.1	14.6-130		%REC	199206	1	11/17/2014 13:32	BB
Surr: Tetrachloro-m-xylene	57.2	14.4-116		%REC	199206	1	11/17/2014 13:32	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-107D
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 3:52:00 PM
Lab ID:	1411B70-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 14:47	MR
Copper	4.07	2.00		ug/L	199311	1	11/19/2014 14:47	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 14:47	MR
Zinc	23.5	10.0		ug/L	199311	1	11/19/2014 14:47	MR
ION SCAN SW9056A								
Nitrate	4.2	0.25		mg/L	R280513	1	11/14/2014 11:15	JM
Sulfate	200	2.0		mg/L	R280513	2	11/14/2014 14:28	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 19:06	MR
Copper	BRL	2.00		ug/L	199550	1	11/20/2014 16:52	MR
Lead	BRL	1.00		ug/L	199473	1	11/19/2014 19:06	MR
Zinc	19.7	10.0		ug/L	199473	1	11/19/2014 19:06	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199206	1	11/17/2014 13:43	BB
4,4´-DDE	BRL	0.10		ug/L	199206	1	11/17/2014 13:43	BB
4,4´-DDT	BRL	0.10		ug/L	199206	1	11/17/2014 13:43	BB
alpha-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
alpha-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
beta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
delta-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
Dieldrin	BRL	0.10		ug/L	199206	1	11/17/2014 13:43	BB
gamma-BHC	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
gamma-Chlordane	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
Heptachlor	BRL	0.050		ug/L	199206	1	11/17/2014 13:43	BB
Methoxychlor	BRL	0.50		ug/L	199206	1	11/17/2014 13:43	BB
Toxaphene	BRL	5.0		ug/L	199206	1	11/17/2014 13:43	BB
Surr: Decachlorobiphenyl	43.9	14.6-130		%REC	199206	1	11/17/2014 13:43	BB
Surr: Tetrachloro-m-xylene	61.4	14.4-116		%REC	199206	1	11/17/2014 13:43	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104D
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 4:30:00 PM
Lab ID:	1411B70-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/20/2014 13:44	MR
Copper	3.67	2.00		ug/L	199311	1	11/20/2014 13:44	MR
Lead	BRL	1.00		ug/L	199311	2	11/20/2014 13:50	MR
Zinc	BRL	10.0		ug/L	199311	1	11/20/2014 13:44	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,1,2,2-Tetrachloroethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,1,2-Trichloroethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,1-Dichloroethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,1-Dichloroethene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2,4-Trichlorobenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2-Dibromo-3-chloropropane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2-Dibromoethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2-Dichlorobenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2-Dichloroethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,2-Dichloropropane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,3-Dichlorobenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
1,4-Dichlorobenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
2-Butanone	260000	130000		ug/L	199255	2500	11/18/2014 17:51	GC
2-Hexanone	1900	500		ug/L	199255	50	11/17/2014 21:43	GC
4-Methyl-2-pentanone	120000	25000		ug/L	199255	2500	11/18/2014 17:51	GC
Acetone	290000	130000		ug/L	199255	2500	11/18/2014 17:51	GC
Benzene	290	250		ug/L	199255	50	11/17/2014 21:43	GC
Bromodichloromethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Bromoform	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Bromomethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Carbon disulfide	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Carbon tetrachloride	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Chlorobenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Chloroethane	BRL	500		ug/L	199255	50	11/17/2014 21:43	GC
Chloroform	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Chloromethane	BRL	500		ug/L	199255	50	11/17/2014 21:43	GC
cis-1,2-Dichloroethene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
cis-1,3-Dichloropropene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Cyclohexane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Dibromochloromethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Dichlorodifluoromethane	BRL	500		ug/L	199255	50	11/17/2014 21:43	GC
Ethylbenzene	4300	250		ug/L	199255	50	11/17/2014 21:43	GC
Freon-113	BRL	500		ug/L	199255	50	11/17/2014 21:43	GC
Isopropylbenzene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104D
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 4:30:00 PM
Lab ID:	1411B70-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	15000	250		ug/L	199255	50	11/17/2014 21:43	GC
Methyl acetate	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Methyl tert-butyl ether	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Methylcyclohexane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Methylene chloride	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
o-Xylene	4700	250		ug/L	199255	50	11/17/2014 21:43	GC
Styrene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Tetrachloroethene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Toluene	67000	13000		ug/L	199255	2500	11/18/2014 17:51	GC
trans-1,2-Dichloroethene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
trans-1,3-Dichloropropene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Trichloroethene	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Trichlorofluoromethane	BRL	250		ug/L	199255	50	11/17/2014 21:43	GC
Vinyl chloride	BRL	100		ug/L	199255	50	11/17/2014 21:43	GC
Surr: 4-Bromofluorobenzene	89.3	70.6-123		%REC	199255	2500	11/18/2014 17:51	GC
Surr: 4-Bromofluorobenzene	91.9	70.6-123		%REC	199255	50	11/17/2014 21:43	GC
Surr: Dibromofluoromethane	99.3	78.7-124		%REC	199255	2500	11/18/2014 17:51	GC
Surr: Dibromofluoromethane	101	78.7-124		%REC	199255	50	11/17/2014 21:43	GC
Surr: Toluene-d8	106	81.3-120		%REC	199255	2500	11/18/2014 17:51	GC
Surr: Toluene-d8	105	81.3-120		%REC	199255	50	11/17/2014 21:43	GC
ION SCAN SW9056A								
Nitrate	BRL	2.5		mg/L	R280513	10	11/14/2014 14:42	JM
Sulfate	BRL	10		mg/L	R280513	10	11/14/2014 14:42	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 19:21	MR
Copper	BRL	2.00		ug/L	199473	1	11/19/2014 19:21	MR
Lead	BRL	1.00		ug/L	199473	1	11/19/2014 19:21	MR
Zinc	BRL	10.0		ug/L	199473	1	11/19/2014 19:21	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 11:28	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 11:28	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 11:28	BB
alpha-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
beta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
delta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 11:28	BB
gamma-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-104D
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 4:30:00 PM
Lab ID:	1411B70-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 11:28	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 11:28	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 11:28	BB
Surr: Decachlorobiphenyl	64.9	14.6-130		%REC	199260	1	11/17/2014 11:28	BB
Surr: Tetrachloro-m-xylene	55.4	14.4-116		%REC	199260	1	11/17/2014 11:28	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-121
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 12:10:00 PM
Lab ID:	1411B70-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 16:44	MR
Copper	11.3	2.00		ug/L	199311	1	11/19/2014 16:44	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 16:44	MR
Zinc	43.4	10.0		ug/L	199311	1	11/19/2014 16:44	MR
ION SCAN SW9056A								
Nitrate	0.43	0.25		mg/L	R280513	1	11/14/2014 11:44	JM
Sulfate	50	1.0		mg/L	R280513	1	11/14/2014 11:44	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 19:26	MR
Copper	2.86	2.00		ug/L	199550	1	11/20/2014 16:57	MR
Lead	BRL	1.00		ug/L	199473	1	11/19/2014 19:26	MR
Zinc	19.6	10.0		ug/L	199473	1	11/19/2014 19:26	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 18:57	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 18:57	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 18:57	BB
alpha-BHC	0.054	0.050		ug/L	199260	1	11/17/2014 18:57	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 18:57	BB
beta-BHC	0.10	0.050		ug/L	199260	1	11/17/2014 18:57	BB
delta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 18:57	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 18:57	BB
gamma-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 18:57	BB
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 18:57	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 18:57	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 18:57	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 18:57	BB
Surr: Decachlorobiphenyl	62.8	14.6-130		%REC	199260	1	11/17/2014 18:57	BB
Surr: Tetrachloro-m-xylene	60.3	14.4-116		%REC	199260	1	11/17/2014 18:57	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-106
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014 4:25:00 PM
Lab ID:	1411B70-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 16:50	MR
Copper	2.98	2.00		ug/L	199311	1	11/19/2014 16:50	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 16:50	MR
Zinc	182	10.0		ug/L	199311	1	11/19/2014 16:50	MR
ION SCAN SW9056A								
Nitrate	0.47	0.25		mg/L	R280513	1	11/14/2014 11:59	JM
Sulfate	440	10		mg/L	R280513	10	11/14/2014 14:57	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199473	1	11/19/2014 19:32	MR
Copper	BRL	2.00		ug/L	199473	1	11/19/2014 19:32	MR
Lead	BRL	1.00		ug/L	199473	1	11/19/2014 19:32	MR
Zinc	172	10.0		ug/L	199473	1	11/19/2014 19:32	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 11:40	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 11:40	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 11:40	BB
alpha-BHC	6.3	0.50		ug/L	199260	10	11/18/2014 12:05	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:40	BB
beta-BHC	2.4	0.50		ug/L	199260	10	11/18/2014 12:05	BB
delta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:40	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 11:40	BB
gamma-BHC	3.5	0.50		ug/L	199260	10	11/18/2014 12:05	BB
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:40	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 11:40	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 11:40	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 11:40	BB
Surr: Decachlorobiphenyl	80.8	14.6-130		%REC	199260	1	11/17/2014 11:40	BB
Surr: Tetrachloro-m-xylene	50.8	14.4-116		%REC	199260	1	11/17/2014 11:40	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014
Lab ID:	1411B70-008	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,1,2-Trichloroethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,1-Dichloroethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,1-Dichloroethene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2-Dibromoethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2-Dichloroethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,2-Dichloropropane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,3-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
1,4-Dichlorobenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
2-Butanone	BRL	50		ug/L	199255	1	11/14/2014 20:22	GC
2-Hexanone	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
4-Methyl-2-pentanone	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
Acetone	BRL	50		ug/L	199255	1	11/14/2014 20:22	GC
Benzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Bromodichloromethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Bromoform	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Bromomethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Carbon disulfide	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Carbon tetrachloride	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Chlorobenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Chloroethane	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
Chloroform	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Chloromethane	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
cis-1,2-Dichloroethene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
cis-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Cyclohexane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Dibromochloromethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Dichlorodifluoromethane	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
Ethylbenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Freon-113	BRL	10		ug/L	199255	1	11/14/2014 20:22	GC
Isopropylbenzene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
m,p-Xylene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Methyl acetate	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Methyl tert-butyl ether	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Methylcyclohexane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Methylene chloride	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
o-Xylene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/13/2014
Lab ID:	1411B70-008	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Tetrachloroethene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Toluene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
trans-1,2-Dichloroethene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
trans-1,3-Dichloropropene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Trichloroethene	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Trichlorofluoromethane	BRL	5.0		ug/L	199255	1	11/14/2014 20:22	GC
Vinyl chloride	BRL	2.0		ug/L	199255	1	11/14/2014 20:22	GC
Surr: 4-Bromofluorobenzene	86.3	70.6-123		%REC	199255	1	11/14/2014 20:22	GC
Surr: Dibromofluoromethane	98.9	78.7-124		%REC	199255	1	11/14/2014 20:22	GC
Surr: Toluene-d8	103	81.3-120		%REC	199255	1	11/14/2014 20:22	GC

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 AMEC / Kennesaw Work Order Number 1411B70

Checklist completed by Joann Pacurar 11/13/14
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°C Cooler #2 3.5°C Cooler #3 3.2°C 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 Don

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: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411B70

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411B70-001A	TW-3	11/13/2014 11:30:00AM	Groundwater	TCL VOLATILE ORGANICS		11/14/2014	11/19/2014
1411B70-001B	TW-3	11/13/2014 11:30:00AM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-001C	TW-3	11/13/2014 11:30:00AM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/20/2014
1411B70-001D	TW-3	11/13/2014 11:30:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-001E	TW-3	11/13/2014 11:30:00AM	Groundwater	ION SCAN			11/14/2014
1411B70-001E	TW-3	11/13/2014 11:30:00AM	Groundwater	ION SCAN			11/21/2014
1411B70-002A	TW-4	11/13/2014 1:07:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-002A	TW-4	11/13/2014 1:07:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/20/2014
1411B70-002B	TW-4	11/13/2014 1:07:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-002C	TW-4	11/13/2014 1:07:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-002C	TW-4	11/13/2014 1:07:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/19/2014
1411B70-002D	TW-4	11/13/2014 1:07:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-003A	TW-5	11/13/2014 3:40:00PM	Groundwater	TCL VOLATILE ORGANICS		11/14/2014	11/19/2014
1411B70-003B	TW-5	11/13/2014 3:40:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-003B	TW-5	11/13/2014 3:40:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/20/2014
1411B70-003C	TW-5	11/13/2014 3:40:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-003C	TW-5	11/13/2014 3:40:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/20/2014
1411B70-003D	TW-5	11/13/2014 3:40:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-003E	TW-5	11/13/2014 3:40:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-004A	MW-107D	11/13/2014 3:52:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-004B	MW-107D	11/13/2014 3:52:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-004B	MW-107D	11/13/2014 3:52:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/20/2014
1411B70-004C	MW-107D	11/13/2014 3:52:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-004D	MW-107D	11/13/2014 3:52:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-005A	MW-104D	11/13/2014 4:30:00PM	Groundwater	TCL VOLATILE ORGANICS		11/14/2014	11/17/2014
1411B70-005A	MW-104D	11/13/2014 4:30:00PM	Groundwater	TCL VOLATILE ORGANICS		11/14/2014	11/18/2014
1411B70-005B	MW-104D	11/13/2014 4:30:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/20/2014
1411B70-005C	MW-104D	11/13/2014 4:30:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-005D	MW-104D	11/13/2014 4:30:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411B70

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411B70-005E	MW-104D	11/13/2014 4:30:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-006A	MW-121	11/13/2014 12:10:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-006B	MW-121	11/13/2014 12:10:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-006B	MW-121	11/13/2014 12:10:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/20/2014
1411B70-006C	MW-121	11/13/2014 12:10:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-006D	MW-121	11/13/2014 12:10:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-007A	MW-106	11/13/2014 4:25:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411B70-007B	MW-106	11/13/2014 4:25:00PM	Groundwater	Dissolved Metals by ICP/MS		11/19/2014	11/19/2014
1411B70-007C	MW-106	11/13/2014 4:25:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411B70-007C	MW-106	11/13/2014 4:25:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/18/2014
1411B70-007D	MW-106	11/13/2014 4:25:00PM	Groundwater	ION SCAN			11/14/2014
1411B70-008A	TRIP BLANK	11/13/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/14/2014	11/14/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **MB-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5924999**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4357	0	0.5000		87.1	14.6	130				
Surr: Tetrachloro-m-xylene	0.3740	0	0.5000		74.8	14.4	116				

Sample ID: **LCS-199206** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925578**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.303	0.10	1.000		130	52.5	140				
Dieldrin	1.209	0.10	1.000		121	59.5	137				
gamma-BHC	1.166	0.050	1.000		117	46	134				
Heptachlor	1.166	0.050	1.000		117	44.7	127				
Surr: Decachlorobiphenyl	0.3744	0	0.5000		74.9	14.6	130				
Surr: Tetrachloro-m-xylene	0.4255	0	0.5000		85.1	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199206

Sample ID: **1411A27-007DMS** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925133**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.036	0.10	1.000		104	27.1	146				
Dieldrin	0.9404	0.10	1.000		94.0	39.4	142				
gamma-BHC	1.553	0.050	1.000	0.6000	95.3	34.5	144				
Heptachlor	0.9363	0.050	1.000		93.6	33	138				
Surr: Decachlorobiphenyl	0.2172	0	0.5000		43.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.3363	0	0.5000		67.3	14.4	116				

Sample ID: **1411A27-007DMSD** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199206** Analysis Date: **11/17/2014** Seq No: **5925135**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.008	0.10	1.000		101	27.1	146	1.036	2.68	21.2	
Dieldrin	0.9387	0.10	1.000		93.9	39.4	142	0.9404	0.179	20	
gamma-BHC	1.562	0.050	1.000	0.6000	96.2	34.5	144	1.553	0.578	23.1	
Heptachlor	0.9445	0.050	1.000		94.4	33	138	0.9363	0.868	26.9	
Surr: Decachlorobiphenyl	0.2132	0	0.5000		42.6	14.6	130	0.2172	0	0	
Surr: Tetrachloro-m-xylene	0.3034	0	0.5000		60.7	14.4	116	0.3363	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199255

Sample ID: **MB-199255** Client ID: Units: **ug/L** Prep Date: **11/14/2014** Run No: **280022**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/14/2014** Seq No: **5922513**

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	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199255

Sample ID: **MB-199255** Client ID: Units: **ug/L** Prep Date: **11/14/2014** Run No: **280022**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/14/2014** Seq No: **5922513**

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	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	45.41	0	50.00		90.8	70.6	123				
Surr: Dibromofluoromethane	49.38	0	50.00		98.8	78.7	124				
Surr: Toluene-d8	49.82	0	50.00		99.6	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199255

Sample ID: **LCS-199255** Client ID: Units: **ug/L** Prep Date: **11/14/2014** Run No: **280022**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/14/2014** Seq No: **5922512**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.77	5.0	50.00		110	63.1	140				
Benzene	50.90	5.0	50.00	0.6400	101	74.2	129				
Chlorobenzene	47.60	5.0	50.00	1.170	92.9	70	129				
Toluene	47.20	5.0	50.00	1.660	91.1	74.2	129				
Trichloroethene	46.42	5.0	50.00		92.8	71.2	135				
Surr: 4-Bromofluorobenzene	46.02	0	50.00		92.0	70.6	123				
Surr: Dibromofluoromethane	49.09	0	50.00		98.2	78.7	124				
Surr: Toluene-d8	49.88	0	50.00		99.8	81.3	120				

Sample ID: **1411B70-001AMS** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/14/2014** Run No: **280305**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/18/2014** Seq No: **5927248**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3472	250	2500		139	60.2	159				
Benzene	2596	250	2500	46.50	102	70.2	138				
Chlorobenzene	2436	250	2500	79.50	94.2	70.1	133				
Toluene	2626	250	2500	143.0	99.3	70	139				
Trichloroethene	2423	250	2500		96.9	70.1	144				
Surr: 4-Bromofluorobenzene	2172	0	2500		86.9	70.6	123				
Surr: Dibromofluoromethane	2358	0	2500		94.3	78.7	124				
Surr: Toluene-d8	2492	0	2500		99.7	81.3	120				

Sample ID: **1411B70-001AMSD** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/14/2014** Run No: **280305**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/18/2014** Seq No: **5927318**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	3380	250	2500		135	60.2	159	3472	2.67	19.2	
Benzene	2616	250	2500	46.50	103	70.2	138	2596	0.748	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199255

Sample ID: **1411B70-001AMSD** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/14/2014** Run No: **280305**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199255** Analysis Date: **11/18/2014** Seq No: **5927318**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	2426	250	2500	79.50	93.8	70.1	133	2436	0.411	20	
Toluene	2644	250	2500	143.0	100	70	139	2626	0.683	20	
Trichloroethene	2415	250	2500		96.6	70.1	144	2423	0.331	20	
Surr: 4-Bromofluorobenzene	2180	0	2500		87.2	70.6	123	2172	0	0	
Surr: Dibromofluoromethane	2372	0	2500		94.9	78.7	124	2358	0	0	
Surr: Toluene-d8	2491	0	2500		99.6	81.3	120	2492	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199260

Sample ID: **MB-199260** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5924996**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4220	0	0.5000		84.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.3816	0	0.5000		76.3	14.4	116				

Sample ID: **LCS-199260** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925577**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.153	0.10	1.000		115	52.5	140				
Dieldrin	1.099	0.10	1.000		110	59.5	137				
gamma-BHC	1.029	0.050	1.000		103	46	134				
Heptachlor	1.032	0.050	1.000		103	44.7	127				
Surr: Decachlorobiphenyl	0.4422	0	0.5000		88.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.4160	0	0.5000		83.2	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199260

Sample ID: **1411C83-004DMS** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925019**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	1.016	0.10	1.000		102	36.3	142				
4,4´-DDE	0.9090	0.10	1.000		90.9	29.8	138				
4,4´-DDT	1.008	0.10	1.000		101	27.1	146				
alpha-BHC	1.111	0.050	1.000	0.2648	84.6	36.6	137				
beta-BHC	1.298	0.050	1.000	0.2637	103	40.6	144				
delta-BHC	1.130	0.050	1.000	0.07253	106	48.5	139				
Dieldrin	0.9320	0.10	1.000		93.2	39.4	142				
gamma-BHC	0.9360	0.050	1.000	0.07631	86.0	34.5	144				
Heptachlor	0.8850	0.050	1.000		88.5	33	138				
Surr: Decachlorobiphenyl	0.2088	0	0.5000		41.8	14.6	130				
Surr: Tetrachloro-m-xylene	0.3191	0	0.5000		63.8	14.4	116				

Sample ID: **1411C83-004DMSD** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925020**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	1.089	0.10	1.000		109	36.3	142	1.016	6.86	21.9	
4,4´-DDE	1.014	0.10	1.000		101	29.8	138	0.9090	10.9	25.6	
4,4´-DDT	1.118	0.10	1.000		112	27.1	146	1.008	10.4	21.2	
alpha-BHC	1.246	0.050	1.000	0.2648	98.1	36.6	137	1.111	11.5	27.1	
beta-BHC	1.468	0.050	1.000	0.2637	120	40.6	144	1.298	12.3	26.3	
delta-BHC	1.280	0.050	1.000	0.07253	121	48.5	139	1.130	12.4	20	
Dieldrin	1.002	0.10	1.000		100	39.4	142	0.9320	7.19	20	
gamma-BHC	1.072	0.050	1.000	0.07631	99.6	34.5	144	0.9360	13.6	23.1	
Heptachlor	0.9806	0.050	1.000		98.1	33	138	0.8850	10.3	26.9	
Surr: Decachlorobiphenyl	0.2389	0	0.5000		47.8	14.6	130	0.2088	0	0	
Surr: Tetrachloro-m-xylene	0.3037	0	0.5000		60.7	14.4	116	0.3191	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199311

Sample ID: **MB-199311** Client ID: Units: **ug/L** Prep Date: **11/18/2014** Run No: **280408**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929436**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199311** Client ID: Units: **ug/L** Prep Date: **11/18/2014** Run No: **280408**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929435**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	96.35	5.00	100.0		96.4	80	120				
Copper	98.32	2.00	100.0	0.1434	98.2	80	120				
Lead	96.52	1.00	100.0		96.5	80	120				
Zinc	99.25	10.0	100.0		99.2	80	120				

Sample ID: **1411B70-001BMS** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929438**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	88.65	5.00	100.0		88.6	75	125				
Copper	917.5	2.00	100.0	820.0	97.5	75	125				
Lead	90.30	1.00	100.0	3.006	87.3	75	125				
Zinc	2228	10.0	100.0	2117	111	75	125				

Sample ID: **1411B70-001BMSD** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929439**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	91.35	5.00	100.0		91.4	75	125	88.65	3.01	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199311

Sample ID: **1411B70-001BMSD** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929439**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	933.1	2.00	100.0	820.0	113	75	125	917.5	1.68	20	
Lead	92.07	1.00	100.0	3.006	89.1	75	125	90.30	1.94	20	
Zinc	2279	10.0	100.0	2117	163	75	125	2228	2.28	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199473

Sample ID: **MB-199473** Client ID: Units: **ug/L** Prep Date: **11/19/2014** Run No: **280410**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199473** Analysis Date: **11/20/2014** Seq No: **5931790**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	2.654	2.00									B
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199473** Client ID: Units: **ug/L** Prep Date: **11/19/2014** Run No: **280410**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199473** Analysis Date: **11/19/2014** Seq No: **5929497**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	89.38	5.00	100.0		89.4	80	120				
Copper	98.77	2.00	100.0	2.654	96.1	80	120				B
Lead	88.83	1.00	100.0		88.8	80	120				
Zinc	92.54	10.0	100.0		92.5	80	120				

Sample ID: **1411B70-001CMS** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/19/2014** Run No: **280410**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199473** Analysis Date: **11/20/2014** Seq No: **5931794**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	90.97	5.00	100.0		91.0	75	125				
Copper	915.7	2.00	100.0	842.4	73.3	75	125				BS
Lead	104.5	1.00	100.0	3.084	101	75	125				
Zinc	2214	10.0	100.0	2191	23.2	75	125				S

Sample ID: **1411B70-001CMSD** Client ID: **TW-3** Units: **ug/L** Prep Date: **11/19/2014** Run No: **280410**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199473** Analysis Date: **11/19/2014** Seq No: **5929501**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	82.15	5.00	100.0		82.1	75	125	82.24	0.121	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199473

Sample ID: **1411B70-001CMSD**	Client ID: **TW-3**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280410**	
SampleType: **MSD**	TestCode: **Dissolved Metals by ICP/MS SW6020A**				BatchID: **199473**		Analysis Date: **11/19/2014**		Seq No: **5929501**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	84.88	1.00	100.0	2.477	82.4	75	125	84.67	0.246	20	

Sample ID: **1411B70-001CMSD**	Client ID: **TW-3**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280410**	
SampleType: **MSD**	TestCode: **Dissolved Metals by ICP/MS SW6020A**				BatchID: **199473**		Analysis Date: **11/20/2014**		Seq No: **5931797**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	906.2	2.00	100.0	842.4	63.8	75	125	915.7	1.04	20	BS
Zinc	2191	10.0	100.0	2191	-0.610	75	125	2214	1.08	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **MB-199550** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931830**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199550** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931833**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	94.84	5.00	100.0		94.8	80	120				
Copper	96.19	2.00	100.0		96.2	80	120				
Lead	95.17	1.00	100.0		95.2	80	120				
Zinc	92.73	10.0	100.0	6.645	86.1	80	120				

Sample ID: **1411C83-001BMS** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931835**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	84.98	5.00	100.0	1.647	83.3	75	125				
Copper	140.4	2.00	100.0	61.63	78.7	75	125				
Lead	99.18	1.00	100.0	0.3398	98.8	75	125				
Zinc	450.4	10.0	100.0	354.8	95.6	75	125				

Sample ID: **1411C83-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931836**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	97.29	1.00	100.0	0.3398	97.0	75	125	99.18	1.92	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **1411C83-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931836**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	442.9	10.0	100.0	354.8	88.1	75	125	450.4	1.67	20	

Sample ID: **1411C83-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931839**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	89.36	25.0	100.0		89.4	75	125	94.03	5.09	20	
Copper	164.1	10.0	100.0	78.96	85.2	75	125	164.7	0.363	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411B70

ANALYTICAL QC SUMMARY REPORT

BatchID: R280513

Sample ID: **MB-R280513** Client ID: Units: **mg/L** Prep Date: Run No: **280513**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280513** Analysis Date: **11/14/2014** Seq No: **5932361**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280513** Client ID: Units: **mg/L** Prep Date: Run No: **280513**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280513** Analysis Date: **11/14/2014** Seq No: **5932360**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.907	0.25	5.000		98.1	90	110				
Sulfate	26.29	1.0	25.00		105	90	110				

Sample ID: **1411B89-002AMS** Client ID: Units: **mg/L** Prep Date: Run No: **280513**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280513** Analysis Date: **11/14/2014** Seq No: **5932378**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.320	0.25	5.000	0.2494	101	90	110				
Sulfate	30.59	1.0	25.00	3.289	109	90	110				

Sample ID: **1411B89-002AMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280513**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280513** Analysis Date: **11/14/2014** Seq No: **5932379**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.848	0.25	5.000	0.2494	92.0	90	110	5.320	9.28	20	
Sulfate	30.14	1.0	25.00	3.289	107	90	110	30.59	1.49	20	

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 24, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411C83

Analytical Environmental Services, Inc. received 4 samples on 11/14/2014 3:00:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704

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

CHAIN OF CUSTODY

Work Order: 1411C83

Date: 11/14/14 Page 1 of 1

COMPANY: AMEC

ADDRESS: 1075 Big Shanty RD NW Suite 100 Kennesaw, GA

PHONE: 770-421-3400

FAX:

SAMPLED BY: Mark A. and Daniel H

SIGNATURE:

ANALYSIS REQUESTED

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

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes)				REMARKS	No # of Containers
							N	I	I	I		
1	TW-6	11/14/14	1059	✓		GW	1	1	2	1		5
2	TW-8	11/14/14	1306	✓		GW	1	1	2	1		5
3	MW-105	11/14/14	1150	✓		GW	1	1	2	1		5
4	MW-115	11/14/14	1332	✓		GW	1	1	2	1		5
5	Temp blank											
6												
7												
8												
9												
10												
11												
12												
13												
14												

Total 1 Metals | Dissolved Metal | Total Organochlorine Pesticides | Nitrate & Sulfate | VOCs List

RELINQUISHED BY / DATE/TIME

1: 11/14/14 1423

2: David L Howard 11/14/14 1500

3:

RECEIVED BY / DATE/TIME

1: David L Howard 1423

2: Cortaya Reeves 11/14/14 3p

3:

PROJECT INFORMATION

PROJECT NAME: BFEL Atlanta

PROJECT #:

SITE ADDRESS: 1551 Marietta RD Atlanta, GA

SEND REPORT TO: Rhonda Quinn

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers

Turnaround Time Request

- (●) Standard 5 Business Days
- ( ) 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:

Total and Dissolved Metals Site Specific list: Arsenic, Lead, Copper, and Zinc Dissolved Metals to be filtered by Lab.

48hr hold time Nitrate & Sulfate

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

White Copy - Original; Yellow Copy - Client

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab ID: 1411C83

Case Narrative

Ion Chromatography Analysis by Method 9056A:

Due to sample matrix, sample 1411C83-002C required a dilution during preparation and/or analysis resulting in elevated reporting limits.

Sulfate values for the QC samples 1411B35-004CMS and -004CMSD are "E" qualified indicating estimated values over linear calibration range due to the level of target analyte present in the unspiked sample.

Nitrate and Nitrite values for the QC samples 1411B35-004CMS and 1411B35-004CMSD are "H" qualified indicating they were analyzed outside of the holding time of 48 Hours. Sample 1411B35-004C did not require nitrate and nitrite to be reported.

Pesticides Analysis by Method 8081B:

Due to sample matrix, sample 1411C83-002D required dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc **Date:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-6
Project Name:	BFEL-Atlanta	**Collection Date:**	11/14/2014 10:59:00 AM
Lab ID:	1411C83-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 16:55	MR
Copper	65.6	2.00		ug/L	199311	1	11/19/2014 16:55	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 16:55	MR
Zinc	375	10.0		ug/L	199311	1	11/19/2014 16:55	MR
ION SCAN SW9056A								
Nitrate	8.5	2.5		mg/L	R280463	10	11/14/2014 19:08	JM
Sulfate	230	10		mg/L	R280463	10	11/14/2014 19:08	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199550	5	11/20/2014 16:37	MR
Copper	79.0	10.0		ug/L	199550	5	11/20/2014 16:37	MR
Lead	BRL	1.00		ug/L	199550	1	11/20/2014 16:21	MR
Zinc	456	50.0		ug/L	199550	5	11/20/2014 16:37	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 11:51	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 11:51	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 11:51	BB
alpha-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
beta-BHC	1.3	0.050		ug/L	199260	1	11/17/2014 11:51	BB
delta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 11:51	BB
gamma-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 11:51	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 11:51	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 11:51	BB
Surr: Decachlorobiphenyl	80.9	14.6-130		%REC	199260	1	11/17/2014 11:51	BB
Surr: Tetrachloro-m-xylene	71.5	14.4-116		%REC	199260	1	11/17/2014 11:51	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-8
Project Name:	BFEL-Atlanta	**Collection Date:**	11/14/2014 1:06:00 PM
Lab ID:	1411C83-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	121	5.00		ug/L	199311	1	11/19/2014 17:00	MR
Copper	10.6	2.00		ug/L	199311	1	11/19/2014 17:00	MR
Lead	BRL	1.00		ug/L	199311	1	11/19/2014 17:00	MR
Zinc	3590	10.0		ug/L	199311	1	11/19/2014 17:00	MR
ION SCAN SW9056A								
Nitrate	BRL	12		mg/L	R280463	50	11/14/2014 19:23	JM
Sulfate	630	50		mg/L	R280463	50	11/14/2014 19:23	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	14.6	5.00		ug/L	199550	1	11/20/2014 23:15	MR
Copper	3.50	2.00		ug/L	199550	1	11/20/2014 23:15	MR
Lead	BRL	1.00		ug/L	199550	1	11/20/2014 23:15	MR
Zinc	2980	10.0		ug/L	199550	1	11/20/2014 23:15	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	19	10		ug/L	199260	100	11/19/2014 17:02	BB
4,4´-DDE	BRL	10		ug/L	199260	100	11/19/2014 17:02	BB
4,4´-DDT	350	100		ug/L	199260	1000	11/20/2014 12:25	BB
alpha-BHC	340	50		ug/L	199260	1000	11/20/2014 12:25	BB
alpha-Chlordane	BRL	5.0		ug/L	199260	100	11/19/2014 17:02	BB
beta-BHC	140	5.0		ug/L	199260	100	11/19/2014 17:02	BB
delta-BHC	160	5.0		ug/L	199260	100	11/19/2014 17:02	BB
Dieldrin	BRL	10		ug/L	199260	100	11/19/2014 17:02	BB
gamma-BHC	230	50		ug/L	199260	1000	11/20/2014 12:25	BB
gamma-Chlordane	BRL	5.0		ug/L	199260	100	11/19/2014 17:02	BB
Heptachlor	BRL	5.0		ug/L	199260	100	11/19/2014 17:02	BB
Methoxychlor	BRL	50		ug/L	199260	100	11/19/2014 17:02	BB
Toxaphene	BRL	500		ug/L	199260	100	11/19/2014 17:02	BB
Surr: Decachlorobiphenyl	46.2	14.6-130		%REC	199260	100	11/19/2014 17:02	BB
Surr: Tetrachloro-m-xylene	0	14.4-116	S	%REC	199260	100	11/19/2014 17:02	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-105
Project Name:	BFEL-Atlanta	**Collection Date:**	11/14/2014 11:50:00 AM
Lab ID:	1411C83-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 17:06	MR
Copper	4.04	2.00		ug/L	199311	1	11/19/2014 17:06	MR
Lead	1.54	1.00		ug/L	199311	1	11/19/2014 17:06	MR
Zinc	10.9	10.0		ug/L	199311	1	11/19/2014 17:06	MR
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280463	1	11/14/2014 17:01	JM
Sulfate	97	10		mg/L	R280463	10	11/14/2014 19:38	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199550	1	11/20/2014 23:20	MR
Copper	BRL	2.00		ug/L	199550	1	11/20/2014 23:20	MR
Lead	BRL	1.00		ug/L	199550	1	11/20/2014 23:20	MR
Zinc	BRL	10.0		ug/L	199550	1	11/20/2014 23:20	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 12:13	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 12:13	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 12:13	BB
alpha-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
beta-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
delta-BHC	0.075	0.050		ug/L	199260	1	11/17/2014 12:13	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 12:13	BB
gamma-BHC	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 12:13	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 12:13	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 12:13	BB
Surr: Decachlorobiphenyl	47.9	14.6-130		%REC	199260	1	11/17/2014 12:13	BB
Surr: Tetrachloro-m-xylene	70.7	14.4-116		%REC	199260	1	11/17/2014 12:13	BB

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:** 24-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-115
Project Name:	BFEL-Atlanta	**Collection Date:**	11/14/2014 1:32:00 PM
Lab ID:	1411C83-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199311	1	11/19/2014 17:11	MR
Copper	4300	2.00		ug/L	199311	1	11/19/2014 17:11	MR
Lead	6.32	1.00		ug/L	199311	1	11/19/2014 17:11	MR
Zinc	18600	100		ug/L	199311	10	11/20/2014 13:55	MR
ION SCAN SW9056A								
Nitrate	1.7	0.25		mg/L	R280463	1	11/14/2014 17:16	JM
Sulfate	650	50		mg/L	R280463	50	11/14/2014 19:53	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	5.00		ug/L	199550	1	11/20/2014 23:26	MR
Copper	4210	2.00		ug/L	199550	1	11/20/2014 23:26	MR
Lead	8.62	1.00		ug/L	199550	1	11/20/2014 23:26	MR
Zinc	18200	100		ug/L	199550	10	11/21/2014 13:45	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.10		ug/L	199260	1	11/17/2014 12:25	BB
4,4´-DDE	BRL	0.10		ug/L	199260	1	11/17/2014 12:25	BB
4,4´-DDT	BRL	0.10		ug/L	199260	1	11/17/2014 12:25	BB
alpha-BHC	0.26	0.050		ug/L	199260	1	11/17/2014 12:25	BB
alpha-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 12:25	BB
beta-BHC	0.26	0.050		ug/L	199260	1	11/17/2014 12:25	BB
delta-BHC	0.073	0.050		ug/L	199260	1	11/17/2014 12:25	BB
Dieldrin	BRL	0.10		ug/L	199260	1	11/17/2014 12:25	BB
gamma-BHC	0.076	0.050		ug/L	199260	1	11/17/2014 12:25	BB
gamma-Chlordane	BRL	0.050		ug/L	199260	1	11/17/2014 12:25	BB
Heptachlor	BRL	0.050		ug/L	199260	1	11/17/2014 12:25	BB
Methoxychlor	BRL	0.50		ug/L	199260	1	11/17/2014 12:25	BB
Toxaphene	BRL	5.0		ug/L	199260	1	11/17/2014 12:25	BB
Surr: Decachlorobiphenyl	37	14.6-130		%REC	199260	1	11/17/2014 12:25	BB
Surr: Tetrachloro-m-xylene	64.9	14.4-116		%REC	199260	1	11/17/2014 12:25	BB

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 Amec Work Order Number 1411C83

Checklist completed by Jann B 11/14/14
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 3.2 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 JB

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: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411C83

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411C83-001A	TW-6	11/14/2014 10:59:00AM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411C83-001B	TW-6	11/14/2014 10:59:00AM	Groundwater	Dissolved Metals by ICP/MS		11/20/2014	11/20/2014
1411C83-001C	TW-6	11/14/2014 10:59:00AM	Groundwater	ION SCAN			11/14/2014
1411C83-001D	TW-6	11/14/2014 10:59:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411C83-002A	TW-8	11/14/2014 1:06:00PM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411C83-002B	TW-8	11/14/2014 1:06:00PM	Groundwater	Dissolved Metals by ICP/MS		11/20/2014	11/20/2014
1411C83-002C	TW-8	11/14/2014 1:06:00PM	Groundwater	ION SCAN			11/14/2014
1411C83-002D	TW-8	11/14/2014 1:06:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/19/2014
1411C83-002D	TW-8	11/14/2014 1:06:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/20/2014
1411C83-003A	MW-105	11/14/2014 11:50:00AM	Groundwater	Total Metals by ICP/MS		11/18/2014	11/19/2014
1411C83-003B	MW-105	11/14/2014 11:50:00AM	Groundwater	Dissolved Metals by ICP/MS		11/20/2014	11/20/2014
1411C83-003C	MW-105	11/14/2014 11:50:00AM	Groundwater	ION SCAN			11/14/2014
1411C83-003D	MW-105	11/14/2014 11:50:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014
1411C83-004A	MW-115	11/14/2014 1:32:00PM	Groundwater	Total Metals by ICP/MS		11/17/2014	11/19/2014
1411C83-004A	MW-115	11/14/2014 1:32:00PM	Groundwater	Total Metals by ICP/MS		11/17/2014	11/20/2014
1411C83-004B	MW-115	11/14/2014 1:32:00PM	Groundwater	Dissolved Metals by ICP/MS		11/20/2014	11/20/2014
1411C83-004B	MW-115	11/14/2014 1:32:00PM	Groundwater	Dissolved Metals by ICP/MS		11/20/2014	11/21/2014
1411C83-004C	MW-115	11/14/2014 1:32:00PM	Groundwater	ION SCAN			11/14/2014
1411C83-004D	MW-115	11/14/2014 1:32:00PM	Groundwater	PP-CL-Pesticides		11/15/2014	11/17/2014
1411C83-004D	MW-115	11/14/2014 1:32:00PM	Groundwater	PP-CL-Pesticides		11/15/2014	11/17/2014
1411C83-004D	MW-115	11/14/2014 1:32:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/15/2014	11/17/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199260

Sample ID: **MB-199260** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5924996**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4220	0	0.5000		84.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.3816	0	0.5000		76.3	14.4	116				

Sample ID: **LCS-199260** Client ID: Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925577**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	1.153	0.10	1.000		115	52.5	140				
Dieldrin	1.099	0.10	1.000		110	59.5	137				
gamma-BHC	1.029	0.050	1.000		103	46	134				
Heptachlor	1.032	0.050	1.000		103	44.7	127				
Surr: Decachlorobiphenyl	0.4422	0	0.5000		88.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.4160	0	0.5000		83.2	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199260

Sample ID: **1411C83-004DMS** Client ID: **MW-115** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925019**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	1.016	0.10	1.000		102	36.3	142				
4,4´-DDE	0.9090	0.10	1.000		90.9	29.8	138				
4,4´-DDT	1.008	0.10	1.000		101	27.1	146				
alpha-BHC	1.111	0.050	1.000	0.2648	84.6	36.6	137				
beta-BHC	1.298	0.050	1.000	0.2637	103	40.6	144				
delta-BHC	1.130	0.050	1.000	0.07253	106	48.5	139				
Dieldrin	0.9320	0.10	1.000		93.2	39.4	142				
gamma-BHC	0.9360	0.050	1.000	0.07631	86.0	34.5	144				
Heptachlor	0.8850	0.050	1.000		88.5	33	138				
Surr: Decachlorobiphenyl	0.2088	0	0.5000		41.8	14.6	130				
Surr: Tetrachloro-m-xylene	0.3191	0	0.5000		63.8	14.4	116				

Sample ID: **1411C83-004DMSD** Client ID: **MW-115** Units: **ug/L** Prep Date: **11/15/2014** Run No: **280216**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199260** Analysis Date: **11/17/2014** Seq No: **5925020**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDD	1.089	0.10	1.000		109	36.3	142	1.016	6.86	21.9	
4,4´-DDE	1.014	0.10	1.000		101	29.8	138	0.9090	10.9	25.6	
4,4´-DDT	1.118	0.10	1.000		112	27.1	146	1.008	10.4	21.2	
alpha-BHC	1.246	0.050	1.000	0.2648	98.1	36.6	137	1.111	11.5	27.1	
beta-BHC	1.468	0.050	1.000	0.2637	120	40.6	144	1.298	12.3	26.3	
delta-BHC	1.280	0.050	1.000	0.07253	121	48.5	139	1.130	12.4	20	
Dieldrin	1.002	0.10	1.000		100	39.4	142	0.9320	7.19	20	
gamma-BHC	1.072	0.050	1.000	0.07631	99.6	34.5	144	0.9360	13.6	23.1	
Heptachlor	0.9806	0.050	1.000		98.1	33	138	0.8850	10.3	26.9	
Surr: Decachlorobiphenyl	0.2389	0	0.5000		47.8	14.6	130	0.2088	0	0	
Surr: Tetrachloro-m-xylene	0.3037	0	0.5000		60.7	14.4	116	0.3191	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199311

Sample ID: **MB-199311** Client ID: Units: **ug/L** Prep Date: **11/18/2014** Run No: **280408**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929436**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199311** Client ID: Units: **ug/L** Prep Date: **11/18/2014** Run No: **280408**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929435**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	96.35	5.00	100.0		96.4	80	120				
Copper	98.32	2.00	100.0	0.1434	98.2	80	120				
Lead	96.52	1.00	100.0		96.5	80	120				
Zinc	99.25	10.0	100.0		99.2	80	120				

Sample ID: **1411B70-001BMS** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929438**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	88.65	5.00	100.0		88.6	75	125				
Copper	917.5	2.00	100.0	820.0	97.5	75	125				
Lead	90.30	1.00	100.0	3.006	87.3	75	125				
Zinc	2228	10.0	100.0	2117	111	75	125				

Sample ID: **1411B70-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929439**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	91.35	5.00	100.0		91.4	75	125	88.65	3.01	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199311

Sample ID: **1411B70-001BMSD** Client ID:
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/17/2014** Run No: **280408**
BatchID: **199311** Analysis Date: **11/19/2014** Seq No: **5929439**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	933.1	2.00	100.0	820.0	113	75	125	917.5	1.68	20	
Lead	92.07	1.00	100.0	3.006	89.1	75	125	90.30	1.94	20	
Zinc	2279	10.0	100.0	2117	163	75	125	2228	2.28	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **MB-199550** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931830**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199550** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931833**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	94.84	5.00	100.0		94.8	80	120				
Copper	96.19	2.00	100.0		96.2	80	120				
Lead	95.17	1.00	100.0		95.2	80	120				
Zinc	92.73	10.0	100.0	6.645	86.1	80	120				

Sample ID: **1411C83-001BMS** Client ID: **TW-6** Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931835**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	84.98	5.00	100.0	1.647	83.3	75	125				
Copper	140.4	2.00	100.0	61.63	78.7	75	125				
Lead	99.18	1.00	100.0	0.3398	98.8	75	125				
Zinc	450.4	10.0	100.0	354.8	95.6	75	125				

Sample ID: **1411C83-001BMSD** Client ID: **TW-6** Units: **ug/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931836**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	97.29	1.00	100.0	0.3398	97.0	75	125	99.18	1.92	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **1411C83-001BMSD**	Client ID: **TW-6**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280497**	
SampleType: **MSD**	TestCode: **Dissolved Metals by ICP/MS SW6020A**				BatchID: **199550**		Analysis Date: **11/20/2014**		Seq No: **5931836**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Zinc	442.9	10.0	100.0	354.8	88.1	75	125	450.4	1.67	20

Sample ID: **1411C83-001BMSD**	Client ID: **TW-6**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280497**	
SampleType: **MSD**	TestCode: **Dissolved Metals by ICP/MS SW6020A**				BatchID: **199550**		Analysis Date: **11/20/2014**		Seq No: **5931839**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Arsenic	89.36	25.0	100.0		89.4	75	125	94.03	5.09	20
Copper	164.1	10.0	100.0	78.96	85.2	75	125	164.7	0.363	20

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411C83

ANALYTICAL QC SUMMARY REPORT

BatchID: R280463

Sample ID: **MB-R280463** Client ID: Units: **mg/L** Prep Date: Run No: **280463**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280463** Analysis Date: **11/14/2014** Seq No: **5930901**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280463** Client ID: Units: **mg/L** Prep Date: Run No: **280463**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280463** Analysis Date: **11/14/2014** Seq No: **5930899**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.419	0.25	5.000		108	90	110				
Sulfate	24.70	1.0	25.00		98.8	90	110				

Sample ID: **1411B35-004CMS** Client ID: Units: **mg/L** Prep Date: Run No: **280463**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280463** Analysis Date: **11/14/2014** Seq No: **5930942**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.009	0.25	5.000	0.1849	96.5	90	110				H
Sulfate	59.56	1.0	25.00	62.69	-12.5	90	110				SE

Sample ID: **1411B35-004CMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280463**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280463** Analysis Date: **11/14/2014** Seq No: **5930943**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.014	0.25	5.000	0.1849	96.6	90	110	5.009	0.106	20	H
Sulfate	56.35	1.0	25.00	62.69	-25.3	90	110	59.56	5.55	20	SE

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 26, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411E16

Analytical Environmental Services, Inc. received 4 samples on 11/17/2014 4:50:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1411E16

Date: 11/17/14 Page 1 of 1

COMPANY:	ADDRESS:
AMEC	1075 Big Shanty RD NW Suite 100 Kennesaw, GA
PHONE: 770-421-3400	FAX:
SAMPLED BY: Mark A. and Daniel H.	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ANALYSIS REQUESTED: Total metals	Dissolved metals	Total organic/inorganic pesticides	Nitrate & Sulfate	VOCs list	PRESERVATION (See codes)	REMARKS	No # of Containers
1	TW-9	11/17/14	1220	✓		GW	1	1	2	1				5
2	TW-10	11/17/14	1522	✓		GW	1	1	2	1				5
3	MW-117	11/17/14	1257	✓		GW	1	1	2	1				5
4	MW-113	11/17/14	1542	✓		GW	1	1	2	1				5
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														

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

PRESERVATION (See codes): N

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	11/17/14 16:22	1:	11/17/14 16:22
2:	11/17/14 4:50	2:	11/17/14 4:50
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:
Total & Dissolved Metals site specific list: Arsenic, Lead, copper, & Zinc. Dissolved Metals to be filtered by Lab.
48 hr hold time nitrate & sulfate

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

PROJECT INFORMATION
PROJECT NAME: BFEL Atlanta
PROJECT #:
SITE ADDRESS: 1551 Marietta RD Atlanta GA
SEND REPORT TO: Rhonda Quinn
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

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

STATE PROGRAM (if any): GA
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:** 26-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-9
Project Name:	BFEL-Atlanta	**Collection Date:**	11/17/2014 12:20:00 PM
Lab ID:	1411E16-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199500	1	11/22/2014 10:15	MR
Copper	0.110	0.00200		mg/L	199500	1	11/22/2014 10:15	MR
Lead	BRL	0.00100		mg/L	199500	1	11/22/2014 10:15	MR
Zinc	4.51	0.0100		mg/L	199500	1	11/22/2014 10:15	MR
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280717	1	11/18/2014 11:44	JM
Sulfate	340	20		mg/L	R280717	20	11/18/2014 15:33	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199550	1	11/22/2014 07:44	MR
Copper	0.0921	0.00200		mg/L	199550	1	11/22/2014 07:44	MR
Lead	BRL	0.00100		mg/L	199550	1	11/22/2014 07:44	MR
Zinc	4.54	0.0100		mg/L	199550	1	11/22/2014 07:44	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 18:57	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 18:57	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 18:57	BB
alpha-BHC	0.0088	0.00050		mg/L	199461	10	11/21/2014 13:56	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 18:57	BB
beta-BHC	0.0044	0.00050		mg/L	199461	10	11/21/2014 13:56	BB
delta-BHC	0.0077	0.00050		mg/L	199461	10	11/21/2014 13:56	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 18:57	BB
gamma-BHC	0.0011	0.00050		mg/L	199461	10	11/21/2014 13:56	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 18:57	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 18:57	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 18:57	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 18:57	BB
Surr: Decachlorobiphenyl	29	14.6-130		%REC	199461	1	11/20/2014 18:57	BB
Surr: Tetrachloro-m-xylene	59.7	14.4-116		%REC	199461	1	11/20/2014 18:57	BB

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:** 26-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-10
Project Name:	BFEL-Atlanta	**Collection Date:**	11/17/2014 3:22:00 PM
Lab ID:	1411E16-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199500	1	11/22/2014 10:20	MR
Copper	16.9	0.100		mg/L	199500	50	11/25/2014 14:11	MR
Lead	BRL	0.00100		mg/L	199500	1	11/22/2014 10:20	MR
Zinc	18.2	0.500		mg/L	199500	50	11/25/2014 14:11	MR
ION SCAN SW9056A								
Nitrate	1.8	0.25		mg/L	R280717	1	11/18/2014 12:14	JM
Sulfate	600	50		mg/L	R280717	50	11/18/2014 16:03	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199550	1	11/22/2014 07:50	MR
Copper	19.2	0.0200		mg/L	199550	10	11/25/2014 14:27	MR
Lead	BRL	0.00100		mg/L	199550	1	11/22/2014 07:50	MR
Zinc	21.2	0.100		mg/L	199550	10	11/25/2014 14:27	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 19:08	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 19:08	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 19:08	BB
alpha-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
beta-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
delta-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 19:08	BB
gamma-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 19:08	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 19:08	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 19:08	BB
Surr: Decachlorobiphenyl	70.4	14.6-130		%REC	199461	1	11/20/2014 19:08	BB
Surr: Tetrachloro-m-xylene	64.4	14.4-116		%REC	199461	1	11/20/2014 19:08	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 26-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-117
Project Name:	BFEL-Atlanta	**Collection Date:**	11/17/2014 12:57:00 PM
Lab ID:	1411E16-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199500	1	11/22/2014 10:26	MR
Copper	0.0678	0.00200		mg/L	199500	1	11/22/2014 10:26	MR
Lead	0.00282	0.00100		mg/L	199500	1	11/22/2014 10:26	MR
Zinc	1.01	0.0100		mg/L	199500	1	11/22/2014 10:26	MR
ION SCAN SW9056A								
Nitrate	3.1	0.25		mg/L	R280717	1	11/18/2014 11:59	JM
Sulfate	130	10		mg/L	R280717	10	11/18/2014 15:48	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199550	1	11/22/2014 07:55	MR
Copper	0.0761	0.00200		mg/L	199550	1	11/22/2014 07:55	MR
Lead	0.00178	0.00100		mg/L	199550	1	11/22/2014 07:55	MR
Zinc	0.991	0.0100		mg/L	199550	1	11/22/2014 07:55	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 19:19	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 19:19	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 19:19	BB
alpha-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
beta-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
delta-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 19:19	BB
gamma-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 19:19	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 19:19	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 19:19	BB
Surr: Decachlorobiphenyl	32.3	14.6-130		%REC	199461	1	11/20/2014 19:19	BB
Surr: Tetrachloro-m-xylene	68.2	14.4-116		%REC	199461	1	11/20/2014 19:19	BB

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:** 26-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-113
Project Name:	BFEL-Atlanta	**Collection Date:**	11/17/2014 3:42:00 PM
Lab ID:	1411E16-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0390	0.00500		mg/L	199500	10	11/25/2014 14:17	MR
Copper	19.5	0.0200		mg/L	199500	10	11/25/2014 14:17	MR
Lead	0.00931	0.00100		mg/L	199500	10	11/25/2014 14:17	MR
Zinc	124	0.500		mg/L	199500	50	11/25/2014 14:22	MR
ION SCAN SW9056A								
Nitrate	1.2	0.25		mg/L	R280717	1	11/18/2014 12:29	JM
Sulfate	2000	100		mg/L	R280717	100	11/18/2014 16:18	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0500	0.00500		mg/L	199550	10	11/25/2014 14:42	MR
Copper	25.2	0.0200		mg/L	199550	10	11/25/2014 14:42	MR
Lead	0.0116	0.0100		mg/L	199550	10	11/25/2014 14:42	MR
Zinc	146	1.00		mg/L	199550	100	11/25/2014 18:36	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 19:30	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 19:30	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 19:30	BB
alpha-BHC	0.00032	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
beta-BHC	0.00093	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
delta-BHC	0.00026	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 19:30	BB
gamma-BHC	0.00033	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 19:30	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 19:30	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 19:30	BB
Surr: Decachlorobiphenyl	61.5	14.6-130		%REC	199461	1	11/20/2014 19:30	BB
Surr: Tetrachloro-m-xylene	49.4	14.4-116		%REC	199461	1	11/20/2014 19:30	BB

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 AMEC Work Order Number 1411E16

Checklist completed by [signature] 11/17/14
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? (0°≤6°C)* 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 MJ

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 26-Nov-14

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411E16

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411E16-001A	TW-9	11/17/2014 12:20:00PM	Groundwater	Total Metals by ICP/MS		11/20/2014	11/22/2014
1411E16-001B	TW-9	11/17/2014 12:20:00PM	Groundwater	Dissolved Metals by ICP/MS		11/21/2014	11/22/2014
1411E16-001C	TW-9	11/17/2014 12:20:00PM	Groundwater	ION SCAN			11/18/2014
1411E16-001D	TW-9	11/17/2014 12:20:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411E16-001D	TW-9	11/17/2014 12:20:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/21/2014
1411E16-002A	TW-10	11/17/2014 3:22:00PM	Groundwater	Total Metals by ICP/MS		11/20/2014	11/22/2014
1411E16-002A	TW-10	11/17/2014 3:22:00PM	Groundwater	Total Metals by ICP/MS		11/20/2014	11/25/2014
1411E16-002B	TW-10	11/17/2014 3:22:00PM	Groundwater	Dissolved Metals by ICP/MS		11/21/2014	11/22/2014
1411E16-002B	TW-10	11/17/2014 3:22:00PM	Groundwater	Dissolved Metals by ICP/MS		11/21/2014	11/25/2014
1411E16-002C	TW-10	11/17/2014 3:22:00PM	Groundwater	ION SCAN			11/18/2014
1411E16-002D	TW-10	11/17/2014 3:22:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411E16-003A	MW-117	11/17/2014 12:57:00PM	Groundwater	Total Metals by ICP/MS		11/20/2014	11/22/2014
1411E16-003B	MW-117	11/17/2014 12:57:00PM	Groundwater	Dissolved Metals by ICP/MS		11/21/2014	11/22/2014
1411E16-003C	MW-117	11/17/2014 12:57:00PM	Groundwater	ION SCAN			11/18/2014
1411E16-003D	MW-117	11/17/2014 12:57:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411E16-004A	MW-113	11/17/2014 3:42:00PM	Groundwater	Total Metals by ICP/MS		11/20/2014	11/25/2014
1411E16-004B	MW-113	11/17/2014 3:42:00PM	Groundwater	Dissolved Metals by ICP/MS		11/21/2014	11/25/2014
1411E16-004C	MW-113	11/17/2014 3:42:00PM	Groundwater	ION SCAN			11/18/2014
1411E16-004D	MW-113	11/17/2014 3:42:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199461

Sample ID: **MB-199461** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5931146**

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	0.00010									
4,4´-DDE	BRL	0.00010									
4,4´-DDT	BRL	0.00010									
alpha-BHC	BRL	0.000050									
alpha-Chlordane	BRL	0.000050									
beta-BHC	BRL	0.000050									
delta-BHC	BRL	0.000050									
Dieldrin	BRL	0.00010									
gamma-BHC	BRL	0.000050									
gamma-Chlordane	BRL	0.000050									
Heptachlor	BRL	0.000050									
Methoxychlor	BRL	0.00050									
Toxaphene	BRL	0.0050									
Surr: Decachlorobiphenyl	0.000426	0	0.5000		85.2	14.6	130				
Surr: Tetrachloro-m-xylene	0.000357	0	0.5000		71.3	14.4	116				

Sample ID: **LCS-199461** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5931230**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001095	0.00010	1.000		110	52.5	140				
Dieldrin	0.001060	0.00010	1.000		106	59.5	137				
gamma-BHC	0.000968	0.000050	1.000		96.8	46	134				
Heptachlor	0.001042	0.000050	1.000		104	44.7	127				
Surr: Decachlorobiphenyl	0.000353	0	0.5000		70.7	14.6	130				
Surr: Tetrachloro-m-xylene	0.000339	0	0.5000		67.8	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199461

Sample ID: **1411E16-002DMS** Client ID: **TW-10** Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5932293**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001089	0.00010	1.000		109	27.1	146				
Dieldrin	0.000943	0.00010	1.000		94.3	39.4	142				
gamma-BHC	0.000907	0.000050	1.000		90.7	34.5	144				
Heptachlor	0.000966	0.000050	1.000		96.6	33	138				
Surr: Decachlorobiphenyl	0.000335	0	0.5000		67.0	14.6	130				
Surr: Tetrachloro-m-xylene	0.000274	0	0.5000		54.8	14.4	116				

Sample ID: **1411E16-002DMSD** Client ID: **TW-10** Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5932294**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001226	0.00010	1.000		123	27.1	146	1.089	11.9	21.2	
Dieldrin	0.001031	0.00010	1.000		103	39.4	142	0.9434	8.87	20	
gamma-BHC	0.000957	0.000050	1.000		95.7	34.5	144	0.9072	5.34	23.1	
Heptachlor	0.000999	0.000050	1.000		99.9	33	138	0.9662	3.34	26.9	
Surr: Decachlorobiphenyl	0.000322	0	0.5000		64.5	14.6	130	0.3351	0	0	
Surr: Tetrachloro-m-xylene	0.000239	0	0.5000		47.8	14.4	116	0.2738	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199500

Sample ID: **MB-199500**	Client ID:			Units: **mg/L**	Prep Date: **11/20/2014**	Run No: **280619**
SampleType: **MBLK**	TestCode: **Total Metals by ICP/MS**	**SW6020A**		BatchID: **199500**	Analysis Date: **11/22/2014**	Seq No: **5935222**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.00500									
Lead	BRL	0.00100									

Sample ID: **MB-199500**	Client ID:			Units: **mg/L**	Prep Date: **11/20/2014**	Run No: **280619**
SampleType: **MBLK**	TestCode: **Total Metals by ICP/MS**	**SW6020A**		BatchID: **199500**	Analysis Date: **11/24/2014**	Seq No: **5939364**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	BRL	0.00200									
Zinc	BRL	0.0100									

Sample ID: **LCS-199500**	Client ID:			Units: **mg/L**	Prep Date: **11/20/2014**	Run No: **280619**
SampleType: **LCS**	TestCode: **Total Metals by ICP/MS**	**SW6020A**		BatchID: **199500**	Analysis Date: **11/22/2014**	Seq No: **5935221**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.09714	0.00500	100.0		97.1	80	120				
Copper	0.1167	0.00200	100.0		117	80	120				
Lead	0.09675	0.00100	100.0		96.8	80	120				

Sample ID: **LCS-199500**	Client ID:			Units: **mg/L**	Prep Date: **11/20/2014**	Run No: **280619**
SampleType: **LCS**	TestCode: **Total Metals by ICP/MS**	**SW6020A**		BatchID: **199500**	Analysis Date: **11/24/2014**	Seq No: **5939363**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.1013	0.0100	100.0		101	80	120				

Sample ID: **1411G45-008AMS**	Client ID:			Units: **mg/L**	Prep Date: **11/20/2014**	Run No: **280619**
SampleType: **MS**	TestCode: **Total Metals by ICP/MS**	**SW6020A**		BatchID: **199500**	Analysis Date: **11/22/2014**	Seq No: **5935224**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.1017	0.00500	100.0	0.8191	101	75	125				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199500

Sample ID: **1411G45-008AMS** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280619**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199500** Analysis Date: **11/22/2014** Seq No: **5935224**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	0.1020	0.00200	100.0	1.562	100	75	125				
Lead	0.09387	0.00100	100.0	0.4586	93.4	75	125				
Zinc	0.1126	0.0100	100.0	10.40	102	75	125				

Sample ID: **1411G45-008AMSD** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280619**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199500** Analysis Date: **11/22/2014** Seq No: **5935225**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.09985	0.00500	100.0	0.8191	99.0	75	125	101.7	1.83	20	
Copper	0.1015	0.00200	100.0	1.562	99.9	75	125	102.0	0.538	20	
Lead	0.09125	0.00100	100.0	0.4586	90.8	75	125	93.87	2.84	20	
Zinc	0.1100	0.0100	100.0	10.40	99.6	75	125	112.6	2.38	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **MB-199550** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931830**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.00500									
Copper	BRL	0.00200									
Lead	BRL	0.00100									
Zinc	BRL	0.0100									

Sample ID: **LCS-199550** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931833**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.09484	0.00500	100.0		94.8	80	120				
Copper	0.09619	0.00200	100.0		96.2	80	120				
Lead	0.09517	0.00100	100.0		95.2	80	120				
Zinc	0.09273	0.0100	100.0	6.645	86.1	80	120				

Sample ID: **1411C83-001BMS** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931835**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.08498	0.00500	100.0	1.647	83.3	75	125				
Copper	0.1404	0.00200	100.0	61.63	78.7	75	125				
Lead	0.09918	0.00100	100.0	0.3398	98.8	75	125				
Zinc	0.4504	0.0100	100.0	354.8	95.6	75	125				

Sample ID: **1411C83-001BMSD** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931836**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	0.09729	0.00100	100.0	0.3398	97.0	75	125	99.18	1.92	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: 199550

Sample ID: **1411C83-001BMSD** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931836**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.4429	0.0100	100.0	354.8	88.1	75	125	450.4	1.67	20	

Sample ID: **1411C83-001BMSD** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280497**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199550** Analysis Date: **11/20/2014** Seq No: **5931839**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.08936	0.0250	100.0		89.4	75	125	94.03	5.09	20	
Copper	0.1641	0.0100	100.0	78.96	85.2	75	125	164.7	0.363	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411E16

ANALYTICAL QC SUMMARY REPORT

BatchID: R280717

Sample ID: **MB-R280717** Client ID: Units: **mg/L** Prep Date: Run No: **280717**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280717** Analysis Date: **11/18/2014** Seq No: **5937525**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280717** Client ID: Units: **mg/L** Prep Date: Run No: **280717**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280717** Analysis Date: **11/18/2014** Seq No: **5937524**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.384	0.25	5.000		108	90	110				
Sulfate	24.03	1.0	25.00		96.1	90	110				

Sample ID: **1411E03-001FMS** Client ID: Units: **mg/L** Prep Date: Run No: **280717**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280717** Analysis Date: **11/18/2014** Seq No: **5937533**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.962	0.25	5.000	0.9997	99.3	90	110				
Sulfate	24.25	1.0	25.00	1.596	90.6	90	110				

Sample ID: **1411E03-001FMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280717**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280717** Analysis Date: **11/18/2014** Seq No: **5937534**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	6.009	0.25	5.000	0.9997	100	90	110	5.962	0.780	20	
Sulfate	24.39	1.0	25.00	1.596	91.2	90	110	24.25	0.593	20	

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 28, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL-Atlanta

Dear Rhonda Quinn: Order No: 1411F52

Analytical Environmental Services, Inc. received 8 samples on 11/18/2014 5:25:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1411F52

Date: 11/18/14 Page 1 of 1

COMPANY:	ADDRESS:
AMEC	1075 Big Shanty RD NW Suite 100 Kennesaw, GA
PHONE: 770-421-3400	FAX:
SAMPLED BY: Mark A., Daniel H. & Evan G	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	PRESERVATION (See codes) N				Nitrate & Sulfate #48hr	VOCs 1151										REMARKS	No # of Containers
								Total Metals #	Dissolved Metals #	Total Organochlorine Pesticides													
1	MW-25	11/18/14	1052	✓		GW	1	1	2	1													5
2	TW-1		1258	✓		GW	1	1	2	1	2												7
3	MW-109D		1551	✓		GW	1	1	2	1													5
4	MW-114		1141	✓		GW	1	1	2	1													5
5	MW-111		1522	✓		GW	1	1	2	1													5
6	MW-119	↓	1135	✓		GW	1	1	2	1	2												7
7	~~MW-120~~ MA 11/15/14																						
8	DUP-2	11/5/14	1200	✓		GW	1	1	2	1													5
9	TRIP BLANK	11/14/14		✓		W					2												2
10																							
11																							
12																							
13																							
14																							

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Mark A.	11/15/14 1656	1:	11-18-14 1655
2:	11/18/14 5:25	2:	11/18/14 5:25
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS: Site specific # total and Dissolved Metals list: Arsenic, Lead, copper and zinc. Dissolved metals to be filtered by Lab.
48hr hold time Nitrate, Sulfate

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

PROJECT INFORMATION
PROJECT NAME: BFEL Atlanta
PROJECT #:
SITE ADDRESS: 1551 Mariotta RD Atlanta GA
SEND REPORT TO: Rhonda Quinn
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

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

STATE PROGRAM (if any): GA
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: 28-Nov-14

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab ID: 1411F52

Case Narrative

Ion Chromatography Analysis by Method 9056a:

Due to sample matrix, sample(s) 1411F52-003C, -005C, and -007C required a dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-25
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 10:52:00 AM
Lab ID:	1411F52-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199660	1	11/25/2014 14:58	MR
Copper	0.204	0.00200		mg/L	199660	1	11/25/2014 14:58	MR
Lead	0.0250	0.00100		mg/L	199660	1	11/25/2014 14:58	MR
Zinc	2.88	0.0100		mg/L	199660	1	11/25/2014 14:58	MR
ION SCAN SW9056A								
Nitrate	0.33	0.25		mg/L	R280735	1	11/19/2014 11:02	JM
Sulfate	190	20		mg/L	R280735	20	11/19/2014 15:25	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199686	1	11/25/2014 15:50	MR
Copper	0.195	0.00200		mg/L	199686	1	11/25/2014 15:50	MR
Lead	0.0181	0.00100		mg/L	199686	1	11/25/2014 15:50	MR
Zinc	2.86	0.0100		mg/L	199686	1	11/25/2014 15:50	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/25/2014 11:34	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/25/2014 11:34	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/25/2014 11:34	BB
alpha-BHC	0.00014	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
beta-BHC	0.0074	0.00050		mg/L	199461	10	11/25/2014 11:45	BB
delta-BHC	0.00010	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/25/2014 11:34	BB
gamma-BHC	BRL	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/25/2014 11:34	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/25/2014 11:34	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/25/2014 11:34	BB
Surr: Decachlorobiphenyl	49.6	14.6-130		%REC	199461	1	11/25/2014 11:34	BB
Surr: Tetrachloro-m-xylene	60	14.4-116		%REC	199461	1	11/25/2014 11:34	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-7
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 12:58:00 PM
Lab ID:	1411F52-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Arsenic	0.0152	0.00500		mg/L	199660	10	11/26/2014 13:04	MR
Copper	124	0.200		mg/L	199660	100	11/26/2014 13:43	MR
Lead	0.0286	0.0100		mg/L	199660	10	11/26/2014 13:04	MR
Zinc	204	1.00		mg/L	199660	100	11/26/2014 13:43	MR
TCL VOLATILE ORGANICS SW8260B					**(SW5030B)**			
1,1,1-Trichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,1,2,2-Tetrachloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,1,2-Trichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,1-Dichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,1-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2,4-Trichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2-Dibromo-3-chloropropane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2-Dibromoethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2-Dichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,2-Dichloropropane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,3-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
1,4-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
2-Butanone	BRL	0.050		mg/L	199652	1	11/24/2014 19:03	AR
2-Hexanone	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
4-Methyl-2-pentanone	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
Acetone	BRL	0.050		mg/L	199652	1	11/24/2014 19:03	AR
Benzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Bromodichloromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Bromoform	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Bromomethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Carbon disulfide	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Carbon tetrachloride	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Chlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Chloroethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
Chloroform	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Chloromethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
cis-1,2-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
cis-1,3-Dichloropropene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Cyclohexane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Dibromochloromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Dichlorodifluoromethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
Ethylbenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Freon-113	BRL	0.010		mg/L	199652	1	11/24/2014 19:03	AR
Isopropylbenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR

Qualifiers:

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- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-7
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 12:58:00 PM
Lab ID:	1411F52-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Methyl acetate	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Methyl tert-butyl ether	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Methylcyclohexane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Methylene chloride	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
o-Xylene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Styrene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Tetrachloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Toluene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
trans-1,2-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
trans-1,3-Dichloropropene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Trichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Trichlorofluoromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:03	AR
Vinyl chloride	BRL	0.002		mg/L	199652	1	11/24/2014 19:03	AR
Surr: 4-Bromofluorobenzene	92.7	70.6-123		%REC	199652	1	11/24/2014 19:03	AR
Surr: Dibromofluoromethane	105	78.7-124		%REC	199652	1	11/24/2014 19:03	AR
Surr: Toluene-d8	99	81.3-120		%REC	199652	1	11/24/2014 19:03	AR
ION SCAN SW9056A								
Nitrate	77	12		mg/L	R280735	50	11/19/2014 15:40	JM
Sulfate	5000	100		mg/L	R280735	100	11/25/2014 12:31	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0147	0.00500		mg/L	199686	10	11/26/2014 12:32	MR
Copper	99.2	0.0200		mg/L	199686	10	11/26/2014 12:32	MR
Lead	0.0275	0.0100		mg/L	199686	10	11/26/2014 12:32	MR
Zinc	228	1.00		mg/L	199686	100	11/26/2014 13:37	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 19:41	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 19:41	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 19:41	BB
alpha-BHC	0.00045	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
beta-BHC	0.0014	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
delta-BHC	0.00011	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 19:41	BB
gamma-BHC	0.00032	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 19:41	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 19:41	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TW-7
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 12:58:00 PM
Lab ID:	1411F52-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 19:41	BB
Surr: Decachlorobiphenyl	35.2	14.6-130		%REC	199461	1	11/20/2014 19:41	BB
Surr: Tetrachloro-m-xylene	69.8	14.4-116		%REC	199461	1	11/20/2014 19:41	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-109D
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 3:51:00 PM
Lab ID:	1411F52-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0342	0.00500		mg/L	199660	10	11/26/2014 13:09	MR
Copper	0.178	0.0200		mg/L	199660	10	11/26/2014 13:09	MR
Lead	0.932	0.0100		mg/L	199660	10	11/26/2014 13:09	MR
Zinc	25.3	0.100		mg/L	199660	10	11/26/2014 13:09	MR
ION SCAN SW9056A								
Nitrate	BRL	12		mg/L	R280735	50	11/19/2014 15:55	JM
Sulfate	1200	50		mg/L	R280735	50	11/19/2014 15:55	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0258	0.00500		mg/L	199686	10	11/26/2014 12:38	MR
Copper	0.241	0.0200		mg/L	199686	10	11/26/2014 12:38	MR
Lead	0.480	0.0100		mg/L	199686	10	11/26/2014 12:38	MR
Zinc	25.1	0.100		mg/L	199686	10	11/26/2014 12:38	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 19:53	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 19:53	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 19:53	BB
alpha-BHC	0.033	0.0050		mg/L	199461	100	11/24/2014 11:38	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:53	BB
beta-BHC	0.0046	0.00050		mg/L	199461	10	11/21/2014 14:07	BB
delta-BHC	0.0058	0.00050		mg/L	199461	10	11/21/2014 14:07	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 19:53	BB
gamma-BHC	0.022	0.0050		mg/L	199461	100	11/24/2014 11:38	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 19:53	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 19:53	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 19:53	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 19:53	BB
Surr: Decachlorobiphenyl	22	14.6-130		%REC	199461	1	11/20/2014 19:53	BB
Surr: Tetrachloro-m-xylene	76.4	14.4-116		%REC	199461	1	11/20/2014 19:53	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-114
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 11:47:00 AM
Lab ID:	1411F52-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199660	1	11/26/2014 02:30	MR
Copper	1.55	0.00200		mg/L	199660	1	11/26/2014 02:30	MR
Lead	0.00200	0.00100		mg/L	199660	10	11/26/2014 13:48	MR
Zinc	6.26	0.100		mg/L	199660	10	11/26/2014 13:48	MR
ION SCAN SW9056A								
Nitrate	16	5.0		mg/L	R280735	20	11/19/2014 16:11	JM
Sulfate	380	20		mg/L	R280735	20	11/19/2014 16:11	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199686	1	11/26/2014 01:47	MR
Copper	1.53	0.00200		mg/L	199686	1	11/26/2014 01:47	MR
Lead	0.00200	0.00100		mg/L	199686	10	11/26/2014 12:43	MR
Zinc	6.00	0.100		mg/L	199686	10	11/26/2014 12:43	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 20:04	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 20:04	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 20:04	BB
alpha-BHC	0.00010	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
beta-BHC	0.0022	0.00050		mg/L	199461	10	11/21/2014 14:18	BB
delta-BHC	0.00013	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 20:04	BB
gamma-BHC	0.000091	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 20:04	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 20:04	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 20:04	BB
Surr: Decachlorobiphenyl	60.6	14.6-130		%REC	199461	1	11/20/2014 20:04	BB
Surr: Tetrachloro-m-xylene	56.4	14.4-116		%REC	199461	1	11/20/2014 20:04	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-111
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 3:22:00 PM
Lab ID:	1411F52-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199660	1	11/26/2014 02:35	MR
Copper	0.0351	0.00200		mg/L	199660	1	11/26/2014 02:35	MR
Lead	BRL	0.00100		mg/L	199660	10	11/26/2014 13:53	MR
Zinc	4.96	0.0100		mg/L	199660	1	11/26/2014 02:35	MR
ION SCAN SW9056A								
Nitrate	BRL	5.0		mg/L	R280735	20	11/19/2014 16:26	JM
Sulfate	450	20		mg/L	R280735	20	11/19/2014 16:26	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199686	1	11/26/2014 01:53	MR
Copper	0.0336	0.00200		mg/L	199686	1	11/26/2014 01:53	MR
Lead	BRL	0.00100		mg/L	199686	1	11/26/2014 01:53	MR
Zinc	4.55	0.0100		mg/L	199686	1	11/26/2014 01:53	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 20:15	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 20:15	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 20:15	BB
alpha-BHC	0.030	0.0050		mg/L	199461	100	11/24/2014 11:49	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:15	BB
beta-BHC	0.0069	0.00050		mg/L	199461	10	11/21/2014 14:29	BB
delta-BHC	0.11	0.0050		mg/L	199461	100	11/24/2014 11:49	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 20:15	BB
gamma-BHC	0.060	0.0050		mg/L	199461	100	11/24/2014 11:49	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:15	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 20:15	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 20:15	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 20:15	BB
Surr: Decachlorobiphenyl	24.5	14.6-130		%REC	199461	1	11/20/2014 20:15	BB
Surr: Tetrachloro-m-xylene	45.6	14.4-116		%REC	199461	1	11/20/2014 20:15	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-119
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 11:35:00 AM
Lab ID:	1411F52-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199660	1	11/26/2014 02:41	MR
Copper	0.00514	0.00200		mg/L	199660	1	11/26/2014 02:41	MR
Lead	BRL	0.00100		mg/L	199660	10	11/26/2014 13:58	MR
Zinc	0.677	0.0100		mg/L	199660	1	11/26/2014 02:41	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,1,2,2-Tetrachloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,1,2-Trichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,1-Dichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,1-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2,4-Trichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2-Dibromo-3-chloropropane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2-Dibromoethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2-Dichloroethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,2-Dichloropropane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,3-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
1,4-Dichlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
2-Butanone	BRL	0.050		mg/L	199652	1	11/24/2014 19:31	AR
2-Hexanone	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
4-Methyl-2-pentanone	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
Acetone	BRL	0.050		mg/L	199652	1	11/24/2014 19:31	AR
Benzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Bromodichloromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Bromoform	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Bromomethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Carbon disulfide	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Carbon tetrachloride	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Chlorobenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Chloroethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
Chloroform	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Chloromethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
cis-1,2-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
cis-1,3-Dichloropropene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Cyclohexane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Dibromochloromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Dichlorodifluoromethane	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
Ethylbenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Freon-113	BRL	0.010		mg/L	199652	1	11/24/2014 19:31	AR
Isopropylbenzene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-119
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 11:35:00 AM
Lab ID:	1411F52-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
m,p-Xylene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Methyl acetate	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Methyl tert-butyl ether	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Methylcyclohexane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Methylene chloride	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
o-Xylene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Styrene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Tetrachloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Toluene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
trans-1,2-Dichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
trans-1,3-Dichloropropene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Trichloroethene	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Trichlorofluoromethane	BRL	0.005		mg/L	199652	1	11/24/2014 19:31	AR
Vinyl chloride	BRL	0.002		mg/L	199652	1	11/24/2014 19:31	AR
Surr: 4-Bromofluorobenzene	91.6	70.6-123		%REC	199652	1	11/24/2014 19:31	AR
Surr: Dibromofluoromethane	105	78.7-124		%REC	199652	1	11/24/2014 19:31	AR
Surr: Toluene-d8	99.1	81.3-120		%REC	199652	1	11/24/2014 19:31	AR
ION SCAN SW9056A								
Nitrate	BRL	0.25		mg/L	R280735	1	11/19/2014 13:18	JM
Sulfate	170	20		mg/L	R280735	20	11/19/2014 16:41	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	BRL	0.00500		mg/L	199686	1	11/26/2014 01:58	MR
Copper	0.00369	0.00200		mg/L	199686	1	11/26/2014 01:58	MR
Lead	BRL	0.00100		mg/L	199686	1	11/26/2014 01:58	MR
Zinc	0.689	0.0100		mg/L	199686	1	11/26/2014 01:58	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 20:26	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 20:26	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 20:26	BB
alpha-BHC	0.00064	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
beta-BHC	0.00062	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
delta-BHC	0.0010	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 20:26	BB
gamma-BHC	0.00013	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 20:26	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 20:26	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-119
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 11:35:00 AM
Lab ID:	1411F52-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 20:26	BB
Surr: Decachlorobiphenyl	27.3	14.6-130		%REC	199461	1	11/20/2014 20:26	BB
Surr: Tetrachloro-m-xylene	62.8	14.4-116		%REC	199461	1	11/20/2014 20:26	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	DUP-2
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014 12:00:00 PM
Lab ID:	1411F52-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0392	0.00500		mg/L	199660	1	11/26/2014 02:46	MR
Copper	0.137	0.00200		mg/L	199660	1	11/26/2014 02:46	MR
Lead	0.937	0.0100		mg/L	199660	10	11/26/2014 14:08	MR
Zinc	25.7	0.100		mg/L	199660	10	11/26/2014 14:08	MR
ION SCAN SW9056A								
Nitrate	BRL	5.0		mg/L	R280735	20	11/19/2014 17:56	JM
Sulfate	450	20		mg/L	R280735	20	11/19/2014 17:56	JM
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Arsenic	0.0302	0.00500		mg/L	199686	1	11/26/2014 02:03	MR
Copper	0.138	0.00200		mg/L	199686	1	11/26/2014 02:03	MR
Lead	0.440	0.0100		mg/L	199686	10	11/26/2014 12:48	MR
Zinc	26.3	0.100		mg/L	199686	10	11/26/2014 12:48	MR
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**				
4,4´-DDD	BRL	0.00010		mg/L	199461	1	11/20/2014 20:38	BB
4,4´-DDE	BRL	0.00010		mg/L	199461	1	11/20/2014 20:38	BB
4,4´-DDT	BRL	0.00010		mg/L	199461	1	11/20/2014 20:38	BB
alpha-BHC	0.00015	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
alpha-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
beta-BHC	0.0067	0.00050		mg/L	199461	10	11/21/2014 14:40	BB
delta-BHC	0.00014	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
Dieldrin	BRL	0.00010		mg/L	199461	1	11/20/2014 20:38	BB
gamma-BHC	BRL	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
gamma-Chlordane	BRL	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
Heptachlor	BRL	0.000050		mg/L	199461	1	11/20/2014 20:38	BB
Methoxychlor	BRL	0.00050		mg/L	199461	1	11/20/2014 20:38	BB
Toxaphene	BRL	0.0050		mg/L	199461	1	11/20/2014 20:38	BB
Surr: Decachlorobiphenyl	51.7	14.6-130		%REC	199461	1	11/20/2014 20:38	BB
Surr: Tetrachloro-m-xylene	66.6	14.4-116		%REC	199461	1	11/20/2014 20:38	BB

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:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014
Lab ID:	1411F52-008	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,1,2,2-Tetrachloroethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,1,2-Trichloroethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,1-Dichloroethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,1-Dichloroethene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2,4-Trichlorobenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2-Dibromo-3-chloropropane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2-Dibromoethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2-Dichlorobenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2-Dichloroethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,2-Dichloropropane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,3-Dichlorobenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
1,4-Dichlorobenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
2-Butanone	BRL	0.050		mg/L	199585	1	11/24/2014 16:11	AR
2-Hexanone	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
4-Methyl-2-pentanone	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
Acetone	BRL	0.050		mg/L	199585	1	11/24/2014 16:11	AR
Benzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Bromodichloromethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Bromoform	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Bromomethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Carbon disulfide	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Carbon tetrachloride	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Chlorobenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Chloroethane	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
Chloroform	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Chloromethane	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
cis-1,2-Dichloroethene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
cis-1,3-Dichloropropene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Cyclohexane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Dibromochloromethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Dichlorodifluoromethane	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
Ethylbenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Freon-113	BRL	0.010		mg/L	199585	1	11/24/2014 16:11	AR
Isopropylbenzene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
m,p-Xylene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Methyl acetate	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Methyl tert-butyl ether	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Methylcyclohexane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Methylene chloride	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
o-Xylene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 28-Nov-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL-Atlanta	**Collection Date:**	11/18/2014
Lab ID:	1411F52-008	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Tetrachloroethene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Toluene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
trans-1,2-Dichloroethene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
trans-1,3-Dichloropropene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Trichloroethene	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Trichlorofluoromethane	BRL	0.005		mg/L	199585	1	11/24/2014 16:11	AR
Vinyl chloride	BRL	0.002		mg/L	199585	1	11/24/2014 16:11	AR
Surr: 4-Bromofluorobenzene	89.4	70.6-123		%REC	199585	1	11/24/2014 16:11	AR
Surr: Dibromofluoromethane	102	78.7-124		%REC	199585	1	11/24/2014 16:11	AR
Surr: Toluene-d8	96.2	81.3-120		%REC	199585	1	11/24/2014 16:11	AR

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 AMEC Work Order Number 1411F52

Checklist completed by [signature] 11/18/14
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.1° Cooler #2 3.9° 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 MS

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411F52

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411F52-001A	MW-25	11/18/2014 10:52:00AM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/25/2014
1411F52-001B	MW-25	11/18/2014 10:52:00AM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/25/2014
1411F52-001C	MW-25	11/18/2014 10:52:00AM	Groundwater	ION SCAN			11/19/2014
1411F52-001D	MW-25	11/18/2014 10:52:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/25/2014
1411F52-002A	TW-7	11/18/2014 12:58:00PM	Groundwater	TCL VOLATILE ORGANICS		11/22/2014	11/24/2014
1411F52-002B	TW-7	11/18/2014 12:58:00PM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-002C	TW-7	11/18/2014 12:58:00PM	Groundwater	ION SCAN			11/19/2014
1411F52-002C	TW-7	11/18/2014 12:58:00PM	Groundwater	ION SCAN			11/25/2014
1411F52-002D	TW-7	11/18/2014 12:58:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-002E	TW-7	11/18/2014 12:58:00PM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-003A	MW-109D	11/18/2014 3:51:00PM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-003B	MW-109D	11/18/2014 3:51:00PM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-003C	MW-109D	11/18/2014 3:51:00PM	Groundwater	ION SCAN			11/19/2014
1411F52-003D	MW-109D	11/18/2014 3:51:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-003D	MW-109D	11/18/2014 3:51:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/21/2014
1411F52-003D	MW-109D	11/18/2014 3:51:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/24/2014
1411F52-004A	MW-114	11/18/2014 11:47:00AM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-004B	MW-114	11/18/2014 11:47:00AM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-004C	MW-114	11/18/2014 11:47:00AM	Groundwater	ION SCAN			11/19/2014
1411F52-004D	MW-114	11/18/2014 11:47:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-004D	MW-114	11/18/2014 11:47:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/21/2014
1411F52-005A	MW-111	11/18/2014 3:22:00PM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-005B	MW-111	11/18/2014 3:22:00PM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-005C	MW-111	11/18/2014 3:22:00PM	Groundwater	ION SCAN			11/19/2014
1411F52-005D	MW-111	11/18/2014 3:22:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-005D	MW-111	11/18/2014 3:22:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/21/2014
1411F52-005D	MW-111	11/18/2014 3:22:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/24/2014
1411F52-006A	MW-119	11/18/2014 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		11/22/2014	11/24/2014
1411F52-006B	MW-119	11/18/2014 11:35:00AM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL-Atlanta
Lab Order: 1411F52

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411F52-006C	MW-119	11/18/2014 11:35:00AM	Groundwater	ION SCAN			11/19/2014
1411F52-006D	MW-119	11/18/2014 11:35:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-006E	MW-119	11/18/2014 11:35:00AM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-007A	DUP-2	11/18/2014 12:00:00PM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-007B	DUP-2	11/18/2014 12:00:00PM	Groundwater	Dissolved Metals by ICP/MS		11/24/2014	11/26/2014
1411F52-007C	DUP-2	11/18/2014 12:00:00PM	Groundwater	ION SCAN			11/19/2014
1411F52-007D	DUP-2	11/18/2014 12:00:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/20/2014
1411F52-007D	DUP-2	11/18/2014 12:00:00PM	Groundwater	TCL-CHLORINATED PESTICIDES		11/19/2014	11/21/2014
1411F52-008A	TRIP BLANK	11/18/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/20/2014	11/24/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199461

Sample ID: **MB-199461** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5931146**

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	0.00010									
4,4´-DDE	BRL	0.00010									
4,4´-DDT	BRL	0.00010									
alpha-BHC	BRL	0.000050									
alpha-Chlordane	BRL	0.000050									
beta-BHC	BRL	0.000050									
delta-BHC	BRL	0.000050									
Dieldrin	BRL	0.00010									
gamma-BHC	BRL	0.000050									
gamma-Chlordane	BRL	0.000050									
Heptachlor	BRL	0.000050									
Methoxychlor	BRL	0.00050									
Toxaphene	BRL	0.0050									
Surr: Decachlorobiphenyl	0.000426	0	0.5000		85.2	14.6	130				
Surr: Tetrachloro-m-xylene	0.000357	0	0.5000		71.3	14.4	116				

Sample ID: **LCS-199461** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5931230**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001095	0.00010	1.000		110	52.5	140				
Dieldrin	0.001060	0.00010	1.000		106	59.5	137				
gamma-BHC	0.000968	0.000050	1.000		96.8	46	134				
Heptachlor	0.001042	0.000050	1.000		104	44.7	127				
Surr: Decachlorobiphenyl	0.000353	0	0.5000		70.7	14.6	130				
Surr: Tetrachloro-m-xylene	0.000339	0	0.5000		67.8	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199461

Sample ID: **1411E16-002DMS** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5932293**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001089	0.00010	1.000		109	27.1	146				
Dieldrin	0.000943	0.00010	1.000		94.3	39.4	142				
gamma-BHC	0.000907	0.000050	1.000		90.7	34.5	144				
Heptachlor	0.000966	0.000050	1.000		96.6	33	138				
Surr: Decachlorobiphenyl	0.000335	0	0.5000		67.0	14.6	130				
Surr: Tetrachloro-m-xylene	0.000274	0	0.5000		54.8	14.4	116				

Sample ID: **1411E16-002DMSD** Client ID: Units: **mg/L** Prep Date: **11/19/2014** Run No: **280465**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199461** Analysis Date: **11/20/2014** Seq No: **5932294**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.001226	0.00010	1.000		123	27.1	146	1.089	11.9	21.2	
Dieldrin	0.001031	0.00010	1.000		103	39.4	142	0.9434	8.87	20	
gamma-BHC	0.000957	0.000050	1.000		95.7	34.5	144	0.9072	5.34	23.1	
Heptachlor	0.000999	0.000050	1.000		99.9	33	138	0.9662	3.34	26.9	
Surr: Decachlorobiphenyl	0.000322	0	0.5000		64.5	14.6	130	0.3351	0	0	
Surr: Tetrachloro-m-xylene	0.000239	0	0.5000		47.8	14.4	116	0.2738	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199585

Sample ID: **MB-199585** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199585** Analysis Date: **11/20/2014** Seq No: **5932062**

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	0.005									
1,1,2,2-Tetrachloroethane	BRL	0.005									
1,1,2-Trichloroethane	BRL	0.005									
1,1-Dichloroethane	BRL	0.005									
1,1-Dichloroethene	BRL	0.005									
1,2,4-Trichlorobenzene	BRL	0.005									
1,2-Dibromo-3-chloropropane	BRL	0.005									
1,2-Dibromoethane	BRL	0.005									
1,2-Dichlorobenzene	BRL	0.005									
1,2-Dichloroethane	BRL	0.005									
1,2-Dichloropropane	BRL	0.005									
1,3-Dichlorobenzene	BRL	0.005									
1,4-Dichlorobenzene	BRL	0.005									
2-Butanone	BRL	0.050									
2-Hexanone	BRL	0.010									
4-Methyl-2-pentanone	BRL	0.010									
Acetone	BRL	0.050									
Benzene	BRL	0.005									
Bromodichloromethane	BRL	0.005									
Bromoform	BRL	0.005									
Bromomethane	BRL	0.005									
Carbon disulfide	BRL	0.005									
Carbon tetrachloride	BRL	0.005									
Chlorobenzene	BRL	0.005									
Chloroethane	BRL	0.010									
Chloroform	BRL	0.005									
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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199585

Sample ID: **MB-199585** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199585** Analysis Date: **11/20/2014** Seq No: **5932062**

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	0.005									
cis-1,3-Dichloropropene	BRL	0.005									
Cyclohexane	BRL	0.005									
Dibromochloromethane	BRL	0.005									
Dichlorodifluoromethane	BRL	0.010									
Ethylbenzene	BRL	0.005									
Freon-113	BRL	0.010									
Isopropylbenzene	BRL	0.005									
m,p-Xylene	BRL	0.005									
Methyl acetate	BRL	0.005									
Methyl tert-butyl ether	BRL	0.005									
Methylcyclohexane	BRL	0.005									
Methylene chloride	BRL	0.005									
o-Xylene	BRL	0.005									
Styrene	BRL	0.005									
Tetrachloroethene	BRL	0.005									
Toluene	BRL	0.005									
trans-1,2-Dichloroethene	BRL	0.005									
trans-1,3-Dichloropropene	BRL	0.005									
Trichloroethene	BRL	0.005									
Trichlorofluoromethane	BRL	0.005									
Vinyl chloride	BRL	0.002									
Surr: 4-Bromofluorobenzene	0.04030	0	50.00		80.6	70.6	123				
Surr: Dibromofluoromethane	0.05260	0	50.00		105	78.7	124				
Surr: Toluene-d8	0.04528	0	50.00		90.6	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199585

Sample ID: **LCS-199585** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199585** Analysis Date: **11/20/2014** Seq No: **5932060**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.04722	0.005	50.00		94.4	64.2	137				
Benzene	0.04059	0.005	50.00		81.2	72.8	128				
Chlorobenzene	0.03860	0.005	50.00		77.2	72.3	126				
Toluene	0.03979	0.005	50.00		79.6	74.9	127				
Trichloroethene	0.03976	0.005	50.00		79.5	70.5	134				
Surr: 4-Bromofluorobenzene	0.04216	0	50.00		84.3	70.6	123				
Surr: Dibromofluoromethane	0.04427	0	50.00		88.5	78.7	124				
Surr: Toluene-d8	0.04196	0	50.00		83.9	81.3	120				

Sample ID: **1411A92-001AMS** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199585** Analysis Date: **11/21/2014** Seq No: **5932085**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.07563	0.005	50.00		151	60.2	159				
Benzene	0.05610	0.005	50.00		112	70.2	138				
Chlorobenzene	0.05036	0.005	50.00		101	70.1	133				
Toluene	0.05813	0.005	50.00	2.300	112	70	139				
Trichloroethene	0.05563	0.005	50.00		111	70.1	144				
Surr: 4-Bromofluorobenzene	0.04361	0	50.00		87.2	70.6	123				
Surr: Dibromofluoromethane	0.04714	0	50.00		94.3	78.7	124				
Surr: Toluene-d8	0.04411	0	50.00		88.2	81.3	120				

Sample ID: **1411A92-001AMSD** Client ID: Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199585** Analysis Date: **11/21/2014** Seq No: **5932087**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.07222	0.005	50.00		144	60.2	159	75.63	4.61	19.2	
Benzene	0.05846	0.005	50.00		117	70.2	138	56.10	4.12	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199585

Sample ID: **1411A92-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **mg/L** Prep Date: **11/20/2014** Run No: **280504**
BatchID: **199585** Analysis Date: **11/21/2014** Seq No: **5932087**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	0.05021	0.005	50.00		100	70.1	133	50.36	0.298	20	
Toluene	0.05681	0.005	50.00	2.300	109	70	139	58.13	2.30	20	
Trichloroethene	0.05295	0.005	50.00		106	70.1	144	55.63	4.94	20	
Surr: 4-Bromofluorobenzene	0.04629	0	50.00		92.6	70.6	123	43.61	0	0	
Surr: Dibromofluoromethane	0.04657	0	50.00		93.1	78.7	124	47.14	0	0	
Surr: Toluene-d8	0.04271	0	50.00		85.4	81.3	120	44.11	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199652

Sample ID: **MB-199652** Client ID: Units: **mg/L** Prep Date: **11/22/2014** Run No: **280600**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199652** Analysis Date: **11/22/2014** Seq No: **5934626**

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	0.005									
1,1,2,2-Tetrachloroethane	BRL	0.005									
1,1,2-Trichloroethane	BRL	0.005									
1,1-Dichloroethane	BRL	0.005									
1,1-Dichloroethene	BRL	0.005									
1,2,4-Trichlorobenzene	BRL	0.005									
1,2-Dibromo-3-chloropropane	BRL	0.005									
1,2-Dibromoethane	BRL	0.005									
1,2-Dichlorobenzene	BRL	0.005									
1,2-Dichloroethane	BRL	0.005									
1,2-Dichloropropane	BRL	0.005									
1,3-Dichlorobenzene	BRL	0.005									
1,4-Dichlorobenzene	BRL	0.005									
2-Butanone	BRL	0.050									
2-Hexanone	BRL	0.010									
4-Methyl-2-pentanone	BRL	0.010									
Acetone	BRL	0.050									
Benzene	BRL	0.005									
Bromodichloromethane	BRL	0.005									
Bromoform	BRL	0.005									
Bromomethane	BRL	0.005									
Carbon disulfide	BRL	0.005									
Carbon tetrachloride	BRL	0.005									
Chlorobenzene	BRL	0.005									
Chloroethane	BRL	0.010									
Chloroform	BRL	0.005									
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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199652

Sample ID: **MB-199652** Client ID: Units: **mg/L** Prep Date: **11/22/2014** Run No: **280600**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199652** Analysis Date: **11/22/2014** Seq No: **5934626**

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	0.005									
cis-1,3-Dichloropropene	BRL	0.005									
Cyclohexane	BRL	0.005									
Dibromochloromethane	BRL	0.005									
Dichlorodifluoromethane	BRL	0.010									
Ethylbenzene	BRL	0.005									
Freon-113	BRL	0.010									
Isopropylbenzene	BRL	0.005									
m,p-Xylene	BRL	0.005									
Methyl acetate	BRL	0.005									
Methyl tert-butyl ether	BRL	0.005									
Methylcyclohexane	BRL	0.005									
Methylene chloride	BRL	0.005									
o-Xylene	BRL	0.005									
Styrene	BRL	0.005									
Tetrachloroethene	BRL	0.005									
Toluene	BRL	0.005									
trans-1,2-Dichloroethene	BRL	0.005									
trans-1,3-Dichloropropene	BRL	0.005									
Trichloroethene	BRL	0.005									
Trichlorofluoromethane	BRL	0.005									
Vinyl chloride	BRL	0.002									
Surr: 4-Bromofluorobenzene	0.04477	0	50.00		89.5	70.6	123				
Surr: Dibromofluoromethane	0.04846	0	50.00		96.9	78.7	124				
Surr: Toluene-d8	0.04941	0	50.00		98.8	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199652

Sample ID: **LCS-199652** Client ID: Units: **mg/L** Prep Date: **11/22/2014** Run No: **280600**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199652** Analysis Date: **11/22/2014** Seq No: **5934624**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.04240	0.005	50.00		84.8	64.2	137				
Benzene	0.04668	0.005	50.00		93.4	72.8	128				
Chlorobenzene	0.04588	0.005	50.00		91.8	72.3	126				
Toluene	0.04713	0.005	50.00		94.3	74.9	127				
Trichloroethene	0.04994	0.005	50.00		99.9	70.5	134				
Surr: 4-Bromofluorobenzene	0.04562	0	50.00		91.2	70.6	123				
Surr: Dibromofluoromethane	0.04869	0	50.00		97.4	78.7	124				
Surr: Toluene-d8	0.04870	0	50.00		97.4	81.3	120				

Sample ID: **1411G37-001AMS** Client ID: Units: **mg/L** Prep Date: **11/22/2014** Run No: **280603**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199652** Analysis Date: **11/24/2014** Seq No: **5934899**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.04175	0.005	50.00		83.5	60.2	159				
Benzene	0.04729	0.005	50.00		94.6	70.2	138				
Chlorobenzene	0.04697	0.005	50.00		93.9	70.1	133				
Toluene	0.04830	0.005	50.00		96.6	70	139				
Trichloroethene	0.05003	0.005	50.00		100	70.1	144				
Surr: 4-Bromofluorobenzene	0.04549	0	50.00		91.0	70.6	123				
Surr: Dibromofluoromethane	0.04884	0	50.00		97.7	78.7	124				
Surr: Toluene-d8	0.04868	0	50.00		97.4	81.3	120				

Sample ID: **1411G37-001AMSD** Client ID: Units: **mg/L** Prep Date: **11/22/2014** Run No: **280603**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199652** Analysis Date: **11/24/2014** Seq No: **5934900**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.04100	0.005	50.00		82.0	60.2	159	41.75	1.81	19.2	
Benzene	0.04581	0.005	50.00		91.6	70.2	138	47.29	3.18	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199652

Sample ID: **1411G37-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **mg/L** Prep Date: **11/22/2014** Run No: **280603**
BatchID: **199652** Analysis Date: **11/24/2014** Seq No: **5934900**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	0.04579	0.005	50.00		91.6	70.1	133	46.97	2.54	20	
Toluene	0.04628	0.005	50.00		92.6	70	139	48.30	4.27	20	
Trichloroethene	0.04911	0.005	50.00		98.2	70.1	144	50.03	1.86	20	
Surr: 4-Bromofluorobenzene	0.04515	0	50.00		90.3	70.6	123	45.49	0	0	
Surr: Dibromofluoromethane	0.04923	0	50.00		98.5	78.7	124	48.84	0	0	
Surr: Toluene-d8	0.04900	0	50.00		98.0	81.3	120	48.68	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199660

Sample ID: **MB-199660** Client ID: Units: **mg/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939493**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.00500									
Copper	BRL	0.00200									
Lead	BRL	0.00100									
Zinc	BRL	0.0100									

Sample ID: **LCS-199660** Client ID: Units: **mg/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939492**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.1021	0.00500	100.0		102	80	120				
Copper	0.1070	0.00200	100.0	0.4146	107	80	120				
Lead	0.09047	0.00100	100.0		90.5	80	120				
Zinc	0.1106	0.0100	100.0		111	80	120				

Sample ID: **1411F52-001AMS** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939495**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.1045	0.00500	100.0	1.385	103	75	125				
Copper	0.3161	0.00200	100.0	204.3	112	75	125				
Lead	0.1156	0.00100	100.0	24.96	90.6	75	125				
Zinc	3.072	0.0100	100.0	2880	192	75	125				S

Sample ID: **1411F52-001AMSD** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939496**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.1126	0.00500	100.0	1.385	111	75	125	104.5	7.43	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199660

Sample ID: **1411F52-001AMSD** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939496**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	0.3362	0.00200	100.0	204.3	132	75	125	316.1	6.18	20	S
Lead	0.1234	0.00100	100.0	24.96	98.4	75	125	115.6	6.54	20	
Zinc	3.277	0.0100	100.0	2880	397	75	125	3072	6.47	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **MB-199686** Client ID: Units: **mg/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939549**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.00500									
Copper	BRL	0.00200									
Lead	BRL	0.00100									
Zinc	BRL	0.0100									

Sample ID: **LCS-199686** Client ID: Units: **mg/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939546**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.09706	0.00500	100.0		97.1	80	120				
Copper	0.1001	0.00200	100.0		100	80	120				
Lead	0.08674	0.00100	100.0		86.7	80	120				
Zinc	0.1006	0.0100	100.0		101	80	120				

Sample ID: **1411F52-001BMS** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939551**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.1013	0.00500	100.0	0.7344	101	75	125				
Copper	0.2965	0.00200	100.0	194.7	102	75	125				
Lead	0.1024	0.00100	100.0	18.13	84.2	75	125				
Zinc	2.997	0.0100	100.0	2860	136	75	125				S

Sample ID: **1411F52-001BMSD** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	0.09821	0.00500	100.0	0.7344	97.5	75	125	101.3	3.08	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **1411F52-001BMSD** Client ID: **MW-25** Units: **mg/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	0.2962	0.00200	100.0	194.7	101	75	125	296.5	0.111	20	
Lead	0.1012	0.00100	100.0	18.13	83.0	75	125	102.4	1.16	20	
Zinc	2.997	0.0100	100.0	2860	137	75	125	2997	0.027	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: R280735

Sample ID: **MB-R280735** Client ID: Units: **mg/L** Prep Date: Run No: **280735**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938056**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280735** Client ID: Units: **mg/L** Prep Date: Run No: **280735**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938055**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.378	0.25	5.000		108	90	110				
Sulfate	24.36	1.0	25.00		97.4	90	110				

Sample ID: **1411F28-003DMS** Client ID: Units: **mg/L** Prep Date: Run No: **280735**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938068**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.814	0.25	5.000		96.3	90	110				
Sulfate	27.84	1.0	25.00	1.400	106	90	110				

Sample ID: **1411F28-004DMS** Client ID: Units: **mg/L** Prep Date: Run No: **280735**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938079**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	4.683	0.25	5.000		93.7	90	110				
Sulfate	24.04	1.0	25.00	1.728	89.3	90	110				S

Sample ID: **1411F28-003DMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280735**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938069**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.006	0.25	5.000		100	90	110	4.814	3.91	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL-Atlanta
Workorder: 1411F52

ANALYTICAL QC SUMMARY REPORT

BatchID: **R280735**

Sample ID: **1411F28-003DMSD** Client ID:
SampleType: **MSD** TestCode: **ION SCAN SW9056A**
Units: **mg/L** Prep Date: Run No: **280735**
BatchID: **R280735** Analysis Date: **11/19/2014** Seq No: **5938069**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfate	25.46	1.0	25.00	1.400	96.3	90	110	27.84	8.91	20	

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		

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

December 18, 2014

Rhonda Quinn
AMEC E&I, Inc. -Kennesaw
1075 Big Shanty Rd NW
Kennesaw GA 30144

TEL: (770) 421-3400
FAX: (770) 421-3486

RE: BFEL Atlanta

Dear Rhonda Quinn: Order No: 1411G71

Analytical Environmental Services, Inc. received 13 samples on 11/19/2014 4:56:00 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 07/01/14-06/30/15.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, 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.

Tara Esbeck

Tara Esbeck
Project Manager

Revision 12/18/2014

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1411G71

Date: 11/19/14 Page 1 of 1

COMPANY: AMEC

ADDRESS: 1075 Big Shanty RD NW Suite 100 Kennesaw GA

PHONE: 770-421-3460

FAX:

SAMPLED BY: Mark A and Evor G

SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Total/Metals	Dissolved Metals	Total Organophosphorus Pesticides	Nitrate + Sulfate	VOCs List	No # of Containers
							PRESERVATION (See codes)					
1	SW-2010-17	11/19/14	1310	✓		GW SW	1	2	1			4
2	SW-2010-15	11/19/14	1320	✓		SW	1	2	1			4
3	SW-2010-14	11/19/14	1340	✓		SW	1	2	1			4
4	Inflow-2	11/19/14	1417	✓		SW	1	2	1			4
5	SW-2010-11	11/19/14	1439	✓		SW	1	2	1			4
6	SW-2010-10	11/19/14	1450	✓		SW	1	2	1			4
7	Inflow-1	11/19/14	1515	✓		SW	1	2	1			4
8	SW-2014-21	11/19/14	1529	✓		SW	1	2	1			4
9	SW-2014-20	11/19/14	1543	✓		SW	1	2	1			4
10	SW-2010-5	11/19/14	1555	✓		SW	1	2	1			4
11	DUP-3	11/19/14	1200	✓		SW	1	2	1			4
12	MW-120	11/19/14	1130	✓		GW	1	2	1	2		7
13	Trip Blank	11/19/14								2		2
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: Mark Andrews	11/19/14 1631	1:	11-19-14 16:31
2:	11/19/14 16:56	2: Teana Pacurar	11/19/14 16:56
3:		3:	

PROJECT INFORMATION

PROJECT NAME: BFEL Atlanta

PROJECT #:

SITE ADDRESS: 1551 Montpelier RD Atlanta, GA

SEND REPORT TO: Rhonda Quinn

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE #: PO#:

RECEIPT

Total # of Containers

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

STATE PROGRAM (if any): GA

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

DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS:
Total & Dissolved Metals site specific list: Arsenic, Lead, Copper, and Zinc Dissolved metals to be filtered by Lab.
46hr hold time Nitrate & Sulfate

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

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-17
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 1:10:00 PM
Lab ID:	1411G71-001	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.8		0.14	0.25	mg/L	R280757	1	11/20/2014 10:55	JM
Sulfate	150		0.44	2.0	mg/L	R280757	2	11/20/2014 18:47	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.935	J	0.536	5.00	ug/L	199686	1	11/25/2014 16:41	MR
Copper	14.0		0.139	2.00	ug/L	199686	1	11/25/2014 16:41	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 16:41	MR
Zinc	1120		4.43	10.0	ug/L	199686	1	11/25/2014 16:41	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:23	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 12:23	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 12:23	BB
alpha-BHC	0.29		0.0038	0.050	ug/L	199571	1	11/24/2014 12:23	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 12:23	BB
beta-BHC	0.37		0.0050	0.050	ug/L	199571	1	11/24/2014 12:23	BB
delta-BHC	0.26		0.0031	0.050	ug/L	199571	1	11/24/2014 12:23	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:23	BB
gamma-BHC	0.082		0.0038	0.050	ug/L	199571	1	11/24/2014 12:23	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 12:23	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 12:23	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 12:23	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 12:23	BB
Surr: Decachlorobiphenyl	81.4		0	14.6-130	%REC	199571	1	11/24/2014 12:23	BB
Surr: Tetrachloro-m-xylene	79.1		0	14.4-116	%REC	199571	1	11/24/2014 12:23	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-15
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 1:20:00 PM
Lab ID:	1411G71-002	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.8		0.14	0.25	mg/L	R280757	1	11/20/2014 11:10	JM
Sulfate	150		0.44	2.0	mg/L	R280757	2	11/20/2014 19:02	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.827	J	0.536	5.00	ug/L	199686	1	11/25/2014 16:47	MR
Copper	18.0		0.139	2.00	ug/L	199686	1	11/25/2014 16:47	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 16:47	MR
Zinc	1230		4.43	10.0	ug/L	199686	1	11/25/2014 16:47	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:34	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 12:34	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 12:34	BB
alpha-BHC	0.29		0.0038	0.050	ug/L	199571	1	11/24/2014 12:34	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 12:34	BB
beta-BHC	0.40		0.0050	0.050	ug/L	199571	1	11/24/2014 12:34	BB
delta-BHC	0.28		0.0031	0.050	ug/L	199571	1	11/24/2014 12:34	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:34	BB
gamma-BHC	0.082		0.0038	0.050	ug/L	199571	1	11/24/2014 12:34	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 12:34	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 12:34	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 12:34	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 12:34	BB
Surr: Decachlorobiphenyl	83.7		0	14.6-130	%REC	199571	1	11/24/2014 12:34	BB
Surr: Tetrachloro-m-xylene	62.3		0	14.4-116	%REC	199571	1	11/24/2014 12:34	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-14
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 1:40:00 PM
Lab ID:	1411G71-003	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.9		0.14	0.25	mg/L	R280757	1	11/20/2014 11:25	JM
Sulfate	140		0.44	2.0	mg/L	R280757	2	11/20/2014 19:17	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.716	J	0.536	5.00	ug/L	199686	1	11/25/2014 16:52	MR
Copper	18.3		0.139	2.00	ug/L	199686	1	11/25/2014 16:52	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 16:52	MR
Zinc	1270		4.43	10.0	ug/L	199686	1	11/25/2014 16:52	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:45	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 12:45	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 12:45	BB
alpha-BHC	0.30		0.0038	0.050	ug/L	199571	1	11/24/2014 12:45	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 12:45	BB
beta-BHC	0.41		0.0050	0.050	ug/L	199571	1	11/24/2014 12:45	BB
delta-BHC	0.32		0.0031	0.050	ug/L	199571	1	11/24/2014 12:45	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:45	BB
gamma-BHC	0.086		0.0038	0.050	ug/L	199571	1	11/24/2014 12:45	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 12:45	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 12:45	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 12:45	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 12:45	BB
Surr: Decachlorobiphenyl	78.8		0	14.6-130	%REC	199571	1	11/24/2014 12:45	BB
Surr: Tetrachloro-m-xylene	77.1		0	14.4-116	%REC	199571	1	11/24/2014 12:45	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	INFLOW-2
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 2:17:00 PM
Lab ID:	1411G71-004	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	2.1		0.14	0.25	mg/L	R280757	1	11/20/2014 11:39	JM
Sulfate	130		0.44	2.0	mg/L	R280757	2	11/20/2014 19:32	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.923	J	0.536	5.00	ug/L	199686	1	11/25/2014 16:57	MR
Copper	13.6		0.139	2.00	ug/L	199686	1	11/25/2014 16:57	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 16:57	MR
Zinc	847		4.43	10.0	ug/L	199686	1	11/25/2014 16:57	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:56	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 12:56	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 12:56	BB
alpha-BHC	0.17		0.0038	0.050	ug/L	199571	1	11/24/2014 12:56	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 12:56	BB
beta-BHC	0.28		0.0050	0.050	ug/L	199571	1	11/24/2014 12:56	BB
delta-BHC	0.13		0.0031	0.050	ug/L	199571	1	11/24/2014 12:56	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 12:56	BB
gamma-BHC	0.058		0.0038	0.050	ug/L	199571	1	11/24/2014 12:56	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 12:56	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 12:56	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 12:56	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 12:56	BB
Surr: Decachlorobiphenyl	75.6		0	14.6-130	%REC	199571	1	11/24/2014 12:56	BB
Surr: Tetrachloro-m-xylene	66.5		0	14.4-116	%REC	199571	1	11/24/2014 12:56	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-11
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 2:39:00 PM
Lab ID:	1411G71-005	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.6		0.14	0.25	mg/L	R280757	1	11/20/2014 11:54	JM
Sulfate	94		0.22	1.0	mg/L	R280757	1	11/20/2014 11:54	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	1.02	J	0.536	5.00	ug/L	199686	1	11/25/2014 17:13	MR
Copper	4.34		0.139	2.00	ug/L	199686	1	11/25/2014 17:13	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:17	MR
Zinc	435		4.43	10.0	ug/L	199686	1	11/25/2014 17:13	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:08	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 13:08	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 13:08	BB
alpha-BHC	0.13		0.0038	0.050	ug/L	199571	1	11/24/2014 13:08	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 13:08	BB
beta-BHC	0.091		0.0050	0.050	ug/L	199571	1	11/24/2014 13:08	BB
delta-BHC	0.077		0.0031	0.050	ug/L	199571	1	11/24/2014 13:08	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:08	BB
gamma-BHC	0.044	J	0.0038	0.050	ug/L	199571	1	11/24/2014 13:08	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 13:08	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 13:08	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 13:08	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 13:08	BB
Surr: Decachlorobiphenyl	77.7		0	14.6-130	%REC	199571	1	11/24/2014 13:08	BB
Surr: Tetrachloro-m-xylene	71.1		0	14.4-116	%REC	199571	1	11/24/2014 13:08	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-10
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 2:50:00 PM
Lab ID:	1411G71-006	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.6		0.14	0.25	mg/L	R280757	1	11/20/2014 12:27	JM
Sulfate	92		0.22	1.0	mg/L	R280757	1	11/20/2014 12:27	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.954	J	0.536	5.00	ug/L	199686	1	11/25/2014 17:18	MR
Copper	4.42		0.139	2.00	ug/L	199686	1	11/25/2014 17:18	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:23	MR
Zinc	456		4.43	10.0	ug/L	199686	1	11/25/2014 17:18	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:19	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 13:19	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 13:19	BB
alpha-BHC	0.097		0.0038	0.050	ug/L	199571	1	11/24/2014 13:19	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 13:19	BB
beta-BHC	0.081		0.0050	0.050	ug/L	199571	1	11/24/2014 13:19	BB
delta-BHC	0.059		0.0031	0.050	ug/L	199571	1	11/24/2014 13:19	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:19	BB
gamma-BHC	0.028	J	0.0038	0.050	ug/L	199571	1	11/24/2014 13:19	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 13:19	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 13:19	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 13:19	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 13:19	BB
Surr: Decachlorobiphenyl	91.8		0	14.6-130	%REC	199571	1	11/24/2014 13:19	BB
Surr: Tetrachloro-m-xylene	84		0	14.4-116	%REC	199571	1	11/24/2014 13:19	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	INFLOW-1
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 3:15:00 PM
Lab ID:	1411G71-007	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.5		0.14	0.25	mg/L	R280757	1	11/20/2014 14:41	JM
Sulfate	92		0.22	1.0	mg/L	R280757	1	11/20/2014 14:41	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.917	J	0.536	5.00	ug/L	199686	1	11/25/2014 17:23	MR
Copper	4.92		0.139	2.00	ug/L	199686	1	11/25/2014 17:23	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:28	MR
Zinc	482		4.43	10.0	ug/L	199686	1	11/25/2014 17:23	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:30	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 13:30	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 13:30	BB
alpha-BHC	0.12		0.0038	0.050	ug/L	199571	1	11/24/2014 13:30	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 13:30	BB
beta-BHC	0.079		0.0050	0.050	ug/L	199571	1	11/24/2014 13:30	BB
delta-BHC	0.072		0.0031	0.050	ug/L	199571	1	11/24/2014 13:30	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:30	BB
gamma-BHC	0.038	J	0.0038	0.050	ug/L	199571	1	11/24/2014 13:30	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 13:30	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 13:30	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 13:30	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 13:30	BB
Surr: Decachlorobiphenyl	76.2		0	14.6-130	%REC	199571	1	11/24/2014 13:30	BB
Surr: Tetrachloro-m-xylene	69.6		0	14.4-116	%REC	199571	1	11/24/2014 13:30	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2014-21
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 3:24:00 PM
Lab ID:	1411G71-008	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	8.1		0.14	0.25	mg/L	R280757	1	11/20/2014 14:56	JM
Sulfate	280		4.4	20	mg/L	R280757	20	11/20/2014 20:45	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	BRL		0.536	5.00	ug/L	199686	1	11/25/2014 17:28	MR
Copper	71.4		0.139	2.00	ug/L	199686	1	11/25/2014 17:28	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:33	MR
Zinc	3750		4.43	10.0	ug/L	199686	1	11/25/2014 17:28	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:41	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 13:41	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 13:41	BB
alpha-BHC	0.20		0.0038	0.050	ug/L	199571	1	11/24/2014 13:41	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 13:41	BB
beta-BHC	1.2		0.0050	0.050	ug/L	199571	1	11/24/2014 13:41	BB
delta-BHC	0.15		0.0031	0.050	ug/L	199571	1	11/24/2014 13:41	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:41	BB
gamma-BHC	0.100		0.0038	0.050	ug/L	199571	1	11/24/2014 13:41	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 13:41	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 13:41	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 13:41	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 13:41	BB
Surr: Decachlorobiphenyl	48.5		0	14.6-130	%REC	199571	1	11/24/2014 13:41	BB
Surr: Tetrachloro-m-xylene	67.7		0	14.4-116	%REC	199571	1	11/24/2014 13:41	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2014-20
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 3:43:00 PM
Lab ID:	1411G71-009	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	8.3		0.14	0.25	mg/L	R280757	1	11/20/2014 15:11	JM
Sulfate	350		4.4	20	mg/L	R280757	20	11/20/2014 21:00	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	BRL		0.536	5.00	ug/L	199686	1	11/25/2014 17:34	MR
Copper	157		0.139	2.00	ug/L	199686	1	11/25/2014 17:34	MR
Lead	2.81		0.0990	1.00	ug/L	199686	1	11/25/2014 21:38	MR
Zinc	4240		4.43	10.0	ug/L	199686	1	11/25/2014 17:34	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:53	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/24/2014 13:53	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/24/2014 13:53	BB
alpha-BHC	0.14		0.0038	0.050	ug/L	199571	1	11/24/2014 13:53	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/24/2014 13:53	BB
beta-BHC	1.5		0.0050	0.050	ug/L	199571	1	11/24/2014 13:53	BB
delta-BHC	0.18		0.0031	0.050	ug/L	199571	1	11/24/2014 13:53	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/24/2014 13:53	BB
gamma-BHC	0.078		0.0038	0.050	ug/L	199571	1	11/24/2014 13:53	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/24/2014 13:53	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/24/2014 13:53	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/24/2014 13:53	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/24/2014 13:53	BB
Surr: Decachlorobiphenyl	87.4		0	14.6-130	%REC	199571	1	11/24/2014 13:53	BB
Surr: Tetrachloro-m-xylene	81.2		0	14.4-116	%REC	199571	1	11/24/2014 13:53	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	SW-2010-5
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 3:55:00 PM
Lab ID:	1411G71-010	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.8		0.14	0.25	mg/L	R280757	1	11/20/2014 15:26	JM
Sulfate	100		0.22	1.0	mg/L	R280757	1	11/20/2014 15:26	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	0.704	J	0.536	5.00	ug/L	199686	1	11/25/2014 17:39	MR
Copper	4.71		0.139	2.00	ug/L	199686	1	11/25/2014 17:39	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:43	MR
Zinc	469		4.43	10.0	ug/L	199686	1	11/25/2014 17:39	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:00	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/25/2014 11:00	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/25/2014 11:00	BB
alpha-BHC	0.083		0.0038	0.050	ug/L	199571	1	11/25/2014 11:00	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/25/2014 11:00	BB
beta-BHC	0.074		0.0050	0.050	ug/L	199571	1	11/25/2014 11:00	BB
delta-BHC	BRL		0.0031	0.050	ug/L	199571	1	11/25/2014 11:00	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:00	BB
gamma-BHC	0.0092	J	0.0038	0.050	ug/L	199571	1	11/25/2014 11:00	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/25/2014 11:00	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/25/2014 11:00	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/25/2014 11:00	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/25/2014 11:00	BB
Surr: Decachlorobiphenyl	80.4		0	14.6-130	%REC	199571	1	11/25/2014 11:00	BB
Surr: Tetrachloro-m-xylene	88.1		0	14.4-116	%REC	199571	1	11/25/2014 11:00	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	DUP-3
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 12:00:00 PM
Lab ID:	1411G71-011	**Matrix:**	Surface Water

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
ION SCAN SW9056A									
Nitrate	1.5		0.14	0.25	mg/L	R280757	1	11/20/2014 15:40	JM
Sulfate	88		0.22	1.0	mg/L	R280757	1	11/20/2014 15:40	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	1.01	J	0.536	5.00	ug/L	199686	1	11/25/2014 17:44	MR
Copper	4.53		0.139	2.00	ug/L	199686	1	11/25/2014 17:44	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:49	MR
Zinc	477		4.43	10.0	ug/L	199686	1	11/25/2014 17:44	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:11	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/25/2014 11:11	BB
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/25/2014 11:11	BB
alpha-BHC	0.13		0.0038	0.050	ug/L	199571	1	11/25/2014 11:11	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/25/2014 11:11	BB
beta-BHC	0.073		0.0050	0.050	ug/L	199571	1	11/25/2014 11:11	BB
delta-BHC	BRL		0.0031	0.050	ug/L	199571	1	11/25/2014 11:11	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:11	BB
gamma-BHC	0.038	J	0.0038	0.050	ug/L	199571	1	11/25/2014 11:11	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/25/2014 11:11	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/25/2014 11:11	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/25/2014 11:11	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/25/2014 11:11	BB
Surr: Decachlorobiphenyl	79		0	14.6-130	%REC	199571	1	11/25/2014 11:11	BB
Surr: Tetrachloro-m-xylene	77.9		0	14.4-116	%REC	199571	1	11/25/2014 11:11	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-120
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 11:30:00 AM
Lab ID:	1411G71-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
1,4-Dioxane	420		8.4	150	ug/L	199526	1	11/24/2014 15:18	GK
Surr: 4-Bromofluorobenzene	93.7		0	70.6-123	%REC	199526	1	11/24/2014 15:18	GK
Surr: Dibromofluoromethane	98		0	78.7-124	%REC	199526	1	11/24/2014 15:18	GK
Surr: Toluene-d8	98.7		0	81.3-120	%REC	199526	1	11/24/2014 15:18	GK
Total Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	1.17	J	0.536	5.00	ug/L	199660	1	11/25/2014 15:24	MR
Copper	10.8		0.139	2.00	ug/L	199660	1	11/25/2014 15:24	MR
Lead	1.97		0.0990	1.00	ug/L	199660	1	11/25/2014 15:24	MR
Zinc	690		4.43	10.0	ug/L	199660	1	11/25/2014 15:24	MR
TCL VOLATILE ORGANICS SW8260B					**(SW5030B)**				
1,1,1-Trichloroethane	BRL		0.52	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,1,2,2-Tetrachloroethane	BRL		0.29	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,1,2-Trichloroethane	BRL		0.38	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,1-Dichloroethane	BRL		0.44	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,1-Dichloroethene	BRL		0.68	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2,4-Trichlorobenzene	BRL		0.25	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2-Dibromo-3-chloropropane	BRL		0.67	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2-Dibromoethane	BRL		0.37	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2-Dichlorobenzene	BRL		0.26	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2-Dichloroethane	BRL		0.43	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,2-Dichloropropane	BRL		0.21	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,3-Dichlorobenzene	BRL		0.28	5.0	ug/L	199526	1	11/24/2014 15:18	GK
1,4-Dichlorobenzene	BRL		0.33	5.0	ug/L	199526	1	11/24/2014 15:18	GK
2-Butanone	BRL		2.0	50	ug/L	199526	1	11/24/2014 15:18	GK
2-Hexanone	BRL		0.59	10	ug/L	199526	1	11/24/2014 15:18	GK
4-Methyl-2-pentanone	BRL		0.43	10	ug/L	199526	1	11/24/2014 15:18	GK
Acetone	BRL		5.6	50	ug/L	199526	1	11/24/2014 15:18	GK
Benzene	BRL		0.39	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Bromodichloromethane	BRL		0.65	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Bromoform	BRL		0.26	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Bromomethane	BRL		0.54	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Carbon disulfide	BRL		1.0	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Carbon tetrachloride	BRL		0.61	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Chlorobenzene	0.87	J	0.40	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Chloroethane	BRL		0.71	10	ug/L	199526	1	11/24/2014 15:18	GK
Chloroform	BRL		0.45	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Chloromethane	BRL		0.60	10	ug/L	199526	1	11/24/2014 15:18	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-120
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 11:30:00 AM
Lab ID:	1411G71-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B					**(SW5030B)**				
cis-1,2-Dichloroethene	7.6		0.38	5.0	ug/L	199526	1	11/24/2014 15:18	GK
cis-1,3-Dichloropropene	BRL		0.31	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Cyclohexane	BRL		1.7	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Dibromochloromethane	BRL		0.20	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Dichlorodifluoromethane	BRL		0.70	10	ug/L	199526	1	11/24/2014 15:18	GK
Ethylbenzene	BRL		0.40	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Freon-113	BRL		0.59	10	ug/L	199526	1	11/24/2014 15:18	GK
Isopropylbenzene	BRL		0.36	5.0	ug/L	199526	1	11/24/2014 15:18	GK
m,p-Xylene	BRL		0.78	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Methyl acetate	BRL		1.5	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Methyl tert-butyl ether	BRL		0.42	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Methylcyclohexane	BRL		0.49	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Methylene chloride	BRL		0.91	5.0	ug/L	199526	1	11/24/2014 15:18	GK
o-Xylene	BRL		0.39	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Styrene	BRL		0.26	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Tetrachloroethene	BRL		0.39	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Toluene	BRL		0.38	5.0	ug/L	199526	1	11/24/2014 15:18	GK
trans-1,2-Dichloroethene	BRL		0.40	5.0	ug/L	199526	1	11/24/2014 15:18	GK
trans-1,3-Dichloropropene	BRL		0.18	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Trichloroethene	3.4	J	0.43	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Trichlorofluoromethane	BRL		0.62	5.0	ug/L	199526	1	11/24/2014 15:18	GK
Vinyl chloride	BRL		0.50	2.0	ug/L	199526	1	11/24/2014 15:18	GK
Surr: 4-Bromofluorobenzene	93.7		0	70.6-123	%REC	199526	1	11/24/2014 15:18	GK
Surr: Dibromofluoromethane	98		0	78.7-124	%REC	199526	1	11/24/2014 15:18	GK
Surr: Toluene-d8	98.7		0	81.3-120	%REC	199526	1	11/24/2014 15:18	GK
ION SCAN SW9056A									
Nitrate	BRL		0.14	0.25	mg/L	R280757	1	11/20/2014 15:55	JM
Sulfate	170		2.2	10	mg/L	R280757	10	11/21/2014 10:15	JM
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**				
Arsenic	BRL		0.536	5.00	ug/L	199686	1	11/25/2014 17:49	MR
Copper	4.20		0.139	2.00	ug/L	199686	1	11/25/2014 17:49	MR
Lead	BRL		0.0990	1.00	ug/L	199686	1	11/25/2014 21:54	MR
Zinc	667		4.43	10.0	ug/L	199686	1	11/25/2014 17:49	MR
CHLORINATED PESTICIDES, TCL SW8081B					**(SW3510C)**				
4,4´-DDD	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:22	BB
4,4´-DDE	BRL		0.0060	0.10	ug/L	199571	1	11/25/2014 11:22	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	MW-120
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014 11:30:00 AM
Lab ID:	1411G71-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
CHLORINATED PESTICIDES, TCL SW8081B				**(SW3510C)**					
4,4´-DDT	BRL		0.0069	0.10	ug/L	199571	1	11/25/2014 11:22	BB
alpha-BHC	0.96		0.0038	0.050	ug/L	199571	1	11/25/2014 11:22	BB
alpha-Chlordane	BRL		0.0022	0.050	ug/L	199571	1	11/25/2014 11:22	BB
beta-BHC	1.1		0.0050	0.050	ug/L	199571	1	11/25/2014 11:22	BB
delta-BHC	1.0		0.0031	0.050	ug/L	199571	1	11/25/2014 11:22	BB
Dieldrin	BRL		0.0091	0.10	ug/L	199571	1	11/25/2014 11:22	BB
gamma-BHC	BRL		0.0038	0.050	ug/L	199571	1	11/25/2014 11:22	BB
gamma-Chlordane	BRL		0.0050	0.050	ug/L	199571	1	11/25/2014 11:22	BB
Heptachlor	BRL		0.0072	0.050	ug/L	199571	1	11/25/2014 11:22	BB
Methoxychlor	BRL		0.043	0.50	ug/L	199571	1	11/25/2014 11:22	BB
Toxaphene	BRL		0.16	5.0	ug/L	199571	1	11/25/2014 11:22	BB
Surr: Decachlorobiphenyl	40.1		0	14.6-130	%REC	199571	1	11/25/2014 11:22	BB
Surr: Tetrachloro-m-xylene	74		0	14.4-116	%REC	199571	1	11/25/2014 11:22	BB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014
Lab ID:	1411G71-013	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
1,4-Dioxane	BRL		8.4	150	ug/L	199526	1	11/22/2014 13:40	GK
Surr: 4-Bromofluorobenzene	89.8		0	70.6-123	%REC	199526	1	11/22/2014 13:40	GK
Surr: Dibromofluoromethane	96.1		0	78.7-124	%REC	199526	1	11/22/2014 13:40	GK
Surr: Toluene-d8	98.3		0	81.3-120	%REC	199526	1	11/22/2014 13:40	GK
TCL VOLATILE ORGANICS SW8260B (SW5030B)									
1,1,1-Trichloroethane	BRL		0.52	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,1,2,2-Tetrachloroethane	BRL		0.29	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,1,2-Trichloroethane	BRL		0.38	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,1-Dichloroethane	BRL		0.44	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,1-Dichloroethene	BRL		0.68	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2,4-Trichlorobenzene	BRL		0.25	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2-Dibromo-3-chloropropane	BRL		0.67	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2-Dibromoethane	BRL		0.37	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2-Dichlorobenzene	BRL		0.26	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2-Dichloroethane	BRL		0.43	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,2-Dichloropropane	BRL		0.21	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,3-Dichlorobenzene	BRL		0.28	5.0	ug/L	199526	1	11/22/2014 13:40	GK
1,4-Dichlorobenzene	BRL		0.33	5.0	ug/L	199526	1	11/22/2014 13:40	GK
2-Butanone	BRL		2.0	50	ug/L	199526	1	11/22/2014 13:40	GK
2-Hexanone	BRL		0.59	10	ug/L	199526	1	11/22/2014 13:40	GK
4-Methyl-2-pentanone	BRL		0.43	10	ug/L	199526	1	11/22/2014 13:40	GK
Acetone	BRL		5.6	50	ug/L	199526	1	11/22/2014 13:40	GK
Benzene	BRL		0.39	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Bromodichloromethane	BRL		0.65	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Bromoform	BRL		0.26	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Bromomethane	BRL		0.54	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Carbon disulfide	BRL		1.0	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Carbon tetrachloride	BRL		0.61	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Chlorobenzene	BRL		0.40	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Chloroethane	BRL		0.71	10	ug/L	199526	1	11/22/2014 13:40	GK
Chloroform	BRL		0.45	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Chloromethane	BRL		0.60	10	ug/L	199526	1	11/22/2014 13:40	GK
cis-1,2-Dichloroethene	BRL		0.38	5.0	ug/L	199526	1	11/22/2014 13:40	GK
cis-1,3-Dichloropropene	BRL		0.31	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Cyclohexane	BRL		1.7	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Dibromochloromethane	BRL		0.20	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Dichlorodifluoromethane	BRL		0.70	10	ug/L	199526	1	11/22/2014 13:40	GK
Ethylbenzene	BRL		0.40	5.0	ug/L	199526	1	11/22/2014 13:40	GK

Qualifiers:

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- BRL Not detected at MDL
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- B Analyte detected in the associated method blank
- NC Not confirmed
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- Narr See case narrative

Analytical Environmental Services, Inc **Date:** 18-Dec-14

Client:	AMEC E&I, Inc. -Kennesaw	**Client Sample ID:**	TRIP BLANK
Project Name:	BFEL Atlanta	**Collection Date:**	11/19/2014
Lab ID:	1411G71-013	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**					
Freon-113	BRL		0.59	10	ug/L	199526	1	11/22/2014 13:40	GK
Isopropylbenzene	BRL		0.36	5.0	ug/L	199526	1	11/22/2014 13:40	GK
m,p-Xylene	BRL		0.78	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Methyl acetate	BRL		1.5	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Methyl tert-butyl ether	BRL		0.42	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Methylcyclohexane	BRL		0.49	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Methylene chloride	BRL		0.91	5.0	ug/L	199526	1	11/22/2014 13:40	GK
o-Xylene	BRL		0.39	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Styrene	BRL		0.26	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Tetrachloroethene	BRL		0.39	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Toluene	BRL		0.38	5.0	ug/L	199526	1	11/22/2014 13:40	GK
trans-1,2-Dichloroethene	BRL		0.40	5.0	ug/L	199526	1	11/22/2014 13:40	GK
trans-1,3-Dichloropropene	BRL		0.18	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Trichloroethene	BRL		0.43	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Trichlorofluoromethane	BRL		0.62	5.0	ug/L	199526	1	11/22/2014 13:40	GK
Vinyl chloride	BRL		0.50	2.0	ug/L	199526	1	11/22/2014 13:40	GK
Surr: 4-Bromofluorobenzene	89.8		0	70.6-123	%REC	199526	1	11/22/2014 13:40	GK
Surr: Dibromofluoromethane	96.1		0	78.7-124	%REC	199526	1	11/22/2014 13:40	GK
Surr: Toluene-d8	98.3		0	81.3-120	%REC	199526	1	11/22/2014 13:40	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- NC Not confirmed
- E Estimated value above quantitation range
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- J Estimated value detected below Reporting Limit
- > Greater than Result value
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- Narr See case narrative

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client AMEC/Kennesaw ✓ Work Order Number 1411G71

Checklist completed by Ioana Pacurar 11/19/14
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°C Cooler #2 3.2°C Cooler #3 3.5°C 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 IP

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: AMEC E&I, Inc. -Kennesaw
Project: BFEL Atlanta
Lab Order: 1411G71

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411G71-001A	SW-2010-17	11/19/2014 1:10:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-001B	SW-2010-17	11/19/2014 1:10:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-001C	SW-2010-17	11/19/2014 1:10:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-002A	SW-2010-15	11/19/2014 1:20:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-002B	SW-2010-15	11/19/2014 1:20:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-002C	SW-2010-15	11/19/2014 1:20:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-003A	SW-2010-14	11/19/2014 1:40:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-003B	SW-2010-14	11/19/2014 1:40:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-003C	SW-2010-14	11/19/2014 1:40:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-004A	INFLOW-2	11/19/2014 2:17:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-004B	INFLOW-2	11/19/2014 2:17:00PM	Surface Water	PP-CL-Pesticides		11/21/2014	11/24/2014
1411G71-004B	INFLOW-2	11/19/2014 2:17:00PM	Surface Water	PP-CL-Pesticides		11/21/2014	11/24/2014
1411G71-004B	INFLOW-2	11/19/2014 2:17:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-004C	INFLOW-2	11/19/2014 2:17:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-005A	SW-2010-11	11/19/2014 2:39:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-005B	SW-2010-11	11/19/2014 2:39:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-005C	SW-2010-11	11/19/2014 2:39:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-006A	SW-2010-10	11/19/2014 2:50:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-006B	SW-2010-10	11/19/2014 2:50:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-006C	SW-2010-10	11/19/2014 2:50:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-007A	INFLOW-1	11/19/2014 3:15:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-007B	INFLOW-1	11/19/2014 3:15:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-007C	INFLOW-1	11/19/2014 3:15:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-008A	SW-2014-21	11/19/2014 3:24:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-008B	SW-2014-21	11/19/2014 3:24:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-008C	SW-2014-21	11/19/2014 3:24:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-009A	SW-2014-20	11/19/2014 3:43:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-009B	SW-2014-20	11/19/2014 3:43:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/24/2014
1411G71-009C	SW-2014-20	11/19/2014 3:43:00PM	Surface Water	ION SCAN			11/20/2014

Client: AMEC E&I, Inc. -Kennesaw
Project: BFEL Atlanta
Lab Order: 1411G71

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1411G71-010A	SW-2010-5	11/19/2014 3:55:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-010B	SW-2010-5	11/19/2014 3:55:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/25/2014
1411G71-010C	SW-2010-5	11/19/2014 3:55:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-011A	DUP-3	11/19/2014 12:00:00PM	Surface Water	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-011B	DUP-3	11/19/2014 12:00:00PM	Surface Water	TCL-CHLORINATED PESTICIDES		11/22/2014	11/25/2014
1411G71-011C	DUP-3	11/19/2014 12:00:00PM	Surface Water	ION SCAN			11/20/2014
1411G71-012A	MW-120	11/19/2014 11:30:00AM	Groundwater	TCL VOLATILE ORGANICS		11/20/2014	11/24/2014
1411G71-012B	MW-120	11/19/2014 11:30:00AM	Groundwater	Total Metals by ICP/MS		11/24/2014	11/25/2014
1411G71-012C	MW-120	11/19/2014 11:30:00AM	Groundwater	Dissolved Metals by ICP/MS		11/25/2014	11/25/2014
1411G71-012D	MW-120	11/19/2014 11:30:00AM	Groundwater	TCL-CHLORINATED PESTICIDES		11/22/2014	11/25/2014
1411G71-012E	MW-120	11/19/2014 11:30:00AM	Groundwater	ION SCAN			11/20/2014
1411G71-012E	MW-120	11/19/2014 11:30:00AM	Groundwater	ION SCAN			11/21/2014
1411G71-013A	TRIP BLANK	11/19/2014 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/20/2014	11/22/2014

Client: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199526

Sample ID: **MB-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5929759**

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	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199526

Sample ID: **MB-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5929759**

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	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	45.62	0	50.00		91.2	70.6	123				
Surr: Dibromofluoromethane	51.82	0	50.00		104	78.7	124				
Surr: Toluene-d8	48.56	0	50.00		97.1	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199526

Sample ID: **MB-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5936329**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	45.62	0	50.00		91.2	70.6	123				
Surr: Dibromofluoromethane	51.82	0	50.00		104	78.7	124				
Surr: Toluene-d8	48.56	0	50.00		97.1	81.3	120				

Sample ID: **MB-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280603**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199526** Analysis Date: **11/24/2014** Seq No: **5971624**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dioxane	BRL	150									
Surr: 4-Bromofluorobenzene	45.73	0	50.00		91.5	70.6	123				
Surr: Dibromofluoromethane	49.88	0	50.00		99.8	78.7	124				
Surr: Toluene-d8	48.91	0	50.00		97.8	81.3	120				

Sample ID: **LCS-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5929757**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	60.27	5.0	50.00		121	63.1	140				
Benzene	53.47	5.0	50.00		107	74.2	129				
Chlorobenzene	49.79	5.0	50.00		99.6	70	129				
Toluene	54.64	5.0	50.00		109	74.2	129				
Trichloroethene	54.52	5.0	50.00		109	71.2	135				
Surr: 4-Bromofluorobenzene	45.73	0	50.00		91.5	70.6	123				
Surr: Dibromofluoromethane	48.05	0	50.00		96.1	78.7	124				
Surr: Toluene-d8	46.75	0	50.00		93.5	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199526

Sample ID: **LCS-199526** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5936298**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	45.73	0	50.00		91.5	70.6	123				
Surr: Dibromofluoromethane	48.05	0	50.00		96.1	78.7	124				
Surr: Toluene-d8	46.75	0	50.00		93.5	81.3	120				

Sample ID: **1411G17-004AMS** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5930508**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	56.77	5.0	50.00		114	60.2	159				
Benzene	48.73	5.0	50.00		97.5	70.2	138				
Chlorobenzene	45.86	5.0	50.00		91.7	70.1	133				
Toluene	49.88	5.0	50.00		99.8	70	139				
Trichloroethene	49.89	5.0	50.00		99.8	70.1	144				
Surr: 4-Bromofluorobenzene	46.56	0	50.00		93.1	70.6	123				
Surr: Dibromofluoromethane	48.77	0	50.00		97.5	78.7	124				
Surr: Toluene-d8	47.16	0	50.00		94.3	81.3	120				

Sample ID: **1411G17-004AMS** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5936307**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	46.56	0	50.00		93.1	70.6	123				
Surr: Dibromofluoromethane	48.77	0	50.00		97.5	78.7	124				
Surr: Toluene-d8	47.16	0	50.00		94.3	81.3	120				

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199526

Sample ID: **1411G17-004AMSD** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5930774**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.37	5.0	50.00		109	60.2	159	56.77	4.32	19.2	
Benzene	47.53	5.0	50.00		95.1	70.2	138	48.73	2.49	20	
Chlorobenzene	45.97	5.0	50.00		91.9	70.1	133	45.86	0.240	20	
Toluene	49.33	5.0	50.00		98.7	70	139	49.88	1.11	20	
Trichloroethene	48.53	5.0	50.00		97.1	70.1	144	49.89	2.76	20	
Surr: 4-Bromofluorobenzene	47.70	0	50.00		95.4	70.6	123	46.56	0	0	
Surr: Dibromofluoromethane	48.69	0	50.00		97.4	78.7	124	48.77	0	0	
Surr: Toluene-d8	47.94	0	50.00		95.9	81.3	120	47.16	0	0	

Sample ID: **1411G17-004AMSD** Client ID: Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199526** Analysis Date: **11/20/2014** Seq No: **5936309**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	47.70	0	50.00		95.4	70.6	123	46.56	0	0	
Surr: Dibromofluoromethane	48.69	0	50.00		97.4	78.7	124	48.77	0	0	
Surr: Toluene-d8	47.94	0	50.00		95.9	81.3	120	47.16	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199571

Sample ID: **MB-199571** Client ID: Units: **ug/L** Prep Date: **11/22/2014** Run No: **280625**
SampleType: **MBLK** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199571** Analysis Date: **11/24/2014** Seq No: **5935652**

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	0.10									
4,4´-DDE	BRL	0.10									
4,4´-DDT	BRL	0.10									
alpha-BHC	BRL	0.050									
alpha-Chlordane	BRL	0.050									
beta-BHC	BRL	0.050									
delta-BHC	BRL	0.050									
Dieldrin	BRL	0.10									
gamma-BHC	BRL	0.050									
gamma-Chlordane	BRL	0.050									
Heptachlor	BRL	0.050									
Methoxychlor	BRL	0.50									
Toxaphene	BRL	5.0									
Surr: Decachlorobiphenyl	0.4069	0	0.5000		81.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.2729	0	0.5000		54.6	14.4	116				

Sample ID: **LCS-199571** Client ID: Units: **ug/L** Prep Date: **11/22/2014** Run No: **280625**
SampleType: **LCS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199571** Analysis Date: **11/24/2014** Seq No: **5937541**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.9485	0.10	1.000		94.8	52.5	140				
Dieldrin	0.9241	0.10	1.000		92.4	59.5	137				
gamma-BHC	0.7730	0.050	1.000		77.3	46	134				
Heptachlor	0.6871	0.050	1.000		68.7	44.7	127				
Surr: Decachlorobiphenyl	0.4034	0	0.5000		80.7	14.6	130				
Surr: Tetrachloro-m-xylene	0.2362	0	0.5000		47.2	14.4	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199571

Sample ID: **1411G71-004BMS** Client ID: **INFLOW-2** Units: **ug/L** Prep Date: **11/22/2014** Run No: **280711**
SampleType: **MS** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199571** Analysis Date: **11/25/2014** Seq No: **5937850**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.9198	0.10	1.000		92.0	27.1	146				
Dieldrin	0.8889	0.10	1.000		88.9	39.4	142				
gamma-BHC	0.8770	0.050	1.000	0.05845	81.9	34.5	144				
Heptachlor	0.7714	0.050	1.000		77.1	33	138				
Surr: Decachlorobiphenyl	0.3071	0	0.5000		61.4	14.6	130				
Surr: Tetrachloro-m-xylene	0.2916	0	0.5000		58.3	14.4	116				

Sample ID: **1411G71-004BMSD** Client ID: **INFLOW-2** Units: **ug/L** Prep Date: **11/22/2014** Run No: **280711**
SampleType: **MSD** TestCode: **CHLORINATED PESTICIDES, TCL SW8081B** BatchID: **199571** Analysis Date: **11/25/2014** Seq No: **5938158**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
4,4´-DDT	0.8614	0.10	1.000		86.1	27.1	146	0	0	21.2	
Dieldrin	0.8834	0.10	1.000		88.3	39.4	142	0	0	20	
gamma-BHC	0.8049	0.050	1.000	0.05845	74.6	34.5	144	0	0	23.1	
Heptachlor	0.7011	0.050	1.000		70.1	33	138	0	0	26.9	
Surr: Decachlorobiphenyl	0.3212	0	0.5000		64.2	14.6	130	0	0	0	
Surr: Tetrachloro-m-xylene	0.2711	0	0.5000		54.2	14.4	116	0	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199660

Sample ID: **MB-199660** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MBLK** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939493**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	0.4146	2.00									J
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199660** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **LCS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939492**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	102.1	5.00	100.0		102	80	120				
Copper	107.0	2.00	100.0	0.4146	107	80	120				
Lead	90.47	1.00	100.0		90.5	80	120				
Zinc	110.6	10.0	100.0		111	80	120				

Sample ID: **1411F52-001AMS** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MS** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939495**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	104.5	5.00	100.0	1.385	103	75	125				
Copper	316.1	2.00	100.0	204.3	112	75	125				
Lead	115.6	1.00	100.0	24.96	90.6	75	125				
Zinc	3072	10.0	100.0	2880	192	75	125				S

Sample ID: **1411F52-001AMSD** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280747**
SampleType: **MSD** TestCode: **Total Metals by ICP/MS** **SW6020A** BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939496**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	112.6	5.00	100.0	1.385	111	75	125	104.5	7.43	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199660

Sample ID: **1411F52-001AMSD** Client ID:
SampleType: **MSD** TestCode: **Total Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/24/2014** Run No: **280747**
BatchID: **199660** Analysis Date: **11/25/2014** Seq No: **5939496**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	336.2	2.00	100.0	204.3	132	75	125	316.1	6.18	20	S
Lead	123.4	1.00	100.0	24.96	98.4	75	125	115.6	6.54	20	
Zinc	3277	10.0	100.0	2880	397	75	125	3072	6.47	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **MB-199686** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MBLK** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939549**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Copper	BRL	2.00									
Lead	BRL	1.00									
Zinc	BRL	10.0									

Sample ID: **LCS-199686** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **LCS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939546**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	97.06	5.00	100.0		97.1	80	120				
Copper	100.1	2.00	100.0		100	80	120				
Lead	86.74	1.00	100.0		86.7	80	120				
Zinc	100.6	10.0	100.0		101	80	120				

Sample ID: **1411F52-001BMS** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MS** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939551**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	101.3	5.00	100.0	0.7344	101	75	125				
Copper	296.5	2.00	100.0	194.7	102	75	125				
Lead	102.4	1.00	100.0	18.13	84.2	75	125				
Zinc	2997	10.0	100.0	2860	136	75	125				S

Sample ID: **1411F52-001BMSD** Client ID: Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A** BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	98.21	5.00	100.0	0.7344	97.5	75	125	101.3	3.08	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: 199686

Sample ID: **1411F52-001BMSD** Client ID:
SampleType: **MSD** TestCode: **Dissolved Metals by ICP/MS SW6020A**
Units: **ug/L** Prep Date: **11/24/2014** Run No: **280781**
BatchID: **199686** Analysis Date: **11/25/2014** Seq No: **5939552**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Copper	296.2	2.00	100.0	194.7	101	75	125	296.5	0.111	20	
Lead	101.2	1.00	100.0	18.13	83.0	75	125	102.4	1.16	20	
Zinc	2997	10.0	100.0	2860	137	75	125	2997	0.027	20	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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: R280757

Sample ID: **MB-R280757** Client ID: Units: **mg/L** Prep Date: Run No: **280757**
SampleType: **MBLK** TestCode: **ION SCAN SW9056A** BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938707**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	BRL	0.25									
Sulfate	BRL	1.0									

Sample ID: **LCS-R280757** Client ID: Units: **mg/L** Prep Date: Run No: **280757**
SampleType: **LCS** TestCode: **ION SCAN SW9056A** BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938706**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	5.104	0.25	5.000		102	90	110				
Sulfate	26.37	1.0	25.00		105	90	110				

Sample ID: **1411G70-001BMS** Client ID: Units: **mg/L** Prep Date: Run No: **280757**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938723**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	7.020	0.25	5.000	1.393	113	90	110				S
Sulfate	29.21	1.0	25.00	0.6525	114	90	110				S

Sample ID: **1411H47-002BMS** Client ID: Units: **mg/L** Prep Date: Run No: **280757**
SampleType: **MS** TestCode: **ION SCAN SW9056A** BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938749**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	71.67	2.5	50.00	20.57	102	90	110				
Sulfate	309.4	10	250.0	59.11	100	90	110				

Sample ID: **1411G70-001BMSD** Client ID: Units: **mg/L** Prep Date: Run No: **280757**
SampleType: **MSD** TestCode: **ION SCAN SW9056A** BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938725**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Nitrate	6.490	0.25	5.000	1.393	102	90	110	7.020	7.85	20	

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: AMEC E&I, Inc. -Kennesaw
Project Name: BFEL Atlanta
Workorder: 1411G71

ANALYTICAL QC SUMMARY REPORT

BatchID: R280757

Sample ID: **1411G70-001BMSD** Client ID:
SampleType: **MSD** TestCode: **ION SCAN SW9056A**
Units: **mg/L** Prep Date: Run No: **280757**
BatchID: **R280757** Analysis Date: **11/20/2014** Seq No: **5938725**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Sulfate	30.28	1.0	25.00	0.6525	119	90	110	29.21	3.60	20	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		

FIELD SAMPLING FORMS

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-1B DEPTH TO PRODUCT: NA DATE: 11/11/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1258

SAMPLE METHOD: Pump per SESDPROC 301-R1 metals only Bailer GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 26.37 DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

TOTAL DEPTH: 32.46

Arrived at: 1120 PURGE VOLUME: 6.09x0.163=0.99x3 WELL DIAMETER (inches):
Initial PID = _____ 3.0 2-inch
Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1215	0.25	4.94	18.61	0.476	19.2	3.29	196	200 ( )	26.48
1225	0.75	5.04	21.47	DUP 0.474	12.8	2.48	196	200	26.52
1235	1.5	5.09	21.37	0.475	3.8	2.12	202	300	26.53
1240	1.875	5.10	21.41	0.475	0.9	2.01	203	300	26.53
1245	2.25	5.13	21.52	0.474	0.2	2.01	203	300	26.53
1250	2.625	5.13	21.53	0.474	0.0	1.95	204	300	26.53
1255	3.0	5.14	21.59	0.474	0.0	2.10	205	300	26.53

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40ml vials	2	HCl	8260	Site Specific VOCs

GENERAL INFORMATION		
WEATHER:	Clear, Temp 65°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard		OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-22 DEPTH TO PRODUCT: _____ DATE: 11/12/14

PURGE METHOD: Low Flow/Low Stress :Pump (Peristaltic) TIME: 1206

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DUP-1 DEPTH TO WATER: 20.41 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 28.89 _____

Arrived at: 1059 PURGE VOLUME: 8.48 X .163 X 3 = 4.15 gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1110		3.78	16.63	0.692	7.2	3.07	353	300 ( )	20.71
1116	.5	3.79	16.28	0.703	4.4	1.97	413	300	20.71
1122	1.00	3.79	16.28	0.709	4.6	2.07	412	300	20.71
1128	1.50	3.77	16.22	0.724	3.8	2.50	420	300	20.71
1134	2.00	3.79	16.23	0.730	4.4	3.29	423	300	20.72
1140	2.50	3.80	16.24	0.741	3.5	3.16	426	300	20.72
1146	3.00	3.79	16.21	0.749	2.9	2.53	433	300	20.72
1152	3.50	3.81	16.19	0.757	2.5	2.12	434	300	20.72
1158	4.00	3.81	16.20	0.754	2.3	2.09	435	300	20.72
1204	4.50	3.81	16.19	0.760	2.2	2.10	437	300	20.72
1206	Sample time		MW-22						

COMMENTS: DUP-1 taken at this location for VOC list only. Sample time DUP-1 (1200)

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40 ml/vial	2	HCl	8260	VOC list

GENERAL INFORMATION			
WEATHER:	Sunny some clouds cool		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Mark A		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-25 DEPTH TO PRODUCT: Permeable DATE: 11/18/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1052

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 28.35 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 29.8

Arrived at: 1000 PURGE VOLUME: 1.45 X 0.163 = 0.24 X 3 = 0.75 gal WELL DIAMETER (inches): 2-inch

Initial PID =

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1010		4.96	9.65	0.706	69.6	5.71	55	100 ( )	28.49
1020	.25	4.66	10.56	0.602	7.10	4.40	103	100	29.33 29.30
1030	.50	4.51	10.47	0.534	0.00	4.41	140	100	29.35
1040	.75	4.50	9.81	0.579	0.00	4.45	145	100	29.33
1050	1.00	4.49	9.71	0.578	0.00	4.51	150	100	29.34
1052	sample time			MW-25					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny some clouds very cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-26 DEPTH TO PRODUCT: NA DATE: 11/12/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1218

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 12.42 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 20.95 ~~*0.163 = D H~~ _____

Arrived at: 1110 PURGE VOLUME: 8.53 x 0.163 = 1.4 x 3 = 4.2 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1135	0.25	3.89	18.24	0.586	110	2.64	289	400 ( )	12.90
1145	1.25	3.89	19.04	0.593	76.5	0.78	312	400	12.95
1155	2.25	3.91	19.21	0.581	25.9	0.52	310	400	12.97
1200	2.75	3.92	19.23	0.578	20.1	0.39	311	400	12.96
1205	3.25	3.95	19.39	0.574	16.2	0.35	307	400	12.94
1210	3.75	3.95	19.39	0.574	6.9	0.29	307	400	12.95
1215	4.25	3.95	19.40	0.573	3.9	0.25	306	400	12.97

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Clear, Temp 60°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-101 DEPTH TO PRODUCT: NA DATE: 11/11/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1617

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 17.42 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 27.2 _____

Arrived at: 1430 PURGE VOLUME: 9.78 x 0.163 = 1.6 x 3 = 4.8 gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1515	0.25	4.37	21.57	0.243	104	4.11	255	300 ( )	18.03
1525	1.0	3.97	21.99	0.257	46.1	2.69	297	300	18.12
1535	1.75	3.88	21.93	0.262	10.8	1.87	318	300	18.17
1545	2.50	3.85	21.97	0.261	4.9	1.47	327	300	18.18
1555	3.25	3.85	21.89	0.257	2.5	1.20	329	300	18.18
1605	4.0	3.85	21.86	0.255	2.2	1.06	330	300	18.18
1610	4.375	3.84	21.83	0.254	1.8	0.97	330	300	18.18
1615	4.80 5	3.84	21.81	0.254	1.1	0.96	330	300	18.18

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40ml vials	2	HCl	8260	VOCs List

GENERAL INFORMATION		
WEATHER:	Clear, 70°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard		OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-102 DEPTH TO PRODUCT: _____ DATE: 11-11-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1330

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 25.08 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

32.65-25.08 = 7.57 x .17 = 1.28 x 3 = 3.86

TOTAL DEPTH: 32.65 _____

Arrived at: _____ PURGE VOLUME: 4.0 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1105	0.25	5.01	19.17	0.368	16.3	0.76	186	200 ( )	25.45
1220	1.0	4.99	19.74	0.363	12.0	0.0	197		25.65
1240	2.0	4.97	20.15	0.370	6.1	0.0	209		25.76
1250	2.5	4.98	20.29	0.373	2.4	0.0	216		25.80
1300	3.0	4.99	20.35	0.371	1.3	0.0	218		25.84
1310	3.5	5.01	20.39	0.368	0.8	0.0	220		25.86
1320	4.0	5.01	20.42	0.364	0.3	0.0	222		25.86
1330	collect		sample						

COMMENTS: 1107 - Pump shuts off - Troubleshoot Pump - Bad Pump Control Box
1205 Replaced Pump Control Box & Continue Purge

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Cool - Clear - DRY		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Evee Guillen		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-104A DEPTH TO PRODUCT: NA DATE: 11/12/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1538

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 14.85 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 39.6 _____

Arrived at: 1310 PURGE VOLUME: 24.75 x 0.163 = 4.0 WELL DIAMETER (inches):
Initial PID = _____ 4.0 x 3 = 12 2-inch
Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1335	0.1	5.23	18.93	0.833	233	8.76	-59	400 ( )	15.62
1345	1.0	5.49	19.79	0.861	55.5	2.64	-81	400	15.66
1355	2.0	5.57	20.18	0.873	48.1	5.61	-90	400	15.71
1415	4.0	5.65	20.00	0.889	16.6	0.21	-80	400	15.79
1435	6.0	5.70	19.96	0.883	20.2	0.19	-86	400	15.88
1455	8.0	5.73	19.94	0.879	9.6	0.17	-90	400	15.91
1515	10.0	5.76	19.88	0.870	5.4	0.18	-93	400	15.92
1525	11.0	5.78	19.84	0.871	5.1	0.19	-94	400	15.92
1530	11.5	5.79	19.86	0.871	3.4	0.18	-95	400	15.92
1535	12.0	5.79	19.86	0.870	3.6	0.18	-95	400	15.92

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40ml vials	2	HCl	8260	VOCs List

GENERAL INFORMATION			
WEATHER:	Clear, Temp 65°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Daniel Howard		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-104D DEPTH TO PRODUCT: _____ DATE: 11/13/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1630

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 18.76 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 82.75 _____

Arrived at: 1000 PURGE VOLUME: 63.99X0.163 = 10.4X3 WELL DIAMETER (inches):
Initial PID = _____ 31.2 gal 2-inch
Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1020	0.1	5.56	16.79	3.17	89.9	2.15	-55	400 ( )	20.80
1030	1.0	5.69	17.48	3.15	12.6	0.47	-59	400	25.03
1040	2.0	5.78	17.37	3.17	34.0	0.0	-67	400	32.10
1100	4.0	5.85	18.34	3.18	48.9	0.05	-68	400	38.90
1120	7.0	5.90	19.21	3.13	46.1	0.05	-69	400	50.30
1140	9.0	5.92	18.11	3.20	37.2	0.0	-65	500	58.90
1200	12	5.94	18.59	3.28	20.9	0.0	-64	500	60.60
1220	14	5.99	21.55	3.16	37.5	0.0	-71	400	73.30
1230	15	6.02	20.82	3.20	30.5	0.0	-68	400	76.40
1240	16	6.06	22.32	3.19	20.2	0.0	-67	400	80.1
			Well is	dry will let	recharge	and	sample		

COMMENTS: Well very slow recharge, water has solvent odor
Water has slight yellow tint, w
Well is dry will let recharge and sample

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40ml vial	2	HCl	8260	VOCs list

GENERAL INFORMATION			
WEATHER:	Clear + cold, Temp 45°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Daniel Howard		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-105 DEPTH TO PRODUCT: NA DATE: 11/14/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1150

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 15.38 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 27.45 _____

Arrived at: 0940 PURGE VOLUME: 12.07 x 0.163 = 2.0 x 3 = 6 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1020	0.25	5.07	15.17	0.521	376	2.63	168	200 ( )	17.86
1030	0.75	5.08	15.85	0.514	181	1.55	167	200	18.24
1050	1.75	5.15	15.61	0.515	54.1	1.01	137	200	18.00
1105	3.00	5.13	15.97	0.514	188	1.10	131	*	25.05
1116	3.5	well	is dry	will let recharge and then sample					
1150					28.8				17.90

COMMENTS: * Flow rate keeps going down, will pump well dry at let recharge, sample with bailer. Took turbidity reading before sampling.

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Clear + Cold, Temp 35°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-106 DEPTH TO PRODUCT: _____ DATE: 11-13-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1625

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 27.42 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 72.80 _____

45.38 X .17 = 7.71 X 3 = 23.14

Arrived at: _____ PURGE VOLUME: 23.5 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1230	0.25	5.76	15.00	1.35	2.1	7.51	26	200 ( )	33.71
1300	3.0	5.80	14.53	1.35	0.4	6.54	-47	400	34.97
1330	6.0	5.75	15.81	1.36	0.3	6.96	-48		36.42
1400	9.0	5.72	16.07	1.36	0.2	6.88	-47		39.28
1430	12.0	5.71	16.69	1.35	0.6	6.71	-47		42.61
1500	15	5.82	17.35	1.32	0.1	5.07	-56		
1530	18	5.82	17.63	1.27	1.8	7.38	-73		
1600	21	5.84	17.50	1.29	0.0	8.01	-72		
1620	23	5.84	17.78	1.29	0.0	7.88	-73		
1625	Collect Sample								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION	
WEATHER:	COLD - CLOUDY - HUMID
SHIPPED VIA:	FedEX or lab courier
SHIPPED TO:	AES -Atlanta, GA
SAMPLER: EVER GUILLEN	OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-107D DEPTH TO PRODUCT: NA DATE: 11/13/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1552

SAMPLE METHOD: Pump per SESDPROC 301-R1 Bailer (Pest) GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 22.48 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 50.05 _____

Arrived at: 1330 PURGE VOLUME: 27.57 X 0.163 = 4.5 X3 = 13.5 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1355	0.1	5.77	16.79	0.657	3.3	3.26	176	400 ( )	24.89
1405	1.0	5.32	18.68	0.647	1.8	2.56	200	400	25.86
1425	3.0	5.18	19.11	0.648	0.5	2.50	210	400	26.04
1445	5.5	5.18	19.03	0.645	0.3	2.36	216	500	27.05
1505	8.0	5.18	19.05	0.644	0.2	2.32	217	500	27.06
1525	10.5	5.19	19.03	0.643	0.2	2.33	217	500	27.10
1535	11.75	5.20	19.11	0.642	0.2	2.31	216	500	27.02
1545	13.0	5.21	19.10	0.641	0.2	2.31	216	500	27.02
1550	13.5	5.21	19.11	0.641	0.2	2.28	216	500	27.02

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Overcast, Temp 50°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-108 DEPTH TO PRODUCT:_____ DATE: 11-12-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1145

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER: 22.09 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 35.70 _____

Arrived at:_____ PURGE VOLUME: 7.0 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1040	1.0	4.76	17.29	0.322	659	0.0	299	400 ( )	22.57
1045	1.5	4.76	17.68	0.320	458	0.0	313		22.60
1050	2.0	4.82	18.21	0.321	146	0.0	328		22.63
1100	3.0	4.95	18.34	0.326	24.2	0.0	336		22.63
1110	4.0	5.09	18.42	0.329	18.7	0.0	338		22.63
1120	5.0	5.11	18.41	0.335	13.6	0.0	337		22.63
1130	6.0	5.13	18.32	0.335	12.2	0.0	333		22.63
1135	6.5	5.15	18.34	0.334	10.1	0.0	334		22.63
1140	7.0	5.15	18.39	0.334	8.7	0.0	333		22.63
1145	Collect Sample								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION	
WEATHER:	COOL - CLOUDY - HUMID
SHIPPED VIA:	FedEX or lab courier
SHIPPED TO:	AES -Atlanta, GA
SAMPLER: EVER GUILLEN	OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-109D DEPTH TO PRODUCT: _____ DATE: 11/15/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1551

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DUP-2 DEPTH TO WATER: 17.06 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 33.35 _____

Arrived at: 1440 PURGE VOLUME: 16.29 X .163 X 3 = 7.97gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1445		4.40	13.22	2.98	1.40	5.81	254	500 ( )	17.25
1453	1.00	4.35	13.99	2.94	0.00	3.32	245	500	17.25
1501	2.00	4.34	14.51	2.90	0.00	2.64	240	500	17.25
1509	3.00	4.33	14.71	2.88	0.00	2.30	235	500	17.25
1517	4.00	4.33	14.74	2.98	0.00	2.27	235	500	17.25
1525	5.00	4.33	14.81	2.58	0.00	2.24	233	500	17.25
1533	6.00	4.33	14.77	2.87	0.00	2.17	232	500	17.25
1541	7.00	4.32	14.85	2.87	0.00	2.13	229	500	17.25
1549	8.00	4.31	14.87	2.86	0.00	2.08	227	500	17.25
1551	Sample time MW-109D								

COMMENTS: DUP-2 taken at this location for Total & Dissolved Metals, Pesticides, and Nitrate & Sulfate.

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Sunny few clouds Very cold!	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark A	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-110 DEPTH TO PRODUCT: _____ DATE: 11-12-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1615

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 28.76 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 38.85 _____

Arrived at: _____ PURGE VOLUME: 25.5 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1315	0.25	5.24	18.93	0.490	13.9	3.10	339	600 ( )	29.91
1335	3.0	5.28	18.43	0.491	19.7	0.0	315		31.92
1355	6.0	5.27	18.60	0.495	4.6	0.0	310		31.98
1415	9.0	5.26	18.49	0.498	5.0	0.0	312		31.98
1435	12	5.27	18.55	0.498	4.7	0.0	309		31.98
1455	15	5.27	18.56	0.498	4.2	0.0	310		31.98
1515	18	5.27	18.55	0.498	4.0	0.0	309		31.98
1535	21	5.26	18.49	0.498	4.1	0.0	310		31.98
1555	24	5.27	18.48	0.498	4.2	0.0	310		31.98
1608	26	5.27	18.49	0.498	4.1	0.0	310		31.98
1615	collect								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	COOL - CLOUDY - HUMID	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: EVER GUILLEN		OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-111 DEPTH TO PRODUCT: NA DATE: 11/18/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1522

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 21.46 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: ~~21~~ 43.45 _____

Arrived at: 1215 PURGE VOLUME: 21.99 x 0.163 = 3.6 x 3 WELL DIAMETER (inches):

Initial PID = _____ 10.8 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1300	0.1	4.88	15.33	1.22	12.4	3.54	187	300 ( )	22.05
1310	0.80	5.21	17.36	1.38	3.6	1.63	135	300	22.15
1320	1.6	5.24	17.88	1.41	1.6	0.82	129	300	22.15
1330	2.4	5.25	18.19	1.41	1.8	0.57	126	300	22.13
1340	4.0	5.27	18.23	1.42	1.5	0.46	119	300	22.11
1410	5.6	5.30	18.26	1.43	0.7	0.09	114	300	22.12
1430	7.2	5.31	18.37	1.43	1.5	0.13	111	300	22.11
1450	8.8	5.33	18.20	1.43	0.3	0.0	107	300	22.15
1500	9.6	5.33	18.39	1.43	0.5	0.0	106	300	22.21
1510	10.2	5.32	18.43	1.42	0.1	0.0	106	300	22.20
1518	10.8	5.34	18.38	1.43	0.7	0.0	104	300	22.19

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Clear + Cold, Temp 38°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Daniel Howard		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-112 DEPTH TO PRODUCT:_____ DATE: 11-11-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1610

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER: 17.16 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 25.22 _____

25.22-17.16 = 8.05 x .17 = 1.37 x 3 = 4.11

Arrived at:_____ PURGE VOLUME: 4.25 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1445	0.25	5.78	18.05	0.356	787	0.0	204	200 ( )	17.78
1500	1.0	5.85	18.56	0.352	29.9	0.0	197		17.78
1520	2.0	5.86	19.07	0.354	9.5	0.0	195		17.80
1530	2.5	5.86	19.14	0.353	6.3	0.0	194		17.78
1540	3.0	5.87	19.26	0.353	4.4	0.0	192		17.78
1550	3.5	5.87	19.76	0.353	5.1	0.0	190		17.78
1600	4.0	5.87	19.79	0.353	4.1	0.0	189		17.78
1605	4.25	5.87	19.75	0.354	3.0	0.0	189		17.78
1610	Collect								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Cool - Cloudy - Dry	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: EVER GUILLEN	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-113 DEPTH TO PRODUCT: NA DATE: 11/17/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1542

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 30.30 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 43.95 _____

Arrived at: 1355 PURGE VOLUME: 13.65 x 0.163 = 2.2 x 3 = 6.6 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1415	0.25	3.33	16.35	3.41	356	1.85	404	300( )	31.86
1425	1.0	3.40	18.53	3.43	32.5	0.41	372	300	31.93
1435	1.75	3.42	18.82	3.39	60.4	0.21	381	300	31.98
1445	2.5	3.42	19.08	3.37	28.6	0.15	381	300	31.92
1455	3.25	3.43	19.19	3.37	20.2	0.07	377	300	31.93
1505	4.0	3.44	19.04	3.37	12.6	0.04	379	300	31.95
1515	4.75	3.44	19.18	3.38	10.0	0.01	382	300	31.99
1525	5.5	3.45	19.01	3.37	5.9	0.0	372	300	32.03
1535	6.25	3.46	18.57	3.38	4.6	0.0	378	300	31.96
1540	6.625	3.45	18.93	3.37	3.3	0.0	378	300	31.91

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Overcast, Cool, Temp 45°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Daniel Howard		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-114 DEPTH TO PRODUCT: NA DATE: 11/18/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1147

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 27.06 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 50.15

Arrived at: 0945 PURGE VOLUME: 23.09X0.163=3.8x3 WELL DIAMETER (inches):

Initial PID = 11.4 2-inch

Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1015	0.25	3.41	15.45	1.10	114	2.49	380	400	27.18
1025	1.25	3.37	17.47	1.15	62.4	0.76	382	400	27.23
1035	2.25	3.37	17.59	1.15	27.7	0.50	377	400	27.23
1055	4.75	3.38	17.60	1.17	20.1	0.03	354	500	27.32
1115	7.25	3.41	17.75	1.23	12.6	0.0	335	500	27.35
1125	8.75	3.42	17.77	1.22	9.7	0.0	329	600	27.34
1135	10.25	3.43	17.86	1.24	8.3	0.0	327	600	27.34
1140	10.00	3.43	17.87	1.23	7.5	0.0	325	600	27.34
1145	11.75	3.43	17.94	1.23	4.2	0.0	325	600	27.34

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Clear + Cold, Temp 3.3°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-115 DEPTH TO PRODUCT: NA DATE: 11/14/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1332

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 15.91 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 22.15 _____

Arrived at: 1215 PURGE VOLUME: 6.24 x 0.163 = 1.0x3 WELL DIAMETER (inches):

Initial PID = _____ 3.0gal 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1250	0.25	3.28	17.16	1.51	9.2	0.22	429	300 ( )	15.97
1300	1.0	3.28	17.94	1.51	2.5	0.01	429	300	15.98
1310	1.75	3.29	18.06	1.51	0.9	0.0	427	300	15.98
1320	2.5	3.30	18.09	1.50	0.1	0.0	426	300	15.98
1325	2.875	3.30	17.97	1.51	0.0	0.0	422	300	15.97
1330	3.25	3.30	18.16	1.51	0.1	0.0	422	300	15.97

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Clear, Temp 50°F	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Daniel Howard	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-116 DEPTH TO PRODUCT: _____ DATE: 11-12-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1255

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 29.95 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 33.40 _____

Arrived at: _____ PURGE VOLUME: 2.0 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1215	~~0.25~~ 0.25	4.12	19.36	0.992	73.0	3.11	366	200 ( )	30.27
1220	0.5	4.06	19.94	0.993	56.7	1.62	373		
1225	0.75	4.03	20.01	0.995	30.3	0.31	383		
1230	1.0	4.04	20.35	0.998	21.7	0.0	389		
1235	1.25	4.05	20.50	0.999	17.6	0.0	392		
1240	1.5	4.06	20.59	1.00	13.9	0.0	393		
1245	1.75	4.06	20.71	0.999	8.3	0.0	394		
1250	2.0	4.05	20.76	0.999	7.1	0.0	393		
1255	collect	Sample							

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Cool - Cloudy - Humid	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: EVER GUILLEN	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-117 DEPTH TO PRODUCT: NA DATE: 11/17/14

PURGE METHOD: Low Flow/Low Stress :Pump (Peri Bailer) TIME: 1257

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 13.81 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 25.15 _____

Arrived at: 1110 PURGE VOLUME: 11.34 X 0.163 = 1.8 x 3 WELL DIAMETER (inches):

Initial PID = _____ 5.4 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1145	0.25	3.84	16.56	0.409	315	3.30	380	300 ( )	13.97
1155	1.0	3.58	17.15	0.410	191	1.84	394	300	13.96
1205	1.75	3.49	17.95	0.412	35.5	1.65	412	300	13.96
1215	2.5	3.50	18.15	0.413	9.4	1.55	418	300	13.96
1225	3.25	3.49	18.20	0.414	5.1	1.47	420	300	13.96
1235	4.0	3.49	18.35	0.414	2.2	1.44	422	300	13.96
1240	4.375	3.49	18.33	0.414	1.5	1.44	422	300	13.96
1245	4.75	3.50	18.34	0.414	2.3	1.40	421	300	13.96
1250	5.125	3.51	18.32	0.414	1.4	1.39	421	300	13.96
1255	5.5	3.52	18.32	0.414	1.3	1.40	421	300	13.96

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Overcast, Cool, Temp 50°F		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Daniel Howard		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-119 DEPTH TO PRODUCT: _____ DATE: 11-18-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1135

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 42.68 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 54.55 _____

11.87 X .17 = 2.01 X 3 = 6.05

Arrived at: _____ PURGE VOLUME: 6.0 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 935	0.25	5.60	16.58	0.731	68.1	7.43	-7.0	( )	43.03
1010	2.0	5.59	16.67	0.732	35.2	7.27	-20		43.03
1050	4.0	5.67	15.72	0 ~~0.737~~	19.3	7.40	-21		43.03
1110	5.0	5.64	15.73	0.739	12.6	7.12	-21		43.03
1120	5.5	5.63	15.82	0.739	10.0	7.31	-20		43.03
1130	6.0	5.64	15.77	0.740	6.8	7.45	-21		43.03
1135	collect		Sample						

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:		
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Evar G	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-120 DEPTH TO PRODUCT:_____ DATE: ~~11-18-14~~

PURGE METHOD: Low Flow/Low Stress :Pump TIME: ~~1600~~

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER: 45.12 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 65.56

20.44 x .17 = 3.47 x 3 = 10.42

Arrived at:_____ PURGE VOLUME: 10.5 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1250	0.25	5.71	15.66	0.855	113.0	7.89	80	200 ( )	46.22
1305	1.0	5.85	12.42	0.831	868	7.40	68	↓	46.79
1325	2.0	5.73	14.67	0.860	517	6.63	66		47.06
1345	4.0	5.62	20.13	0.841	782	6.34	73	400	47.88
1405	6.0	5.72	18.75	0.842	748	7.73	70		48.79
1425	8.0	5.67	18.23	0.843	449	6.44	76		49.48
1435	9.0	5.62	17.21	0.850	327	7.20	79		50.17
1445	10.0	5.61	17.96	0.847	175	7.36	79		52.98
1455	11.0	5.61	17.63	0.845	115	6.14	83		55.11
1505	12.0	5.59	17.22	0.850	82	6.05	82		57.32
11-19-14 @ 1130	Collected	Sample	using	Bailer					

COMMENTS: Pump Not Holding Steady Pump Rate - Raised Pump rate to 400 - Purged 3 Volumes Before Sampling - Turbidity Hi Due to Pump @ Flow Rate ~~Fluctua~~ FLUCTUATION Will allow Some Settling Before Collecting Sample - ~~Turb @ Sample~~ COULD NOT Sample due to HIGH TURBIDITY - Purged Well Dry - allowed overnight Recharge Before Sampling WITH BAILER

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	COLD - CLEAR - DRY	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: EVER GUILLEN	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: MW-121 DEPTH TO PRODUCT: _____ DATE: 11-13-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1210

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 17.19
18.19 X .17 = 3.09 X 3 = 9.27
TOTAL DEPTH: 35.38 DEPTH TO PASSIVE DIFFUSION BAG (btoc) _____

Arrived at: _____ PURGE VOLUME: 9.5 WELL DIAMETER (inches):
Initial PID = _____ 2-inch
Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1030	0.25	6.02	16.95	0.310	43.0	4.39	70	400 ( )	18.27
1100	3.0	6.37	17.45	0.292	69.4	3.09	29		18.27
1120	5.0	6.38	18.14	0.265	38.9	2.36	31		18.29
1140	7.0	6.36	18.44	0.253	17.8	1.69	37		18.30
1200	9.0	6.35	18.63	0.251	4.4	0.83	46		18.32
1205	9.5	6.36	18.65	0.251	1.8	0.0	43		18.34
1210	Collect Sample								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION	
WEATHER:	COLD - CLOUDY - HUMID
SHIPPED VIA:	FedEX or lab courier
SHIPPED TO:	AES -Atlanta, GA
SAMPLER: EVER GUILLEN	OBSERVER:

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-1 DEPTH TO PRODUCT: _____ DATE: 11/12/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1402

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 15.70 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 24.85 _____

Arrived at: 1248 PURGE VOLUME: 9.15 X .04 X 3 = 1.10gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1300		5.33	16.48	0.452	<800	3.63	133	150 ( )	17.61
1306	.25	5.84	17.06	0.450	~~MK=400~~ 723	1.81	70	150	17.75
1312	.50	5.75	17.04	0.450	607	1.66	56	150	17.75
1318	.75	5.85	17.09	0.449	405	1.27	11	150	17.75
1324	1.00	5.90	17.13	0.449	275	1.11	-18	150	17.75
1330	1.25	5.92	17.10	0.450	144	0.98	-28	150	17.75
1336	1.50	5.90	17.05	0.449	104	0.92	-32	150	17.75
1342	1.75	5.79	17.07	0.449	61.0	0.87	-35	150	17.75
1348	2.00	5.80	17.21	0.448	35.7	0.90	-32	150	17.75
1354	2.25	5.81	17.15	0.448	20.3	0.92	-32	150	17.75
1400	2.50	5.81	17.14	0.449	10.7	0.95	-33	150	17.75
1402	Sample time TW-1								

COMMENTS: TW-1 started out very muddy then clearing up after .50 gallons pumped

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Sunny Some Clouds Cool	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-2 DEPTH TO PRODUCT: _____ DATE: 11/12/14

PURGE METHOD: Low Flow/Low Stress :Pump Peristaltic TIME: 1522

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 22.57 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 29.15 _____

Arrived at: 1440 PURGE VOLUME: 6.64X.04X3=.809l WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1456		5.57	16.84	0.419	11.9	1.92	6	150 ( )	23.87
1502	.25	5.51	16.80	0.414	2.8	1.18	-49	150	23.90
1509	.50	5.53	16.80	0.413	2.4	1.00	-47	150	23.91
1514	.75	5.52	16.42	0.413	2.1	0.96	-42	150	23.91
1520	1.00	5.51	16.81	0.412	1.5	0.93	-40	150	23.91
1522	Sample time TW-2								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Sunny Some clouds cool	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark A	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-3 DEPTH TO PRODUCT: Not Measured DATE: 11/13/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1130

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DEPTH TO WATER: 6.58 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 39.80

Arrived at: 1034 PURGE VOLUME: 13.22 X .04X3 = 1.58 gal WELL DIAMETER (Inches):
Initial PID = 2-inch
Bailing PID =

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1045		3.50	10.17	1.56	35.3	3.20	386	150 ( )	27.20
1051	.25	3.49	10.67	1.55	67.3	2.42	404	150	27.20
1057	.50	3.69	11.50	1.53	44.3	1.90	407	150	27.20
1103	.75	3.69	11.75	1.52	36.4	1.78	414	150	27.20
1109	1.00	3.69	11.97	1.64	25.2	1.69	417	150	27.20
1115	1.25	3.68	12.27	1.47	16.1	1.85	424	150	27.20
1121	1.50	3.69	12.44	1.45	8.1	1.83	427	150	27.20
1127	1.75	3.69	12.50	1.44	7.7	1.88	428	150	27.20
1130	Sample	from	TW-3						
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40ml (VOA)	3	HCl	8260	Site VOCs

GENERAL INFORMATION			
WEATHER:	Sunny Some Clouds Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Alissa H.		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-4 DEPTH TO PRODUCT: _____ DATE: 11/13/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1307

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 27.11 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 33.50 _____

Arrived at: 1214 PURGE VOLUME: 6.39X.04X3= 1.7754 WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1230		4.01	13.76	0.469	11.5	3.64	338	150 ( )	27.76
1246	.25	4.04	13.99	0.455	11.7	3.04	296	100	28.25
1250	.50	4.09	14.06	0.451	4.4	2.81	288	100	28.28
1300	.75	4.08	14.10	0.450	0.0	2.78	295	100	28.25
1305	.99	4.07	14.09	0.450	0.0	2.79	300	100	28.28
1307	Sample	this	TW-4						

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny some clouds Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-5 DEPTH TO PRODUCT: _____ DATE: 11/13/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1540

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 21.96 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 31.90 _____

Arrived at: 1430 PURGE VOLUME: 9.94 X .04 X 3 = 1.19 gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1450		4.02	13.95	1.48	52.1	6.01	319	150 ( )	22.85
1456	.25	3.94	13.93	1.63	25.1	3.29	356	150	22.85
1502	.50	3.95	14.10	1.62	15.0	2.92	363	150	22.85
1508	.75	3.92	14.40	1.57	13.4	2.56	371	150	22.85
1514	1.00	3.98	14.48	1.57	6.4	2.29	376	150	22.85
1520	1.25	3.94	14.47	1.58	4.2	2.17	382	150	22.85
1526	1.50	3.93	14.48	1.59	3.5	2.13	384	150	22.85
1532	1.75	3.92	14.45	1.60	2.1	2.08	386	150	22.85
1538	2.00	3.92	14.37	1.61	1.3	2.02	389	150	22.85
1540	Sample time TW-5								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate
40 ml/vial	2	HCl	8260	57e VOCs

GENERAL INFORMATION			
WEATHER:	Sunny Some clouds cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Mark A		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-6 DEPTH TO PRODUCT: _____ DATE: 11/14/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1059

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 25.68 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 39.90 _____

Arrived at: 0932 PURGE VOLUME: 14.22 X .04 X 3 = 1.70 gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 0957		4.07	20.04	0.840	12.7	4.31	294	150 ( )	25.95
1003	.25	4.23	20.08	0.834	97.9	3.58	299	150	25.95
1009	.50	4.20	20.07	0.842	65.7	2.99	312	150	25.95
1015	.75	4.15	17.87	0.710	50.4	2.53	337	150	25.95
1021	1.00	4.13	17.12	0.713	41.5	2.47	344	150	25.95
1027	1.25	4.12	16.59	0.952	45.9	2.50	347	150	25.95
1033	1.50	4.11	16.22	0.958	44.2	2.50	352	150	25.95
1039	1.75	4.11	15.75	0.974	38.5	2.51	357	150	25.95
1045	2.00	4.14	15.42	0.978	27.8	2.51	360	150	25.95
1051	2.25	4.09	14.80	0.980	20.8	2.51	369	150	25.95
1057	2.50	4.09	14.61	0.986	16.7	2.53	370	150	25.95
1059	Sample	@	time	TW-6					

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny clear very cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Mark A		OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-7 DEPTH TO PRODUCT: _____ DATE: 11/18/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 12 58

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 21.25 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 32.25 _____

Arrived at: 1145 PURGE VOLUME: 11 X .04 X 3 = 1.32 gal WELL DIAMETER (inches): 2-inch

Initial PID = _____

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1155		5.96	5.96	6.88	49.4	5.77	266	100 ( )	23.89
1205	.25	3.75	6.99	6.72	43.6	5.60	269	100	25.05
1215	.50	3.61	8.68	6.26	188	4.06	274	100	28.00
1225	.75	3.72	9.09	6.02	160	3.24	264	100	28.55
1235	1.00	3.88	9.27	5.76	49.3	5.06	269	100	28.55
1245	1.25	3.89	9.25	5.74	39.2	5.40	272	100	28.55
1255	1.50	3.98	9.18	5.73	8.38	5.45	275	100	28.55
1259	Sample	tinc	TW-7						

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny few clouds Very cold !		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: Tw-8 DEPTH TO PRODUCT: _____ DATE: 11/14/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1306

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 20.14 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 29.95 _____

Arrived at: 1126 PURGE VOLUME: 9.81 x .64 x 3 = 1.18 (gal) WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1140		4.71	14.00	1.49	440	1.52	203	150 ( )	20.55
1146	.25	5.86	13.79	2.43	407	2.84	-56	150	20.55
1152	.50	5.84	14.09	2.28	327	3.25	-54	150	20.55
1158	.75	5.83	14.33	2.18	291	3.19	-51	150	20.55
1204	1.00	5.82	14.58	2.14	220	2.96	-49	150	20.55
1210	1.25	5.82	14.76	2.09	180	2.80	-47	150	20.55
1216	1.50	5.82	14.82	~~2.11~~ 2.07	154	2.77	-47	150	20.55
1222	1.75	5.82	14.76	2.05	129	2.67	-45	150	20.55
1228	2.00	5.81	14.75	2.01	115	2.57	-43	150	20.55
1240	2.50	5.80	14.80	1.98	86.8	2.47	-41	150	20.55
1252	3.00	5.81	14.74	1.97	66.6	2.42	-41	150	20.55
1258	3.25	5.81	14.75	1.97	68.7	2.41	-41	150	20.55
1304	3.50	5.81	14.77	1.97	67.0	2.35	-41	150	20.55
1306	Sample time Tw-8								

COMMENTS: 9 well volumes taken out of Tw-6 ; turbity stabalized around 66 ntu ; will sample Tw-8

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Sunny Clear Very cold	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark A	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-9 DEPTH TO PRODUCT: _____ DATE: 11/17/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1220

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 21.40 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 34.95 _____

Arrived at: 1128 PURGE VOLUME: 13.55X.04X3= 1.63gal WELL DIAMETER (Inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1130		5.12	14.12	0.818	84.9	5.44	237	150 ( )	21.90
1136	.25	5.14	14.15	0.821	83.3	4.80	237	150	21.87
1142	.50	5.18	14.92	0.831	72.0	3.39	237	150	21.88
1148	.75	5.21	15.14	0.848	23.2	2.75	234	150	21.88
1154	1.00	5.22	15.20	0.847	18.2	2.62	234	150	21.88
1200	1.25	5.25	15.20	0.870	8.51	2.32	232	150	21.88
1206	1.50	5.26	15.07	0.917	5.57	2.15	231	150	21.88
1212	1.75	5.26	15.04	0.920	2.51	2.15	231	150	21.88
1218	2.00	5.26	15.00	0.918	2.21	2.12	231	150	21.88
1220	Sample time TW-9								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	Cloudy rainy Cold	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-10 DEPTH TO PRODUCT: _____ DATE: 11/17/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1522

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 18.60 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 29.95 _____

Arrived at: 1340 PURGE VOLUME: 11.35 X .04 X 3 = 1.36gal WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1355		3.66	11.35	1.32	511	6.98	313	200 ( )	18.78
1400	.25	3.51	12.36	1.30	350	5.93	357	200	18.70
1405	.50	3.46	12.49	1.30	233	4.29	360	200	18.70
1410	.75	3.48	13.30	1.27	218	3.36	370	200	18.70
1415	1.00	3.50	13.42	1.25	191	2.98	387	200	18.70
1420	1.25	3.48	13.44	1.24	174	2.90	395	200	18.70
1425	1.50	3.49	13.46	1.24	162	2.90	401	200	18.70
1430	1.75	3.47	13.47	1.24	140	2.88	408	200	18.70
1435	2.00	3.47	13.46	1.24	114	2.78	417	200	18.70
1440	2.25	3.47	13.47	1.24	92.0	2.77	423	200	18.70
1500	2.75	3.46	12.49	1.25	53.3	2.82	425	200	18.70
1505	3.50	3.46	12.36	1.27	15.9	2.77	427	200	18.70
1520	3.75	3.46	12.33	1.27	7.89	2.74	430	200	18.70

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION		
WEATHER:	cloudy rainy cold	
SHIPPED VIA:	FedEX or lab courier	
SHIPPED TO:	AES -Atlanta, GA	
SAMPLER: Mark H.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-11 DEPTH TO PRODUCT: _____ DATE: 11/11/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: ~~1546~~ 1546 MA 11/11/14

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: 30.41 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 44.80 _____

Arrived at: 1400 PURGE VOLUME: 14.35 X .04 X 3 = 1.7304 WELL DIAMETER (inches):

Initial PID = _____ ~~2 inch~~ 1-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1440		4.46	16.10	0.495	367	4.75	-53	150 ( )	
1446	.25	4.42	17.97	0.494	288	4.60	-55	150	
1452	.50	4.41	17.61	0.491	103	3.56	-54	150	
1458	.75	4.40	17.60	0.492	88.3	3.55	-58	150	
1504	1.00	4.05	17.60	0.495	60.3	3.45	-53	150	
1510	1.25	4.09	17.27	0.507	49.3	4.14	-29	150	
1516	1.50	4.10	17.15	0.512	37.4	3.83	-29	150	
1522	1.75	4.09	17.18	0.515	38.7	3.89	-29	150	
1528	2.00	4.10	17.14	0.517	29.3	3.85	-28	150	
1534	2.25	4.10	17.17	0.517	18.9	3.88	-29	150	
1540	2.50	4.10	17.20	0.519	9.53	3.83	-30	150	
1546	Sample time TW-11								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny clear cool		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: TW-12 DEPTH TO PRODUCT: _____ DATE: 11/11/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1233

SAMPLE METHOD: Pump per SESDPROC 301-R1 34.25 GRAB (x) COMPOSITE ( )

DUP./REP. OF: _____ DEPTH TO WATER: ~~30.41~~ MA 11/11/14 DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: 44.95 _____

Arrived at: 1100 PURGE VOLUME: ~~14.54~~ MA 11/11/14 X .04 X 3 = ~~1.74 gal~~ 1.26 gal WELL DIAMETER (inches):

Initial PID = _____ 10.70 2-inch 1-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1150		4.35	18.87	0.342	24	6.94	220	150 ( )	
1156	.25	4.52	18.53	0.307	16.4	6.63	250	150	
1200	.50	4.52	18.50	0.303	13.9	6.57	253	150	
1206	.75	4.52	18.47	0.301	10.0	6.61	257	150	
1212	1.00	4.51	18.52	0.298	8.2	6.54	263	150	
1218	1.25	4.50	18.49	0.296	5.3	6.50	264	150	
1224	1.50	4.50	18.50	0.293	5.2	6.50	265	150	
1230	1.75	4.50	18.51	0.295	4.1	6.48	266	150	
1233	Sample time TW-12								
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cool		
SHIPPED VIA:	FedEx or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	mark A.	OBSERVER:	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: Inflow-1 DEPTH TO PRODUCT:_____ DATE: 11/19/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1515

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER:_____ DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:_____ _____

Arrived at: 1509 PURGE VOLUME:_____ WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1512		6.90	7.27	.465	11.5	12.31	70	( )	
1515	Sample time Inflow-1								
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
~~500 mL PL~~	~~1~~	~~Nitric acid~~	~~6020~~	~~Metals: Total Arsenic Lead Copper Zinc~~
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Evan G	OBSERVER:	Mark A

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: Inflow-2 DEPTH TO PRODUCT:_____ DATE: 11-19-14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1417

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER:_____ DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:_____ _____

Arrived at: 1400 PURGE VOLUME:_____ WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1410		6.99	8.21	0.535	4.88	8.82	103	( )	
1417	Sample from Inflow-2								
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Eva G	OBSERVER:	Mark A.

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: SW-2010-5 DEPTH TO PRODUCT:_____ DATE: 11/19/14

PURGE METHOD: Low Flow/Low Stress :Pump Stuff Gauge 1 TIME: 1555

SAMPLE METHOD: Pump per SESDPROC 301-R1 3.14 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER:_____ DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:_____ _____

Arrived at: 1550 PURGE VOLUME:_____ WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1552		6.96	8.77	.443	5.88	10.65	27	( )	
1555	Sample	time		SW-2010-5					
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
~~500 mL PL~~	~~1~~	~~Nitric acid~~	~~6020~~	~~Metals: Total Arsenic Lead Copper Zinc~~
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Eric C	OBSERVER:	Mark A

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: SW-2010-10 DEPTH TO PRODUCT:_____ DATE: 11/19/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1450

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF:_____ DEPTH TO WATER:_____ DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH:_____ _____

Arrived at: 1446 PURGE VOLUME:_____ WELL DIAMETER (Inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1448		7.12	9.25	0.465	37.4	7.51	47	( )	
1450	Sample	Pump	SW-2010-10						
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
~~500 mL PL~~	~~1~~	~~Nitric acid~~	~~6020~~	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:			
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER: Evan G		OBSERVER: Mark A.	

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

GROUNDWATER FIELD SAMPLING REPORT

PROJECT NO: 6122-08-0154.15

AMEC Environment & Infrastructure, Inc
1075 BIG SHANTY ROAD SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: SW-2010-11 DEPTH TO PRODUCT: _____ DATE: 11/19/14

PURGE METHOD: Low Flow/Low Stress :Pump TIME: 1439

SAMPLE METHOD: Pump per SESDPROC 301-R1 GRAB (x) COMPOSITE ( )

DUP./REP. OF: DUP-3 DEPTH TO WATER: _____ DEPTH TO PASSIVE DIFFUSION BAG (btoc)

TOTAL DEPTH: _____ _____

Arrived at: 1430 PURGE VOLUME: _____ WELL DIAMETER (inches):

Initial PID = _____ 2-inch

Bailing PID = _____

TIME	VOL. PURGED (gal)	pH	TEMPERATURE (°C)	SPEC. COND. (mS/cm)	TURB. (NTU)	DO	ORP	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1435		6.93	7.73	0.553	3.67	9.20	82	( )	
1439	Sample	+Inc							
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500 mL PL	1	Nitric acid	6020	Metals: Total Arsenic Lead Copper Zinc
500 mL PL	1	none	6020	Metals: DISSOLVED Arsenic Lead Copper Zinc
1 L GL Amber	2	none	8081A	Total organochlorine Pesticides
500 mL PL	1	none	9056	Nitrate and Sulfate

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:	FedEX or lab courier		
SHIPPED TO:	AES -Atlanta, GA		
SAMPLER:	Ener G	OBSERVER:	Mark H.

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]

PROJECT NAME:

FIELD SAMPLING REPORT

Project Number:

AMEC Environmental & Infrastructure
1075 BIG SHANTY SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT:

WELL ID: SW-2010-14
WELL MATERIAL:
SAMPLE METHOD:

DUP./REP. OF:

Top of Screened interval (btoc):
Screen length:
Arrived at: 1335
Initial PID =
Bailing PID =

WELL DIAMETER:
DEPTH TO WATER: GRAB (x) COMPOSITE ( )
TOTAL DEPTH:
WATER COLUMN HEIGHT:
PURGE VOLUME:
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1338		10.44	64.00	6.98	.593	7.70	13.2	( )	
1340	Sample	Hmp	SW-2010	-14					

NOTES:

SAMPLE DATE: 11/14/14
SAMPLE TIME: 1340

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500ml/poly				Dissolved Metals
500ml/poly				Nitrate + Sulfate
1L/Amber				Pesticides

GENERAL INFORMATION			
WEATHER:	Sunny clear Cold		
SHIPPED VIA:			
SHIPPED TO:			
SAMPLER:	Mark A.	OBSERVER:	Evan G

PROJECT NAME:

FIELD SAMPLING REPORT

Project Number:

AMEC Environmental & Infrastructure
1075 BIG SHANTY SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT:

WELL ID: SW-2010-15
WELL MATERIAL:
SAMPLE METHOD:

DUP./REP. OF:

Top of Screened Interval (btoc):
Screen length:
Arrived at: 1314
Initial PID =
Bailing PID =

WELL DIAMETER:
DEPTH TO WATER: GRAB (x) COMPOSITE ( )
TOTAL DEPTH:
WATER COLUMN HEIGHT:
PURGE VOLUME:
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1316		11.09	85	6.47	0.606	7.43	3.89	( )	
1320	Sample Time SW-2010-15								

NOTES:

SAMPLE DATE: 11/19/14
SAMPLE TIME: 1320

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500ml/poly				Dissolved metals
500ml/poly				Nitrate & Sulfate
1L/Amber				Perchlorate

GENERAL INFORMATION			
WEATHER:	Sunny clear cold		
SHIPPED VIA:			
SHIPPED TO:			
SAMPLER:	EVR G	OBSERVER:	Mark A

PROJECT NAME:

FIELD SAMPLING REPORT

Project Number:

AMEC Environmental & Infrastructure
1075 BIG SHANTY SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

SAMPLING EVENT:

WELL ID: SW-2010-17
WELL MATERIAL:
SAMPLE METHOD:

DUP./REP. OF:

Top of Screened interval (btoc):
Screen length:
Arrived at: 1300
Initial PID =
Bailing PID =

WELL DIAMETER:
DEPTH TO WATER: GRAB (x) COMPOSITE ( )
TOTAL DEPTH:
WATER COLUMN HEIGHT:
PURGE VOLUME:
[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]
[0.653 x water column height (ft) x 3 (well volumes) for 4" wells]
[1.47 x water column height (ft) x 3 (well volumes) for 6" wells]

TIME	VOL. PURGED (gal)	Diss. Oxygen (+/- 10%)	ORP (+/- 10 mV)	pH (+/- 0.1 pH units)	SPEC. COND. (ms/cm) [+/- 3%]	TEMP (°C)	TURB. (NTU) [<10 NTU]	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1304		19.76	145	6.26	0.593	7.02	8.74	( )	
1310	Sample time SW-2010-17								

NOTES:

SAMPLE DATE: 11/19/14
SAMPLE TIME: 1310

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:			
SHIPPED TO:			
SAMPLER: Evan G		OBSERVER: Mark A	

FIELD SAMPLING REPORT

PROJECT NO: _____

MACTEC ENGINEERING AND CONSULTING, INC.
3200 TOWN POINT DRIVE, SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: SW-2014-20 DEPTH TO PRODUCT: _____ DATE: 11/19/14

SAMPLE METHOD: _____ TIME: 1543

DUP./REP. OF: _____ DEPTH TO WATER: _____ GRAB ( ) COMPOSITE ( )

Arrival time 1539 TOTAL DEPTH: _____

PURGE VOLUME: _____

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TIME	VOL. PURGED (gal)	pH	TEMP (°C)	SPEC. COND. (ms/cm)	ORP (mV)	TURB. (NTU)	DO (mg/L)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1541		6.57	13.89	.867	120	13.5	7.14	( )	
1543	Sample time SW-2014-20								

COMMENTS:

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500ml/poly	1			Dissolved Metals
500ml/poly	1			Nitrate & Sulfate
1L/Amber	2			pesticide

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:			
SHIPPED TO:			
SAMPLER: Evar G		OBSERVER: Mark A.	

FIELD SAMPLING REPORT

PROJECT NO: _____

MACTEC ENGINEERING AND CONSULTING, INC.
3200 TOWN POINT DRIVE, SUITE 100 KENNESAW GA 30144
PHONE: (770) 421-3400 / FAX: (770) 421-3486

WELL ID: SW-2014-21 DEPTH TO PRODUCT: _____ DATE: 11/19/14

SAMPLE METHOD: _____ TIME: 1529

DUP./REP. OF: _____ DEPTH TO WATER: _____ GRAB ( ) COMPOSITE ( )

TOTAL DEPTH: _____

Arrival time
1520

PURGE VOLUME: _____

[0.163 x water column height (ft) x 3 (well volumes) for 2" wells]

TIME	VOL. PURGED (gal)	pH	TEMP (°C)	SPEC. COND. (ms/cm)	ORP (mV)	TURB. (NTU)	DO (mg/L)	Pump Rate ml/min. (& pump setting)	New Water Level
Initial: 1525		6.58	11.96	.876	115	62.5	8.02	( )	
1529	Sample time of SW-2014-21								
COMMENTS:									

CONTAINER SIZE/TYPE	NO.	PRESERVATIVE	ANALYTICAL METHOD	ANALYSIS
500ml/poly	1			Dissolved Metals
500ml/poly	1			Nitrate & Sulfate
1L/Amber	2			pesticides

GENERAL INFORMATION			
WEATHER:	Sunny Clear Cold		
SHIPPED VIA:			
SHIPPED TO:			
SAMPLER: Evan G		OBSERVER: Mark H	

APPENDIX B

RESPONSES TO EPD COMMENTS DATED OCTOBER 7 AND DECEMBER 1, 2014

RESPONSE TO ENVIRONMENTAL PROTECTION DIVISION OCTOBER 7, 2014 COMMENTS ON VRP STATUS REPORTS NO. 4 AND NO. 5 FOR ESTECH GENERAL CHEMICALS SITE, HSI SITE NO. 10196, ATLANTA, FULTON COUNTY, GEORGIA, TAX PARCELS 17-0191-LL0244 AND 17-0191-LL0400

COMMENT # I: During the September 18, 2014 meeting, BFEL proposed an interim Type 5 risk reduction standard (RRS) for soil consisting of fencing and signage for an indeterminate amount of time until an end use could be determined for the property. EPD cannot concur with the proposed interim Type 5 RRS for soil. BFEL should propose a permanent Type 5 RRS or other applicable RRS approach that will result in a permanent remedy for site soils achievable within the approved VRP application timeframe.

Response to Comment #1: BFEL proposes to designate the site as a permanent Type 5 RRS area and restrict access/exposure using fencing, signage, and an environmental covenant. Additional exposure and erosion controls will consist of placing surficial limestone rip-rap over portions of the site where soil impacts exceed direct contact RRS.

COMMENT #2: EPD concurred with the February 2014 Progress Report delineation proposal for the presence of pesticides in groundwater west-northwest of TW-1; however, no additional delineation information was included in the VRP Status Report #5 dated August 8, 2014. Please provide documentation of the horizontal delineation at this location in future reports.

Response to Comment #2: BFEL is attempting to obtain permission from Whitaker Oil to sample well MW-WO-01 located on their property and from wells MW-CSX-01 and MW-CSX-01D on CSX property, installed by M&J Solvents for Estech site-specific pesticides to complete the delineation of detected pesticides in well TW-1.

COMMENT #3a. According to the VRP Progress Reports, "deeper investigation of site constituents in groundwater at the well MW-106D location is not warranted because there is no exposure pathway to the groundwater in the deeper fractures." Section 12-8-1 08(1) of the Act states that evidence of horizontal and vertical delineation must be addressed as part of the VRP investigation. Therefore, in order to complete the conceptual site model for the site and meet the above referenced VRP delineation requirements, please ensure that when the final VRP CSR is submitted that a sufficient amount of data is presented to demonstrate the vertical extent of the groundwater impacts at the site.

Response to Comment #3a: BFEL will approach M&J Solvents to request permission to sample their downgradient well MW-CSX-03D for the BFEL constituents to help with the vertical delineation of pesticides downgradient. Well MW-CSX-03D is located near Estech wells MW-119/MW-120 and is deeper than well MW-120 and MW-106D.

COMMENT #3b: In addition, please note the VRP Progress Reports for the site continue to indicate that monitoring well location MW-106D is a "point of demonstration (POD)" monitoring location to evaluate whether groundwater concentrations are protective of the "point of exposure (POE)," in this case the stream. According to the previous Progress Reports, the groundwater in the bedrock fractures screened by MW-106D is not surfacing in the stream and is therefore not a complete exposure pathway. Based on this conclusion, monitoring well MW-106D cannot be used in the future as a POD location, and in light of the newly proposed corrective actions for both soil

and groundwater EPD recommends that the new POD monitoring locations for the stream should take into account the revisions to onsite and offsite corrective measures.

Response to Comment #3b: Going forward wells MW-105, MW-121, and MW-119 will be designated as POD monitoring locations to evaluate whether groundwater concentrations are protective of the stream.

COMMENT #4: Based on the information provided in the VRP Status Reports and the discussions held during a September 18, 2014, meeting between EPD and site representatives, Type 5 RRS corrective action was proposed that incorporated the use of an area average approach to soil cleanup at the site property. In the event that the site wishes to continue to pursue an area averaging approach to soil remediation, please ensure that the following comments are addressed:

COMMENT #4a: According to the VRP Progress Reports, the entire site was proposed as one exposure area and the entire off-site area accessible to the Tilford Yard railyard workers was proposed as another exposure area. A figure must be provided to illustrate the extent of the offsite exposure area(s), including the soil sample locations from each of these areas that will be used to develop the exposure domain UCL- based exposure point concentration (EPC). Regarding the established onsite exposure domain, EPD continues to require that the area averaging not apply to designated "hot spots" and/or materials defined as "source material in accordance with Section I02-8-108(1) of the Act. Therefore, based on the data provided, at a minimum the former cooling pond(s) must be treated as a separate release area as the contamination in this area does not meet the random contaminant distribution scenario that would be applied to an area averaging exposure domain scenario.

Response to Comment #4a: The exposure domains for the on-site Estech property are being re-evaluated under a Type 5 approach. The identification of on-site areas that might be considered "hot spots" is not clear because soil impacts range across the entire BFEL property. The results of the assessment data have not identified concentrated source areas of individual constituents of concern. This is the primary reason that compliance under Type 1 through Type 4 is not technically feasible.

The exposure domain for off-site remains unchanged. The off-site areas are three linear expanses that run parallel to the Estech property and the actively operating rail lines. Railyard workers are present in these areas for maintenance activities only. Figure B-1 showing the soil locations used to characterize the off-site exposure domain is provided.

During the calculation of both on-site and off-site exposure point concentrations, USEPA guidance was followed in that upper confidence limits of the arithmetic mean were first calculated using all soil data points and then repeated after removing "outliers" or points associated with an unacceptable level of risk and that are not representative of the underlying data set (Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites, OSWER Directive OSWER Directive 9285.6-10, December 2002). The data points identified as elevated and driving the "risk" are identified in attached Revised Appendix C tables.

COMMENT #4b: According to the VRP Status Report #5 dated August 8, 2014, area averaging is being used to demonstrate compliance for subsurface soil as well as surface soils (<2-feet). Please note that area averaging should not be applied to subsurface soils as the exposure scenarios to subsurface soils, and resulting cleanup criteria, are not based on random exposure to these soils over the entire ED but rather specific exposure scenarios such as construction/utility worker and leaching based determinations. Therefore, please ensure that the subsurface data set

is removed from the area averaging calculations, and that a not-to-exceed value is utilized for these subsurface soils.

Response to Comment #4b: BFEL disagrees with EPD's interpretation. A representative concentration is necessary to address both surface and subsurface exposures for direct soil exposures during construction work. Construction workers are likely to come into contact with both surface soil and subsurface soil during intrusive activities, if these activities were ever to occur in the future. In accordance with USEPA guidance, if contaminated subsurface soils could be disturbed and brought to the surface, site managers should characterize the subsurface more thoroughly by collecting enough samples to develop UCLs (Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, OSWER Directive 9355.4-24, December 2002). Data sufficient to calculate UCLs were available for both the on-site and off-site soil exposure areas. UCLs were based on 6 to 175 samples for on-site areas and 5 to 153 samples for off-site areas. Maximum detected values were used for comparison purposes when the sample distribution was small or the UCL exceeded the maximum detected concentration.

As discussed in the August 2014 Status Report, the soils of concern for leaching potential can be better addressed by controlling off-site migration of impacted groundwater. Therefore, leaching criteria were not included in the evaluation of compliance with HSRA RRS in the August 2014 Status Report. The potential for soil leaching to groundwater will be addressed through the capture and remediation of the groundwater. In addition, corrective measures to limit impacts of groundwater to surface water will be incorporated in the corrective action for the site. BFEL believes this a practical and feasible solution to address concern regarding soil leaching.

COMMENT #4c: Because soils with contaminant concentrations exceeding the cleanup level will be left onsite, it is important to ensure that those concentrations are not so high that they pose acute or subchronic health risks according to USEPA Guidance on Surface Soil Cleanup at Hazardous Waste Sites dated May 2004 (EPA 93555.0-91). Calculations for the acute and subchronic exposure concentrations for each of the contaminants of concern must be provided along with a table illustrating the comparison of the onsite contaminant concentration levels to these established acute exposure levels.

Response to Comment #4c: BFEL was not able to obtain the guidance listed in the comment. The State of New Jersey recommends using the ATSDR acute minimal risk levels where available for a chemical and an acute exposure duration of 14 days for construction workers. If these assumptions are acceptable to EPD, BFEL can calculate acute soil risk-based screening levels for construction workers and provide the requested table in the next Status Report.

COMMENT #4d: Please provide EPD with an Excel spreadsheet of all sample location data that were used to calculate the area average EPCs for the site.

Response to Comment #4d: These data are provided on the attached CD.

COMMENT #5: According to the August 2014 Report, a pump and treat hydraulic containment/infiltration gallery corrective action has been proposed to address impacts within the groundwater. Based on existing site data, and data available for the upgradient M&J Solvent site (HSI Site No. 10096), a dissolved phase groundwater plume consisting of multiple organic compounds exists onsite and upgradient of the Estech site. Due to the potential influence of this proposed groundwater corrective action on this dissolved phase organic compound plume, additional site characterization data will be required prior to EPD concurring with the proposed groundwater corrective action. This information should include the following:

COMMENT #5a: Complete delineation and characterization of the dissolved phase plume, vertically and horizontally, within the confines of the Estech property, especially in the areas directly upgradient of the extraction wells.

Response to Comment #5a: In November 2014, 11 monitoring wells were sampled and analyzed for VOCs to evaluate the presence or absence of the M&J Solvents VOC groundwater plume on the Estech property. The data indicated that the M&J Solvents VOC groundwater plume was present on the northern third of the Estech property and was not detected in groundwater on the upgradient and downgradient property boundaries on the southern two-thirds of the property. Further evaluation of the VOC plume may be conducted in the future.

COMMENT #5b: While characterization and delineation activities are ongoing on the upgradient property, in particular on the Whitaker property, complete characterization of the impacts to groundwater has not yet been completed. These investigations on the Whitaker property will need to be completed in order to accurately determine the influence of the proposed groundwater corrective action on the upgradient groundwater plume migration.

Response to Comment #5b: Comment noted, and BFEL agrees that our Remediation Plan cannot be fully implemented as proposed until the up-gradient VOC plume is addressed.

COMMENT #5c: According to the August 2014 Progress Report, the groundwater recovery wells will be installed approximately 25-feet into bedrock, or deeper, and will be screened from the water table to the total depth of the well. Based on the above noted groundwater impacts originating from the upgradient property, EPD recommends that additional characterization of the groundwater impacts in the area of the recovery wells be determined prior to the utilization of such a large screened interval so as to avoid further mobilization, either horizontal or vertical, of groundwater impacts that may currently be isolated to specific depth intervals within the subsurface.

Response to Comment #5c: Further evaluation of the VOC plume and the Estech groundwater remediation alternatives are in progress.

COMMENT #5d: If access is not restricted, the recovery wells should be installed as close as possible to the hot spots to effectively remediate groundwater contamination.

Response to Comment #5d: The groundwater hot spots are actually on the Estech property in the area of wells TW-7, TW-8, MW-109, MW-110, and MW-111. Even though wells MW-113 and MW-114 have elevated pesticide and metals concentrations, those concentrations are not as high as those exhibited by wells TW-7, TW-8, MW-109, MW-110, and MW-111. BFEL would prefer not to install recovery wells downgradient of these MW-113/MW-114 hot spots in order to not draw contamination further downgradient and off of the Estech property and onto the CSX property.

COMMENT #6: Pesticides have been detected in sediment samples previously collected from the unnamed stream. It is unclear how the currently proposed remedial approach will address these contaminated sediments that have occurred either through depositional migration or groundwater discharging upwards into the sediment streambed. Please clarify how the contaminated sediments will be addressed.

Response to Comment #6: Remediation of sediments will be dealt with, if necessary, after the groundwater corrective action is implemented.

COMMENT #7: EPD's Risk Assessment staff is currently reviewing your Updated EPC and Risk Reduction Standards Calculations in Appendix C of the VRP Report #5. EPD will comment on it in a separate letter once the review is completed.

Response to Comment #7: Noted

COMMENT #8: Please provide an updated schedule for implementation of corrective action at the site.

Response to Comment #8: Please see Figure 7 in the main report for an updated schedule.

RESPONSE TO ENVIRONMENTAL PROTECTION DIVISION COMMENTS on the EPC and RISK REDUCTION STANDARDS CALCULATIONS IN APPENDIX C OF THE VOLUNTARY REMEDIATION PROGRAM STATUS REPORT #5 ESTECH GENERAL CHEMICALS SITE, HSI # 10196 DECEMBER 1, 2014

Comment #1. Table A-3 Type 2 Soil Calculations
GA EPD could not replicate the RAGS, Part B Equations 6 and 7 results for 1,1,1-trichloroethane in Table A-6 as a result of an incorrect volatilization factor (VF) used to derive the Risk Reduction Standards (RRS). Please revise the VF in Tables A-2 and A-3.

Response to Comment #1: The volatilization factor has been updated.

Comment #2. Table A-5 Toxicity Values for HSRA Soil Calculations
The RfDO toxicity value for alpha-BHC is incorrect resulting from a typographical error. The correct value for the substances should be 8.00E-3. Please note that this may affect the outcome of the all RRS. Please revise all impacted tables.

Response to Comment #2: The toxicity value has been revised and the summary tables verified.

Comment #3. Table A-6 Summary Soil RRS

The Type 2 and Type 4 soil criteria for benzo(g,h,i)perylene and phenanthrene are missing from the table or not clearly defined. The Rules states that for Type 2 and Type 4 soil RRS, if a constituent is not calculable then a site should use the greater of items (i)-(iii): (i) Appendix ill, Table 2 (if listed), (ii) background, and (iii) detection limit. Please revise.

The substance thallium (soluble salts) for metals should be utilized when generating soil RRS. Therefore, the Type 4 soil RRS for construction worker and rail site worker for thallium (soluble salts) are incorrect due to not using the RrDo toxicity factor of 1.0E-05 mg/kg-day. Please revise all impacted tables.

In order to generate a Type 4 subsurface soil RRS, a leachability evaluation should be considered. Therefore, the higher of the Type 3 and Type 4 groundwater RRS should be selected for use in determining the soil screening level value. According to the rules, the final Type 4 soil RRS should be the lower of the RAGS, Part B Equations 6 and 7, groundwater protection value, and for lead, the GALM, Fate and Transport Model. Furthermore, since construction workers and rail site workers were considered for this site then the overall final Type 4 soil RRS should be the more conservative of the two receptors. Please revise.

Response to Comment #3: Risk-based values for benzo(g,h,i)perylene and phenanthrene were not calculated because these compounds have no published toxicity values. The Type 1 and Type 3 values were used for these compounds. The summary table has been revised.

The oral toxicity value for thallium (soluble salts) has been added and the resulting RRS incorporated into the tables.

As discussed in the August 2014 Status Report, the soils of concern for leaching potential can be better addressed by controlling off-site migration of impacted groundwater. Therefore, leaching criteria were not included in the evaluation of compliance with HSRA RRS in the August 2014 Status Report. The potential for soil leaching to groundwater will be addressed through the capture and remediation of the groundwater. In addition, corrective measures to limit impacts of groundwater to surface water will be incorporated in the corrective action for the site. BFEL believes this a practical and feasible solution to address concern regarding soil leaching. For these reasons, the Type 4 RRS are focused on direct contact risk calculated using equations 6 and 7 from RAGS Part B and the GALM Model for lead exposures.

Construction workers are the selected on-site receptors. Railyard workers are the selected off-site receptors. Railyard workers would not be present on the BFEL property. For this reason, the applicable RRS are applied according to the receptors present or potentially present on the two separate exposure areas.

Comment #4. The Type 2 soil RRS for lead apparently used the IEUBK model to derive the RRS. Please submit the IEUBK model results to EPD for review.

Response to Comment #4: The IEUBK model output is provided.

The revised tables are attached.

APPENDIX B TABLES

UPDATED EPC AND RISK REDUCTION STANDARDS CALCULATIONS

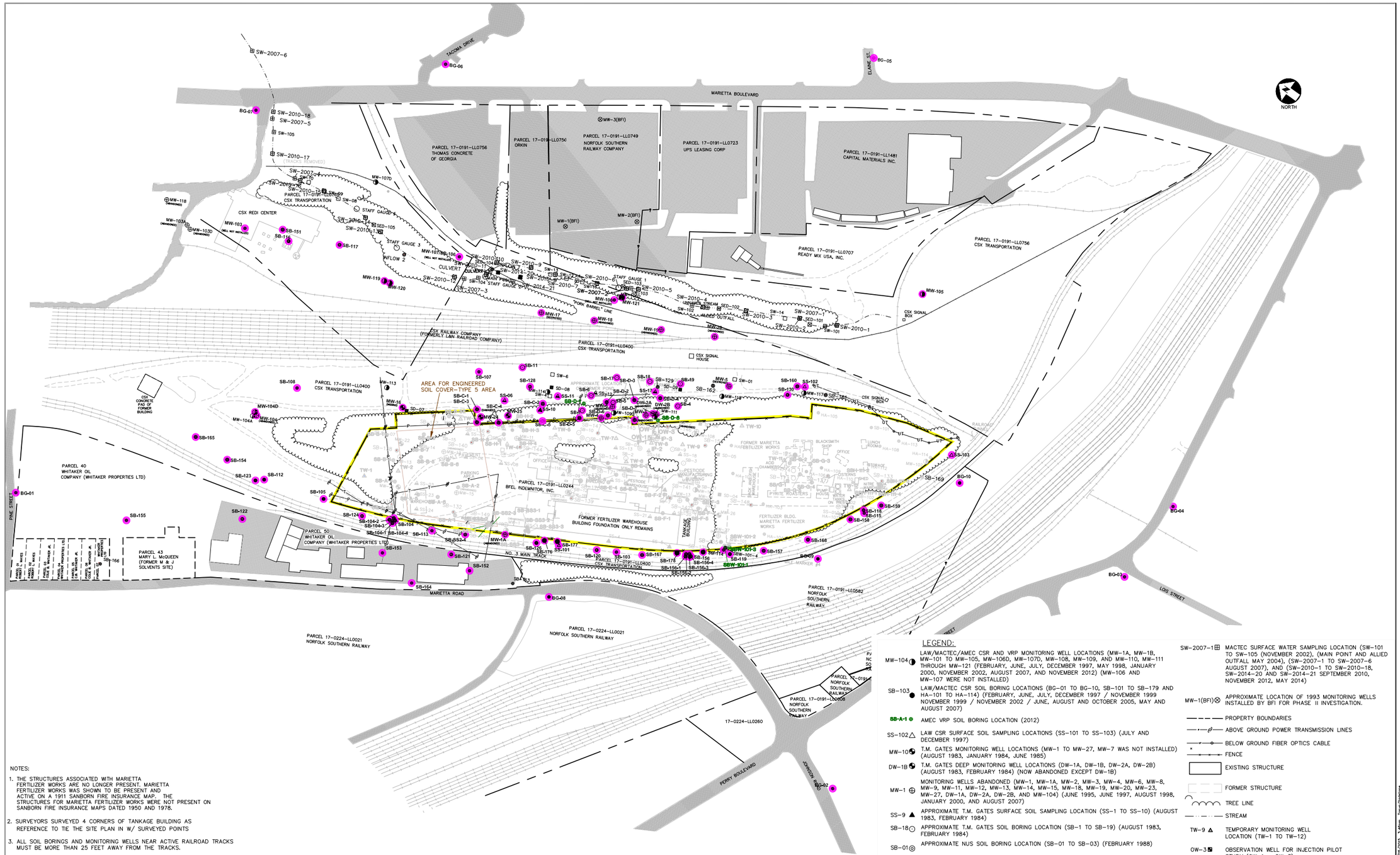

TACOMA DRIVE
MARIETTA BOULEVARD
CLAIRE ST.
NORTH
PARCEL 17-0191-LL0756 THOMAS CONCRETE OF GEORGIA
PARCEL 17-0191-LL0756 ORKIN
PARCEL 17-0191-LL0749 NORFOLK SOUTHERN RAILWAY COMPANY
PARCEL 17-0191-LL0723 UPS LEASING CORP
PARCEL 17-0191-LL1481 CAPITAL MATERIALS INC.
PARCEL 17-0191-LL0707 READY MIX USA, INC.
PARCEL 17-0191-LL0756 CSX TRANSPORTATION
PARCEL 17-0191-LL0756 CSX TRANSPORTATION
CSX REDI CENTER
CSX RAILWAY COMPANY (FORMERLY L&N RAILROAD COMPANY)
PARCEL 17-0191-LL0400 CSX TRANSPORTATION
CSX SIGNAL HOUSE
CSX SIGNAL BOX
CSX CONCRETE PAD OF FORMER BUILDING
AREA FOR ENGINEERED SOIL COVER-TYPE 5 AREA
PARCEL 40 WHITAKER OIL COMPANY (WHITAKER PROPERTIES LTD)
PARCEL 50 WHITAKER OIL COMPANY (WHITAKER PROPERTIES LTD)
PARCEL 43 MARY L. McQUEEN (FORMER M & J SOLVENTS SITE)
PARCEL 17-0191-LL0244 BFEL INDEMNITOR, INC.
FORMER FERTILIZER WAREHOUSE BUILDING FOUNDATION ONLY REMAINS
TANKAGE BUILDING
NO. 3 MAIN TRACK
PARCEL 17-0191-LL0400 CSX TRANSPORTATION
PARCEL 17-0191-LL0582 NORFOLK SOUTHERN RAILWAY
PARCEL 17-0224-LL0021 NORFOLK SOUTHERN RAILWAY
PARCEL 17-0191-LL0058 NORFOLK SOUTHERN RAILWAY
17-0224-LL0260
MARIETTA ROAD
PERRY BOULEVARD
JOHNSON ROAD
LOG STREET
PINE STREET
FORMER MARIETTA FERTILIZER WORKS
BLACKSMITH SHOP
OFFICE
LUNCH ROOM
STORAGE
ACID CHAMBERS
PYRITE ROOSTERS
PUMP HOUSE
FERTILIZER BLDG. MARIETTA FERTILIZER WORKS
RAILROAD SCALE
"PORK BARREL" LINE
CULVERT
GRASS PERIMETER DITCH
UNNAMED STREAM
INLAND OUTFALL
STAFF GAUGE 1
STAFF GAUGE 2
STAFF GAUGE 3
STAFF GAUGE 4
INFLOW 1
INFLOW 2
MW-1(BFI)
MW-2(BFI)
MW-3(BFI)
SB-A-1
SB-A-2
SB-A-3
SB-A-4
SB-A-5
SB-A-6
SB-A-7
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SB-A-40

Table A-2
Type 1 and 3 Soil Calculations, mg/kg

SUBSTANCE	Volatilization Factor (m^3/kg)	Table 2 Appendix III	Appendix I	Type 1 GW x 100	Number 1	Risk-Based Residential Type 1 NC-Type 1	Risk-Based Residential Type 1 C-Type 1	Risk-Based Residential Type 1 Type 1 RRS	Least of 1,2, & 3	Overall Type 1 RRS	Risk-Based Nonresidential Type 3 NC-Type 3	Risk-Based Nonresidential Type 3 C-Type 3	Risk-based Soil Type 3 RRS	Subsurface Soil Type 3 RRS	Surface Soil Type 3 RRS
INORGANICS/METALS															
Antimony	0.0E+00	4.0E+00	1.0E+01	6.0E-01	1.0E+01	2.6E+02	--	2.6E+02	1.0E+01	4.0E+00	8.2E+02	--	8.2E+02	1.0E+01	1.0E+01
Arsenic	0.0E+00	2.0E+01	4.1E+01	1.0E+00	4.1E+01	1.9E+02	1.0E+01	1.0E+01	1.0E+01	2.0E+01	6.1E+02	3.8E+01	3.8E+01	4.1E+01	3.8E+01
Barium	0.0E+00	1.0E+03	5.0E+02	2.0E+02	5.0E+02	1.2E+05	--	1.2E+05	5.0E+02	1.0E+03	3.6E+05	--	3.6E+05	1.0E+03	1.0E+03
Copper	0.0E+00	1.0E+02	1.5E+03	1.3E+02	1.5E+03	2.6E+04	--	2.6E+04	1.5E+03	1.0E+02	8.2E+04	--	8.2E+04	1.5E+03	1.5E+03
Cyanides (soluble salts and complexes) n.o.s.	0.0E+00	--	1.0E+01	2.0E+01	2.0E+01	3.8E+02	--	3.8E+02	2.0E+01	2.0E+01	1.2E+03	--	1.2E+03	2.0E+01	2.0E+01
Lead	0.0E+00	7.5E+01	4.0E+02	1.5E+00	4.0E+02	--	--	4.0E+02	4.0E+02	7.5E+01	--	--	--	4.0E+02	4.0E+02
Nickel	0.0E+00	5.0E+01	4.2E+02	1.0E+01	4.2E+02	1.3E+04	5.8E+05	1.3E+04	4.2E+02	5.0E+01	3.8E+04	7.3E+05	3.8E+04	4.2E+02	4.2E+02
Silver	0.0E+00	2.0E+00	1.0E+01	1.0E+01	1.0E+01	3.2E+03	--	3.2E+03	1.0E+01	2.0E+00	1.0E+04	--	1.0E+04	1.0E+01	1.0E+01
Sulfate (Not Regulated)	0.0E+00	--	--	2.5E+04	2.5E+04	--	--	--	2.5E+04	2.5E+04	--	--	--	2.5E+04	2.5E+04
Thallium (soluble salts)	0.0E+00	2.0E+00	1.0E+01	1.0E+00	1.0E+01	6.4E+00	--	6.4E+00	6.4E+00	2.0E+00	2.0E+01	--	2.0E+01	1.0E+01	1.0E+01
Zinc	0.0E+00	1.0E+02	2.8E+03	2.0E+02	2.8E+03	1.9E+05	--	1.9E+05	2.8E+03	1.0E+02	6.1E+05	--	6.1E+05	2.8E+03	2.8E+03
VOCs/SVOCs															
1,1,1-Trichloroethane	1.5E+03	--	5.4E+00	2.0E+01	2.0E+01	1.1E+04	--	1.1E+04	2.0E+01	2.0E+01	1.1E+04	--	1.1E+04	2.0E+01	2.0E+01
2,4-Dinitrotoluene	0.0E+00	--	6.6E-01	5.0E-01	6.6E-01	1.3E+03	4.8E+01	4.8E+01	6.6E-01	6.6E-01	4.1E+03	1.8E+02	1.8E+02	6.6E-01	6.6E-01
PAHs															
Anthracene	2.3E+06	--	5.0E+02	5.0E-01	5.0E+02	1.9E+05	--	1.9E+05	5.0E+02	5.0E+02	6.1E+05	--	6.1E+05	5.0E+02	5.0E+02
Benzo(a)anthracene	0.0E+00	--	5.0E+00	1.0E-02	5.0E+00	--	2.0E+01	2.0E+01	5.0E+00	5.0E+00	--	7.8E+01	7.8E+01	5.0E+00	5.0E+00
Benzo(a)pyrene	0.0E+00	--	1.6E+00	2.0E-02	1.6E+00	--	2.0E+00	2.0E+00	1.6E+00	1.6E+00	--	7.8E+00	7.8E+00	1.6E+00	1.6E+00
Benzo(b)fluoranthene	0.0E+00	--	5.0E+00	2.0E-02	5.0E+00	--	2.0E+01	2.0E+01	5.0E+00	5.0E+00	--	7.8E+01	7.8E+01	5.0E+00	5.0E+00
Benzo(ghi)perylene	0.0E+00	--	5.0E+02	5.0E-01	5.0E+02	ND	--	ND	5.0E+02	5.0E+02	ND	--	ND	5.0E+02	5.0E+02
Benzo(k)fluoranthene	0.0E+00	--	5.0E+00	5.0E-01	5.0E+00	--	2.0E+02	2.0E+02	5.0E+00	5.0E+00	--	7.8E+02	7.8E+02	5.0E+00	5.0E+00
Chrysene	0.0E+00	--	5.0E+00	5.0E-01	5.0E+00	--	2.0E+03	2.0E+03	5.0E+00	5.0E+00	--	7.8E+03	7.8E+03	5.0E+00	5.0E+00
Fluoranthene	0.0E+00	--	5.0E+02	1.0E+02	5.0E+02	2.6E+04	--	2.6E+04	5.0E+02	5.0E+02	8.2E+04	--	8.2E+04	5.0E+02	5.0E+02
Indeno(1,2,3-cd)pyrene	0.0E+00	--	5.0E+00	4.0E-02	5.0E+00	--	2.0E+01	2.0E+01	5.0E+00	5.0E+00	--	7.8E+01	7.8E+01	5.0E+00	5.0E+00
Phenanthrene	1.3E+06	--	1.1E+02	5.0E-01	1.1E+02	ND	--	ND	1.1E+02	1.1E+02	ND	--	ND	1.1E+02	1.1E+02
Pyrene	0.0E+00	--	5.0E+02	1.0E+02	5.0E+02	1.9E+04	--	1.9E+04	5.0E+02	5.0E+02	6.1E+04	--	6.1E+04	5.0E+02	5.0E+02
PESTICIDES															
Aldrin	0.0E+00	--	6.6E-01	2.0E-03	6.6E-01	1.9E+01	8.8E-01	8.8E-01	6.6E-01	6.6E-01	6.1E+01	3.4E+00	3.4E+00	6.6E-01	6.6E-01
alpha-BHC	0.0E+00	--	6.6E-01	2.5E-03	6.6E-01	5.1E+03	2.4E+00	2.4E+00	6.6E-01	6.6E-01	1.6E+04	9.1E+00	9.1E+00	6.6E-01	6.6E-01
beta-BHC	0.0E+00	--	6.6E-01	2.5E-03	6.6E-01	--	8.3E+01	8.3E+01	6.6E-01	6.6E-01	--	3.2E+01	3.2E+01	6.6E-01	6.6E-01
delta-BHC	0.0E+00	--	2.5E+01	2.5E-03	2.5E+01	--	8.3E+01	8.3E+01	2.5E+01	2.5E+01	--	3.2E+01	3.2E+01	2.5E+01	2.5E+01
gamma-BHC (Lindane)	0.0E+00	--	6.6E-01	2.0E-02	6.6E-01	1.9E+02	1.4E+01	1.4E+01	6.6E-01	6.6E-01	6.1E+02	5.2E+01	5.2E+01	6.6E-01	6.6E-01
Chlordane	0.0E+00	--	9.2E+00	2.0E-01	9.2E+00	3.2E+02	4.3E+01	4.3E+01	9.2E+00	9.2E+00	1.0E+03	1.6E+02	1.6E+02	9.2E+00	9.2E+00
DDD	0.0E+00	--	6.6E-01	1.0E-02	6.6E-01	--	6.2E+01	6.2E+01	6.6E-01	6.6E-01	--	2.4E+02	2.4E+02	6.6E-01	6.6E-01
DDE	0.0E+00	--	6.6E-01	1.0E-02	6.6E-01	--	4.4E+01	4.4E+01	6.6E-01	6.6E-01	--	1.7E+02	1.7E+02	6.6E-01	6.6E-01
DDT	0.0E+00	--	6.6E-01	1.0E-02	6.6E-01	3.2E+02	4.4E+01	4.4E+01	6.6E-01	6.6E-01	1.0E+03	1.7E+02	1.7E+02	6.6E-01	6.6E-01
Dieldrin	0.0E+00	--	6.6E-01	2.0E-03	6.6E-01	3.2E+01	9.3E-01	9.3E-01	6.6E-01	6.6E-01	1.0E+02	3.6E+00	3.6E+00	6.6E-01	6.6E-01
Endrin	0.0E+00	--	1.0E+01	2.0E-01	1.0E+01	1.9E+02	--	1.9E+02	1.0E+01	1.0E+01	6.1E+02	--	6.1E+02	1.0E+01	1.0E+01
Heptachlor	0.0E+00	--	6.6E-01	4.0E-02	6.6E-01	3.2E+02	3.3E+00	3.3E+00	6.6E-01	6.6E-01	1.0E+03	1.3E+01	1.3E+01	6.6E-01	6.6E-01
Methoxychlor	0.0E+00	--	1.0E+01	4.0E+00	1.0E+01	3.2E+03	--	3.2E+03	1.0E+01	1.0E+01	1.0E+04	--	1.0E+04	1.0E+01	1.0E+01
Toxaphene	0.0E+00	--	1.1E+01	3.0E-01	1.1E+01	--	1.4E+01	1.4E+01	1.1E+01	1.1E+01	--	5.2E+01	5.2E+01	1.1E+01	1.1E+01

Notes:

NC	Noncarcinogen
C	Carcinogen
RRS	Risk Reduction Standard
GW	Groundwater

Exposure Parameters	Residential Type 1	Nonresidential Type 3	Unit
Total Hazard Index (THI)	1	1	unitless
Target Risk (TR)	1.E-05	1.E-05	unitless
Body Weight (BW)	70	70	kg
Averaging Time, Carcinogen (ATc)	70	70	yrs
Averaging Time, Noncarcinogen (ATn)	30.0	25.0	yrs
Exposure Duration (ED)	30.0	25.0	yrs
Exposure Frequency (EF)	350	250	days/yr
Soil Ingestion Rate (IRs)	114	50	mg/day
Air Inhalation Rate (InhR)	15	20	m^3/day
Particulate Emission Factor (PEF)	4.63E+09	4.63E+09	m^3/kg
Conversion Factor (CF)	1.E-06	1.E-06	kg/mg
Volatilization Factor (K)	Chemical-specific	Chemical-specific	m^3/kg

Noncarcinogenic Exposure

$$C = \frac{THI \times BW \times ATn \times 365 days/year}{EF \times ED \times [(1/RfDi \times (1/K + 1/PEF) \times InhR) + (1/RfDc}$$

Carcinogenic Exposure

$$C = \frac{TR \times BW \times ATc \times 365 days/year}{EF \times ED \times [(SFi \times (1/K + 1/PEF) \times IRa) + (SFo \times IRw)]}$$

Prepared by:MKB 10/5/07
Checked by: LMS 1/30/15

Table A-3
Type 2 Soil Calculations, mg/kg

SUBSTANCE	Volatilization Factor (m^3/kg)	Residential Child NC-Type 2	Residential Child C-Type 2	Residential Child Type 2 RRS	Residential Adult NC-Type 2	Residential Adult C-Type 2	Residential Adult Type 2 RRS	Overall Type 2 RRS
INORGANICS/METALS								
Antimony	0.0E+00	3.1E+01	--	3.1E+01	2.9E+02	--	2.9E+02	3.1E+01
Arsenic	0.0E+00	2.3E+01	6.1E+00	6.1E+00	2.2E+02	1.1E+01	1.1E+01	6.1E+00
Barium	0.0E+00	1.5E+04	--	1.5E+04	1.4E+05	--	1.4E+05	1.5E+04
Copper	0.0E+00	3.1E+03	--	3.1E+03	2.9E+04	--	2.9E+04	3.1E+03
Cyanides (soluble salts and complexes) n.o.s.	0.0E+00	4.7E+01	--	4.7E+01	4.4E+02	--	4.4E+02	4.7E+01
Lead	0.0E+00	3.3E+02	--	3.3E+02	--	--	--	3.3E+02
Nickel	0.0E+00	1.5E+03	6.2E+05	1.5E+03	1.4E+04	4.3E+05	1.4E+04	1.5E+03
Silver	0.0E+00	3.9E+02	--	3.9E+02	3.7E+03	--	3.7E+03	3.9E+02
Sulfate (Not Regulated)	0.0E+00	--	--	--	--	--	--	--
Thallium (soluble salts)	0.0E+00	7.8E-01	--	7.8E-01	7.3E+00	--	7.3E+00	7.8E-01
Zinc	0.0E+00	2.3E+04	--	2.3E+04	2.2E+05	--	2.2E+05	2.3E+04
VOCs/SVOCs								
1,1,1-Trichloroethane	1.5E+03	2.2E+03	ND	2.2E+03	7.9E+03	ND	7.9E+03	2.2E+03
2,4-Dinitrotoluene	0.0E+00	1.6E+02	2.9E+01	2.9E+01	1.5E+03	5.5E+01	5.5E+01	2.9E+01
PAHs								
Anthracene	2.3E+06	2.3E+04	--	2.3E+04	2.2E+05	--	2.2E+05	2.3E+04
Benzo(a)anthracene	0.0E+00	--	1.2E+01	1.2E+01	--	2.3E+01	2.3E+01	1.2E+01
Benzo(a)pyrene	0.0E+00	--	1.2E+00	1.2E+00	--	2.3E+00	2.3E+00	1.2E+00
Benzo(b)fluoranthene	0.0E+00	--	1.2E+01	1.2E+01	--	2.3E+01	2.3E+01	1.2E+01
Benzo(ghi)perylene	0.0E+00	--	--	--	--	--	--	--
Benzo(k)fluoranthene	0.0E+00	--	1.2E+02	1.2E+02	--	2.3E+02	2.3E+02	1.2E+02
Chrysene	0.0E+00	--	1.2E+03	1.2E+03	--	2.3E+03	2.3E+03	1.2E+03
Fluoranthene	0.0E+00	3.1E+03	--	3.1E+03	2.9E+04	--	2.9E+04	3.1E+03
Indeno(1,2,3-cd)pyrene	0.0E+00	--	1.2E+01	1.2E+01	--	2.3E+01	2.3E+01	1.2E+01
Phenanthrene	1.3E+06	--	--	--	--	--	--	--
Pyrene	0.0E+00	2.3E+03	--	2.3E+03	2.2E+04	--	2.2E+04	2.3E+03
PESTICIDES								
Aldrin	0.0E+00	2.3E+00	5.4E-01	5.4E-01	2.2E+01	1.0E+00	1.0E+00	5.4E-01
alpha-BHC	0.0E+00	6.3E+02	1.4E+00	1.4E+00	5.8E+03	2.7E+00	2.7E+00	1.4E+00
beta-BHC	0.0E+00	--	5.1E+00	5.1E+00	--	9.5E+00	9.5E+00	5.1E+00
delta-BHC	0.0E+00	--	5.1E+00	5.1E+00	--	9.5E+00	9.5E+00	5.1E+00
gamma-BHC (Lindane)	0.0E+00	2.3E+01	8.3E+00	8.3E+00	2.2E+02	1.5E+01	1.5E+01	8.3E+00
Chlordane	0.0E+00	3.9E+01	2.6E+01	2.6E+01	3.6E+02	4.9E+01	4.9E+01	2.6E+01
DDD	0.0E+00	--	3.8E+01	3.8E+01	--	7.1E+01	7.1E+01	3.8E+01
DDE	0.0E+00	--	2.7E+01	2.7E+01	--	5.0E+01	5.0E+01	2.7E+01
DDT	0.0E+00	3.9E+01	2.7E+01	2.7E+01	3.7E+02	5.0E+01	5.0E+01	2.7E+01
Dieldrin	0.0E+00	3.9E+00	5.7E-01	5.7E-01	3.7E+01	1.1E+00	1.1E+00	5.7E-01
Endrin	0.0E+00	2.3E+01	--	2.3E+01	2.2E+02	--	2.2E+02	2.3E+01
Heptachlor	0.0E+00	3.9E+01	2.0E+00	2.0E+00	3.7E+02	3.8E+00	3.8E+00	2.0E+00
Methoxychlor	0.0E+00	3.9E+02	--	3.9E+02	3.7E+03	--	3.7E+03	3.9E+02
Toxaphene	0.0E+00	--	8.3E+00	8.3E+00	--	1.5E+01	1.5E+01	8.3E+00

Notes:
NC Noncarcinogen
C Carcinogen
RRS Risk Reduction Standard
GW Groundwater

Exposure Parameters	Residential Child	Residential Adult
Total Hazard Index (THI)	1	1
Target Risk (TR)	1.E-05	1.E-05
Body Weight (BW)	15	70
Averaging Time, Carcinogen (ATc)	70	70
Averaging Time, Noncarcinogen (ATn)	6.0	30.0
Exposure Duration (ED)	6.0	30.0
Exposure Frequency (EF)	350	350
Soil Ingestion Rate (IRs)	200	100
Air Inhalation Rate (InhR)	15	20
Particulate Emission Factor (PEF)	4.63E+09	4.63E+09
Conversion Factor (CF)	1.E-06	1.E-06
Volatilization Factor (K)	Chemical-specific	Chemical-specific

Noncarcinogenic Exposure

$$C = \frac{THI \times BW \times ATn \times 365 days/year}{EF \times ED \times [(1/RfDi \times (1/K + 1/PEF) \times InhR) + (1/RfDo \times IRs)]}$$

Carcinogenic Exposure

$$C = \frac{TR \times BW \times ATc \times 365 days/year}{EF \times ED \times [(SFi \times (1/K + 1/PEF) \times IRa) + (SFo \times IRw)]}$$

Prepared by: MKB 10/11/07
Checked by: LMS 1/30/15

Table A-4
Type 4 Soil Calculations, mg/kg

SUBSTANCE	Volatilization Factor (m^3/kg)	On-Site Construction Worker NC-Type 4	On-Site Construction Worker C-Type 4	Direct Contact Type 4 RRS	CW Surface Soil RRS	Subsurface Soil RRS (mg/kg) (b)	Off-Site Rail Site Worker NC-Type 4	Off-Site Rail Site Worker C-Type 4	Direct Contact	RW Surface Soil RRS	RW Subsurface Soil (mg/kg) (d)
INORGANICS/METALS											
Antimony	0.00E+00	2.5E+02	--	2.5E+02	2.5E+02	2.5E+02	4.3E+03	--	4.3E+03	4.3E+03	4.3E+03
Arsenic	0.00E+00	1.9E+02	2.9E+02	1.9E+02	1.9E+02	1.9E+02	3.2E+03	2.0E+02	2.0E+02	2.0E+02	2.0E+02
Barium	0.00E+00	1.2E+05	--	1.2E+05	1.2E+05	1.2E+05	1.9E+06	--	1.9E+06	1.9E+06	1.9E+06
Copper	0.00E+00	2.5E+04	--	2.5E+04	2.5E+04	2.5E+04	4.3E+05	--	4.3E+05	4.3E+05	4.3E+05
Cyanides (soluble salts and complexes) n.o.s.	0.00E+00	3.7E+02	--	3.7E+02	3.7E+02	3.7E+02	6.5E+03	--	6.5E+03	6.5E+03	6.5E+03
Lead	0.00E+00	6.0E+02	--	6.0E+02	6.0E+02	6.0E+02	2.8E+03	--	2.8E+03	2.8E+03	2.8E+03
Nickel	0.00E+00	1.2E+04	3.6E+07	1.2E+04	1.2E+04	1.2E+04	2.0E+05	3.9E+06	2.0E+05	2.0E+05	2.0E+05
Silver	0.00E+00	3.1E+03	--	3.1E+03	3.1E+03	3.1E+03	5.4E+04	--	5.4E+04	5.4E+04	5.4E+04
Sulfate (Not Regulated)	0.00E+00	--	--	--	--	--	--	--	--	--	--
Thallium (soluble salts)	0.00E+00	6.2E+00	--	6.2E+00	6.2E+00	6.2E+00	1.1E+02	--	1.1E+02	1.1E+02	1.1E+02
Zinc	0.00E+00	1.9E+05	--	1.9E+05	1.9E+05	1.9E+05	3.3E+06	--	3.3E+06	3.3E+06	3.3E+06
VOCs/SVOCs											
1,1,1-Trichloroethane	1.55E+03	1.2E+06	--	1.2E+06	1.2E+06	1.2E+06	5.9E+04	--	5.9E+04	5.9E+04	5.9E+04
2,4-Dinitrotoluene	0.00E+00	1.2E+03	1.4E+03	1.2E+03	1.2E+03	1.2E+03	2.2E+04	9.8E+02	9.8E+02	9.8E+02	9.8E+02
PAHs											
Anthracene	7.33E+05	1.9E+05	--	1.9E+05	1.9E+05	1.9E+05	3.3E+06	--	3.3E+06	3.3E+06	3.3E+06
Benzo(a)anthracene	0.00E+00	--	5.9E+02	5.9E+02	5.9E+02	5.9E+02	--	4.2E+02	4.2E+02	4.2E+02	4.2E+02
Benzo(a)pyrene	0.00E+00	--	5.9E+01	5.9E+01	5.9E+01	5.9E+01	--	4.2E+01	4.2E+01	4.2E+01	4.2E+01
Benzo(b)fluoranthene	0.00E+00	--	5.9E+02	5.9E+02	5.9E+02	5.9E+02	--	4.2E+02	4.2E+02	4.2E+02	4.2E+02
Benzo(ghi)perylene	0.00E+00	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	0.00E+00	--	5.9E+03	5.9E+03	5.9E+03	5.9E+03	--	4.2E+03	4.2E+03	4.2E+03	4.2E+03
Chrysene	0.00E+00	--	5.9E+04	5.9E+04	5.9E+04	5.9E+04	--	4.2E+04	4.2E+04	4.2E+04	4.2E+04
Fluoranthene	0.00E+00	2.5E+04	--	2.5E+04	2.5E+04	2.5E+04	4.3E+05	--	4.3E+05	4.3E+05	4.3E+05
Indeno(1,2,3-cd)pyrene	0.00E+00	--	5.9E+02	5.9E+02	5.9E+02	5.9E+02	--	4.2E+02	4.2E+02	4.2E+02	4.2E+02
Phenanthrene	1.26E+06	--	--	--	--	--	--	--	--	--	--
Pyrene	0.00E+00	1.9E+04	--	1.9E+04	1.9E+04	1.9E+04	3.3E+05	--	3.3E+05	3.3E+05	3.3E+05
PESTICIDES											
Aldrin	0.00E+00	1.9E+01	2.6E+01	1.9E+01	1.9E+01	1.9E+01	3.3E+02	1.8E+01	1.8E+01	1.8E+01	1.8E+01
alpha-BHC	0.00E+00	5.0E+03	6.9E+01	6.9E+01	6.9E+01	6.9E+01	8.7E+04	4.8E+01	4.8E+01	4.8E+01	4.8E+01
beta-BHC	0.00E+00	--	2.4E+02	2.4E+02	2.4E+02	2.4E+02	--	1.7E+02	1.7E+02	1.7E+02	1.7E+02
delta-BHC	0.00E+00	--	2.4E+02	2.4E+02	2.4E+02	2.4E+02	--	1.7E+02	1.7E+02	1.7E+02	1.7E+02
gamma-BHC (Lindane)	0.00E+00	1.9E+02	3.9E+02	1.9E+02	1.9E+02	1.9E+02	3.3E+03	2.8E+02	2.8E+02	2.8E+02	2.8E+02
Chlordane	0.00E+00	3.1E+02	1.2E+03	3.1E+02	3.1E+02	3.1E+02	5.4E+03	8.7E+02	8.7E+02	8.7E+02	8.7E+02
DDD	0.00E+00	--	1.8E+03	1.8E+03	1.8E+03	1.8E+03	--	1.3E+03	1.3E+03	1.3E+03	1.3E+03
DDE	0.00E+00	--	1.3E+03	1.3E+03	1.3E+03	1.3E+03	--	9.0E+02	9.0E+02	9.0E+02	9.0E+02
DDT	0.00E+00	3.1E+02	1.3E+03	3.1E+02	3.1E+02	3.1E+02	5.4E+03	9.0E+02	9.0E+02	9.0E+02	9.0E+02
Dieldrin	0.00E+00	3.1E+01	2.7E+01	2.7E+01	2.7E+01	2.7E+01	5.4E+02	1.9E+01	1.9E+01	1.9E+01	1.9E+01
Endrin	0.00E+00	1.9E+02	--	1.9E+02	1.9E+02	1.9E+02	3.3E+03	--	3.3E+03	3.3E+03	3.3E+03
Heptachlor	0.00E+00	3.1E+02	9.6E+01	9.6E+01	9.6E+01	9.6E+01	5.4E+03	6.8E+01	6.8E+01	6.8E+01	6.8E+01
Methoxychlor	0.00E+00	3.1E+03	--	3.1E+03	3.1E+03	3.1E+03	5.4E+04	--	5.4E+04	5.4E+04	5.4E+04
Toxaphene	0.00E+00	--	3.9E+02	3.9E+02	3.9E+02	3.9E+02	--	2.8E+02	2.8E+02	2.8E+02	2.8E+02

NC Noncarcinogen
C Carcinogen
RRS Risk Reduction Standard
GW Groundwater

Exposure Parameters	Construction Worker	Rail Site Worker
Total Hazard Index (THI)	1	1
Target Risk (TR)	1.E-05	1.E-05
Body Weight (BW)	70	70
Averaging Time, Carcinogen (ATc)	70	70
Averaging Time, Noncarcinogen (ATn)	1.0	25.0
Exposure Duration (ED)	1.0	25.0
Exposure Frequency (EF)	125	47
Soil Ingestion Rate (IRs)	330	50
Air Inhalation Rate (InhR)	20	20
Particulate Emission Factor (PEF)	4.63E+09	4.63E+09
Conversion Factor (CF)	1.E-06	1.E-06
Volatilization Factor (K)	Chemical-specific	Chemical-specific

Noncarcinogenic Exposure

$$C = \frac{THI \times BW \times ATn \times 365 days/year}{EF \times ED \times [(1/RfDi \times (1/K + 1/PEF) \times InhR) + (1/RfDo \times IRs)]}$$

Carcinogenic Exposure

$$C = \frac{TR \times BW \times ATc \times 365 days/year}{EF \times ED \times [(SFi \times (1/K + 1/PEF) \times IRa) + (SFo \times IRw)]}$$

Prepared by: MKB 10/11/07
Checked by: LMS 1/30/15

Table A-5
Toxicity Values for HSRA Soil Calculations

SUBSTANCE	RFDO	RFDI	CSFO	CSFI	CCLASS	Source
INORGANICS/METALS						
Antimony	4.00E-04	NA	NA	NA	ND	IRIS
Arsenic	3.00E-04	4.30E-06	1.50E+00	1.51E+01	A	IRIS
Barium	2.00E-01	1.43E-04	NA	NA	D	IRIS, HEAST
Copper	4.00E-02	NA	NA	NA	D	HEAST
Cyanides (soluble salts and c	6.00E-04	2.30E-04	NA	NA	D	IRIS
Lead	NA	NA	NA	NA	B2	IRIS
Nickel (soluble salts)	2.00E-02	2.60E-05	NA	9.10E-01	ND	IRIS, CAL EPA, ATSDR
Silver	5.00E-03	NA	NA	NA	D	IRIS
Sulfate (Not Regulated)	NA	NA	NA	NA	D	IRIS
Thallium (soluble salts)	1.00E-05	NA	NA	NA	D	IRIS
Zinc	3.00E-01	NA	NA	NA	D	IRIS
VOCs/SVOCs						
1,1,1-Trichloroethane	2.00E+00	1.40E+00	NA	NA	D	IRIS
2,4-Dinitrotoluene	2.00E-03	NA	3.10E-01	3.10E-01	ND	IRIS, CAL EPA
PAHs						
Anthracene	3.00E-01	NA	NA	NA	D	IRIS
Benzo(a)anthracene	NA	NA	7.30E-01	3.90E-01	B2	NCEA, CAL EPA
Benzo(a)pyrene	NA	NA	7.30E+00	3.90E+00	B2	IRIS, CAL EPA
Benzo(b)fluoranthene	NA	NA	7.30E-01	3.90E-01	B2	NCEA, CAL EPA
Benzo(ghi)perylene	NA	NA	NA	NA	D	ND
Benzo(k)fluoranthene	NA	NA	7.30E-02	3.90E-01	B2	NCEA, CAL EPA
Chrysene	NA	NA	7.30E-03	3.90E-02	B2	NCEA, CAL EPA
Fluoranthene	4.00E-02	NA	NA	NA	D	IRIS
Indeno(1,2,3-cd)pyrene	NA	NA	7.30E-01	3.90E-01	B2	NCEA, CAL EPA
Phenanthrene	NA	NA	NA	NA	D	ND
Pyrene	3.00E-02	NA	NA	NA	D	IRIS
PESTICIDES						
Aldrin	3.00E-05	NA	1.70E+01	1.70E+00	B2	IRIS
alpha-BHC	8.00E-03	NA	6.30E+00	6.30E+00	B2	IRIS, ATSDR
beta-BHC	NA	NA	1.80E+00	1.90E+00	C	IRIS
delta-BHC	NA	NA	1.80E+00	1.80E+00	C	IRIS
gamma-BHC (Lindane)	3.00E-04	NA	1.10E+00	1.10E+00	ND	IRIS, CAL EPA
Chlordane	5.00E-04	2.00E-04	3.50E-01	3.50E-01	B2	IRIS
DDD	NA	NA	2.40E-01	2.40E-01	B2	IRIS
DDE	NA	NA	3.40E-01	3.40E-01	B2	IRIS
DDT	5.00E-04	NA	3.40E-01	3.40E-01	B2	IRIS
Dieldrin	5.00E-05	NA	1.60E+01	1.60E+01	B2	IRIS
Endrin	3.00E-04	NA	NA	NA	D	IRIS
Heptachlor	5.00E-04	NA	4.50E+00	4.60E+00	B2	IRIS
Methoxychlor	5.00E-03	NA	NA	NA	D	IRIS
Toxaphene	NA	NA	1.10E+00	1.10E+00	B2	IRIS

Source: EPA Regional Screening Values January 2015 and IRIS, 2015.

Prepared by: MKB 10/11/07
Checked by: LMS 1/30/15

Table A-6
SUMMARY
SOIL RRS

SUBSTANCE	Type 1 Soil RRS (mg/kg)	Type 2 Soil RRS (mg/kg)	Type 3 Subsurface Soil RRS (mg/kg)	Type 3 Surface Soil RRS (mg/kg)	Type 4 CW Surface Soil RRS (mg/kg)	Type 4 CW Subsurface Soil RRS (mg/kg)	Type 4 Rail SW Surface Soil RRS (mg/kg)	Type 4 Rail SW Subsurface Soil RRS (mg/kg)	Maximum Onsite Surface (a) (mg/kg)	Maximum Onsite Subsurface (b) (mg/kg)	Maximum Offsite Surface (c) (mg/kg)	Maximum Offsite Subsurface (d) (mg/kg)
INORGANICS/METALS												
Antimony	4.0E+00	3.1E+01	1.0E+01	1.0E+01	2.5E+02	2.5E+02	4.3E+03	4.3E+03	248	248	31	4349
Arsenic	2.0E+01	6.1E+00	4.1E+01	3.8E+01	1.9E+02	1.9E+02	2.0E+02	2.0E+02	186	186	20	203
Barium	1.0E+03	1.5E+04	1.0E+03	1.0E+03	1.2E+05	1.2E+05	1.9E+06	1.9E+06	121652	121652	15296	1940053
Copper	1.0E+02	3.1E+03	1.5E+03	1.5E+03	2.5E+04	2.5E+04	4.3E+05	4.3E+05	24776	24776	3129	434894
Cyanides (soluble salts and complexes) n.o.s.	2.0E+01	4.7E+01	2.0E+01	2.0E+01	3.7E+02	3.7E+02	6.5E+03	6.5E+03	372	372	47	6523
Lead	7.5E+01	3.3E+02	4.0E+02	4.0E+02	6.0E+02	6.0E+02	2.8E+03	2.8E+03	600	600	325	2800
Nickel	5.0E+01	1.5E+03	4.2E+02	4.2E+02	1.2E+04	1.2E+04	2.0E+05	2.0E+05	12264	12264	1545	203897
Silver	2.0E+00	3.9E+02	1.0E+01	1.0E+01	3.1E+03	3.1E+03	5.4E+04	5.4E+04	3097	3097	391.1	54362
Sulfate (Not Regulated)	2.5E+04	--	2.5E+04	2.5E+04	--	--	--	--	25000	25000	25000	25000
Thallium (soluble salts)	2.0E+00	7.8E-01	1.0E+01	1.0E+01	6.2E+00	6.2E+00	1.1E+02	1.1E+02	10	10	2.0	109
Zinc	1.0E+02	2.3E+04	2.8E+03	2.8E+03	1.9E+05	1.9E+05	3.3E+06	3.3E+06	185818	185818	23464	3261702
VOCs/SVOCs												
1,1,1-Trichloroethane	2.0E+01	2.2E+03	2.0E+01	2.0E+01	1.2E+06	1.2E+06	5.9E+04	5.9E+04	1238765	1238765	2230	58808
2,4-Dinitrotoluene	6.6E-01	2.9E+01	6.6E-01	6.6E-01	1.2E+03	1.2E+03	9.8E+02	9.8E+02	1238.8	1238.8	29.44	981.93
PAHs												
Anthracene	5.0E+02	2.3E+04	5.0E+02	5.0E+02	1.9E+05	1.9E+05	3.3E+06	3.3E+06	185818	185818	23464	3261702
Benzo(a)anthracene	5.0E+00	1.2E+01	5.0E+00	5.0E+00	5.9E+02	5.9E+02	4.2E+02	4.2E+02	594	594	12.5	417.0
Benzo(a)pyrene	1.6E+00	1.2E+00	1.6E+00	1.6E+00	5.9E+01	5.9E+01	4.2E+01	4.2E+01	59	59	1.6	41.7
Benzo(b)fluoranthene	5.0E+00	1.2E+01	5.0E+00	5.0E+00	5.9E+02	5.9E+02	4.2E+02	4.2E+02	594	594	12.5	417
Benzo(ghi)perylene	5.0E+02	--	5.0E+02	5.0E+02	--	--	--	--	500	500	500	500
Benzo(k)fluoranthene	5.0E+00	1.2E+02	5.0E+00	5.0E+00	5.9E+03	5.9E+03	4.2E+03	4.2E+03	5939	5939	125	4168
Chrysene	5.0E+00	1.2E+03	5.0E+00	5.0E+00	5.9E+04	5.9E+04	4.2E+04	4.2E+04	59390	59390	1250	41683
Fluoranthene	5.0E+02	3.1E+03	5.0E+02	5.0E+02	2.5E+04	2.5E+04	4.3E+05	4.3E+05	24776	24776	3129	434894
Indeno(1,2,3-cd)pyrene	5.0E+00	1.2E+01	5.0E+00	5.0E+00	5.9E+02	5.9E+02	4.2E+02	4.2E+02	594	594	12	417
Phenanthrene	1.1E+02	--	1.1E+02	1.1E+02	--	--	--	--	110	110	110	110
Pyrene	5.0E+02	2.3E+03	5.0E+02	5.0E+02	1.9E+04	1.9E+04	3.3E+05	3.3E+05	18582	18582	2346	326170
PESTICIDES												
Aldrin	6.6E-01	5.4E-01	6.6E-01	6.6E-01	1.9E+01	1.9E+01	1.8E+01	1.8E+01	19	19	0.66	17.91
alpha-BHC	6.6E-01	1.4E+00	6.6E-01	6.6E-01	6.9E+01	6.9E+01	4.8E+01	4.8E+01	68.8	68.8	1.45	48.32
beta-BHC	6.6E-01	5.1E+00	6.6E-01	6.6E-01	2.4E+02	2.4E+02	1.7E+02	1.7E+02	240.9	240.9	5.07	169.11
delta-BHC	2.5E+01	5.1E+00	2.5E+01	2.5E+01	2.4E+02	2.4E+02	1.7E+02	1.7E+02	241	241	25	169
gamma-BHC (Lindane)	6.6E-01	8.3E+00	6.6E-01	6.6E-01	1.9E+02	1.9E+02	2.8E+02	2.8E+02	185.8	185.8	8.30	276.73
Chlordane	9.2E+00	2.6E+01	9.2E+00	9.2E+00	3.1E+02	3.1E+02	8.7E+02	8.7E+02	310	310	26.1	869.7
DDD	6.6E-01	3.8E+01	6.6E-01	6.6E-01	1.8E+03	1.8E+03	1.3E+03	1.3E+03	1807	1807	38.02	1268
DDE	6.6E-01	2.7E+01	6.6E-01	6.6E-01	1.3E+03	1.3E+03	9.0E+02	9.0E+02	1275	1275	26.84	895
DDT	6.6E-01	2.7E+01	6.6E-01	6.6E-01	3.1E+02	3.1E+02	9.0E+02	9.0E+02	310	310	26.84	895
Dieldrin	6.6E-01	5.7E-01	6.6E-01	6.6E-01	2.7E+01	2.7E+01	1.9E+01	1.9E+01	27.1	27.1	0.66	19.02
Endrin	1.0E+01	2.3E+01	1.0E+01	1.0E+01	1.9E+02	1.9E+02	3.3E+03	3.3E+03	186	186	23	3262
Heptachlor	6.6E-01	2.0E+00	6.6E-01	6.6E-01	9.6E+01	9.6E+01	6.8E+01	6.8E+01	96	96	2.03	67.64
Methoxychlor	1.0E+01	3.9E+02	1.0E+01	1.0E+01	3.1E+03	3.1E+03	5.4E+04	5.4E+04	3097	3097	391	54362
Toxaphene	1.1E+01	8.3E+00	1.1E+01	1.1E+01	3.9E+02	3.9E+02	2.8E+02	2.8E+02	394	394	11	277

(a) Maximum of Type 1, Type 2, and Type 3 and Type 4 CW surface soil RRS
(b) Maximum of Type 1, Type 2, and Type 3 and Type 4 CW subsurface soil RRS
(c) Maximum of Type 1 and Type 2
(d) Maximum of Type 1, Type 2 and Type 3 and Type 4 Rail Site Worker subsurface soil RRS.

Prepared by:MKB 10/5/07
Checked by: LMS 1/30/15

Table A-7a

Calculation of Remediation Goal for Lead in Soil - Railroad Workers

Exposure Variable	PRG Equation[1]	Description of Exposure Variable	Units	Values for Railroad Worker Using Equation 1 GSDi = 2.04
$PbB_{fetal, 0.95}$	X	95th percentile PbB in fetus	ug/dL	10
$R_{fetal/maternal}$	X	Fetal/maternal PbB ratio	--	0.9
BKSF	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	X	Geometric standard deviation PbB	--	2.04
PbB_0	X	Baseline PbB	ug/dL	1.38
IR_S	X	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{S, D}$	X	Absorption fraction (same for soil and dust)	--	0.12
C_w	X	Concentration of lead in ground water (average for site)	ug/L	21
IR_w[2]	X	Intake rate of water from on-site ground water	L/day	1
AF_w	X	Absolute gastrointestinal absorption fraction for lead in GW		0.2
EF	X	Exposure frequency (same for soil and dust and water)	days/yr	90
AT	X	Averaging Time	days/yr	365
PRG		**Preliminary Remediation Goal**	**ppm**	**2,800**

Note:

Level in groundwater set to average site-wide concentration for last 8 events.

(a) Assumptions for the Adult Lead Model for EPA were updated in June 2009. Soil ingestion rate and frequency of exposure based on Frequent Questions from Risk Assessors on the ALM (www.epa.gov/superfund/health/contaminants/lead/almfaq.htm).

***Equation based on Georgia Adult Lead Model (November, 1999).**

$$\mathbf{PRG} = \frac{[([[PbB_{fetal,0.95}/(R*(GSD_i^{1.645})])-PbB_0) - (C_w*I_w*A_w)] * (IR_S*AF_S)^{-1}}{BKSF*(EF/AT)}$$

Sources:

U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil.

Georgia EPD HSRA: Appendix IV.

Table A-7b

Calculation of Remediation Goal for Lead in Soil - Construction Workers

Exposure Variable	PRG Equation[1]	Description of Exposure Variable	Units	Values for Construction Worker Using Equation 1 GSDi = 2.04
$PbB_{fetal,\ 0.95}$	X	95th percentile PbB in fetus	ug/dL	10
$R_{fetal/maternal}$	X	Fetal/maternal PbB ratio	--	0.9
BKSF	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	X	Geometric standard deviation PbB	--	2.04
PbB_0	X	Baseline PbB	ug/dL	1.38
IR_S	X	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100
$AF_{S,\ D}$	X	Absorption fraction (same for soil and dust)	--	0.12
C_w	X	Concentration of lead in ground water (average for site)	ug/L	21
IR_w[2]	X	Intake rate of water from on-site ground water	L/day	0.08
AF_w	X	Absolute gastrointestinal absorption fraction for lead in GW		0.2
EF	X	Exposure frequency (same for soil and dust and water)	days/yr	125
AT	X	Averaging Time	days/yr	183
PRG		**Preliminary Remediation Goal**	**ppm**	**600**

Note:

Level in groundwater set to background.

(a) Assumptions for the Adult Lead Model for EPA were updated in June 2009. Soil ingestion rate based on Frequent Questions from Risk Assessors on the ALM (www.epa.gov/superfund/health/contaminants/lead/almfaq.htm).

***Equation based on Georgia Adult Lead Model (November, 1999).**

$$\mathbf{PRG} = \frac{[([[PbB_{fetal,0.95}/(R*(GSD_i^{1.645})])-PbB_0)\ -(C_w*I_w*A_w)]\ \ *\ \ (IR_S*AF_S)^{-1}}{BKSF*(EF/AT)}$$

LEAD MODEL FOR WINDOWS Version 1.1

==========

Model Version: 1.1 Build11
User Name:
Date:
Site Name:
Operable Unit:
Run Mode: Research

==========

******** Air ********

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

******** Diet ********

Age	Diet Intake(µg/day)
.5-1	2.260
1-2	1.960
2-3	2.130
3-4	2.040
4-5	1.950
5-6	2.050
6-7	2.220

******** Drinking Water ********

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 15.000 µg Pb/L

******** Soil & Dust ********

Multiple Source Analysis Used
Average multiple source concentration: 237.500 µg/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)

.5-1	325.000	237.500
1-2	325.000	237.500
2-3	325.000	237.500
3-4	325.000	237.500
4-5	325.000	237.500
5-6	325.000	237.500
6-7	325.000	237.500

****** Alternate Intake ******

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

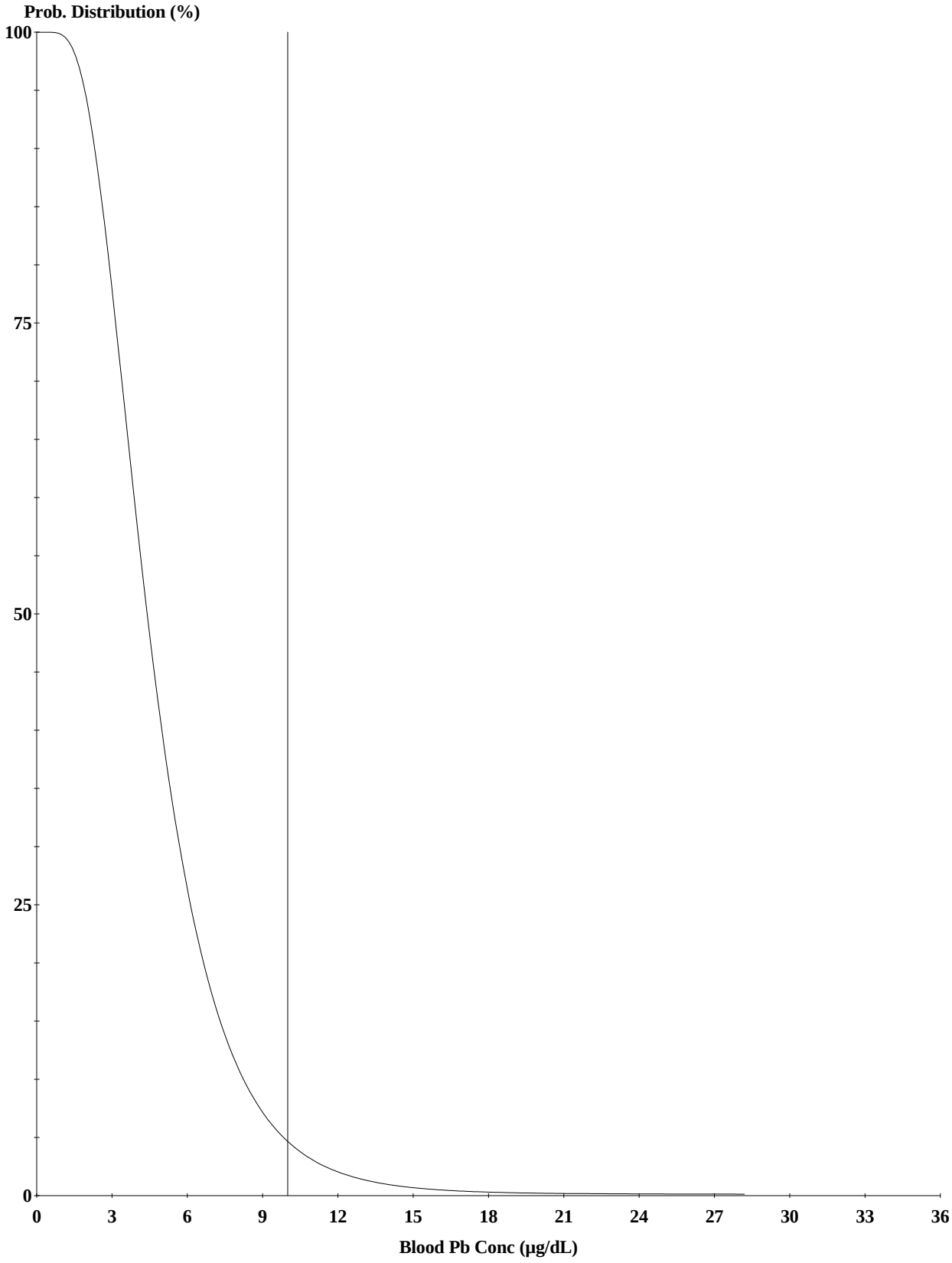
****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 1.000 µg Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.021	1.022	0.000	1.356
1-2	0.034	0.865	0.000	3.310
2-3	0.062	0.955	0.000	3.497
3-4	0.067	0.928	0.000	3.616
4-5	0.067	0.910	0.000	3.850
5-6	0.093	0.966	0.000	4.101
6-7	0.093	1.052	0.000	4.195

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	6.385	8.784	4.7
1-2	9.897	14.106	5.7
2-3	10.054	14.568	5.4
3-4	10.202	14.813	5.2
4-5	7.753	12.580	4.4
5-6	7.047	12.207	3.8
6-7	6.693	12.034	3.5



Cutoff = 10.000 µg/dl
Geo Mean = 4.613
GSD = 1.600
% Above = 4.984

Age Range = 0 to 84 months

Run Mode = Research

Table C-1
CSX Surface Soil

Parameter	Mininum Detected	Maximum Detected	Frequency	EPC	Basis	Notification Concentration	Maximum Off-Site Surface Type 1/2 RRS	Goal	Removal
VOCs/SVOCs									
1,1,1-Trichloroethane	0.009	0.009	1 / 4	0.009	Max	5.44	2200		
Acenaphthene	0.13	0.13	1 / 4	0.13	Max	300	--		
Anthracene	0.12	0.33	3 / 4	0.33	Max	500	23500		
Benzo(a)anthracene	0.17	1.4	7 / 22	0.537	95% KM(t) UCL	5	12.5		
Benzo(a)pyrene	0.45	0.9	5 / 22	0.56	95% KM(t) UCL	1.6	1.6		
Benzo(b)fluoranthene	0.41	1.6	4 / 18	0.685	95% KM(t) UCL	5	12.5		
Benzo(b,k)fluoranthene	0.81	1.7	3 / 4	1.7	Max	5	12.5		
Benzo(ghi)pyrene	0.19	0.9	4 / 22	0.43	95% KM(t) UCL	500	500		
Benzo(k)fluoranthene	0.41	0.41	2 / 18	0.41	Max	5	125		
Chrysene	0.19	1.6	7 / 22	0.585	95% KM(t) UCL	5	1250		
Fluoranthene	0.32	3.3	11 / 23	1.11	95% KM(t) UCL	500	3130		
Fluorene	0.14	0.14	1 / 4	0.14	Max	360	--		
Indeno(1,2,3-cd)pyrene	0.16	0.45	3 / 4	0.45	Max	5	12		
Naphthalene	0.11	0.12	2 / 4	0.12	Max	100	--		
Phenanthrene	0.42	0.66	4 / 15	0.484	95% KM(t) UCL	110	110		
Pyrene	0.27	2.7	11 / 23	0.983	95% KM(t) UCL	500	2350		
Pesticides									
alpha, beta, delta-BHC	0.01	0.36	7 / 17	0.0977	95% KM(t) UCL	0.66	1.45		
alpha -BHC	0.01	0.023	3 / 29	0.005	95% KM (t) UCL	0.66	1.45		
beta-BHC	0.073	0.4	2 / 27	0.4	Max	0.66	5.07		
Chlordane	0.0042	67	12 / 46	16.48	99% KM (Chebyshev) UCL	9.2	26.1		
alpha-Chlordane	0.0071	0.049	4 / 5	0.0325	95% KM (BCA) UCL	9.2	26.1		
gamma-Chlordane	0.0026	0.073	4 / 5	0.0493	95% KM (t) UCL	9.2	26.1		
DDD	0.0039	3.7	9 / 41	1.04	99% KM (Chebyshev) UCL	0.66	38		
DDE	0.0031	24	19 / 48	2.84	95% KM (Chebyshev) UCL	0.66	27		
DDT	0.014	11.1	27 / 49	1.6	95% KM (BCA) UCL	0.66	27		
delta-BHC	0.012	0.012	1 / 27	0.012	Max	25	25		
Dieldrin	0.0099	0.514	5 / 38	0.0538	95% KM (t) UCL	0.66	0.66		
gamma-BHC (Lindane)	0.015	1.78	13 / 44	0.15	95% KM (BCA) UCL	0.66	8.3		
Heptachlor	0.00902	0.3	9 / 48	0.0362	95% KM (t) UCL	0.66	2.0		
Heptachlor epoxide	0.0076	0.008	2 / 4	0.008	Max	1.7	--		
Toxaphene	0.071	190	8 / 48	11.4	95% KM (t) UCL	11	**11**	>21	SS-10
Inorganic compounds									
Antimony	37	37	1 / 4	37	Max	10	**31**		SS-06
Arsenic	1.2	1547	43 / 50	263	97.5% KM (Chebyshev) UCL	41	**20**	>75.7	MW-24, MW-25,SB-104, SB-156
Barium	99	1300	4 / 4	1300	Max	500	15300		
Beryllium	1	1	1 / 4	1	Max	3	--		
Chromium	8.2	27	4 / 4	27	Max	1200	--		
Copper	18.3	820	6 / 6	820	Max	1500	3130		
Lead	0.0151	4000	29 / 29	264	Mean	400	325		
Nickel	82	82	1 / 4	82	Max	420	1545		
Silver	21	21	1 / 4	21	Max	10	391		
Thallium	6.3	6.3	1 / 4	6.3	Max	10	**2**	Only Detection	SS-06
Zinc	44.1	1500	6 / 6	1500	Max	2800	23500		

mg/kg milligrams per kilograms
UCL Upper confidence limit of the arithmetic mean. Calculated with ProUCL Version 4.1.
EPC Exposure Point Concentration

Basis of EPC - Recommended UCL is listed if sufficient data to calculate the UCL. The mean is used for lead per modeling guidance. For detections less than 3 or when a high detection limit exceeds the maximum, the maximum concentration is listed.
Notification Concentration from Appendix I of the HSRA Rule.
Target RRS - Target Risk Reduction Standard for Off-Site Surface Soil from VRP RRS Summary Table
Bolded RRS - The EPC exceeds the target RRS.

Goal to Achieve - Sample concentrations were ranked from low to high. The higher concentrations were removed from the data set and the UCL recalculated until the revised UCL was less than the target RRS. All samples greater than the indicated value were removed.
Removal of Soil Locations to Achieve EPC< RRS - Location of samples causing the EPC to exceed the target RRS.

Prepared/Date: MKB 4/11/14
Checked/Date: LMS 4/11/14

Table C-1 - continued
CSX Surface Soil

Parameter	Mininum Detected	Maximum Detected	Frequency	EPC	Basis	Notification Concentration	Maximum Type 3/4 Off-Site Surface RRS	Goal	Removal
VOCs/SVOCs									
1,1,1-Trichloroethane	0.009	0.009	1 / 4	0.009	Max	5.44	60000		
Acenaphthene	0.13	0.13	1 / 4	0.13	Max	300	--		
Anthracene	0.12	0.33	3 / 4	0.33	Max	500	3260000		
Benzo(a)anthracene	0.17	1.4	7 / 22	0.537	95% KM(t) UCL	5	417		
Benzo(a)pyrene	0.45	0.9	5 / 22	0.56	95% KM(t) UCL	1.6	42		
Benzo(b)fluoranthene	0.41	1.6	4 / 18	0.685	95% KM(t) UCL	5	417		
Benzo(b,k)fluoranthene	0.81	1.7	3 / 4	1.7	Max	5	417		
Benzo(ghi)pyrene	0.19	0.9	4 / 22	0.43	95% KM(t) UCL	500	500		
Benzo(k)fluoranthene	0.41	0.41	2 / 18	0.41	Max	5	4170		
Chrysene	0.19	1.6	7 / 22	0.585	95% KM(t) UCL	5	41700		
Fluoranthene	0.32	3.3	11 / 23	1.11	95% KM(t) UCL	500	435000		
Fluorene	0.14	0.14	1 / 4	0.14	Max	360	--		
Indeno(1,2,3-cd)pyrene	0.16	0.45	3 / 4	0.45	Max	5	417		
Naphthalene	0.11	0.12	2 / 4	0.12	Max	100	--		
Phenanthrene	0.42	0.66	4 / 15	0.484	95% KM(t) UCL	110	110		
Pyrene	0.27	2.7	11 / 23	0.983	95% KM(t) UCL	500	326000		
Pesticides									
alpha, beta, delta-BHC	0.01	0.36	7 / 17	0.0977	95% KM(t) UCL	0.66	48		
alpha -BHC	0.01	0.023	3 / 29	0.005	95% KM (t) UCL	0.66	48		
beta-BHC	0.073	0.4	2 / 27	0.4	Max	0.66	169		
Chlordane	0.0042	67	12 / 46	16.48	99% KM (Chebyshev) UCL	9.2	870		
alpha-Chlordane	0.0071	0.049	4 / 5	0.0325	95% KM (BCA) UCL	9.2	870		
gamma-Chlordane	0.0026	0.073	4 / 5	0.0493	95% KM (t) UCL	9.2	870		
DDD	0.0039	3.7	9 / 41	1.04	99% KM (Chebyshev) UCL	0.66	1270		
DDE	0.0031	24	19 / 48	2.84	95% KM (Chebyshev) UCL	0.66	895		
DDT	0.014	11.1	27 / 49	1.6	95% KM (BCA) UCL	0.66	895		
delta-BHC	0.012	0.012	1 / 27	0.012	Max	25	169		
Dieldrin	0.0099	0.514	5 / 38	0.0538	95% KM (t) UCL	0.66	19		
gamma-BHC (Lindane)	0.015	1.78	13 / 44	0.15	95% KM (BCA) UCL	0.66	277		
Heptachlor	0.00902	0.3	9 / 48	0.0362	95% KM (t) UCL	0.66	68		
Heptachlor epoxide	0.0076	0.008	2 / 4	0.008	Max	1.7	--		
Toxaphene	0.071	190	8 / 48	11.4	95% KM (t) UCL	11	277		
Inorganic compounds									
Antimony	37	37	1 / 4	37	Max	10	4350		
Arsenic	1.2	1547	43 / 50	263	97.5% KM (Chebyshev) UCL	41	**203**	>1547	MW-24
Barium	99	1300	4 / 4	1300	Max	500	1940000		
Beryllium	1	1	1 / 4	1	Max	3	--		
Chromium	8.2	27	4 / 4	27	Max	1200	--		
Copper	18.3	820	6 / 6	820	Max	1500	43500		
Lead	0.0151	4000	29 / 29	264	Mean	400	3000		
Nickel	82	82	1 / 4	82	Max	420	204000		
Silver	21	21	1 / 4	21	Max	10	54300		
Thallium	6.3	6.3	1 / 4	6.3	Max	10	10		
Zinc	44.1	1500	6 / 6	1500	Max	2800	3260000		

mg/kg milligrams per kilograms
UCL Upper confidence limit of the arithmetic mean. Calculated with ProUCL Version 4.1.
EPC Exposure Point Concentration

Basis of EPC - Recommended UCL is listed if sufficient data to calculate the UCL. The mean is used for lead per modeling guidance. For detections less than 3 or when a high detection limit exceeds the maximum, the maximum concentration is listed.
Notification Concentration from Appendix I of the HSRA Rule.
Target RRS - Target Risk Reduction Standard for Off-Site Surface Soil from VRP RRS Summary Table
Bolded RRS - The EPC exceeds the target RRS.

Goal to Achieve - Sample concentrations were ranked from low to high. The higher concentrations were removed from the data set and the UCL recalculated until the revised UCL was less than the target RRS. All samples greater than the indicated value were removed.
Removal of Soil Locations to Achieve EPC< RRS - Location of samples causing the EPC to exceed the target RRS.

Prepared/Date: MKB 4/11/14
Checked/Date: LMS 4/11/14

Table C-2
CSX Subsurface Soil

Parameter	Mininum Detected	Maximum Detected	Frequency	EPC	Basis	Notification Concentration	Maximum Off-Site Subsurface RRS	Goal	Removal	
<u>Pesticides</u>										
alpha, beta, delta-BHC	0.0032	222	22 / 86	19.1	97.5% KM(Chebyshev) UCL	0.66	**0.66**	>6.5	DW-2B (16-17.5)	These samples are from 1980s.
alpha -BHC	0.0026	26	13 / 66	3.08	97.5% KM(Chebyshev) UCL	0.66	**0.66**	>4.4	SB-5 (18.5-20)	
alpha-Chlordane	0.0053	0.068	5 / 34	0.07	Max	9.2	9.2			
Chlordane	0.0031	466	26 / 152	22.6	97.5% KM(Chebyshev) UCL	9.2	**9.2**	>1.6	DW-2B (16-17.5)	
gamma-Chlordane	0.0045	0.035	5 / 34	0.00829	95% KM (t) UCL	9.2	9.2			
DDD	0.0021	3.8	4 / 91	0.127	95% KM (t) UCL	0.66	0.66			
DDE	0.0045	78	25 / 153	3.78	97.5% KM(Chebyshev) UCL	0.66	0.66	>1.77	DW-2B (16-17.5)	
DDT	0.0022	774	43 / 153	38.1	97.5% KM(Chebyshev) UCL	0.66	**0.66**	>110	DW-2B (16-17.5)	
Dieldrin	0.065	0.22	2 / 92	0.22	Max	0.66	0.66			
gamma-BHC (Lindane)	0.005	33	28 / 153	1.92	97.5% KM(Chebyshev) UCL	0.66	0.66			
Heptachlor	0.0021	1.3	18 / 153	0.0488	95% KM (Chebyshev) UCL	0.66	0.66			
Toxaphene	0.077	700	12 / 152	34.9	97.5% KM(Chebyshev) UCL	11	**11**	>17.1	DW-2B (16-17.5)	
<u>Inorganic compounds</u>										
Arsenic	0.061	840	91 / 144	111	97.5% KM(Chebyshev) UCL	41	**41**	>287	8 PTS. With some at depth	
Copper	13.5	85.6	5 / 5	63.25	95% Student's-t UCL	1500	1500			
Lead	2.9	200	37 / 37	30.6	Mean	400	400			
Zinc	25.4	89.2	5 / 5	74.4	95% Student's-t UCL	2800	2800			

mg/kg milligrams per kilograms
UCL Upper confidence limit of the arithmetic mean. Calculated with ProUCL Version 4.1.
EPC Exposure Point Concentration
Basis of EPC - Recommended UCL is listed if sufficient data to calculate the UCL. The mean is used for lead per modeling guidance. For detections less than 3 or when a high detection limit exceeds the maximum, the maximum concentration is listed.
Notification Concentration from Appendix I of the HSRA Rule.
Target RRS - Higher of Type 1 and Type 3 RRS
Bolded RRS - The EPC exceeds the target RRS.
Goal to Achieve - Sample concentrations were ranked from low to high. The higher concentrations were removed from the data set and the UCL recalculated until the revised UCL was less than the target RRS. All samples greater than the indicated value were removed.
Removal of Soil Locations to Achieve EPC< RRS - Location of samples causing the EPC to exceed the target RRS.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

Table C-3
BFEL Surface Soil

Parameter	Mininum Detected, mg/kg	Maximum Detected, mg/kg	Frequency of Detection	Exposure Point Concentration (EPC), mg/kg	Basis for EPC	Notification Concentration, mg/kg	Target (Maximum On-Site Surface) RRS, mg/kg	Goal to Achieve (EPC < RRS)	Removal of Soil Locations to Achieve EPC < Target RRS
VOCs/SVOCs									
2,4-Dinitrotoluene	7.5	7.5	1 / 22	7.5	Max	0.66	1200	NA	
Acenaphthene	0.41	0.75	2 / 20	0.75	Max	300	NA	NA	
Acenaphthylene	0.14	0.72	4 / 20	0.72	Max	130	NA	NA	
Anthracene	0.064	6.9	7 / 20	1.7	95% KM (t) UCL	500	190000	NA	
Benzo(a)anthracene	0.025	32	20 / 33	14	99% KM (Chebyshev) UCL	5	590	NA	
Benzo(a)pyrene	0.0052	14	20 / 33	2.3	95% KM (BCA) UCL	1.6	59	NA	
Benzo(b)fluoranthene	0.0052	2.9	7 / 13	0.87	95% KM (BCA) UCL	5	590	NA	
Benzo(b,k)fluoranthene	0.096	22	13 / 20	6.2	95% KM (BCA) UCL	5	590	NA	
Benzo(ghi)pyrene	0.025	21	12 / 33	2.5	95% KM (t) UCL	500	500	NA	
Benzo(k)fluoranthene	0.0021	0.99	7 / 13	0.42	95% KM (t) UCL	5	5900	NA	
Chrysene	0.13	32	19 / 33	14	99% KM (Chebyshev) UCL	5	59000	NA	
Fluoranthene	0.18	34	18 / 33	17	99% KM (Chebyshev) UCL	500	25000	NA	
Fluorene	0.41	0.57	2 / 20	0.57	Max	360	NA	NA	
Indeno(1,2,3-cd)pyrene	0.31	3.4	6 / 20	1.3	95% KM (t) UCL	5	590	NA	
Naphthalene	0.071	0.25	4 / 20	0.25	Max	100	NA	NA	
Phenanthrene	0.55	0.9	3 / 12	0.67	95% KM (t) UCL	110	110	NA	
Pyrene	0.087	32	20 / 33	17	99% KM (Chebyshev) UCL	500	19000	NA	
Pesticides									
Aldrin	0.039	140	4 / 22	19	95% KM (t) UCL	0.66	19	NA	
alpha, beta, delta-BHC	0.006	40.7	26 / 29	11	95% KM (Chebyshev) UCL	0.66	69	NA	
alpha -BHC	0.005	960	21 / 42	254	99% KM (Chebyshev) UCL	0.66	**69**	>19	SS-24
alpha-Chlordane	0.041	4.1	3 / 6	4.1	Max	9.2	310	NA	
beta-BHC	0.0092	930	17 / 35	300	99% KM (Chebyshev) UCL	0.66	**240**	>110	SS-24
Chlordane	0.012	390	51 / 83	61	97.5% KM (Chebyshev) UCL	9.2	310	NA	
DDD	0.013	550	23 / 63	81	97.5% KM (Chebyshev) UCL	0.66	1800	NA	
DDE	0.0029	94	57 / 73	12	95% KM (Chebyshev) UCL	0.66	1300	NA	
DDT	0.003	9100	62 / 73	1140	97.5% KM (Chebyshev) UCL	0.66	**310**	>1280	SS-24, SS-2, SS-21
delta-BHC	0.003	69	9 / 37	6.6	95% KM (t) UCL	25	240	NA	
Dieldrin	0.0052	590	20 / 64	70	97.5% KM (Chebyshev) UCL	0.66	**27**	>78	SS-24
Endosulfan sulfate	1.3	1.3	1 / 20	1.3	Max	1.7	NA	NA	
Endosulfan I	0.005	0.005	1 / 20	0.0050	Max	10	NA	NA	
Endrin	0.15	38	4 / 45	2.7	95% KM (t) UCL	10	190	NA	
gamma-BHC (Lindane)	0.0051	14	37 / 71	0.87	95% KM (BCA) UCL	0.66	190	NA	
gamma-Chlordane	0.029	4.6	4 / 6	4.6	Max	9.2	310	NA	
Heptachlor	0.0070	210	33 / 73	22	97.5% KM (Chebyshev) UCL	0.66	96	NA	
Heptachlor epoxide	0.008	0.96	3 / 20	0.96	Max	1.7	NA	NA	
Methoxychlor	0.031	0.067	2 / 64	0.067	Max	10	3100	NA	
Toxaphene	0.25	1633	28 / 74	190	97.5% KM (Chebyshev) UCL	11	390	NA	
Inorganic compounds									
Sulfate	160	1200	6 / 6	960	95% Student's-t UCL	NR	25000	NA	
Cyanide	1.8	1.8	1 / 20	1.8	Max	10	370	NA	
Antimony	20	30	2 / 20	30	Max	10	250	NA	
Arsenic	1.2	1100	60 / 70	213	97.5% KM (Chebyshev) UCL	41	290	NA	
Barium	28	2000	20 / 23	817	95% KM (Chebyshev) UCL	500	120000	NA	
Beryllium	1.1	1.8	3 / 20	1.8	Max	3	NA	NA	
Chromium	5.9	68	20 / 20	37	95% Approximate Gamma UCL	1200	NA	NA	
Copper	4.12	800	38 / 41	279	95% KM (Chebyshev) UCL	1500	25000	NA	
Lead	8.4	7450	55 / 56	1008	Mean	400	**600**	>3923	HA-106 (1-2), SS-07 (0-2), SS-20 (0-1), SB-173 (0-2)
Mercury	0.1	0.33	2 / 23	0.33	Max	17	NA	NA	
Nickel	36	120	5 / 23	52	95% KM (t) UCL	420	12000	NA	
Silver	6.1	14	5 / 23	8.1	95% KM (t) UCL	10	3100	NA	
Thallium	2.9	8.8	5 / 20	4.3	95% KM (t) UCL	10	10	NA	
Zinc	35.4	3200	41 / 41	529	95% H-UCL	2800	190000	NA	

mg/kg milligrams
UCL Upper confidence limit of the arithmetic mean. Calculated with ProUCL Version 4.00.05.
EPC Exposure Point Concentration
Basis of EPC - Recommended UCL is listed if sufficient data to calculate the UCL. The mean is used for lead per modeling guidance. For detections less than 3 or when a high detection limit exceeds the maximum, the maximum concentration is listed.
Notification Concentration from Appendix I of the HSRA Rule.
Target RRS - Target Risk Reduction Standard for On-Site Surface Soil (Nonresidential exposures) from VRP RRS Summary Table.
Bolded RRS - The EPC exceeds the target RRS.
Goal to Achieve - Sample concentrations were ranked from low to high. The higher concentrations were removed from the data set and the UCL recalculated until the revised UCL was less than the target RRS. All samples greater than the indicated value were removed.
Removal of Soil Locations to Achieve EPC< RRS - Location of samples causing the EPC to exceed the target RRS.

PREPARED/DATE: MKB 4/7/14
CHECKED/DATE: LMS 1/30/15

Table C-4
BFEL Subsurface Soil

Parameter	Mininum Detected, mg/kg	Maximum Detected, mg/kg	Frequency of Detection	Exposure Point Concentration (EPC), mg/kg	Basis for EPC	Notification Concentration, mg/kg	Maximum On-Site Subsurface RRS	Goal to Achieve EPC < RRS	Removal of Soil Locations to Achieve EPC < Target RRS
VOCs/SVOCs									
2,4-Dinitrotoluene	0.53	0.53	1 / 4	0.53	Max	0.66	1200	NA	
Benzo(a)anthracene	0.022	2.9	2 / 9	2.9	Max	5	600	NA	
Benzo(a)pyrene	0.0021	3.8	4 / 9	1.3	95% KM (t) UCL	1.6	59	NA	
Benzo(b)fluoranthene	0.0054	2.2	3 / 6	2.2	Max	5	590	NA	
Benzo(b,k)fluoranthene	0.13	0.13	1 / 3	0.13	Max	5	590	NA	
Benzo(ghi)pyrene	0.079	0.58	2 / 9	0.58	Max	500	500	NA	
Benzo(k)fluoranthene	0.0021	1.3	3 / 6	1.3	Max	5	5900	NA	
Chrysene	0.056	5.5	3 / 9	2.0	95% KM (t) UCL	5	59000	NA	
Fluoranthene	0.33	11	2 / 9	11	Max	500	25000	NA	
Naphthalene	0.12	0.12	1 / 3	0.12	Max	100	NA	NA	
Phenanthrene	3.9	3.9	1 / 6	3.9	Max	110	110	NA	
Pyrene	0.32	16	2 / 9	16	Max	500	19000	NA	
Pesticides									
Aldrin	9.14	9.1	1 / 4	9.1	Max	0.66	19	NA	
alpha, beta, delta-BHC	0.005	44	49 / 90	4.1	97.5% KM (Chebyshev) UCL	0.66	69	NA	
alpha -BHC	0.0034	41	19 / 74	5.3	97.5% KM (Chebyshev) UCL	0.66	69	NA	
alpha-Chlordane	0.00970	1.5	4 / 6	0.8	95% KM (t) UCL	9.2	310	NA	
beta-BHC	0.0068	10.6	4 / 29	1.1	95% KM (t) UCL	0.66	241	NA	
Chlordane	0.00200	191	57 / 157	9.6	97.5% KM (Chebyshev) UCL	9.2	310	NA	
DDD	0.0022	59	18 / 117	5.5	97.5% KM (Chebyshev) UCL	0.66	1800	NA	
DDE	0.0025	17	38 / 157	1.2	97.5% KM (Chebyshev) UCL	0.66	1300	NA	
DDT	0.0036	555	67 / 157	37	97.5% KM (Chebyshev) UCL	0.66	310	NA	
delta-bHC	0.00300	0.043	3 / 29	0.0073	95% KM (t) UCL	25	240	NA	
Dieldrin	0.0019	8.1	12 / 117	0.76	97.5% KM (Chebyshev) UCL	0.66	27	NA	
gamma-BHC (Lindane)	0.00111	19	55 / 158	0.75	95% KM (Chebyshev) UCL	0.66	190	NA	
gamma-Chlordane	0.014	1.2	4 / 6	0.638	95% KM (t) UCL	9.2	310	NA	
Heptachlor	0.00600	6.2	40 / 157	0.30	97.5% KM (Chebyshev) UCL	0.66	96	NA	
Methoxychlor	0.08	0.08	1 / 111	0.080	Max	10	3100	NA	
Toxaphene	0.12	592	23 / 157	32	97.5% KM (Chebyshev) UCL	11	390	NA	
Inorganic compounds									
Sulfate	130	850	6 / 6	646	95% Student's-t UCL	NR	25000	NA	
Arsenic	0.68	3300	133 / 175	240	97.5% KM (Chebyshev) UCL	41	290	NA	
Barium	83	270	3 / 15	262	95% KM (t) UCL	500	120000	NA	
Beryllium	1	1	1 / 3	1	Max	3	NA	NA	
Chromium	2	18	3 / 3	18	Max	1200	NA	NA	
Copper	11.00	463	17 / 27	133	95% Adjusted Gamma KM-UCL	1500	25000	NA	
Lead	5.4	65300	44 / 53	1409	Mean	400	**600**	>3100	HA-111 (5-6')
Mercury	0.26	0.26	1 / 15	0.26	Max	17	NA	NA	
Nickel	31.5	31.5	1 / 15	32	Max	420	12000	NA	
Zinc	46.0	1210	23 / 27	485	95% KM (Chebyshev) UCL	2800	190000	NA	

mg/kg milligrams per kilograms
UCL Upper confidence limit of the arithmetic mean. Calculated with ProUCL Version 4.00.05.
EPC Exposure Point Concentration
Basis of EPC - Recommended UCL is listed if sufficient data to calculate the UCL. The mean is used for lead per modeling guidance. For detections less than 3 or when a high detection limit exceeds the maximum, the maximum concentration is listed.
Notification Concentration from Appendix I of the HSRA Rule.
Target RRS - Target Risk Reduction Standard for Subsurface Soil (Nonresidential exposures) from VRP RRS Summary Table.
Bolded RRS - The EPC exceeds the target RRS.

Goal to Achieve - Sample concentrations were ranked from low to high. The higher concentrations were removed from the data set and the UCL recalculated until the revised UCL was less than the target RRS. All samples greater than the indicated value were removed.
Removal of Soil Locations to Achieve EPC< RRS - Location of samples causing the EPC to exceed the target RRS.

PREPARED/DATE: MKB 1/16/14
CHECKED/DATE: LMS 1/30/15

Location	Substance	Result	Detects	Date
MW-102	alpha-BHC	0.001	0	2/24/1997
SB-102	alpha-BHC	0.001	0	2/24/1997
HA-107 (1-2')	alpha-BHC	0.0021	0	12/2/1999
HA-103 (1-2')	alpha-BHC	0.0022	0	12/1/1999
HA-111 (1-2')	alpha-BHC	0.0022	0	12/1/1999
HA-110 (1-2')	alpha-BHC	0.0023	0	12/2/1999
HA-105 (1-2')	alpha-BHC	0.0024	0	12/1/1999
HA-106 (1-2')	alpha-BHC	0.0024	0	12/2/1999
HA-112 (1-2')	alpha-BHC	0.0024	0	12/1/1999
HA-104 (1'-2')	alpha-BHC	0.0025	0	11/30/1999
HA-109 (1-2')	alpha-BHC	0.0025	0	12/2/1999
HA-114 (1-2')	alpha-BHC	0.0025	0	12/1/1999
SS-22	alpha-BHC	0.005	1	2/5/1988
SS-08	alpha-BHC	0.007	1	2/5/1988
HA-113 (1-2')	alpha-BHC	0.011	1	12/1/1999
SS-01	alpha-BHC	0.011	0	2/5/1988
HA-101 (1'-2')	alpha-BHC	0.012	0	12/1/1999
HA-102 (1'-2')	alpha-BHC	0.012	0	12/1/1999
MW-101	alpha-BHC	0.022	1	7/1/1997
SS-20	alpha-BHC	0.022	1	2/5/1988
SB-1	alpha-BHC	0.025	1	1/11/1984
SS-10	alpha-BHC	0.043	1	2/5/1988
SB-3	alpha-BHC	0.044	1	1/11/1984
SB-2	alpha-BHC	0.089	1	1/11/1984
SS-14	alpha-BHC	0.092	1	2/5/1988
SS-18	alpha-BHC	0.095	1	2/5/1988
SS-13	alpha-BHC	0.1	0	2/5/1988
SS-02	alpha-BHC	0.11	0	2/5/1988
SS-03	alpha-BHC	0.12	1	2/5/1988
SS-07	alpha-BHC	0.15	1	2/5/1988
SB-16	alpha-BHC	0.185	1	4/17/1985
SB-101	alpha-BHC	0.234	1	2/24/1997
SS-15	alpha-BHC	0.32	1	2/5/1988
SS-19	alpha-BHC	0.67	1	2/5/1988
SS-09	alpha-BHC	1	0	2/5/1988
SS-16	alpha-BHC	1	0	2/5/1988
SS-04	alpha-BHC	1.6	0	2/5/1988
SS-05	alpha-BHC	1.7	0	2/5/1988
HA-108 (1-2')	alpha-BHC	4.7	1	12/1/1999
SS-23	alpha-BHC	5.5	1	2/5/1988
SS-21	alpha-BHC	19	1	2/5/1988
SS-24	alpha-BHC	960	1	2/5/1988
SB-13	Arsenic	0.59	0	4/18/1985
SS-22	Arsenic	0.6	0	2/5/1988
SS-16	Arsenic	1.1	0	2/5/1988
HA-107 (1-2')	Arsenic	1.2	1	12/2/1999
SB-170 (0-2')	Arsenic	1.3	1	5/30/2007
SB-175 (0-2')	Arsenic	1.5	1	5/30/2007
SB-171 (0-2')	Arsenic	2.2	1	5/30/2007
HA-104 (1'-2')	Arsenic	2.4	1	11/30/1999
SS-18	Arsenic	2.5	0	2/5/1988
HA-113 (1-2')	Arsenic	2.8	1	12/1/1999
MW-2	Arsenic	4	1	8/16/1983
SS-5	Arsenic	4	1	2/8/1984

HA-114 (1-2')	Arsenic	4.4	1	12/1/1999
SB-150 (0-2)	Arsenic	4.5	1	6/22/2005
HA-108 (1-2')	Arsenic	6.1	0	12/1/1999
MW-23	Arsenic	6.4	1	4/17/1985
MW-1	Arsenic	7.4	1	8/15/1983
HA-101 (1'-2')	Arsenic	7.5	1	12/1/1999
MW-26	Arsenic	8.41	1	6/18/1985
HA-102 (1'-2')	Arsenic	8.6	1	12/1/1999
SB-8	Arsenic	8.7	1	1/19/1984
HA-109 (1-2')	Arsenic	9.2	1	12/2/1999
HA-110 (1-2')	Arsenic	10	0	12/2/1999
HA-112 (1-2')	Arsenic	10	0	12/1/1999
SB-14	Arsenic	10.8	1	4/16/1985
SB-12	Arsenic	11	1	1/27/1984
SB-141 (0-2)	Arsenic	12	1	6/23/2005
SB-172 (0-2')	Arsenic	12	1	5/30/2007
SB-101	Arsenic	12.2	1	2/24/1997
HA-105 (1-2')	Arsenic	14	0	12/1/1999
MW-15	Arsenic	14	1	1/23/1984
SB-3	Arsenic	14	1	1/11/1984
MW-27	Arsenic	20.8	1	6/17/1985
SB-147 (0-2)	Arsenic	21	1	6/23/2005
SB-148 (0-2)	Arsenic	22	1	6/23/2005
SB-9	Arsenic	22	1	1/19/1984
MW-10	Arsenic	23	1	1/23/1984
MW-102	Arsenic	23	0	2/24/1997
SB-133 (0-2)	Arsenic	23	1	6/23/2005
MW-11	Arsenic	24	1	1/25/1984
SS-4	Arsenic	24	1	2/8/1984
SB-102	Arsenic	25	0	2/24/1997
SB-137 (0-2)	Arsenic	25	1	6/23/2005
SS-2	Arsenic	26	1	2/8/1984
SS-9	Arsenic	26	1	2/8/1984
SB-10	Arsenic	27	1	1/27/1984
SB-16	Arsenic	34	1	4/17/1985
SS-1	Arsenic	34	1	2/8/1984
SB-135 (0-2)	Arsenic	36	1	6/22/2005
HA-111 (1-2')	Arsenic	42.2	1	12/1/1999
SB-2	Arsenic	51	1	1/11/1984
HA-103 (1-2')	Arsenic	53.5	1	12/1/1999
MW-9	Arsenic	55	1	1/24/1984
SS-3	Arsenic	66	1	2/8/1984
SB-1	Arsenic	68	1	1/11/1984
SS-8	Arsenic	71	1	2/8/1984
SS-6	Arsenic	94	1	2/8/1984
MW-8	Arsenic	97	1	1/26/1984
SB-142 (0-2)	Arsenic	120	1	6/23/2005
MW-14	Arsenic	150	1	2/8/1984
MW-21	Arsenic	169	1	4/18/1985
MW-12	Arsenic	210	1	1/20/1984
MW-101	Arsenic	215	1	7/1/1997
MW-13	Arsenic	240	1	1/26/1984
SB-174 (0-2')	Arsenic	250	1	5/30/2007
SB-15	Arsenic	332	1	4/18/1985
SS-7	Arsenic	440	1	2/8/1984

MW-22	Arsenic	539	1	4/16/1985
HA-106 (1-2')	Arsenic	694	1	12/2/1999
SB-173 (0-2')	Arsenic	1100	1	5/30/2007
MW-102	beta-BHC	0.002	0	2/24/1997
SB-102	beta-BHC	0.002	0	2/24/1997
HA-107 (1-2')	beta-BHC	0.0021	0	12/2/1999
HA-103 (1-2')	beta-BHC	0.0022	0	12/1/1999
HA-111 (1-2')	beta-BHC	0.0022	0	12/1/1999
HA-110 (1-2')	beta-BHC	0.0023	0	12/2/1999
HA-105 (1-2')	beta-BHC	0.0024	0	12/1/1999
HA-106 (1-2')	beta-BHC	0.0024	0	12/2/1999
HA-112 (1-2')	beta-BHC	0.0024	0	12/1/1999
HA-104 (1'-2')	beta-BHC	0.0025	0	11/30/1999
HA-109 (1-2')	beta-BHC	0.0025	0	12/2/1999
HA-114 (1-2')	beta-BHC	0.0025	0	12/1/1999
HA-102 (1'-2')	beta-BHC	0.0092	1	12/1/1999
SS-01	beta-BHC	0.011	0	2/5/1988
HA-101 (1'-2')	beta-BHC	0.012	0	12/1/1999
SS-08	beta-BHC	0.031	1	2/5/1988
MW-101	beta-BHC	0.037	1	7/1/1997
SS-13	beta-BHC	0.039	1	2/5/1988
SS-20	beta-BHC	0.08	1	2/5/1988
HA-113 (1-2')	beta-BHC	0.093	1	12/1/1999
SS-22	beta-BHC	0.1	0	2/5/1988
SS-02	beta-BHC	0.11	0	2/5/1988
SS-19	beta-BHC	0.23	1	2/5/1988
SS-14	beta-BHC	0.25	1	2/5/1988
SS-04	beta-BHC	0.73	1	2/5/1988
SS-03	beta-BHC	0.9	1	2/5/1988
SS-09	beta-BHC	1	0	2/5/1988
SS-05	beta-BHC	1.4	1	2/5/1988
SS-10	beta-BHC	1.5	1	2/5/1988
SS-15	beta-BHC	1.7	1	2/5/1988
SB-101	beta-BHC	5.2	0	2/24/1997
HA-108 (1-2')	beta-BHC	8.6	1	12/1/1999
SS-23	beta-BHC	18	1	2/5/1988
SS-21	beta-BHC	110	1	2/5/1988
SS-24	beta-BHC	930	1	2/5/1988
TW-12-0-2	Copper	4.12037	1	05/16/12
TW-10-0-2	Copper	10.0684	1	05/15/12
TW-7-0-2	Copper	14.0225	1	05/15/12
TW-9-0-2	Copper	19.8609	1	05/15/12
SS-14	Copper	21	1	2/5/1988
SS-01	Copper	24	1	2/5/1988
TW-5-0-2	Copper	26.4208	1	05/14/12
SS-21	Copper	31	1	2/5/1988
TW-8-0-2	Copper	33.9633	1	05/15/12
SS-22	Copper	43	1	2/5/1988
SS-02	Copper	44	1	2/5/1988
SS-08	Copper	44	1	2/5/1988
SB-171 (0-2')	Copper	46	1	5/30/2007
MW-102	Copper	50	0	2/24/1997
SS-09	Copper	50	0	2/5/1988
SS-18	Copper	52	1	2/5/1988
SS-13	Copper	54	1	2/5/1988

SS-04	Copper	67	1	2/5/1988
TW-11-0-2	Copper	67.3435	1	05/16/12
SB-175 (0-2')	Copper	69	1	5/30/2007
TW-6-0-2	Copper	70.392	1	05/15/12
TW-2-0-2	Copper	73.6026	1	05/14/12
SS-15	Copper	74	1	2/5/1988
SB-102	Copper	88	1	2/24/1997
SB-172 (0-2')	Copper	94	1	5/30/2007
SS-16	Copper	99	1	2/5/1988
SS-23	Copper	100	1	2/5/1988
SS-19	Copper	110	1	2/5/1988
TW-1-0-2	Copper	119.453	1	05/14/12
TW-4-0-2	Copper	136.179	1	05/14/12
SB-170 (0-2')	Copper	140	1	5/30/2007
SS-24	Copper	160	1	2/5/1988
SB-173 (0-2')	Copper	190	1	5/30/2007
SB-174 (0-2')	Copper	240	1	5/30/2007
SB-101	Copper	250	0	2/24/1997
TW-3-0-2	Copper	364.459	1	05/14/12
SS-05	Copper	400	1	2/5/1988
SS-07	Copper	460	1	2/5/1988
SS-20	Copper	610	1	2/5/1988
SS-03	Copper	790	1	2/5/1988
SS-10	Copper	800	1	2/5/1988
HA-107 (1-2')	DDD	0.0021	0	12/2/1999
HA-103 (1-2')	DDD	0.0022	0	12/1/1999
HA-110 (1-2')	DDD	0.0023	0	12/2/1999
HA-105 (1-2')	DDD	0.0024	0	12/1/1999
HA-106 (1-2')	DDD	0.0024	0	12/2/1999
HA-112 (1-2')	DDD	0.0024	0	12/1/1999
MW-101	DDD	0.0024	0	7/1/1997
HA-104 (1'-2')	DDD	0.0025	0	11/30/1999
HA-109 (1-2')	DDD	0.0025	0	12/2/1999
HA-114 (1-2')	DDD	0.0025	0	12/1/1999
MW-102	DDD	0.003	0	2/24/1997
SB-102	DDD	0.003	0	2/24/1997
MW-1	DDD	0.01	0	8/15/1983
MW-2	DDD	0.01	0	8/16/1983
SS-02	DDD	0.013	1	2/5/1988
HA-111 (1-2')	DDD	0.019	1	12/1/1999
MW-11	DDD	0.02	0	1/25/1984
MW-15	DDD	0.02	0	1/23/1984
MW-9	DDD	0.02	0	1/24/1984
SB-1	DDD	0.02	0	1/11/1984
SB-10	DDD	0.02	0	1/27/1984
SB-12	DDD	0.02	0	1/27/1984
SB-2	DDD	0.02	0	1/11/1984
SB-3	DDD	0.02	0	1/11/1984
SB-9	DDD	0.02	0	1/19/1984
SS-1	DDD	0.02	0	2/8/1984
SS-2	DDD	0.02	0	2/8/1984
SS-4	DDD	0.02	0	2/8/1984
SS-5	DDD	0.02	0	2/8/1984
SS-6	DDD	0.02	0	2/8/1984
SS-8	DDD	0.02	0	2/8/1984

SS-9	DDD	0.02	0	2/8/1984
SS-01	DDD	0.022	0	2/5/1988
SS-22	DDD	0.03	1	2/5/1988
MW-10	DDD	0.05	0	1/23/1984
MW-12	DDD	0.05	0	1/20/1984
SS-7	DDD	0.05	0	2/8/1984
MW-13	DDD	0.1	0	1/26/1984
MW-8	DDD	0.1	0	1/26/1984
HA-101 (1'-2')	DDD	0.13	1	12/1/1999
SS-08	DDD	0.2	0	2/5/1988
SS-3	DDD	0.2	0	2/8/1984
SS-13	DDD	0.21	1	2/5/1988
SS-14	DDD	0.22	1	2/5/1988
SS-16	DDD	0.28	1	2/5/1988
HA-102 (1'-2')	DDD	0.3	1	12/1/1999
SB-8	DDD	0.34	1	1/19/1984
SS-10	DDD	0.35	1	2/5/1988
SS-07	DDD	0.54	1	2/5/1988
SS-18	DDD	0.66	1	2/5/1988
SS-19	DDD	0.91	1	2/5/1988
MW-14	DDD	1	0	2/8/1984
SS-15	DDD	1.8	1	2/5/1988
HA-113 (1-2')	DDD	1.9	1	12/1/1999
SS-04	DDD	3.7	1	2/5/1988
SS-05	DDD	3.9	1	2/5/1988
SS-09	DDD	7.1	1	2/5/1988
SB-101	DDD	7.8	0	2/24/1997
SS-03	DDD	18	1	2/5/1988
SS-23	DDD	45	1	2/5/1988
SS-21	DDD	120	1	2/5/1988
HA-108 (1-2')	DDD	310	1	12/1/1999
SS-24	DDD	550	1	2/5/1988
MW-102	DDE	0.001	0	2/24/1997
SB-102	DDE	0.001	0	2/24/1997
HA-107 (1-2')	DDE	0.0021	0	12/2/1999
HA-110 (1-2')	DDE	0.0023	0	12/2/1999
HA-106 (1-2')	DDE	0.0024	0	12/2/1999
HA-114 (1-2')	DDE	0.0025	0	12/1/1999
HA-104 (1'-2')	DDE	0.0029	1	11/30/1999
HA-103 (1-2')	DDE	0.0031	1	12/1/1999
SB-14	DDE	0.004	0	4/16/1985
HA-112 (1-2')	DDE	0.0059	1	12/1/1999
HA-109 (1-2')	DDE	0.0065	1	12/2/1999
MW-1	DDE	0.01	0	8/15/1983
MW-2	DDE	0.01	0	8/16/1983
HA-105 (1-2')	DDE	0.016	1	12/1/1999
SB-1	DDE	0.02	0	1/11/1984
SB-2	DDE	0.02	0	1/11/1984
SB-3	DDE	0.02	0	1/11/1984
SB-9	DDE	0.02	0	1/19/1984
MW-101	DDE	0.036	1	7/1/1997
HA-101 (1'-2')	DDE	0.048	1	12/1/1999
HA-102 (1'-2')	DDE	0.052	1	12/1/1999
MW-15	DDE	0.055	1	1/23/1984
SS-01	DDE	0.073	1	2/5/1988

SS-6	DDE	0.097	1	2/8/1984
HA-111 (1-2')	DDE	0.1	1	12/1/1999
MW-21	DDE	0.116	1	4/18/1985
SS-20	DDE	0.12	1	2/5/1988
SS-14	DDE	0.13	1	2/5/1988
SS-08	DDE	0.14	1	2/5/1988
SS-22	DDE	0.21	0	2/5/1988
SB-13	DDE	0.308	1	4/18/1985
HA-113 (1-2')	DDE	0.31	1	12/1/1999
MW-26	DDE	0.341	1	6/18/1985
SS-5	DDE	0.41	1	2/8/1984
SS-13	DDE	0.46	1	2/5/1988
MW-11	DDE	0.488	1	1/25/1984
SB-16	DDE	0.526	1	4/17/1985
SB-15	DDE	0.596	1	4/18/1985
SS-19	DDE	0.78	1	2/5/1988
SS-16	DDE	0.79	1	2/5/1988
SS-4	DDE	0.85	1	2/8/1984
HA-108 (1-2')	DDE	0.99	1	12/1/1999
SS-02	DDE	1.1	1	2/5/1988
SS-10	DDE	1.2	1	2/5/1988
SS-07	DDE	1.4	1	2/5/1988
MW-22	DDE	2.01	1	4/16/1985
SB-8	DDE	2.1	1	1/19/1984
SS-18	DDE	2.1	0	2/5/1988
SS-05	DDE	2.2	1	2/5/1988
SS-23	DDE	2.3	1	2/5/1988
SS-8	DDE	2.5	1	2/8/1984
SB-101	DDE	2.6	0	2/24/1997
SS-15	DDE	2.7	1	2/5/1988
SB-10	DDE	3.3	1	1/27/1984
MW-9	DDE	3.67	1	1/24/1984
MW-10	DDE	4	1	1/23/1984
SS-04	DDE	4.2	1	2/5/1988
MW-8	DDE	4.7	1	1/26/1984
SB-12	DDE	5	1	1/27/1984
SS-09	DDE	5.1	1	2/5/1988
MW-12	DDE	5.2	1	1/20/1984
SS-1	DDE	5.9	1	2/8/1984
SS-9	DDE	6.7	1	2/8/1984
MW-27	DDE	7.2	1	6/17/1985
SS-3	DDE	7.3	1	2/8/1984
SS-03	DDE	9.3	1	2/5/1988
MW-23	DDE	12.68	1	4/17/1985
MW-13	DDE	15	1	1/26/1984
MW-14	DDE	15	1	2/8/1984
SS-7	DDE	31.2	1	2/8/1984
SS-21	DDE	45	1	2/5/1988
SS-2	DDE	59	1	2/8/1984
SS-24	DDE	94	1	2/5/1988
HA-107 (1-2')	DDT	0.0021	0	12/2/1999
HA-103 (1-2')	DDT	0.0022	0	12/1/1999
HA-110 (1-2')	DDT	0.0023	0	12/2/1999
HA-106 (1-2')	DDT	0.0024	0	12/2/1999
HA-104 (1'-2')	DDT	0.0025	0	11/30/1999

HA-109 (1-2')	DDT	0.0025	0	12/2/1999
HA-114 (1-2')	DDT	0.0025	0	12/1/1999
HA-105 (1-2')	DDT	0.003	1	12/1/1999
SB-102	DDT	0.003	0	2/24/1997
SB-14	DDT	0.004	0	4/16/1985
MW-102	DDT	0.00668	1	2/24/1997
MW-1	DDT	0.01	0	8/15/1983
SB-9	DDT	0.02	0	1/19/1984
HA-112 (1-2')	DDT	0.023	1	12/1/1999
HA-101 (1'-2')	DDT	0.048	1	12/1/1999
HA-102 (1'-2')	DDT	0.055	1	12/1/1999
SS-01	DDT	0.061	1	2/5/1988
MW-21	DDT	0.0662	1	4/18/1985
HA-111 (1-2')	DDT	0.12	1	12/1/1999
MW-15	DDT	0.203	1	1/23/1984
SB-13	DDT	0.326	1	4/18/1985
MW-2	DDT	0.364	1	8/16/1983
MW-101	DDT	0.37	1	7/1/1997
SS-08	DDT	0.4	1	2/5/1988
SS-6	DDT	0.4	1	2/8/1984
SB-3	DDT	0.75	1	1/11/1984
SS-02	DDT	0.79	1	2/5/1988
SS-13	DDT	0.88	1	2/5/1988
SS-5	DDT	1.04	1	2/8/1984
SS-22	DDT	1.2	1	2/5/1988
SS-20	DDT	1.3	1	2/5/1988
MW-11	DDT	1.36	1	1/25/1984
SS-14	DDT	2	1	2/5/1988
SB-16	DDT	2.9	1	4/17/1985
SB-15	DDT	2.986	1	4/18/1985
SS-4	DDT	3	1	2/8/1984
SB-8	DDT	3.7	1	1/19/1984
SB-12	DDT	5.3	1	1/27/1984
SS-18	DDT	6	1	2/5/1988
MW-22	DDT	6.58	1	4/16/1985
SB-1	DDT	7.7	1	1/11/1984
SS-19	DDT	8	1	2/5/1988
SB-2	DDT	9.39	1	1/11/1984
SS-10	DDT	9.6	1	2/5/1988
SS-16	DDT	10	1	2/5/1988
HA-113 (1-2')	DDT	11	1	12/1/1999
SS-07	DDT	11	1	2/5/1988
MW-26	DDT	15	1	6/18/1985
SB-10	DDT	15.1	1	1/27/1984
MW-9	DDT	20	1	1/24/1984
SS-09	DDT	21	1	2/5/1988
SS-15	DDT	25	1	2/5/1988
SS-1	DDT	27.2	1	2/8/1984
SS-9	DDT	27.5	1	2/8/1984
SS-05	DDT	41	1	2/5/1988
MW-12	DDT	51	1	1/20/1984
SS-04	DDT	54	1	2/5/1988
SS-03	DDT	55	1	2/5/1988
MW-8	DDT	65.6	1	1/26/1984
MW-10	DDT	72.7	1	1/23/1984

HA-108 (1-2')	DDT	77	1	12/1/1999
SS-8	DDT	116	1	2/8/1984
SB-101	DDT	208	1	2/24/1997
SS-3	DDT	219	1	2/8/1984
MW-23	DDT	221.8	1	4/17/1985
MW-27	DDT	236	1	6/17/1985
SS-23	DDT	390	1	2/5/1988
MW-13	DDT	429	1	1/26/1984
MW-14	DDT	600	1	2/8/1984
SS-7	DDT	1280	1	2/8/1984
SS-21	DDT	3100	1	2/5/1988
SS-2	DDT	3370	1	2/8/1984
SS-24	DDT	9100	1	2/5/1988
MW-102	delta-BHC	0.002	0	2/24/1997
SB-102	delta-BHC	0.002	0	2/24/1997
HA-107 (1-2')	delta-BHC	0.0021	0	12/2/1999
HA-103 (1-2')	delta-BHC	0.0022	0	12/1/1999
HA-111 (1-2')	delta-BHC	0.0022	0	12/1/1999
HA-110 (1-2')	delta-BHC	0.0023	0	12/2/1999
HA-105 (1-2')	delta-BHC	0.0024	0	12/1/1999
HA-106 (1-2')	delta-BHC	0.0024	0	12/2/1999
HA-112 (1-2')	delta-BHC	0.0024	0	12/1/1999
HA-104 (1'-2')	delta-BHC	0.0025	0	11/30/1999
HA-109 (1-2')	delta-BHC	0.0025	0	12/2/1999
HA-114 (1-2')	delta-BHC	0.0025	0	12/1/1999
MW-101	delta-BHC	0.003	1	7/1/1997
SS-22	delta-BHC	0.005	1	2/5/1988
SS-01	delta-BHC	0.011	0	2/5/1988
HA-101 (1'-2')	delta-BHC	0.012	0	12/1/1999
HA-102 (1'-2')	delta-BHC	0.012	0	12/1/1999
HA-113 (1-2')	delta-BHC	0.02	1	12/1/1999
SS-19	delta-BHC	0.057	1	2/5/1988
SS-08	delta-BHC	0.1	0	2/5/1988
SS-13	delta-BHC	0.1	0	2/5/1988
SS-02	delta-BHC	0.11	0	2/5/1988
SS-14	delta-BHC	0.13	0	2/5/1988
SB-101	delta-BHC	0.497	1	2/24/1997
SS-07	delta-BHC	1	0	2/5/1988
SS-09	delta-BHC	1	0	2/5/1988
SS-10	delta-BHC	1	0	2/5/1988
SS-16	delta-BHC	1	0	2/5/1988
SS-18	delta-BHC	1	0	2/5/1988
SS-03	delta-BHC	1.5	0	2/5/1988
SS-04	delta-BHC	1.6	0	2/5/1988
SS-20	delta-BHC	1.6	0	2/5/1988
SS-05	delta-BHC	1.7	0	2/5/1988
SS-23	delta-BHC	2	1	2/5/1988
HA-108 (1-2')	delta-BHC	5.9	1	12/1/1999
SS-21	delta-BHC	32	1	2/5/1988
SS-24	delta-BHC	69	1	2/5/1988
MW-102	Dieldrin	0.001	0	2/24/1997
SB-102	Dieldrin	0.001	0	2/24/1997
HA-107 (1-2')	Dieldrin	0.0021	0	12/2/1999
HA-103 (1-2')	Dieldrin	0.0022	0	12/1/1999
HA-111 (1-2')	Dieldrin	0.0022	0	12/1/1999

HA-110 (1-2')	Dieldrin	0.0023	0	12/2/1999
HA-106 (1-2')	Dieldrin	0.0024	0	12/2/1999
MW-101	Dieldrin	0.0024	0	7/1/1997
HA-104 (1'-2')	Dieldrin	0.0025	0	11/30/1999
HA-109 (1-2')	Dieldrin	0.0025	0	12/2/1999
HA-114 (1-2')	Dieldrin	0.0025	0	12/1/1999
MW-1	Dieldrin	0.005	0	8/15/1983
MW-2	Dieldrin	0.005	0	8/16/1983
HA-105 (1-2')	Dieldrin	0.0052	1	12/1/1999
HA-102 (1'-2')	Dieldrin	0.012	0	12/1/1999
MW-11	Dieldrin	0.02	0	1/25/1984
MW-15	Dieldrin	0.02	0	1/23/1984
MW-9	Dieldrin	0.02	0	1/24/1984
SB-10	Dieldrin	0.02	0	1/27/1984
SB-12	Dieldrin	0.02	0	1/27/1984
SB-8	Dieldrin	0.02	0	1/19/1984
SB-9	Dieldrin	0.02	0	1/19/1984
SS-1	Dieldrin	0.02	0	2/8/1984
SS-2	Dieldrin	0.02	0	2/8/1984
SS-4	Dieldrin	0.02	0	2/8/1984
SS-5	Dieldrin	0.02	0	2/8/1984
SS-6	Dieldrin	0.02	0	2/8/1984
SS-8	Dieldrin	0.02	0	2/8/1984
SS-9	Dieldrin	0.02	0	2/8/1984
SS-01	Dieldrin	0.022	0	2/5/1988
HA-112 (1-2')	Dieldrin	0.024	1	12/1/1999
SS-02	Dieldrin	0.034	1	2/5/1988
HA-108 (1-2')	Dieldrin	0.041	0	12/1/1999
MW-10	Dieldrin	0.05	0	1/23/1984
MW-12	Dieldrin	0.05	0	1/20/1984
MW-8	Dieldrin	0.05	0	1/26/1984
SS-7	Dieldrin	0.05	0	2/8/1984
HA-101 (1'-2')	Dieldrin	0.066	1	12/1/1999
SS-08	Dieldrin	0.09	1	2/5/1988
SS-22	Dieldrin	0.094	1	2/5/1988
MW-13	Dieldrin	0.1	0	1/26/1984
SS-13	Dieldrin	0.2	0	2/5/1988
SS-3	Dieldrin	0.2	0	2/8/1984
HA-113 (1-2')	Dieldrin	0.21	1	12/1/1999
SS-23	Dieldrin	0.21	1	2/5/1988
SB-3	Dieldrin	0.23	1	1/11/1984
SS-18	Dieldrin	0.24	1	2/5/1988
SS-14	Dieldrin	0.26	0	2/5/1988
SS-10	Dieldrin	0.37	1	2/5/1988
SS-16	Dieldrin	0.63	1	2/5/1988
SS-15	Dieldrin	0.87	1	2/5/1988
MW-14	Dieldrin	1	0	2/8/1984
SB-1	Dieldrin	1.27	1	1/11/1984
SS-09	Dieldrin	1.3	1	2/5/1988
SB-2	Dieldrin	1.49	1	1/11/1984
SS-07	Dieldrin	2	0	2/5/1988
SS-19	Dieldrin	2	0	2/5/1988
SB-101	Dieldrin	2.63	1	2/24/1997
SS-20	Dieldrin	3.1	0	2/5/1988
SS-03	Dieldrin	3.2	1	2/5/1988

SS-04	Dieldrin	3.3	0	2/5/1988
SS-05	Dieldrin	3.3	0	2/5/1988
SS-21	Dieldrin	78	1	2/5/1988
SS-24	Dieldrin	590	1	2/5/1988
MW-21	gamma-BHC (Lindane)	0.0005	0	4/18/1985
MW-26	gamma-BHC (Lindane)	0.0005	0	6/18/1985
MW-102	gamma-BHC (Lindane)	0.001	0	2/24/1997
SB-102	gamma-BHC (Lindane)	0.001	0	2/24/1997
SB-14	gamma-BHC (Lindane)	0.001	0	4/16/1985
HA-107 (1-2')	gamma-BHC (Lindane)	0.0021	0	12/2/1999
HA-103 (1-2')	gamma-BHC (Lindane)	0.0022	0	12/1/1999
HA-111 (1-2')	gamma-BHC (Lindane)	0.0022	0	12/1/1999
HA-110 (1-2')	gamma-BHC (Lindane)	0.0023	0	12/2/1999
HA-105 (1-2')	gamma-BHC (Lindane)	0.0024	0	12/1/1999
HA-106 (1-2')	gamma-BHC (Lindane)	0.0024	0	12/2/1999
HA-112 (1-2')	gamma-BHC (Lindane)	0.0024	0	12/1/1999
HA-104 (1'-2')	gamma-BHC (Lindane)	0.0025	0	11/30/1999
HA-109 (1-2')	gamma-BHC (Lindane)	0.0025	0	12/2/1999
HA-114 (1-2')	gamma-BHC (Lindane)	0.0025	0	12/1/1999
MW-11	gamma-BHC (Lindane)	0.005	0	1/25/1984
MW-15	gamma-BHC (Lindane)	0.005	0	1/23/1984
SS-5	gamma-BHC (Lindane)	0.005	0	2/8/1984
SS-6	gamma-BHC (Lindane)	0.005	0	2/8/1984
HA-113 (1-2')	gamma-BHC (Lindane)	0.0051	1	12/1/1999
SS-20	gamma-BHC (Lindane)	0.006	1	2/5/1988
MW-101	gamma-BHC (Lindane)	0.0077	1	7/1/1997
MW-1	gamma-BHC (Lindane)	0.0099	1	8/15/1983
SB-1	gamma-BHC (Lindane)	0.01	0	1/11/1984
SS-01	gamma-BHC (Lindane)	0.011	0	2/5/1988
HA-101 (1'-2')	gamma-BHC (Lindane)	0.012	0	12/1/1999
HA-102 (1'-2')	gamma-BHC (Lindane)	0.012	0	12/1/1999
SS-4	gamma-BHC (Lindane)	0.016	1	2/8/1984
SB-9	gamma-BHC (Lindane)	0.017	1	1/19/1984
SB-13	gamma-BHC (Lindane)	0.0366	1	4/18/1985
SB-16	gamma-BHC (Lindane)	0.039	1	4/17/1985
SB-3	gamma-BHC (Lindane)	0.039	1	1/11/1984
SS-9	gamma-BHC (Lindane)	0.05	0	2/8/1984
SB-10	gamma-BHC (Lindane)	0.052	1	1/27/1984
SB-2	gamma-BHC (Lindane)	0.065	1	1/11/1984
SB-101	gamma-BHC (Lindane)	0.0917	1	2/24/1997
SS-08	gamma-BHC (Lindane)	0.1	0	2/5/1988
SS-13	gamma-BHC (Lindane)	0.1	0	2/5/1988
SS-22	gamma-BHC (Lindane)	0.1	0	2/5/1988
SS-02	gamma-BHC (Lindane)	0.11	0	2/5/1988
SS-15	gamma-BHC (Lindane)	0.11	1	2/5/1988
MW-27	gamma-BHC (Lindane)	0.114	1	6/17/1985
MW-2	gamma-BHC (Lindane)	0.125	1	8/16/1983
SS-19	gamma-BHC (Lindane)	0.14	1	2/5/1988
SB-15	gamma-BHC (Lindane)	0.167	1	4/18/1985
SS-05	gamma-BHC (Lindane)	0.2	1	2/5/1988
MW-22	gamma-BHC (Lindane)	0.217	1	4/16/1985
SB-12	gamma-BHC (Lindane)	0.22	1	1/27/1984
SS-03	gamma-BHC (Lindane)	0.25	1	2/5/1988
MW-12	gamma-BHC (Lindane)	0.26	1	1/20/1984
SS-1	gamma-BHC (Lindane)	0.58	1	2/8/1984

SS-8	gamma-BHC (Lindane)	0.59	1	2/8/1984
MW-8	gamma-BHC (Lindane)	0.62	1	1/26/1984
SS-23	gamma-BHC (Lindane)	0.73	1	2/5/1988
SS-3	gamma-BHC (Lindane)	0.79	1	2/8/1984
MW-23	gamma-BHC (Lindane)	0.834	1	4/17/1985
MW-13	gamma-BHC (Lindane)	0.84	1	1/26/1984
MW-10	gamma-BHC (Lindane)	0.911	1	1/23/1984
SS-09	gamma-BHC (Lindane)	1	0	2/5/1988
SS-10	gamma-BHC (Lindane)	1	0	2/5/1988
SS-16	gamma-BHC (Lindane)	1	0	2/5/1988
SS-18	gamma-BHC (Lindane)	1	0	2/5/1988
HA-108 (1-2')	gamma-BHC (Lindane)	1.2	1	12/1/1999
MW-9	gamma-BHC (Lindane)	1.5	1	1/24/1984
SS-7	gamma-BHC (Lindane)	1.5	1	2/8/1984
SS-04	gamma-BHC (Lindane)	1.6	0	2/5/1988
SS-2	gamma-BHC (Lindane)	1.8	1	2/8/1984
MW-14	gamma-BHC (Lindane)	1.9	1	2/8/1984
SB-8	gamma-BHC (Lindane)	2.1	1	1/19/1984
SS-21	gamma-BHC (Lindane)	14	1	2/5/1988
SS-24	gamma-BHC (Lindane)	95	0	2/5/1988
MW-21	Heptachlor	0.0005	0	4/18/1985
MW-26	Heptachlor	0.0005	0	6/18/1985
SB-15	Heptachlor	0.0005	0	4/18/1985
MW-102	Heptachlor	0.001	0	2/24/1997
MW-22	Heptachlor	0.001	0	4/16/1985
SB-102	Heptachlor	0.001	0	2/24/1997
SB-14	Heptachlor	0.001	0	4/16/1985
HA-107 (1-2')	Heptachlor	0.0021	0	12/2/1999
HA-103 (1-2')	Heptachlor	0.0022	0	12/1/1999
HA-111 (1-2')	Heptachlor	0.0022	0	12/1/1999
HA-110 (1-2')	Heptachlor	0.0023	0	12/2/1999
HA-105 (1-2')	Heptachlor	0.0024	0	12/1/1999
HA-106 (1-2')	Heptachlor	0.0024	0	12/2/1999
HA-112 (1-2')	Heptachlor	0.0024	0	12/1/1999
MW-101	Heptachlor	0.0024	0	7/1/1997
HA-104 (1'-2')	Heptachlor	0.0025	0	11/30/1999
HA-109 (1-2')	Heptachlor	0.0025	0	12/2/1999
HA-114 (1-2')	Heptachlor	0.0025	0	12/1/1999
MW-11	Heptachlor	0.005	0	1/25/1984
MW-15	Heptachlor	0.005	0	1/23/1984
SB-9	Heptachlor	0.005	0	1/19/1984
SB-16	Heptachlor	0.00695	1	4/17/1985
SB-13	Heptachlor	0.0084	1	4/18/1985
MW-1	Heptachlor	0.0095	1	8/15/1983
SB-12	Heptachlor	0.01	0	1/27/1984
SS-4	Heptachlor	0.01	1	2/8/1984
SS-5	Heptachlor	0.01	1	2/8/1984
HA-113 (1-2')	Heptachlor	0.011	1	12/1/1999
SS-01	Heptachlor	0.011	0	2/5/1988
HA-101 (1'-2')	Heptachlor	0.012	0	12/1/1999
MW-2	Heptachlor	0.015	1	8/16/1983
SS-6	Heptachlor	0.016	1	2/8/1984
SS-20	Heptachlor	0.017	1	2/5/1988
HA-102 (1'-2')	Heptachlor	0.033	1	12/1/1999
SB-3	Heptachlor	0.039	1	1/11/1984

SS-16	Heptachlor	0.04	1	2/5/1988
HA-108 (1-2')	Heptachlor	0.041	0	12/1/1999
SB-8	Heptachlor	0.052	1	1/19/1984
SB-2	Heptachlor	0.069	1	1/11/1984
SB-1	Heptachlor	0.073	1	1/11/1984
SS-1	Heptachlor	0.092	1	2/8/1984
SS-09	Heptachlor	0.096	1	2/5/1988
SS-08	Heptachlor	0.1	0	2/5/1988
SS-13	Heptachlor	0.1	0	2/5/1988
SS-15	Heptachlor	0.1	1	2/5/1988
SS-22	Heptachlor	0.1	0	2/5/1988
MW-27	Heptachlor	0.1023	1	6/17/1985
SS-02	Heptachlor	0.11	0	2/5/1988
SS-14	Heptachlor	0.13	0	2/5/1988
SS-9	Heptachlor	0.13	1	2/8/1984
MW-9	Heptachlor	0.138	1	1/24/1984
MW-12	Heptachlor	0.14	1	1/20/1984
SB-10	Heptachlor	0.17	1	1/27/1984
MW-10	Heptachlor	0.214	1	1/23/1984
SS-8	Heptachlor	0.37	1	2/8/1984
SS-3	Heptachlor	0.54	1	2/8/1984
MW-23	Heptachlor	0.934	1	4/17/1985
SS-19	Heptachlor	0.98	0	2/5/1988
SS-07	Heptachlor	1	0	2/5/1988
SS-10	Heptachlor	1	0	2/5/1988
SS-18	Heptachlor	1	0	2/5/1988
SS-03	Heptachlor	1.5	0	2/5/1988
SS-04	Heptachlor	1.6	0	2/5/1988
SS-05	Heptachlor	1.7	0	2/5/1988
SS-2	Heptachlor	1.7	1	2/8/1984
SS-23	Heptachlor	1.7	0	2/5/1988
MW-8	Heptachlor	1.8	1	1/26/1984
SB-101	Heptachlor	2.6	0	2/24/1997
MW-13	Heptachlor	16.5	1	1/26/1984
MW-14	Heptachlor	23	1	2/8/1984
SS-7	Heptachlor	36.5	1	2/8/1984
SS-24	Heptachlor	95	0	2/5/1988
SS-21	Heptachlor	210	1	2/5/1988
HA-107 (1-2')	Methoxychlor	0.0021	0	12/2/1999
HA-103 (1-2')	Methoxychlor	0.0022	0	12/1/1999
HA-111 (1-2')	Methoxychlor	0.0022	0	12/1/1999
HA-110 (1-2')	Methoxychlor	0.0023	0	12/2/1999
HA-105 (1-2')	Methoxychlor	0.0024	0	12/1/1999
HA-106 (1-2')	Methoxychlor	0.0024	0	12/2/1999
HA-112 (1-2')	Methoxychlor	0.0024	0	12/1/1999
MW-101	Methoxychlor	0.0024	0	7/1/1997
HA-104 (1'-2')	Methoxychlor	0.0025	0	11/30/1999
HA-109 (1-2')	Methoxychlor	0.0025	0	12/2/1999
HA-114 (1-2')	Methoxychlor	0.0025	0	12/1/1999
HA-101 (1'-2')	Methoxychlor	0.012	0	12/1/1999
HA-102 (1'-2')	Methoxychlor	0.012	0	12/1/1999
MW-102	Methoxychlor	0.017	0	2/24/1997
SB-102	Methoxychlor	0.017	0	2/24/1997
MW-1	Methoxychlor	0.02	0	8/15/1983
MW-2	Methoxychlor	0.02	0	8/16/1983

SS-1	Methoxychlor	0.02	0	2/8/1984
MW-11	Methoxychlor	0.031	1	1/25/1984
HA-108 (1-2')	Methoxychlor	0.041	0	12/1/1999
SB-1	Methoxychlor	0.05	0	1/11/1984
SB-2	Methoxychlor	0.05	0	1/11/1984
SB-3	Methoxychlor	0.05	0	1/11/1984
HA-113 (1-2')	Methoxychlor	0.067	1	12/1/1999
MW-10	Methoxychlor	0.1	0	1/23/1984
MW-15	Methoxychlor	0.1	0	1/23/1984
MW-9	Methoxychlor	0.1	0	1/24/1984
SB-10	Methoxychlor	0.1	0	1/27/1984
SB-12	Methoxychlor	0.1	0	1/27/1984
SB-8	Methoxychlor	0.1	0	1/19/1984
SB-9	Methoxychlor	0.1	0	1/19/1984
SS-2	Methoxychlor	0.1	0	2/8/1984
SS-3	Methoxychlor	0.1	0	2/8/1984
SS-4	Methoxychlor	0.1	0	2/8/1984
SS-5	Methoxychlor	0.1	0	2/8/1984
SS-6	Methoxychlor	0.1	0	2/8/1984
SS-8	Methoxychlor	0.1	0	2/8/1984
SS-9	Methoxychlor	0.1	0	2/8/1984
SS-01	Methoxychlor	0.11	0	2/5/1988
MW-8	Methoxychlor	0.2	0	1/26/1984
SS-7	Methoxychlor	0.2	0	2/8/1984
MW-12	Methoxychlor	0.4	0	1/20/1984
MW-13	Methoxychlor	0.5	0	1/26/1984
MW-14	Methoxychlor	1	0	2/8/1984
SS-08	Methoxychlor	1	0	2/5/1988
SS-13	Methoxychlor	1	0	2/5/1988
SS-22	Methoxychlor	1	0	2/5/1988
SS-02	Methoxychlor	1.1	0	2/5/1988
SS-14	Methoxychlor	1.3	0	2/5/1988
SS-19	Methoxychlor	9.8	0	2/5/1988
SS-07	Methoxychlor	10	0	2/5/1988
SS-09	Methoxychlor	10	0	2/5/1988
SS-10	Methoxychlor	10	0	2/5/1988
SS-16	Methoxychlor	10	0	2/5/1988
SS-18	Methoxychlor	10	0	2/5/1988
SS-15	Methoxychlor	11	0	2/5/1988
SS-03	Methoxychlor	15	0	2/5/1988
SS-04	Methoxychlor	16	0	2/5/1988
SS-20	Methoxychlor	16	0	2/5/1988
SS-05	Methoxychlor	17	0	2/5/1988
SS-23	Methoxychlor	17	0	2/5/1988
SB-101	Methoxychlor	44.2	0	2/24/1997
SS-21	Methoxychlor	200	0	2/5/1988
SS-24	Methoxychlor	950	0	2/5/1988
SS-6	Toxaphene	0.1	0	8/18/1983
SB-14	Toxaphene	0.01	0	4/16/1985
HA-107 (1-2')	Toxaphene	0.052	0	12/2/1999
HA-103 (1-2')	Toxaphene	0.056	0	12/1/1999
HA-110 (1-2')	Toxaphene	0.057	0	12/2/1999
HA-106 (1-2')	Toxaphene	0.059	0	12/2/1999
HA-105 (1-2')	Toxaphene	0.06	0	12/1/1999
HA-112 (1-2')	Toxaphene	0.061	0	12/1/1999

HA-104 (1'-2')	Toxaphene	0.062	0	11/30/1999
HA-109 (1-2')	Toxaphene	0.062	0	12/2/1999
HA-114 (1-2')	Toxaphene	0.062	0	12/1/1999
MW-102	Toxaphene	0.066	0	2/24/1997
SB-102	Toxaphene	0.066	0	2/24/1997
MW-1	Toxaphene	0.1	0	8/15/1983
MW-2	Toxaphene	0.1	0	8/16/1983
MW-11	Toxaphene	0.2	0	1/25/1984
MW-15	Toxaphene	0.2	0	1/23/1984
SB-8	Toxaphene	0.2	0	1/19/1984
SB-9	Toxaphene	0.2	0	1/19/1984
SS-6	Toxaphene	0.2	0	2/8/1984
SS-01	Toxaphene	0.22	0	2/5/1988
MW-26	Toxaphene	0.251	1	6/18/1985
HA-101 (1'-2')	Toxaphene	0.3	0	12/1/1999
SB-13	Toxaphene	0.397	1	4/18/1985
SS-5	Toxaphene	0.5	0	2/8/1984
MW-22	Toxaphene	0.593	1	4/16/1985
HA-111 (1-2')	Toxaphene	0.73	0	12/1/1999
MW-101	Toxaphene	0.78	1	7/1/1997
HA-108 (1-2')	Toxaphene	0.79	0	12/1/1999
HA-102 (1'-2')	Toxaphene	0.81	0	12/1/1999
SB-15	Toxaphene	1.179	1	4/18/1985
SB-3	Toxaphene	1.48	1	1/11/1984
SS-4	Toxaphene	1.7	1	2/8/1984
HA-113 (1-2')	Toxaphene	1.9	1	12/1/1999
SS-08	Toxaphene	2	0	2/5/1988
SS-13	Toxaphene	2	0	2/5/1988
SS-22	Toxaphene	2.1	0	2/5/1988
SS-02	Toxaphene	2.3	0	2/5/1988
SS-14	Toxaphene	2.6	0	2/5/1988
SB-16	Toxaphene	2.76	1	4/17/1985
MW-21	Toxaphene	3.6	1	4/18/1985
SB-12	Toxaphene	4.9	1	1/27/1984
SB-2	Toxaphene	6.81	1	1/11/1984
SB-10	Toxaphene	7	1	1/27/1984
MW-9	Toxaphene	9.65	1	1/24/1984
MW-27	Toxaphene	11.2	1	6/17/1985
SB-1	Toxaphene	15	1	1/11/1984
MW-10	Toxaphene	16	1	1/23/1984
SS-07	Toxaphene	20	0	2/5/1988
SS-10	Toxaphene	20	0	2/5/1988
SS-16	Toxaphene	20	0	2/5/1988
SS-19	Toxaphene	20	0	2/5/1988
SS-09	Toxaphene	21	0	2/5/1988
SS-18	Toxaphene	21	0	2/5/1988
SS-15	Toxaphene	23	0	2/5/1988
SS-03	Toxaphene	30	0	2/5/1988
SS-20	Toxaphene	31	0	2/5/1988
SS-04	Toxaphene	33	0	2/5/1988
SS-05	Toxaphene	33	0	2/5/1988
SS-23	Toxaphene	34	0	2/5/1988
SS-9	Toxaphene	37.4	1	2/8/1984
MW-8	Toxaphene	39.5	1	1/26/1984
SS-1	Toxaphene	46	1	2/8/1984

SS-2	Toxaphene	47	1	2/8/1984
SS-3	Toxaphene	57	1	2/8/1984
SS-8	Toxaphene	59	1	2/8/1984
MW-12	Toxaphene	63	1	1/20/1984
SB-101	Toxaphene	172	0	2/24/1997
MW-13	Toxaphene	245	1	1/26/1984
MW-23	Toxaphene	341.8	1	4/17/1985
MW-14	Toxaphene	354	1	2/8/1984
SS-21	Toxaphene	400	0	2/5/1988
SS-7	Toxaphene	1633	1	2/8/1984
SS-24	Toxaphene	1900	0	2/5/1988
TW-12-0-2	Zinc	35.4418	1	05/16/12
TW-11-0-2	Zinc	44.8853	1	05/16/12
SB-175 (0-2')	Zinc	49	1	5/30/2007
SB-101	Zinc	51.2	1	2/24/1997
MW-102	Zinc	56.7	1	2/24/1997
TW-2-0-2	Zinc	57.8633	1	05/14/12
TW-7-0-2	Zinc	69.5893	1	05/15/12
TW-9-0-2	Zinc	86.9299	1	05/15/12
SS-13	Zinc	100	1	2/5/1988
SB-171 (0-2')	Zinc	110	1	5/30/2007
SS-14	Zinc	110	1	2/5/1988
TW-1-0-2	Zinc	118.751	1	05/14/12
SS-19	Zinc	120	1	2/5/1988
TW-5-0-2	Zinc	130.31	1	05/14/12
SB-102	Zinc	134	1	2/24/1997
SS-21	Zinc	140	1	2/5/1988
TW-10-0-2	Zinc	146.091	1	05/15/12
SB-174 (0-2')	Zinc	150	1	5/30/2007
SS-08	Zinc	150	1	2/5/1988
SS-01	Zinc	160	1	2/5/1988
SS-22	Zinc	180	1	2/5/1988
SS-02	Zinc	190	1	2/5/1988
TW-6-0-2	Zinc	190.658	1	05/15/12
SS-16	Zinc	220	1	2/5/1988
SB-173 (0-2')	Zinc	230	1	5/30/2007
SS-15	Zinc	250	1	2/5/1988
SB-172 (0-2')	Zinc	270	1	5/30/2007
SS-18	Zinc	290	1	2/5/1988
TW-3-0-2	Zinc	366.888	1	05/14/12
SS-04	Zinc	370	1	2/5/1988
TW-4-0-2	Zinc	386.081	1	05/14/12
SB-170 (0-2')	Zinc	400	1	5/30/2007
TW-8-0-2	Zinc	445.29	1	05/15/12
SS-05	Zinc	480	1	2/5/1988
SS-24	Zinc	860	1	2/5/1988
SS-07	Zinc	930	1	2/5/1988
SS-20	Zinc	950	1	2/5/1988
SS-23	Zinc	990	1	2/5/1988
SS-03	Zinc	1100	1	2/5/1988
SS-09	Zinc	1100	1	2/5/1988
SS-10	Zinc	3200	1	2/5/1988

alpha-BHC	D_alpha-BHC	Arsenic	D_Arsenic	beta-BHC	D_beta-BHC	DDT
0.001	0	0.59	0	0.002	0	0.0021
0.001	0	0.6	0	0.002	0	0.0022
0.0021	0	1.1	0	0.0021	0	0.0023
0.0022	0	2.5	0	0.0022	0	0.0024
0.0022	0	6.1	0	0.0022	0	0.0025
0.0023	0	10	0	0.0023	0	0.0025
0.0024	0	10	0	0.0024	0	0.0025
0.0024	0	14	0	0.0024	0	0.003
0.0024	0	23	0	0.0024	0	0.004
0.0025	0	25	0	0.0025	0	0.01
0.0025	0	1.2	1	0.0025	0	0.02
0.0025	0	1.3	1	0.0025	0	0.003
0.011	0	1.5	1	0.011	0	0.00668
0.012	0	2.2	1	0.012	0	0.023
0.012	0	2.4	1	0.1	0	0.048
0.1	0	2.8	1	0.11	0	0.055
0.11	0	4	1	1	0	0.061
1	0	4	1	5.2	0	0.0662
1	0	4.4	1	0.0092	1	0.12
1.6	0	4.5	1	0.031	1	0.203
1.7	0	6.4	1	0.037	1	0.326
0.005	1	7.4	1	0.039	1	0.364
0.007	1	7.5	1	0.08	1	0.37
0.011	1	8.41	1	0.093	1	0.4
0.022	1	8.6	1	0.23	1	0.4
0.022	1	8.7	1	0.25	1	0.75
0.025	1	9.2	1	0.73	1	0.79
0.043	1	10.8	1	0.9	1	0.88
0.044	1	11	1	1.4	1	1.04
0.089	1	12	1	1.5	1	1.2
0.092	1	12	1	1.7	1	1.3
0.095	1	12.2	1	8.6	1	1.36
0.12	1	14	1	18	1	2
0.15	1	14	1	110	1	2.9
0.185	1	20.8	1	930	1	2.986
0.234	1	21	1			3
0.32	1	22	1			3.7
0.67	1	22	1			5.3
4.7	1	23	1			6
5.5	1	23	1			6.58
19	1	24	1			7.7
960	1	24	1			8
		25	1			9.39
		26	1			9.6
		26	1			10
		27	1			11
		34	1			11
		34	1			15
		36	1			15.1
		42.2	1			20
		51	1			21
		53.5	1			25
		55	1			27.2
		66	1			27.5

68	1	41
71	1	51
94	1	54
97	1	55
120	1	65.6
150	1	72.7
169	1	77
210	1	116
215	1	208
240	1	219
250	1	221.8
332	1	236
440	1	390
539	1	429
694	1	600
1100	1	1280
		3100
		3370
		9100

D_DDT	Dieldrin	D_Dieldrin	Lead	D_Lead
0	0.001	0	38	0
0	0.001	0	8.4	1
0	0.0021	0	9.4	1
0	0.0022	0	11	1
0	0.0022	0	11	1
0	0.0023	0	13	1
0	0.0024	0	14.6	1
0	0.0024	0	16	1
0	0.0025	0	21	1
0	0.0025	0	21.4	1
0	0.0025	0	22.4	1
1	0.005	0	24.6	1
1	0.005	0	56	1
1	0.012	0	58.8	1
1	0.02	0	64	1
1	0.02	0	71	1
1	0.02	0	72	1
1	0.02	0	72.8	1
1	0.02	0	72.8	1
1	0.02	0	81	1
1	0.02	0	100	1
1	0.02	0	110	1
1	0.02	0	120	1
1	0.02	0	140	1
1	0.02	0	150	1
1	0.02	0	151	1
1	0.02	0	168	1
1	0.02	0	171	1
1	0.022	0	190	1
1	0.041	0	200	1
1	0.05	0	223	1
1	0.05	0	270	1
1	0.05	0	280	1
1	0.05	0	360	1
1	0.1	0	360	1
1	0.2	0	370	1
1	0.2	0	470	1
1	0.26	0	590	1
1	1	0	660	1
1	2	0	752	1
1	2	0	810	1
1	3.1	0	890	1
1	3.3	0	1000	1
1	3.3	0	1200	1
1	0.0052	1	1200	1
1	0.024	1	1300	1
1	0.034	1	1556	1
1	0.066	1	2100	1
1	0.09	1	2491	1
1	0.094	1	3300	1
1	0.21	1	3923	1
1	0.21	1	4349	1
1	0.23	1	4700	1
1	0.24	1	5900	1

1	0.37	1	6700	1
1	0.63	1	7450	1
1	0.87	1		
1	1.27	1		
1	1.3	1		
1	1.49	1		
1	2.63	1		
1	3.2	1		
1	78	1		
1	590	1		
1				
1				
1				
1				
1				
1				
1				
1				
1				

User Selected Options	
Date/Time of Computation	4/7/2014 11:04:24 AM
From File	Book1_c.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

alpha-BHC

General Statistics

Total Number of Observations	41	Number of Distinct Observations	31
Number of Detects	20	Number of Non-Detects	21
Number of Distinct Detects	19	Number of Distinct Non-Detects	13
Minimum Detect	0.005	Minimum Non-Detect	0.001
Maximum Detect	19	Maximum Non-Detect	1.7
Variance Detects	19.21	Percent Non-Detects	51.22%
Mean Detects	1.567	SD Detects	4.383
Median Detects	0.0935	CV Detects	2.797
Skewness Detects	3.708	Kurtosis Detects	14.63
Mean of Logged Detects	-2.101	SD of Logged Detects	2.209

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.408	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.431	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.198	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.772	Standard Error of Mean	0.494
SD	3.083	95% KM (BCA) UCL	1.608
95% KM (t) UCL	1.604	95% KM (Percentile Bootstrap) UCL	1.632
95% KM (z) UCL	1.584	95% KM Bootstrap t UCL	3.43
90% KM Chebyshev UCL	2.254	95% KM Chebyshev UCL	2.925
97.5% KM Chebyshev UCL	3.857	99% KM Chebyshev UCL	5.688

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.135	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.857	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.303	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.211	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.274	k star (bias corrected MLE)	0.267
Theta hat (MLE)	5.71	Theta star (bias corrected MLE)	5.878
nu hat (MLE)	10.97	nu star (bias corrected)	10.66
MLE Mean (bias corrected)	1.567	MLE Sd (bias corrected)	3.035

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0627	nu hat (KM)	5.14
Approximate Chi Square Value (5.14, α)	1.217	Adjusted Chi Square Value (5.14, β)	1.15
95% Gamma Approximate KM-UCL (use when n>=50)	3.259	95% Gamma Adjusted KM-UCL (use when n<50)	3.449

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.005	Mean	0.769
Maximum	19	Median	0.01
SD	3.122	CV	4.057
k hat (MLE)	0.231	k star (bias corrected MLE)	0.23
Theta hat (MLE)	3.337	Theta star (bias corrected MLE)	3.346
nu hat (MLE)	18.9	nu star (bias corrected)	18.85
MLE Mean (bias corrected)	0.769	MLE Sd (bias corrected)	1.605
		Adjusted Level of Significance (β)	0.0441
Approximate Chi Square Value (18.85, α)	10.01	Adjusted Chi Square Value (18.85, β)	9.775
95% Gamma Approximate UCL (use when n>=50)	1.449	95% Gamma Adjusted UCL (use when n<50)	1.484

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.135	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.198	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.766	Mean in Log Scale	-4.483
SD in Original Scale	3.123	SD in Log Scale	2.967
95% t UCL (assumes normality of ROS data)	1.587	95% Percentile Bootstrap UCL	1.584
95% BCA Bootstrap UCL	2.388	95% Bootstrap t UCL	3.387
95% H-UCL (Log ROS)	9.941		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.258	95% H-UCL (KM -Log)	5.571
KM SD (logged)	2.782	95% Critical H Value (KM-Log)	4.787
KM Standard Error of Mean (logged)	0.468		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.832	Mean in Log Scale	-3.605
SD in Original Scale	3.113	SD in Log Scale	2.815
95% t UCL (Assumes normality)	1.651	95% H-Stat UCL	12.3

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL	5.688

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Arsenic

General Statistics

Total Number of Observations	69	Number of Distinct Observations	57
Number of Detects	59	Number of Non-Detects	10
Number of Distinct Detects	51	Number of Distinct Non-Detects	9
Minimum Detect	1.2	Minimum Non-Detect	0.59
Maximum Detect	694	Maximum Non-Detect	25
Variance Detects	18291	Percent Non-Detects	14.49%
Mean Detects	76.53	SD Detects	135.2
Median Detects	23	CV Detects	1.767
Skewness Detects	2.92	Kurtosis Detects	9.179
Mean of Logged Detects	3.199	SD of Logged Detects	1.559

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.589	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.296	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	65.95	Standard Error of Mean	15.38
SD	126.6	95% KM (BCA) UCL	92.85
95% KM (t) UCL	91.6	95% KM (Percentile Bootstrap) UCL	93.82
95% KM (z) UCL	91.25	95% KM Bootstrap t UCL	100.5
90% KM Chebyshev UCL	112.1	95% KM Chebyshev UCL	133
97.5% KM Chebyshev UCL	162	99% KM Chebyshev UCL	219

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.052	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.811	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.183	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.122	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Gamma Statistics on Detected Data Only

k hat (MLE)	0.55	k star (bias corrected MLE)	0.533
Theta hat (MLE)	139.2	Theta star (bias corrected MLE)	143.5
nu hat (MLE)	64.88	nu star (bias corrected)	62.91
MLE Mean (bias corrected)	76.53	MLE Sd (bias corrected)	104.8

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.271	nu hat (KM)	37.43
Approximate Chi Square Value (37.43, α)	24.42	Adjusted Chi Square Value (37.43, β)	24.2
95% Gamma Approximate KM-UCL (use when n>=50)	101.1	95% Gamma Adjusted KM-UCL (use when n<50)	102

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	65.44
Maximum	694	Median	20.8
SD	127.8	CV	1.953
k hat (MLE)	0.323	k star (bias corrected MLE)	0.318
Theta hat (MLE)	202.9	Theta star (bias corrected MLE)	205.7
nu hat (MLE)	44.51	nu star (bias corrected)	43.9
MLE Mean (bias corrected)	65.44	MLE Sd (bias corrected)	116
		Adjusted Level of Significance (β)	0.0465
Approximate Chi Square Value (43.90, α)	29.71	Adjusted Chi Square Value (43.90, β)	29.46
95% Gamma Approximate UCL (use when n>=50)	96.7	95% Gamma Adjusted UCL (use when n<50)	97.52

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.0854	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	65.85	Mean in Log Scale	2.831
SD in Original Scale	127.6	SD in Log Scale	1.737
95% t UCL (assumes normality of ROS data)	91.47	95% Percentile Bootstrap UCL	93.08
95% BCA Bootstrap UCL	98.67	95% Bootstrap t UCL	100.3
95% H-UCL (Log ROS)	132.6		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	2.819	95% H-UCL (KM -Log)	137.4
KM SD (logged)	1.757	95% Critical H Value (KM-Log)	2.628
KM Standard Error of Mean (logged)	0.217		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	66.11	Mean in Log Scale	2.858
SD in Original Scale	127.5	SD in Log Scale	1.745
95% t UCL (Assumes normality)	91.7	95% H-Stat UCL	138.9

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	162

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

beta-BHC

General Statistics

Total Number of Observations	34	Number of Distinct Observations	28
Number of Detects	16	Number of Non-Detects	18
Number of Distinct Detects	16	Number of Distinct Non-Detects	12
Minimum Detect	0.0092	Minimum Non-Detect	0.002
Maximum Detect	110	Maximum Non-Detect	5.2
Variance Detects	747.8	Percent Non-Detects	52.94%
Mean Detects	8.975	SD Detects	27.35
Median Detects	0.49	CV Detects	3.047
Skewness Detects	3.814	Kurtosis Detects	14.86
Mean of Logged Detects	-0.742	SD of Logged Detects	2.562

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.37	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.417	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.222	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	4.235	Standard Error of Mean	3.313
SD	18.71	95% KM (BCA) UCL	10.42
95% KM (t) UCL	9.842	95% KM (Percentile Bootstrap) UCL	10.49
95% KM (z) UCL	9.685	95% KM Bootstrap t UCL	53.25
90% KM Chebyshev UCL	14.17	95% KM Chebyshev UCL	18.68
97.5% KM Chebyshev UCL	24.93	99% KM Chebyshev UCL	37.2

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.355	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.864	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.296	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.236	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.243	k star (bias corrected MLE)	0.239
Theta hat (MLE)	36.93	Theta star (bias corrected MLE)	37.53
nu hat (MLE)	7.777	nu star (bias corrected)	7.652
MLE Mean (bias corrected)	8.975	MLE Sd (bias corrected)	18.35

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0513	nu hat (KM)	3.486
Approximate Chi Square Value (3.49, α)	0.53	Adjusted Chi Square Value (3.49, β)	0.48
95% Gamma Approximate KM-UCL (use when n>=50)	27.87	95% Gamma Adjusted KM-UCL (use when n<50)	30.78

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0092	Mean	4.229
Maximum	110	Median	0.01
SD	18.99	CV	4.49
k hat (MLE)	0.177	k star (bias corrected MLE)	0.181
Theta hat (MLE)	23.85	Theta star (bias corrected MLE)	23.33
nu hat (MLE)	12.06	nu star (bias corrected)	12.32
MLE Mean (bias corrected)	4.229	MLE Sd (bias corrected)	9.933
		Adjusted Level of Significance (β)	0.0422
Approximate Chi Square Value (12.32, α)	5.442	Adjusted Chi Square Value (12.32, β)	5.216
95% Gamma Approximate UCL (use when n>=50)	9.578	95% Gamma Adjusted UCL (use when n<50)	9.992

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.222	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.225	Mean in Log Scale	-3.968
SD in Original Scale	18.99	SD in Log Scale	3.664
95% t UCL (assumes normality of ROS data)	9.736	95% Percentile Bootstrap UCL	10.6
95% BCA Bootstrap UCL	14.5	95% Bootstrap t UCL	52.57
95% H-UCL (Log ROS)	1039		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-3.471	95% H-UCL (KM -Log)	123.8
KM SD (logged)	3.187	95% Critical H Value (KM-Log)	5.789
KM Standard Error of Mean (logged)	0.578		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.319	Mean in Log Scale	-3.209
SD in Original Scale	18.97	SD in Log Scale	3.393
95% t UCL (Assumes normality)	9.825	95% H-Stat UCL	478.3

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL	37.2

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDT

General Statistics

Total Number of Observations	70	Number of Distinct Observations	65
Number of Detects	59	Number of Non-Detects	11
Number of Distinct Detects	57	Number of Distinct Non-Detects	9
Minimum Detect	0.003	Minimum Non-Detect	0.0021
Maximum Detect	1280	Maximum Non-Detect	0.02
Variance Detects	38785	Percent Non-Detects	15.71%
Mean Detects	74.17	SD Detects	196.9
Median Detects	7.7	CV Detects	2.655
Skewness Detects	4.611	Kurtosis Detects	25.05
Mean of Logged Detects	1.584	SD of Logged Detects	2.953

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.436	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.353	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	62.51	Standard Error of Mean	21.85
SD	181.3	95% KM (BCA) UCL	100.8
95% KM (t) UCL	98.95	95% KM (Percentile Bootstrap) UCL	101
95% KM (z) UCL	98.46	95% KM Bootstrap t UCL	130.7
90% KM Chebyshev UCL	128.1	95% KM Chebyshev UCL	157.8
97.5% KM Chebyshev UCL	199	99% KM Chebyshev UCL	280

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.458	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.884	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.139	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.127	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.259	k star (bias corrected MLE)	0.257
Theta hat (MLE)	286	Theta star (bias corrected MLE)	288.1
nu hat (MLE)	30.6	nu star (bias corrected)	30.38
MLE Mean (bias corrected)	74.17	MLE Sd (bias corrected)	146.2

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.119	nu hat (KM)	16.65
Approximate Chi Square Value (16.65, α)	8.42	Adjusted Chi Square Value (16.65, β)	8.297
95% Gamma Approximate KM-UCL (use when n>=50)	123.6	95% Gamma Adjusted KM-UCL (use when n<50)	125.4

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.003	Mean	62.51
Maximum	1280	Median	2.993
SD	182.6	CV	2.921
k hat (MLE)	0.208	k star (bias corrected MLE)	0.208
Theta hat (MLE)	301.1	Theta star (bias corrected MLE)	300.2
nu hat (MLE)	29.06	nu star (bias corrected)	29.15
MLE Mean (bias corrected)	62.51	MLE Sd (bias corrected)	137
		Adjusted Level of Significance (β)	0.0466
Approximate Chi Square Value (29.15, α)	17.83	Adjusted Chi Square Value (29.15, β)	17.64
95% Gamma Approximate UCL (use when n>=50)	102.2	95% Gamma Adjusted UCL (use when n<50)	103.3

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.0707	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.115	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	62.51	Mean in Log Scale	0.584
SD in Original Scale	182.6	SD in Log Scale	3.579
95% t UCL (assumes normality of ROS data)	98.9	95% Percentile Bootstrap UCL	100.7
95% BCA Bootstrap UCL	118.2	95% Bootstrap t UCL	136
95% H-UCL (Log ROS)	7194		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	0.37	95% H-UCL (KM -Log)	26814
KM SD (logged)	3.889	95% Critical H Value (KM-Log)	4.838
KM Standard Error of Mean (logged)	0.469		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	62.51	Mean in Log Scale	0.337
SD in Original Scale	182.6	SD in Log Scale	3.983
95% t UCL (Assumes normality)	98.9	95% H-Stat UCL	42309

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	199

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Dieldrin

General Statistics

Total Number of Observations	63	Number of Distinct Observations	37
Number of Detects	19	Number of Non-Detects	44
Number of Distinct Detects	18	Number of Distinct Non-Detects	19
Minimum Detect	0.0052	Minimum Non-Detect	0.001
Maximum Detect	78	Maximum Non-Detect	3.3
Variance Detects	315.2	Percent Non-Detects	69.84%
Mean Detects	4.788	SD Detects	17.75
Median Detects	0.24	CV Detects	3.708
Skewness Detects	4.34	Kurtosis Detects	18.88
Mean of Logged Detects	-1.057	SD of Logged Detects	2.139

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.281	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.483	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.203	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1.461	Standard Error of Mean	1.261
SD	9.739	95% KM (BCA) UCL	3.999
95% KM (t) UCL	3.566	95% KM (Percentile Bootstrap) UCL	3.938
95% KM (z) UCL	3.534	95% KM Bootstrap t UCL	30.01
90% KM Chebyshev UCL	5.243	95% KM Chebyshev UCL	6.956
97.5% KM Chebyshev UCL	9.334	99% KM Chebyshev UCL	14

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.175	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.858	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.283	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.217	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.268	k star (bias corrected MLE)	0.261
Theta hat (MLE)	17.88	Theta star (bias corrected MLE)	18.37
nu hat (MLE)	10.18	nu star (bias corrected)	9.902
MLE Mean (bias corrected)	4.788	MLE Sd (bias corrected)	9.379

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0225	nu hat (KM)	2.834
Approximate Chi Square Value (2.83, α)	0.325	Adjusted Chi Square Value (2.83, β)	0.309
95% Gamma Approximate KM-UCL (use when n>=50)	12.73	95% Gamma Adjusted KM-UCL (use when n<50)	13.4

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0052	Mean	1.451
Maximum	78	Median	0.01
SD	9.817	CV	6.767
k hat (MLE)	0.19	k star (bias corrected MLE)	0.191
Theta hat (MLE)	7.641	Theta star (bias corrected MLE)	7.58
nu hat (MLE)	23.92	nu star (bias corrected)	24.12
MLE Mean (bias corrected)	1.451	MLE Sd (bias corrected)	3.316
		Adjusted Level of Significance (β)	0.0462
Approximate Chi Square Value (24.12, α)	13.94	Adjusted Chi Square Value (24.12, β)	13.76
95% Gamma Approximate UCL (use when n>=50)	2.51	95% Gamma Adjusted UCL (use when n<50)	2.544

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.097	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.203	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.446	Mean in Log Scale	-5.057
SD in Original Scale	9.818	SD in Log Scale	3.226
95% t UCL (assumes normality of ROS data)	3.512	95% Percentile Bootstrap UCL	3.927
95% BCA Bootstrap UCL	5.242	95% Bootstrap t UCL	32.57
95% H-UCL (Log ROS)	6.81		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.88	95% H-UCL (KM -Log)	2.604
KM SD (logged)	2.954	95% Critical H Value (KM-Log)	3.93
KM Standard Error of Mean (logged)	0.408		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.571	Mean in Log Scale	-3.328
SD in Original Scale	9.807	SD in Log Scale	2.668
95% t UCL (Assumes normality)	3.634	95% H-Stat UCL	4.146

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	9.334

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Lead

General Statistics

Total Number of Observations	49	Number of Distinct Observations	45
Number of Detects	48	Number of Non-Detects	1
Number of Distinct Detects	44	Number of Distinct Non-Detects	1
Minimum Detect	8.4	Minimum Non-Detect	38
Maximum Detect	2491	Maximum Non-Detect	38
Variance Detects	316896	Percent Non-Detects	2.041%
Mean Detects	398	SD Detects	562.9
Median Detects	150.5	CV Detects	1.414
Skewness Detects	2.094	Kurtosis Detects	4.377
Mean of Logged Detects	4.954	SD of Logged Detects	1.601

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.708	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.25	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.128	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	390.2	Standard Error of Mean	79.98
SD	554	95% KM (BCA) UCL	520.7
95% KM (t) UCL	524.3	95% KM (Percentile Bootstrap) UCL	529.1
95% KM (z) UCL	521.7	95% KM Bootstrap t UCL	553.2
90% KM Chebyshev UCL	630.1	95% KM Chebyshev UCL	738.8
97.5% KM Chebyshev UCL	889.6	99% KM Chebyshev UCL	1186

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.836	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.805	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.115	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.134	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.599	k star (bias corrected MLE)	0.575
Theta hat (MLE)	664.8	Theta star (bias corrected MLE)	692
nu hat (MLE)	57.47	nu star (bias corrected)	55.21
MLE Mean (bias corrected)	398	MLE Sd (bias corrected)	524.8

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.496	nu hat (KM)	48.62
Approximate Chi Square Value (48.62, α)	33.61	Adjusted Chi Square Value (48.62, β)	33.23
95% Gamma Approximate KM-UCL (use when n>=50)	564.4	95% Gamma Adjusted KM-UCL (use when n<50)	570.8

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	389.9
Maximum	2491	Median	150
SD	559.9	CV	1.436
k hat (MLE)	0.523	k star (bias corrected MLE)	0.504
Theta hat (MLE)	745.9	Theta star (bias corrected MLE)	773.1
nu hat (MLE)	51.22	nu star (bias corrected)	49.42
MLE Mean (bias corrected)	389.9	MLE Sd (bias corrected)	549
		Adjusted Level of Significance (β)	0.0451
Approximate Chi Square Value (49.42, α)	34.28	Adjusted Chi Square Value (49.42, β)	33.9
95% Gamma Approximate UCL (use when n>=50)	562	95% Gamma Adjusted UCL (use when n<50)	568.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.947	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0921	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.128	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	390.2	Mean in Log Scale	4.913
SD in Original Scale	559.7	SD in Log Scale	1.61
95% t UCL (assumes normality of ROS data)	524.3	95% Percentile Bootstrap UCL	529.6
95% BCA Bootstrap UCL	559	95% Bootstrap t UCL	558.3
95% H-UCL (Log ROS)	1016		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	4.908	95% H-UCL (KM -Log)	990.7
KM SD (logged)	1.601	95% Critical H Value (KM-Log)	3.067
KM Standard Error of Mean (logged)	0.231		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	390.2	Mean in Log Scale	4.913
SD in Original Scale	559.7	SD in Log Scale	1.61
95% t UCL (Assumes normality)	524.3	95% H-Stat UCL	1017

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	738.8	95% GROS Adjusted Gamma UCL	568.4
95% Adjusted Gamma KM-UCL	570.8		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared: MKB 4/7/14
Checked: LMS 4/7/14

Location	Substance	Result	ResultCode	DL	Unit	StartDepth	EndDepth	Group	Site	Material	SDate
HA-102 (5'-6')	Arsenic	1.6		0.61	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-102 (5'-6')	Lead	15.2		0.61	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-103 (4-5')	Arsenic	5.2		2.8	mg/Kg	4	5	Metal	BFEL	soil	12/1/1999
HA-103 (4-5')	Lead	47.8		0.56	mg/Kg	4	5	Metal	BFEL	soil	12/1/1999
HA-104 (4'-5')	Arsenic	0	U	0.62	mg/Kg	4	5	Metal	BFEL	soil	11/30/1999
HA-104 (4'-5')	Lead	14		0.62	mg/Kg	4	5	Metal	BFEL	soil	11/30/1999
HA-105 (5-6')	Arsenic	0	U	2.8	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-105 (5-6')	Lead	24		0.56	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-106 (4-5')	Arsenic	361		56	mg/Kg	4	5	Metal	BFEL	soil	12/2/1999
HA-106 (4-5')	Lead	120		0.56	mg/Kg	4	5	Metal	BFEL	soil	12/2/1999
HA-107 (5-6')	Arsenic	1.9		0.54	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-107 (5-6')	Lead	5.4		0.54	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-109(5-6')	Arsenic	0	U	2.7	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-109(5-6')	Lead	36.8		0.54	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-110 (5-6')	Arsenic	0	U	0.54	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-110 (5-6')	Lead	11.1		0.54	mg/Kg	5	6	Metal	BFEL	soil	12/2/1999
HA-111 (5-6')	Arsenic	3300		560	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-111 (5-6')	Lead	65300		280	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-112 (5-6')	Arsenic	0	U	2.8	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-112 (5-6')	Lead	17.2		0.56	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-113 (5-6')	Arsenic	3.4		3.1	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-113 (5-6')	Lead	20.3		0.62	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-114 (5-6')	Arsenic	6.7		2.9	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
HA-114 (5-6')	Lead	20.7		0.59	mg/Kg	5	6	Metal	BFEL	soil	12/1/1999
MW-1	Arsenic	7		0	mg/Kg	23.5	25	Metal	BFEL	soil	8/14/1983
MW-1	Arsenic	13		0	mg/Kg	3.5	5	Metal	BFEL	soil	8/15/1983
MW-1	Arsenic	13		0	mg/Kg	18.5	20	Metal	BFEL	soil	8/15/1983
MW-1	Arsenic	14		0	mg/Kg	8.5	10	Metal	BFEL	soil	8/15/1983
MW-1	Arsenic	16		0	mg/Kg	13.5	15	Metal	BFEL	soil	8/15/1983
MW-10	Arsenic	8.1		0	mg/Kg	26	27.5	Metal	BFEL	soil	1/23/1984
MW-10	Arsenic	12		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/23/1984
MW-10	Arsenic	27		0	mg/Kg	21	22.5	Metal	BFEL	soil	1/23/1984
MW-10	Arsenic	110		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/23/1984
MW-10	Arsenic	190		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/23/1984
MW-101	Arsenic	4.6		0.63	mg/Kg	3	5	Metal	BFEL	soil	7/1/1997
MW-101	Arsenic	6.5		0.65	mg/Kg	8	10	Metal	BFEL	soil	7/1/1997
MW-101	Lead	44.3		0.65	mg/Kg	8	10	Metal	BFEL	soil	7/1/1997
MW-101	Lead	44.7		0.63	mg/Kg	3	5	Metal	BFEL	soil	7/1/1997
MW-102	Arsenic	0	U	10	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Arsenic	0	U	10	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Arsenic	0	U	10	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Arsenic	0	U	10	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Arsenic	0	U	10	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Arsenic	0	U	10	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Barium	0	U	500	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Cadmium	0	U	1	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Copper	0	U	50	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Lead	0	U	38	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Mercury	0	U	0.25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Mercury	0	U	0.25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Mercury	0	U	0.25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Mercury	0	U	0.25	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Mercury	0	U	0.25	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997

MW-102	Mercury	0	U	0.25	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	0	U	25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	0	U	25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	0	U	25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	0	U	25	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	0	U	25	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Nickel	31.5		25	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Silver	0	U	1	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	0	U	50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	0	U	50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	57.3		50	mg/Kg	28	30	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	62		50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	69.4		50	mg/Kg	23	25	Metal	BFEL	soil	2/24/1997
MW-102	Zinc	87.3		50	mg/Kg	18	20	Metal	BFEL	soil	2/24/1997
MW-11	Arsenic	6.9		0	mg/Kg	28.5	30	Metal	BFEL	soil	1/25/1984
MW-11	Arsenic	15		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/25/1984
MW-11	Arsenic	180		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/25/1984
MW-11	Arsenic	240		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/25/1984
MW-11	Arsenic	780		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/25/1984
MW-12	Arsenic	12		0	mg/Kg	26	27.5	Metal	BFEL	soil	1/20/1984
MW-12	Arsenic	27		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/20/1984
MW-12	Arsenic	45		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/20/1984
MW-12	Arsenic	230		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/20/1984
MW-12	Arsenic	710		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/20/1984
MW-13	Arsenic	8.9		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/26/1984
MW-13	Arsenic	11		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/26/1984
MW-13	Arsenic	13		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/26/1984
MW-13	Arsenic	14		0	mg/Kg	26	27.5	Metal	BFEL	soil	1/26/1984
MW-13	Arsenic	22		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/26/1984
MW-14	Arsenic	35		0	mg/Kg	8.5	10	Metal	BFEL	soil	2/8/1984
MW-14	Arsenic	77		0	mg/Kg	3.5	5	Metal	BFEL	soil	2/8/1984
MW-14	Arsenic	215		0	mg/Kg	13.5	15	Metal	BFEL	soil	2/8/1984
MW-15	Arsenic	5.7		0	mg/Kg	23.5	25	Metal	BFEL	soil	1/23/1984
MW-15	Arsenic	5.8		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/23/1984
MW-15	Arsenic	6.8		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/23/1984
MW-15	Arsenic	7.1		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/23/1984
MW-15	Arsenic	250		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/23/1984
MW-2	Arsenic	7.3		0	mg/Kg	28.5	30	Metal	BFEL	soil	8/16/1983
MW-2	Arsenic	9.6		0	mg/Kg	8.5	10	Metal	BFEL	soil	8/16/1983
MW-2	Arsenic	12		0	mg/Kg	18.5	20	Metal	BFEL	soil	8/16/1983
MW-2	Arsenic	12.5		0	mg/Kg	23.5	25	Metal	BFEL	soil	8/16/1983
MW-2	Arsenic	19		0	mg/Kg	13.5	14	Metal	BFEL	soil	8/16/1983
MW-21	Arsenic	0	U	2.5	mg/Kg	24	25.5	Metal	BFEL	soil	4/18/1985
MW-21	Arsenic	10.2		0	mg/Kg	14	15.5	Metal	BFEL	soil	4/18/1985
MW-21	Arsenic	42.7		0	mg/Kg	4	5.5	Metal	BFEL	soil	4/18/1985
MW-21	Arsenic	44		0	mg/Kg	9	10.5	Metal	BFEL	soil	4/18/1985
MW-22	Arsenic	2.1		0	mg/Kg	13.5	15	Metal	BFEL	soil	4/16/1985
MW-22	Arsenic	2.5		0	mg/Kg	23.5	25	Metal	BFEL	soil	4/16/1985
MW-22	Arsenic	32		0	mg/Kg	8.5	10	Metal	BFEL	soil	4/16/1985
MW-22	Arsenic	952		0	mg/Kg	3.5	5	Metal	BFEL	soil	4/16/1985
MW-23	Arsenic	0	U	2.5	mg/Kg	14	15.5	Metal	BFEL	soil	4/17/1985
MW-23	Arsenic	0	U	2.5	mg/Kg	24	25.5	Metal	BFEL	soil	4/17/1985
MW-23	Arsenic	4.82		0	mg/Kg	9	10.5	Metal	BFEL	soil	4/17/1985
MW-23	Arsenic	243		0	mg/Kg	4	5.5	Metal	BFEL	soil	4/17/1985
MW-26	Arsenic	0	U	2.5	mg/Kg	14	15.5	Metal	BFEL	soil	6/18/1985
MW-26	Arsenic	0	U	2.5	mg/Kg	19	20.5	Metal	BFEL	soil	6/18/1985
MW-26	Arsenic	8.78		0	mg/Kg	4	5.5	Metal	BFEL	soil	6/18/1985
MW-26	Arsenic	195		0	mg/Kg	9	10.5	Metal	BFEL	soil	6/18/1985
MW-27	Arsenic	0	U	2.5	mg/Kg	14	15.5	Metal	BFEL	soil	6/17/1985
MW-27	Arsenic	0	U	2.5	mg/Kg	19	20.5	Metal	BFEL	soil	6/17/1985
MW-27	Arsenic	21.4		0	mg/Kg	9	10.5	Metal	BFEL	soil	6/17/1985
MW-27	Arsenic	62.6		0	mg/Kg	4	5.5	Metal	BFEL	soil	6/17/1985
MW-8	Arsenic	6.9		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/26/1984
MW-8	Arsenic	25		0	mg/Kg	16	17.5	Metal	BFEL	soil	1/26/1984
MW-8	Arsenic	88		0	mg/Kg	11	12.5	Metal	BFEL	soil	1/26/1984
MW-9	Arsenic	5.5		0	mg/Kg	28.5	30	Metal	BFEL	soil	1/24/1984
MW-9	Arsenic	12		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/24/1984
MW-9	Arsenic	170		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/24/1984
MW-9	Arsenic	170		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/24/1984

MW-9	Arsenic	180		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/24/1984
SB-01	Antimony	0	U	1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Arsenic	0	U	3.9	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Barium	83	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Beryllium	0	U	0.5	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Cadmium	1.9	JN	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Chromium	2	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Copper	0	U	2.6	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Cyanides (soluble	0	U	1.1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Lead	21	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Mercury	0	U	0.1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Nickel	0	U	4	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Selenium	0	U	0.2	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Silver	0	U	0.1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Thallium	0	U	0.6	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-01	Zinc	0	U	20	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-02	Antimony	0	U	1.1	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Arsenic	0	U	13	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Barium	270	J	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Beryllium	1		0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Cadmium	9.9	JN	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Chromium	18	J	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Copper	200	J	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Cyanides (soluble	0	U	1.3	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Lead	31	J	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Mercury	0	U	0.1	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Nickel	0	U	40	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Selenium	0	U	0.2	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Silver	0	U	1	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Thallium	0	U	0.7	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-02	Zinc	110	J	0	mg/Kg	5.5	6.5	Metal	BFEL	soil	2/5/1988
SB-03	Antimony	0	U	0.9	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Arsenic	21	JN	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Barium	140	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Beryllium	0	U	0.5	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Cadmium	2	JN	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Chromium	11	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Copper	33	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Cyanides (soluble	0	U	1.2	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Lead	140	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Mercury	0	U	0.1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Nickel	0	U	20	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Selenium	0	U	1	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Silver	0	U	2	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Thallium	0	U	0.6	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-03	Zinc	79	J	0	mg/Kg	6	7	Metal	BFEL	soil	2/5/1988
SB-1	Arsenic	5.9		0	mg/Kg	26	26.5	Metal	BFEL	soil	1/11/1984
SB-1	Arsenic	8.1		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/11/1984
SB-1	Arsenic	12		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/11/1984
SB-1	Arsenic	12		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/11/1984
SB-1	Arsenic	23		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/11/1984
SB-10	Arsenic	9.7		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/27/1984
SB-10	Arsenic	14		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/27/1984
SB-10	Arsenic	24		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/27/1984
SB-101	Arsenic	0	U	10	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Arsenic	0	U	10	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Arsenic	25.7		10	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Barium	0	U	500	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Barium	0	U	500	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Barium	0	U	500	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Cadmium	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Cadmium	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Cadmium	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Copper	0	U	50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Copper	0	U	50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Copper	0	U	50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Lead	0	U	38	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Lead	0	U	38	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Lead	265		38	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Mercury	0	U	0.25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Mercury	0	U	0.25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101	Mercury	0	U	0.25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101	Nickel	0	U	25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101	Nickel	0	U	25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997

SB-101		Nickel	0	U	25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101		Silver	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101		Silver	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101		Silver	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-101		Zinc	0	U	50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-101		Zinc	71		50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-101		Zinc	78.3		50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Arsenic	0	U	10	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Arsenic	0	U	10	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Arsenic	0	U	10	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Barium	0	U	500	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Barium	0	U	500	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Barium	0	U	500	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Cadmium	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Cadmium	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Cadmium	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Copper	52		50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Copper	54.5		50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Copper	103		50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Lead	0	U	38	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Lead	83.3		38	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Lead	122		38	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Mercury	0	U	0.25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Mercury	0	U	0.25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Mercury	0.26		0.25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Nickel	0	U	25	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Nickel	0	U	25	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Nickel	0	U	25	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Silver	0	U	1	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Silver	0	U	1	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Silver	0	U	1	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-102		Zinc	142		50	mg/Kg	3	5	Metal	BFEL	soil	2/24/1997
SB-102		Zinc	164		50	mg/Kg	8	10	Metal	BFEL	soil	2/24/1997
SB-102		Zinc	228		50	mg/Kg	13	15	Metal	BFEL	soil	2/24/1997
SB-12		Arsenic	10		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/27/1984
SB-12		Arsenic	10		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/30/1984
SB-12		Arsenic	14		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/27/1984
SB-12		Arsenic	16		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/27/1984
SB-13		Arsenic	0	U	2.5	mg/Kg	23.5	25	Metal	BFEL	soil	4/18/1985
SB-13		Arsenic	0	U	2.5	mg/Kg	33.35	35	Metal	BFEL	soil	4/18/1985
SB-13		Arsenic	4.6		0	mg/Kg	13.5	15	Metal	BFEL	soil	4/18/1985
SB-13		Arsenic	118		0	mg/Kg	8.5	10	Metal	BFEL	soil	4/18/1985
SB-13		Arsenic	340		0	mg/Kg	3.5	5	Metal	BFEL	soil	4/18/1985
SB-131		Arsenic	1.8		1.2	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-131		Lead	19	B	0.71	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-132	(12-13)	Arsenic	0	U	0.01	mg/L	12	13	Metal	BFEL	soil	6/21/2005
SB-132	(12-13)	Arsenic	1200		1.2	mg/Kg	12	13	Metal	BFEL	soil	6/21/2005
SB-132	(12-13)	Lead	0.0097		0.005	mg/L	12	13	Metal	BFEL	soil	6/21/2005
SB-132	(12-13)	Lead	20	B	0.73	mg/Kg	12	13	Metal	BFEL	soil	6/21/2005
SB-132	(14-15)	Arsenic	0	U	0.01	mg/L	14	15	Metal	BFEL	soil	6/21/2005
SB-132	(14-15)	Arsenic	460		1.1	mg/Kg	14	15	Metal	BFEL	soil	6/21/2005
SB-132	(14-15)	Lead	0.0081		0.005	mg/L	14	15	Metal	BFEL	soil	6/21/2005
SB-132	(14-15)	Lead	19	B	0.76	mg/Kg	14	15	Metal	BFEL	soil	6/21/2005
SB-132	(3-5)	Arsenic	0	U	0.01	mg/L	3	5	Metal	BFEL	soil	6/21/2005
SB-132	(3-5)	Arsenic	730		1.2	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-132	(3-5)	Lead	0	U	0.005	mg/L	3	5	Metal	BFEL	soil	6/21/2005
SB-132	(3-5)	Lead	92	B	0.71	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-134	(13-15)	Arsenic	1.2		1.2	mg/Kg	13	15	Metal	BFEL	soil	6/21/2005
SB-134	(13-15)	Lead	14	B	0.72	mg/Kg	13	15	Metal	BFEL	soil	6/21/2005
SB-134	(8-10)	Arsenic	0	U	0.01	mg/L	8	10	Metal	BFEL	soil	6/21/2005
SB-134	(8-10)	Arsenic	39		1.3	mg/Kg	8	10	Metal	BFEL	soil	6/21/2005
SB-134	(8-10)	Lead	0.0094		0.005	mg/L	8	10	Metal	BFEL	soil	6/21/2005
SB-134	(8-10)	Lead	35	B	0.75	mg/Kg	8	10	Metal	BFEL	soil	6/21/2005
SB-136	(3-5)	Arsenic	0	U	0.01	mg/L	3	5	Metal	BFEL	soil	6/22/2005
SB-136	(3-5)	Arsenic	73		1.1	mg/Kg	3	5	Metal	BFEL	soil	6/22/2005
SB-136	(3-5)	Lead	0.18		0.005	mg/L	3	5	Metal	BFEL	soil	6/22/2005
SB-136	(3-5)	Lead	340	B	0.69	mg/Kg	3	5	Metal	BFEL	soil	6/22/2005
SB-138	(3-5)	Arsenic	4.2		1.3	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-138	(3-5)	Lead	22	B	0.77	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-139	(3-5)	Arsenic	28		1.1	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-139	(3-5)	Lead	46	B	0.63	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-14		Arsenic	0	U	2.5	mg/Kg	4	5.5	Metal	BFEL	soil	4/16/1985
SB-14		Arsenic	0	U	2.5	mg/Kg	9	10.5	Metal	BFEL	soil	4/16/1985
SB-14		Arsenic	0	U	2.5	mg/Kg	34	35.5	Metal	BFEL	soil	4/16/1985

SB-14	Arsenic	11.4		0	mg/Kg	24	25.5	Metal	BFEL	soil	4/16/1985
SB-14	Arsenic	66.6		0	mg/Kg	19	20.5	Metal	BFEL	soil	4/16/1985
SB-14	Arsenic	217.7		0	mg/Kg	14	15.5	Metal	BFEL	soil	4/16/1985
SB-140 (3-5)	Arsenic	1.3		1.3	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-140 (3-5)	Lead	22	B	0.76	mg/Kg	3	5	Metal	BFEL	soil	6/21/2005
SB-143 (6-7)	Arsenic	0	U	0.01	mg/L	6	7	Metal	BFEL	soil	6/21/2005
SB-143 (6-7)	Arsenic	30		1.1	mg/Kg	6	7	Metal	BFEL	soil	6/21/2005
SB-143 (6-7)	Lead	0.0082		0.005	mg/L	6	7	Metal	BFEL	soil	6/21/2005
SB-143 (6-7)	Lead	18	B	0.65	mg/Kg	6	7	Metal	BFEL	soil	6/21/2005
SB-144 (14-15)	Arsenic	0	U	0.01	mg/L	14	15	Metal	BFEL	soil	6/21/2005
SB-144 (14-15)	Arsenic	40		1.3	mg/Kg	14	15	Metal	BFEL	soil	6/21/2005
SB-144 (14-15)	Lead	0	U	0.005	mg/L	14	15	Metal	BFEL	soil	6/21/2005
SB-144 (14-15)	Lead	36	B	0.78	mg/Kg	14	15	Metal	BFEL	soil	6/21/2005
SB-15	Arsenic	0	U	2.5	mg/Kg	14.5	16	Metal	BFEL	soil	4/18/1985
SB-15	Arsenic	0	U	2.5	mg/Kg	34.5	36	Metal	BFEL	soil	4/18/1985
SB-15	Arsenic	3.34		0	mg/Kg	24.5	26	Metal	BFEL	soil	4/18/1985
SB-15	Arsenic	91.6		0	mg/Kg	9.5	11	Metal	BFEL	soil	4/18/1985
SB-15	Arsenic	432.5		0	mg/Kg	4.5	6	Metal	BFEL	soil	4/18/1985
SB-16	Arsenic	0	U	2.5	mg/Kg	4.5	6	Metal	BFEL	soil	4/17/1985
SB-16	Arsenic	0	U	2.5	mg/Kg	9.5	11	Metal	BFEL	soil	4/17/1985
SB-16	Arsenic	0	U	2.5	mg/Kg	14.5	16	Metal	BFEL	soil	4/17/1985
SB-16	Arsenic	0	U	2.5	mg/Kg	24.5	26	Metal	BFEL	soil	4/17/1985
SB-16	Arsenic	0	U	2.5	mg/Kg	34.5	36	Metal	BFEL	soil	4/17/1985
SB-170 (4.5')	Arsenic	0.68		0.51	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-170 (4.5')	Copper	77		0.51	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-170 (4.5')	Lead	8.5		0.31	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-170 (4.5')	Zinc	250		4.1	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-171 (4.5')	Arsenic	35		0.53	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-171 (4.5')	Copper	110		0.53	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-171 (4.5')	Lead	260		0.32	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-171 (4.5')	Zinc	390		4.2	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-172 (4.5')	Arsenic	13		0.57	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-172 (4.5')	Copper	120		0.57	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-172 (4.5')	Lead	79		0.34	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-172 (4.5')	Zinc	230		4.5	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-173 (4.5')	Arsenic	590		0.54	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-173 (4.5')	Copper	170		0.54	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-173 (4.5')	Lead	440		0.33	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-173 (4.5')	Zinc	64		4.3	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-174 (4.5')	Arsenic	250		0.53	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-174 (4.5')	Copper	330		0.53	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-174 (4.5')	Lead	3100		1.6	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-174 (4.5')	Zinc	180		4.2	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-175 (4.5')	Arsenic	1		0.52	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-175 (4.5')	Copper	95		0.52	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-175 (4.5')	Lead	21		0.31	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-175 (4.5')	Zinc	64		4.2	mg/Kg	3.5	4.5	Metal	BFEL	soil	5/30/2007
SB-2	Arsenic	2.8		0	mg/Kg	33.5	35	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	6.8		0	mg/Kg	38.5	40	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	15		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	23		0	mg/Kg	28.5	30	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	42		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	160		0	mg/Kg	23.5	25	Metal	BFEL	soil	1/12/1984
SB-2	Arsenic	549		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	11		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	11		0	mg/Kg	23.5	25	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	13		0	mg/Kg	31	32.5	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	18		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	29		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/12/1984
SB-3	Arsenic	59		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/12/1984
SB-8	Arsenic	6.1		0	mg/Kg	38.5	40	Metal	BFEL	soil	1/19/1984
SB-8	Arsenic	8.6		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/19/1984
SB-8	Arsenic	31		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/19/1984
SB-8	Arsenic	32		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/19/1984
SB-8	Arsenic	32		0	mg/Kg	28.5	30	Metal	BFEL	soil	1/19/1984
SB-8	Arsenic	1000		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/19/1984
SB-9	Arsenic	9.2		0	mg/Kg	3.5	5	Metal	BFEL	soil	1/18/1984
SB-9	Arsenic	9.9		0	mg/Kg	28.5	30	Metal	BFEL	soil	1/19/1984
SB-9	Arsenic	14		0	mg/Kg	13.5	15	Metal	BFEL	soil	1/19/1984
SB-9	Arsenic	15		0	mg/Kg	18.5	20	Metal	BFEL	soil	1/19/1984
SB-9	Arsenic	23		0	mg/Kg	8.5	10	Metal	BFEL	soil	1/18/1984

Location	Substance	Result	ResultCode	DL	Unit	StartDepth	EndDepth	Group	Site	Material	SDate
HA-102 (5'-6')	alpha-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	beta-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	Chlordane	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	DDD	0.019			0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	DDE	0.0027			0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	DDT	0.021			0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	delta-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	Dieldrin	0.0029			0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	gamma-BHC (Lindane)	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	Heptachlor	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	Methoxychlor	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-102 (5'-6')	Toxaphene	0	U		0.061 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	alpha-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	beta-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	Chlordane	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	DDD	0.0022			0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	DDE	0.0028			0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	DDT	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	delta-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	Dieldrin	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	Heptachlor	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	Methoxychlor	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-103 (4-5')	Toxaphene	0	U		0.056 mg/Kg	4	5	Pest	BFEL	soil	12/1/1999
HA-104 (4'-5')	alpha-BHC	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	beta-BHC	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	Chlordane	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	DDD	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	DDE	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	DDT	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	delta-BHC	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	Dieldrin	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	gamma-BHC (Lindane)	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	Heptachlor	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	Methoxychlor	0	U		0.0025 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-104 (4'-5')	Toxaphene	0	U		0.062 mg/Kg	4	5	Pest	BFEL	soil	11/30/1999
HA-105 (5-6')	alpha-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	beta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	Chlordane	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	DDD	0.004			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	DDE	0.0025			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	DDT	0.0036			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	delta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	Dieldrin	0.0036			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	Heptachlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	Methoxychlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-105 (5-6')	Toxaphene	0	U		0.056 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-106 (4-5')	alpha-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	beta-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	Chlordane	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	DDD	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	DDE	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	DDT	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	delta-BHC	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	Dieldrin	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	Heptachlor	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	Methoxychlor	0	U		0.0022 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-106 (4-5')	Toxaphene	0	U		0.056 mg/Kg	4	5	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	alpha-BHC	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	beta-BHC	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	Chlordane	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	DDD	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	DDE	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	DDT	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	delta-BHC	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	Dieldrin	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	gamma-BHC (Lindane)	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	Heptachlor	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	Methoxychlor	0	U		0.0021 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-107 (5-6')	Toxaphene	0	U		0.054 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	alpha-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	beta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	Chlordane	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	DDD	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	DDE	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	DDT	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	delta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	Dieldrin	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	Heptachlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	Methoxychlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-109(5-6')	Toxaphene	0	U		0.054 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	alpha-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	beta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	Chlordane	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	DDD	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	DDE	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	DDT	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	delta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	Dieldrin	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	Heptachlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	Methoxychlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-110 (5-6')	Toxaphene	0	U		0.054 mg/Kg	5	6	Pest	BFEL	soil	12/2/1999
HA-111 (5-6')	alpha-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	beta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	Chlordane	0.031	Y		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	DDD	0.025	Y		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	DDE	0.036			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	DDT	0.049			0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	delta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	Dieldrin	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	Heptachlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	Methoxychlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-111 (5-6')	Toxaphene	0	U		0.75 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	alpha-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	beta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	Chlordane	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	DDD	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	DDE	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	DDT	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	delta-BHC	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	Dieldrin	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	gamma-BHC (Lindane)	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	Heptachlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	Methoxychlor	0	U		0.0022 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-112 (5-6')	Toxaphene	0	U		0.056 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	alpha-BHC	0.0034			0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	beta-BHC	0.039			0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	Chlordane	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	DDD	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	DDE	0.003			0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	DDT	0.7			0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	delta-BHC	0.017			0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	Dieldrin	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	gamma-BHC (Lindane)	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	Heptachlor	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	Methoxychlor	0	U		0.0025 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-113 (5-6')	Toxaphene	0	U		0.062 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	alpha-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	beta-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	Chlordane	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	DDD	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	DDE	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	DDT	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	delta-BHC	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	Dieldrin	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	gamma-BHC (Lindane)	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	Heptachlor	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	Methoxychlor	0	U		0.0024 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
HA-114 (5-6')	Toxaphene	0	U		0.059 mg/Kg	5	6	Pest	BFEL	soil	12/1/1999
MW-1	alpha-BHC	0	U		0.01 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	alpha-BHC	0	U		0.1 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	alpha-BHC	0	U		0.01 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	alpha-BHC	0	U		0.01 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	alpha-BHC	0	U		0.01 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Chlordane	0	U		0.025 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Chlordane	0	U		0.025 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Chlordane	0	U		0.025 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Chlordane	0	U		0.025 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Chlordane	0	U		0.025 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	DDD	0	U		0.02 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	DDD	0	U		0.02 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	DDD	0	U		0.02 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	DDD	0	U		0.02 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	DDD	0	U		0.02 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	DDE	0	U		0.02 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	DDE	0	U		0.02 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	DDE	0	U		0.02 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	DDE	0	U		0.02 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	DDE	0	U		0.02 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	DDT	0	U		0.02 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	DDT	0	U		0.02 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	DDT	0	U		0.02 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	DDT	0	U		0.02 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	DDT	0	U		0.02 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Dieldrin	0	U		0.02 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Dieldrin	0	U		0.02 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Dieldrin	0	U		0.02 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Dieldrin	0	U		0.02 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Dieldrin	0	U		0.02 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Endrin	0	U		0.02 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Endrin	0	U		0.02 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Endrin	0	U		0.02 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Endrin	0	U		0.02 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Endrin	0	U		0.02 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	gamma-BHC (Lindane)	0	U		0.01 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	gamma-BHC (Lindane)	0	U		0.1 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	gamma-BHC (Lindane)	0	U		0.01 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	gamma-BHC (Lindane)	0	U		0.01 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	gamma-BHC (Lindane)	0	U		0.01 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Heptachlor	0	U		0.01 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Heptachlor	0	U		0.1 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Heptachlor	0	U		0.01 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Heptachlor	0	U		0.01 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Heptachlor	0.011			0 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Methoxychlor	0	U		0.05 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Methoxychlor	0	U		0.05 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Methoxychlor	0	U		0.05 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Methoxychlor	0	U		0.1 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Methoxychlor	0	U		0.1 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-1	Toxaphene	0	U		0.2 mg/Kg	3.5	5	Pest	BFEL	soil	8/15/1983
MW-1	Toxaphene	0	U		0.2 mg/Kg	8.5	10	Pest	BFEL	soil	8/15/1983
MW-1	Toxaphene	0	U		0.2 mg/Kg	13.5	15	Pest	BFEL	soil	8/15/1983
MW-1	Toxaphene	0	U		0.2 mg/Kg	18.5	20	Pest	BFEL	soil	8/15/1983
MW-1	Toxaphene	0	U		0.2 mg/Kg	23.5	25	Pest	BFEL	soil	8/14/1983
MW-10	Alpha, Beta, Delta-BHC	0	U		0.005 mg/Kg	26	27.5	Pest	BFEL	soil	1/23/1984
MW-10	Alpha, Beta, Delta-BHC	0.005			0 mg/Kg	21	22.5	Pest	BFEL	soil	1/23/1984
MW-10	Alpha, Beta, Delta-BHC	0.017			0 mg/Kg	13.5	15	Pest	BFEL	soil	1/23/1984

MW-10	Alpha, Beta, Delta-BHC	0.305	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Alpha, Beta, Delta-BHC	0.469	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Chlordane	0 U	0.025 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Chlordane	0 U	0.025 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	DDD	0 U	0.02 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	DDD	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	DDE	0 U	0.02 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	DDE	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	DDT	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	DDT	0 U	0.02 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	DDT	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Dieldrin	0 U	0.02 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Dieldrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Endrin	0 U	0.02 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Endrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	gamma-BHC (Lindane)	0.007	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	gamma-BHC (Lindane)	0.033	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	gamma-BHC (Lindane)	0.038	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Heptachlor	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Heptachlor	0 U	0.005 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Heptachlor	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Methoxychlor	0 U	0.1 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Methoxychlor	0 U	0.1 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-10	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-10	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-10	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-10	Toxaphene	0 U	0.2 mg/Kg	21	22.5 Pest	BFEL	soil	1/23/1984
MW-10	Toxaphene	0 U	0.2 mg/Kg	26	27.5 Pest	BFEL	soil	1/23/1984
MW-101	alpha-BHC	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	alpha-BHC	0.0044	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	beta-BHC	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	beta-BHC	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	Chlordane	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	Chlordane	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	DDD	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	DDD	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	DDE	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	DDE	0.01	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	DDT	0 U	0.0026 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	DDT	0.074	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	delta-BHC	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	delta-BHC	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	Dieldrin	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	Dieldrin	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	gamma-BHC (Lindane)	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	gamma-BHC (Lindane)	0.0019	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	Heptachlor	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	Heptachlor	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	Methoxychlor	0 U	0.0025 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	Methoxychlor	0 U	0.0026 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-101	Toxaphene	0 U	0.063 mg/Kg	3	5 Pest	BFEL	soil	7/1/1997
MW-101	Toxaphene	0 U	0.065 mg/Kg	8	10 Pest	BFEL	soil	7/1/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	alpha-BHC	0 U	0.001 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	beta-BHC	0 U	0.002 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	Chlordane	0 U	0.0099 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	DDD	0 U	0.003 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	DDE	0 U	0.001 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	DDT	0 U	0.003 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	delta-BHC	0 U	0.002 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	Dieldrin	0 U	0.001 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	Heptachlor	0 U	0.001 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0 U	0.017 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0 U	0.017 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0 U	0.017 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0 U	0.017 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0 U	0.017 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-102	Methoxychlor	0.08	0.017 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	18	20 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	23	25 Pest	BFEL	soil	2/24/1997
MW-102	Toxaphene	0 U	0.066 mg/Kg	28	30 Pest	BFEL	soil	2/24/1997
MW-11	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Alpha, Beta, Delta-BHC	0.063	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Alpha, Beta, Delta-BHC	0.091	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Alpha, Beta, Delta-BHC	3.75	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Chlordane	0 U	0.025 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Chlordane	2.25	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	DDE	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	DDE	1.37	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	DDT	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	DDT	12.5	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	gamma-BHC (Lindane)	0.105	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	gamma-BHC (Lindane)	0.19	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	gamma-BHC (Lindane)	0.975	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Heptachlor	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Heptachlor	0.123	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984
MW-11	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Methoxychlor	0 U	0.1 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/25/1984
MW-11	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/25/1984
MW-11	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/25/1984
MW-11	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	1/25/1984
MW-11	Toxaphene	6.01	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/25/1984

MW-12	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Alpha, Beta, Delta-BHC	0.008	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Alpha, Beta, Delta-BHC	0.01	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Alpha, Beta, Delta-BHC	0.014	0 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	Alpha, Beta, Delta-BHC	0.576	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Chlordane	0 U	0.025 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	DDD	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	DDE	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	DDT	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	DDT	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	DDT	0.193	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Dieldrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Endrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	gamma-BHC (Lindane)	0.009	0 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	gamma-BHC (Lindane)	0.094	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Heptachlor	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Heptachlor	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Methoxychlor	0 U	0.1 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-12	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/20/1984
MW-12	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/20/1984
MW-12	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/20/1984
MW-12	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/20/1984
MW-12	Toxaphene	0 U	0.2 mg/Kg	26	27.5 Pest	BFEL	soil	1/20/1984
MW-13	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Alpha, Beta, Delta-BHC	0.006	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Alpha, Beta, Delta-BHC	0.11	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Alpha, Beta, Delta-BHC	0.19	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Alpha, Beta, Delta-BHC	0.91	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Chlordane	0 U	0.025 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Chlordane	3	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	DDD	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	DDE	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	DDE	0.41	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	DDT	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	DDT	0.026	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	DDT	0.044	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	DDT	0.068	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	DDT	14	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Dieldrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Endrin	0 U	0.02 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	gamma-BHC (Lindane)	0.09	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	gamma-BHC (Lindane)	0.12	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	gamma-BHC (Lindane)	0.15	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Heptachlor	0 U	0.005 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Heptachlor	0.008	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Heptachlor	0.01	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Heptachlor	0.47	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-13	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Methoxychlor	0 U	0.1 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/26/1984
MW-13	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/26/1984
MW-13	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/26/1984
MW-13	Toxaphene	0 U	0.2 mg/Kg	26	27.5 Pest	BFEL	soil	1/26/1984
MW-13	Toxaphene	9	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-14	Alpha, Beta, Delta-BHC	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	Alpha, Beta, Delta-BHC	0.12	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Alpha, Beta, Delta-BHC	0.27	0 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	Chlordane	1.1	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Chlordane	2	0 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	DDE	0.02	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	DDE	0.02	0 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	DDE	0.27	0 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	DDT	0.95	0 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	DDT	1.1	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	DDT	11.2	0 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	gamma-BHC (Lindane)	0 U	0.05 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	gamma-BHC (Lindane)	0.038	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Heptachlor	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	Heptachlor	0.024	0 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Heptachlor	0.3	0 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-14	Toxaphene	0 U	0.5 mg/Kg	3.5	5 Pest	BFEL	soil	2/8/1984
MW-14	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	2/8/1984
MW-14	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	2/8/1984
MW-15	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	Alpha, Beta, Delta-BHC	1.22	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Chlordane	0 U	0.025 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	DDD	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	DDE	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	DDE	4.28	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	DDT	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	DDT	8.12	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Dieldrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Endrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	gamma-BHC (Lindane)	0.014	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	gamma-BHC (Lindane)	0.293	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Heptachlor	0 U	0.005 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	Heptachlor	0.018	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-15	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Methoxychlor	0 U	0.1 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/23/1984
MW-15	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/23/1984
MW-15	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/23/1984
MW-15	Toxaphene	0 U	0.2 mg/Kg	23.5	25 Pest	BFEL	soil	1/23/1984
MW-15	Toxaphene	4.41	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/23/1984
MW-2	alpha-BHC	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	alpha-BHC	0 U	0.01 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	alpha-BHC	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	alpha-BHC	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	alpha-BHC	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983

MW-2	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Chlordane	0 U	0.025 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Chlordane	0 U	0.025 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Chlordane	0 U	0.025 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	DDD	0 U	0.02 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	DDD	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	DDE	0 U	0.02 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	DDE	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	DDE	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	DDT	0 U	0.02 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	DDT	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	DDT	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Dieldrin	0 U	0.02 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Dieldrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Endrin	0 U	0.02 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Endrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	Heptachlor	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Heptachlor	0 U	0.01 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Heptachlor	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Heptachlor	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Heptachlor	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Methoxychlor	0 U	0.1 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Methoxychlor	0 U	0.1 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Methoxychlor	0 U	0.1 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-2	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	8/16/1983
MW-2	Toxaphene	0 U	0.2 mg/Kg	13.5	14 Pest	BFEL	soil	8/16/1983
MW-2	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	8/16/1983
MW-2	Toxaphene	0 U	0.2 mg/Kg	23.5	25 Pest	BFEL	soil	8/16/1983
MW-2	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	8/16/1983
MW-21	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-21	Alpha, Beta, Delta-BHC	0.0306	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/18/1985
MW-21	Chlordane	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	Chlordane	0 U	0.002 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-21	Chlordane	0.002	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	DDE	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	DDE	0 U	0.002 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-21	DDE	0.0129	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	DDT	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	DDT	0.0222	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	4	5.5 Pest	BFEL	soil	4/18/1985
MW-21	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-21	Heptachlor	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	Heptachlor	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	Heptachlor	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-21	Toxaphene	0 U	0.01 mg/Kg	9	10.5 Pest	BFEL	soil	4/18/1985
MW-21	Toxaphene	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	4/18/1985
MW-21	Toxaphene	0 U	0.005 mg/Kg	24	25.5 Pest	BFEL	soil	4/18/1985
MW-22	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	Alpha, Beta, Delta-BHC	0 U	0.0002 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	Alpha, Beta, Delta-BHC	0 U	0.0002 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	Alpha, Beta, Delta-BHC	0.0329	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	Chlordane	0.00344	0 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	Chlordane	0.00603	0 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	Chlordane	0.0436	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	Chlordane	0.538	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	DDE	0 U	0.002 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	DDE	0 U	0.002 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	DDE	0.0521	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	DDE	0.409	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	DDT	0 U	0.002 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	DDT	0 U	0.002 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	DDT	0 U	0.002 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	DDT	0.82	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	gamma-BHC (Lindane)	0 U	0.0002 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	gamma-BHC (Lindane)	0 U	0.0002 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	gamma-BHC (Lindane)	0 U	0.0002 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	Heptachlor	0 U	0.0005 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-22	Heptachlor	0 U	0.0002 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	Heptachlor	0.00885	0 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	Heptachlor	0.0096	0 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	Toxaphene	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	4/16/1985
MW-22	Toxaphene	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	4/16/1985
MW-22	Toxaphene	0 U	0.005 mg/Kg	23.5	25 Pest	BFEL	soil	4/16/1985
MW-22	Toxaphene	0.24	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/16/1985
MW-23	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	Alpha, Beta, Delta-BHC	0.0344	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	Alpha, Beta, Delta-BHC	0.508	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	Alpha, Beta, Delta-BHC	1.762	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	Chlordane	0.0257	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	Chlordane	0.0329	0 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	Chlordane	0.505	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	Chlordane	0.531	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	DDE	0 U	0.002 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	DDE	0.006	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	DDE	0.0308	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	DDE	0.749	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	DDT	0.317	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	DDT	0.628	0 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	DDT	6.445	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	DDT	22.83	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	gamma-BHC (Lindane)	0.0048	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	gamma-BHC (Lindane)	0.102	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	gamma-BHC (Lindane)	2.29	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	Heptachlor	0 U	0.0002 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	Heptachlor	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	Heptachlor	0.0121	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	Heptachlor	0.0782	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-23	Toxaphene	0 U	0.01 mg/Kg	24	25.5 Pest	BFEL	soil	4/17/1985
MW-23	Toxaphene	0.118	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/17/1985
MW-23	Toxaphene	0.272	0 mg/Kg	14	15.5 Pest	BFEL	soil	4/17/1985
MW-23	Toxaphene	4.47	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/17/1985
MW-26	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	Alpha, Beta, Delta-BHC	0.017	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	Chlordane	0.022	0 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	Chlordane	0.0604	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	Chlordane	0.134	0 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	Chlordane	0.262	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	DDE	0 U	0.002 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	DDE	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	DDE	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	DDE	0.0133	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	DDT	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	DDT	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	DDT	0.0349	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	DDT	0.124	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	gamma-BHC (Lindane)	0.0322	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	Heptachlor	0 U	0.0005 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	Heptachlor	0 U	0.0005 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-26	Heptachlor	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	Heptachlor	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	Toxaphene	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	6/18/1985
MW-26	Toxaphene	0 U	0.005 mg/Kg	19	20.5 Pest	BFEL	soil	6/18/1985
MW-26	Toxaphene	0.194	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/18/1985
MW-26	Toxaphene	5.79	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/18/1985
MW-27	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	Alpha, Beta, Delta-BHC	3.62	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	Alpha, Beta, Delta-BHC	10.52	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	Chlordane	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	Chlordane	0.055	0 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	Chlordane	2.502	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	Chlordane	36.2	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	DDE	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	DDE	0.127	0 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	DDE	1.998	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	DDE	14.4	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	DDT	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	DDT	2.62	0 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	DDT	16.6	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	DDT	28.9	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	Heptachlor	0 U	0.0005 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	Heptachlor	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	Heptachlor	0.113	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	Heptachlor	2.61	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-27	Toxaphene	0 U	0.005 mg/Kg	19	20.5 Pest	BFEL	soil	6/17/1985
MW-27	Toxaphene	0.768	0 mg/Kg	14	15.5 Pest	BFEL	soil	6/17/1985
MW-27	Toxaphene	0.993	0 mg/Kg	4	5.5 Pest	BFEL	soil	6/17/1985
MW-27	Toxaphene	3.07	0 mg/Kg	9	10.5 Pest	BFEL	soil	6/17/1985
MW-8	Alpha, Beta, Delta-BHC	0.034	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Alpha, Beta, Delta-BHC	0.44	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	Alpha, Beta, Delta-BHC	44	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Chlordane	0.12	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Chlordane	0.51	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	Chlordane	191	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	DDD	0.063	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	DDD	57	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	DDE	0.015	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	DDE	0.031	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	DDE	17	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	DDT	0.24	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	DDT	1.41	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	DDT	436	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Dieldrin	0 U	0.1 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Dieldrin	0 U	0.02 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984

MW-8	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Endrin	0 U	0.1 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Endrin	0 U	0.02 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	gamma-BHC (Lindane)	0.007	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	gamma-BHC (Lindane)	0.062	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	gamma-BHC (Lindane)	1.87	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Heptachlor	0.006	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Heptachlor	0.006	0 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	Heptachlor	6.2	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Methoxychlor	0 U	0.2 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-8	Methoxychlor	0 U	0.1 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/26/1984
MW-8	Toxaphene	0 U	0.2 mg/Kg	16	17.5 Pest	BFEL	soil	1/26/1984
MW-8	Toxaphene	260	0 mg/Kg	11	12.5 Pest	BFEL	soil	1/26/1984
MW-9	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Alpha, Beta, Delta-BHC	0.134	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Alpha, Beta, Delta-BHC	0.797	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Alpha, Beta, Delta-BHC	3.8	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Chlordane	0 U	0.025 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Chlordane	0.926	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	DDE	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	DDT	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	DDT	0.363	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	DDT	1.11	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	gamma-BHC (Lindane)	0.014	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	gamma-BHC (Lindane)	0.017	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	gamma-BHC (Lindane)	0.109	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	gamma-BHC (Lindane)	0.166	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Heptachlor	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Heptachlor	0.074	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
MW-9	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Methoxychlor	0 U	0.1 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/24/1984
MW-9	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/24/1984
MW-9	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/24/1984
MW-9	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	1/24/1984
MW-9	Toxaphene	12.5	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/24/1984
SB-01	Aldrin	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	alpha-BHC	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	beta-BHC	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Chlordane	0 U	0.086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	DDD	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	DDE	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	DDT	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	delta-BHC	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Dieldrin	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Endosulfan sulfate	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Endosulfan-I	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Endrin	0 U	0.017 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	gamma-BHC (Lindane)	0 UR	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Heptachlor	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Heptachlor epoxide	0 U	0.0086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Methoxychlor	0 U	0.086 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-01	Toxaphene	0 U	0.17 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-02	Aldrin	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	alpha-BHC	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	beta-BHC	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Chlordane	0 U	0.11 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	DDD	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	DDE	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	DDT	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	delta-BHC	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Dieldrin	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Endosulfan sulfate	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Endosulfan-I	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Endrin	0 U	0.022 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	gamma-BHC (Lindane)	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Heptachlor	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Heptachlor epoxide	0 U	0.011 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Methoxychlor	0 U	0.11 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-02	Toxaphene	0 U	0.22 mg/Kg	5.5	6.5 Pest	BFEL	soil	2/5/1988
SB-03	Aldrin	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	alpha-BHC	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	beta-BHC	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Chlordane	0.73 J	0.96 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	DDD	2.3 C	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	DDE	0 U	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	DDT	3 C	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	delta-BHC	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Dieldrin	0.08 J	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Endosulfan sulfate	0 U	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Endosulfan-I	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Endrin	0 U	0.19 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	gamma-BHC (Lindane)	0 UR	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Heptachlor	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Heptachlor epoxide	0 U	0.096 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Methoxychlor	0 U	0.96 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-03	Toxaphene	0 U	1.9 mg/Kg	6	7 Pest	BFEL	soil	2/5/1988
SB-1	alpha-BHC	0 U	0.01 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	alpha-BHC	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	alpha-BHC	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	alpha-BHC	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	alpha-BHC	0 U	0.01 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Chlordane	0.12	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Chlordane	0.12	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Chlordane	0.22	0 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Chlordane	0.26	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Chlordane	0.3	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	DDD	0 U	0.02 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	DDE	0 U	0.02 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	DDT	0.023	0.02 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	DDT	0.032	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	DDT	0.16	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Dieldrin	0 U	0.02 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Endrin	0 U	0.02 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Heptachlor	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Heptachlor	0.02	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Heptachlor	0.021	0 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Heptachlor	0.022	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Heptachlor	0.025	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	Methoxychlor	0 U	0.05 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Methoxychlor	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	Methoxychlor	0 U	0.05 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Methoxychlor	0 U	0.05 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Methoxychlor	0 U	0.05 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-1	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/11/1984
SB-1	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/11/1984
SB-1	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/11/1984
SB-1	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/11/1984
SB-1	Toxaphene	0 U	0.2 mg/Kg	26	26.5 Pest	BFEL	soil	1/11/1984
SB-10	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Alpha, Beta, Delta-BHC	0.007	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Alpha, Beta, Delta-BHC	0.007	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	DDT	0.065	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	gamma-BHC (Lindane)	0.007	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	gamma-BHC (Lindane)	0.01	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	gamma-BHC (Lindane)	0.011	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Heptachlor	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984

SB-10	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-10	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-10	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-10	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-101	alpha-BHC	0.00732	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	alpha-BHC	0.158	0.006 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	alpha-BHC	2.16	0.101 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	beta-BHC	0.00683	0.002 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	beta-BHC	0.057	0.012 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	beta-BHC	10.6	10.3 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	Chlordane	0 U	0.505 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	Chlordane	0 U	0.0594 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Chlordane	0 U	0.0099 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	DDD	0 U	0.153 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	DDD	0 U	0.018 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	DDD	0 U	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	DDE	0 U	0.051 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	DDE	0 U	0.006 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	DDE	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	DDT	0.0452	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	DDT	0.078	0.018 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	DDT	555	30.9 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	delta-BHC	0 U	10.3 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	delta-BHC	0.003	0.002 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	delta-BHC	0.0427	0.012 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Dieldrin	0.00189	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	Dieldrin	0.00921	0.006 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Dieldrin	6.6	0.101 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	gamma-BHC (Lindane)	0 U	5.15 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	gamma-BHC (Lindane)	0.00111	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	gamma-BHC (Lindane)	0.0446	0.006 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Heptachlor	0 U	0.006 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Heptachlor	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	Heptachlor	3.12	0.101 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	Methoxychlor	0 U	0.867 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	Methoxychlor	0 U	0.102 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Methoxychlor	0 U	0.017 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-101	Toxaphene	0 U	3.4 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-101	Toxaphene	0 U	0.396 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-101	Toxaphene	0 U	0.066 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	alpha-BHC	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	alpha-BHC	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	alpha-BHC	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	beta-BHC	0 U	0.002 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	beta-BHC	0 U	0.002 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	beta-BHC	0 U	0.002 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	Chlordane	0 U	0.0099 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	Chlordane	0 U	0.0099 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Chlordane	0 U	0.0099 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	DDD	0 U	0.003 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	DDD	0 U	0.003 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	DDD	0.0239	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	DDE	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	DDE	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	DDE	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	DDT	0 U	0.003 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	DDT	0 U	0.003 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	DDT	0.0798	0.003 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	delta-BHC	0 U	0.002 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	delta-BHC	0 U	0.002 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Dieldrin	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	Dieldrin	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Dieldrin	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	Heptachlor	0 U	0.001 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	Heptachlor	0 U	0.001 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Heptachlor	0 U	0.001 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	Methoxychlor	0 U	0.017 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	Methoxychlor	0 U	0.017 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Methoxychlor	0 U	0.017 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-102	Toxaphene	0 U	0.066 mg/Kg	3	5 Pest	BFEL	soil	2/24/1997
SB-102	Toxaphene	0 U	0.066 mg/Kg	8	10 Pest	BFEL	soil	2/24/1997
SB-102	Toxaphene	0 U	0.066 mg/Kg	13	15 Pest	BFEL	soil	2/24/1997
SB-12	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	Alpha, Beta, Delta-BHC	0.008	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Alpha, Beta, Delta-BHC	0.24	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	DDT	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	DDT	0.02	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	gamma-BHC (Lindane)	0.007	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	gamma-BHC (Lindane)	0.008	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	gamma-BHC (Lindane)	0.072	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Heptachlor	0 U	0.005 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	Heptachlor	0.006	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-12	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/27/1984
SB-12	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/27/1984
SB-12	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/27/1984
SB-12	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/30/1984
SB-13	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	Alpha, Beta, Delta-BHC	1.04	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	Chlordane	0 U	0.002 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	Chlordane	0 U	0.002 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	Chlordane	0 U	0.002 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	Chlordane	0.0033	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	Chlordane	0.658	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	DDE	0 U	0.002 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	DDE	0 U	0.002 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	DDE	0 U	0.002 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	DDE	0 U	0.002 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	DDE	2.19	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	DDT	0 U	0.002 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	DDT	0 U	0.002 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	DDT	0 U	0.002 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	DDT	0.0242	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	DDT	7.52	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	gamma-BHC (Lindane)	0 U	0.001 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	gamma-BHC (Lindane)	0.093	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	Heptachlor	0 U	0.0005 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	Heptachlor	0 U	0.0005 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	Heptachlor	0 U	0.0005 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	Heptachlor	0.0064	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	Heptachlor	0.0538	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-13	Toxaphene	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	4/18/1985
SB-13	Toxaphene	0 U	0.005 mg/Kg	23.5	25 Pest	BFEL	soil	4/18/1985
SB-13	Toxaphene	0 U	0.005 mg/Kg	33.35	35 Pest	BFEL	soil	4/18/1985
SB-13	Toxaphene	1.491	0 mg/Kg	8.5	10 Pest	BFEL	soil	4/18/1985
SB-13	Toxaphene	6.266	0 mg/Kg	3.5	5 Pest	BFEL	soil	4/18/1985
SB-14	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	Alpha, Beta, Delta-BHC	0.0122	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	Alpha, Beta, Delta-BHC	0.1072	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	Alpha, Beta, Delta-BHC	0.385	0 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0 U	0.002 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0 U	0.002 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0 U	0.002 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0.0305	0 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	Chlordane	0.0795	0 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0 U	0.002 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0 U	0.002 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0 U	0.002 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	DDE	0.0214	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	DDT	0 U	0.002 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0.0324	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0.0666	0 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0.259	0 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	gamma-BHC (Lindane)	0.3293	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0 U	0.0005 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0 U	0.002 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0.007	0 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0.0111	0 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	Heptachlor	0.01425	0 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0 U	0.005 mg/Kg	4	5.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0 U	0.005 mg/Kg	9	10.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0 U	0.005 mg/Kg	14	15.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0 U	0.005 mg/Kg	24	25.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0 U	0.005 mg/Kg	34	35.5 Pest	BFEL	soil	4/16/1985
SB-14	Toxaphene	0.464	0 mg/Kg	19	20.5 Pest	BFEL	soil	4/16/1985
SB-15	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	Alpha, Beta, Delta-BHC	0 U	0.0005 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	Alpha, Beta, Delta-BHC	0.0488	0 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985

SB-15	Alpha, Beta, Delta-BHC	0.109	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	Chlordane	0 U	0.002 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	Chlordane	0.0073	0 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	Chlordane	0.0103	0 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	Chlordane	0.0258	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	Chlordane	0.0707	0 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-15	DDE	0 U	0.002 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	DDE	0 U	0.002 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	DDE	0.0086	0 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	DDE	0.015	0 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-15	DDE	0.0403	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	DDT	0 U	0.002 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	DDT	0.0224	0 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	DDT	0.0266	0 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	DDT	0.228	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	DDT	0.944	0 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-15	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-15	gamma-BHC (Lindane)	0.142	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	Heptachlor	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	Heptachlor	0 U	0.0005 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	Heptachlor	0 U	0.0005 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-15	Heptachlor	0.0062	0 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	Heptachlor	0.0065	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	Toxaphene	0 U	0.005 mg/Kg	9.5	11 Pest	BFEL	soil	4/18/1985
SB-15	Toxaphene	0 U	0.005 mg/Kg	14.5	16 Pest	BFEL	soil	4/18/1985
SB-15	Toxaphene	0 U	0.005 mg/Kg	24.5	26 Pest	BFEL	soil	4/18/1985
SB-15	Toxaphene	0.12	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/18/1985
SB-15	Toxaphene	0.182	0 mg/Kg	34.5	36 Pest	BFEL	soil	4/18/1985
SB-16	alpha-BHC	0 U	0.0005 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	alpha-BHC	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	alpha-BHC	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	alpha-BHC	0 U	0.0005 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	alpha-BHC	0.00885	0 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	Chlordane	0 U	0.002 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	Chlordane	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	Chlordane	0 U	0.002 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	Chlordane	0.00503	0 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	Chlordane	0.00989	0 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	DDE	0 U	0.002 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	DDE	0 U	0.002 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	DDE	0 U	0.002 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	DDE	0 U	0.002 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	DDE	0 U	0.002 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	DDT	0 U	0.002 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	DDT	0 U	0.002 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	DDT	0 U	0.002 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	DDT	0 U	0.002 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	DDT	0.0212	0 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	gamma-BHC (Lindane)	0 U	0.0005 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	gamma-BHC (Lindane)	0.0359	0 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	Heptachlor	0 U	0.0005 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	Heptachlor	0 U	0.0005 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	Heptachlor	0 U	0.0005 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	Heptachlor	0 U	0.0005 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-16	Heptachlor	0.00682	0 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	Toxaphene	0 U	0.005 mg/Kg	4.5	6 Pest	BFEL	soil	4/17/1985
SB-16	Toxaphene	0 U	0.005 mg/Kg	9.5	11 Pest	BFEL	soil	4/17/1985
SB-16	Toxaphene	0 U	0.005 mg/Kg	14.5	16 Pest	BFEL	soil	4/17/1985
SB-16	Toxaphene	0 U	0.005 mg/Kg	24.5	26 Pest	BFEL	soil	4/17/1985
SB-16	Toxaphene	0 U	0.005 mg/Kg	34.5	36 Pest	BFEL	soil	4/17/1985
SB-2	alpha-BHC	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	0 U	0.01 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	0 U	0.01 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	0.098	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	0.38	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	1.5	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	alpha-BHC	41	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.1	0 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.14	0 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.16	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.3	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.44	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	0.47	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Chlordane	21	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.02 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	DDD	0.05	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	DDE	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	DDT	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	DDT	0 U	0.02 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	DDT	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	DDT	0.052	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	DDT	0.69	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	DDT	6.9	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	DDT	120	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0 U	0.02 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	0.13	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Dieldrin	3.2	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Endrin	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0.075	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0.089	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	0.77	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	gamma-BHC (Lindane)	19	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0 U	0.01 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0 U	0.01 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0 U	0.01 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0.018	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0.025	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0.035	0 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Heptachlor	0.82	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Methoxychlor	0 U	0.05 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	0 U	0.2 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	0 U	0.2 mg/Kg	38.5	40 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	0.2	0 mg/Kg	33.5	35 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	3.62	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-2	Toxaphene	592	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	0 U	0.01 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	0.011	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	alpha-BHC	6.8	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.25 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.025 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.025 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.025 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Chlordane	0 U	0.025 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	DDD	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	DDD	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	DDD	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	DDD	0 U	0.02 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	DDD	1.7	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0 U	0.02 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	DDE	0.86	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	DDT	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	DDT	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	DDT	0 U	0.02 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	DDT	0.024	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	DDT	28	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Dieldrin	0 U	0.02 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Endrin	0 U	0.02 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	0.01	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	gamma-BHC (Lindane)	3.3	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0 U	0.01 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0 U	0.01 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0 U	0.01 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0 U	0.01 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0.01	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Heptachlor	0.06	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Methoxychlor	0 U	0.1 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984

SB-3	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/12/1984
SB-3	Toxaphene	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/12/1984
SB-3	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/12/1984
SB-3	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/12/1984
SB-3	Toxaphene	0 U	0.2 mg/Kg	23.5	25 Pest	BFEL	soil	1/12/1984
SB-3	Toxaphene	0 U	0.2 mg/Kg	31	32.5 Pest	BFEL	soil	1/12/1984
SB-8	Alpha, Beta, Delta-BHC	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Alpha, Beta, Delta-BHC	0 U	0.01 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Alpha, Beta, Delta-BHC	0.01	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Alpha, Beta, Delta-BHC	0.041	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Alpha, Beta, Delta-BHC	0.67	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	0 U	0.025 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	0 U	0.025 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	0 U	0.05 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	0 U	0.025 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	0 U	0.025 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Chlordane	5.3	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.04 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	DDD	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.04 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	DDE	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	DDT	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	DDT	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	DDT	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	DDT	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	DDT	0.15	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	DDT	4.4	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.04 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Dieldrin	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.05 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.04 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Endrin	0 U	0.02 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0.024	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	gamma-BHC (Lindane)	0.25	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0 U	0.01 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0 U	0.005 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Heptachlor	0.17	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.1 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.2 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.1 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Methoxychlor	0 U	0.1 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	0 U	0.2 mg/Kg	38.5	40 Pest	BFEL	soil	1/19/1984
SB-8	Toxaphene	38	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/19/1984
SB-9	Alpha, Beta, Delta-BHC	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Alpha, Beta, Delta-BHC	0.009	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Alpha, Beta, Delta-BHC	0.14	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Alpha, Beta, Delta-BHC	0.36	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	Alpha, Beta, Delta-BHC	3.4	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Chlordane	0 U	0.025 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	Chlordane	0.022	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Chlordane	0.16	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Chlordane	0.26	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Chlordane	0.42	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	DDD	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	DDD	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	DDD	0.086	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	DDD	0.2	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	DDD	0.43	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	DDE	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	DDE	0.037	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	DDE	0.16	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	DDE	0.29	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	DDE	0.61	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	DDT	0.061	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	DDT	0.26	0 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	DDT	0.56	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	DDT	1.2	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	DDT	1.6	0 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Dieldrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Dieldrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Dieldrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Dieldrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Dieldrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	Endrin	0 U	0.02 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Endrin	0 U	0.02 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Endrin	0 U	0.02 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Endrin	0 U	0.02 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Endrin	0 U	0.02 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	gamma-BHC (Lindane)	0 U	0.01 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	gamma-BHC (Lindane)	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	gamma-BHC (Lindane)	0.005	0 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	gamma-BHC (Lindane)	0.034	0 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	gamma-BHC (Lindane)	0.62	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Heptachlor	0 U	0.005 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Heptachlor	0 U	0.005 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Heptachlor	0 U	0.005 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Heptachlor	0 U	0.005 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	Heptachlor	0.015	0 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Methoxychlor	0 U	0.2 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Methoxychlor	0 U	0.1 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Methoxychlor	0 U	0.1 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Methoxychlor	0 U	0.1 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Methoxychlor	0 U	0.1 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984
SB-9	Toxaphene	0 U	0.5 mg/Kg	3.5	5 Pest	BFEL	soil	1/18/1984
SB-9	Toxaphene	0 U	0.26 mg/Kg	8.5	10 Pest	BFEL	soil	1/18/1984
SB-9	Toxaphene	0 U	0.2 mg/Kg	13.5	15 Pest	BFEL	soil	1/19/1984
SB-9	Toxaphene	0 U	0.2 mg/Kg	18.5	20 Pest	BFEL	soil	1/19/1984
SB-9	Toxaphene	0 U	0.2 mg/Kg	28.5	30 Pest	BFEL	soil	1/19/1984

Arsenic	D_Arsenic	Copper	D_Copper	Lead	D_Lead	Zinc	D_Zinc
0.54	0	2.6	0	5.4	1	20	0
0.62	0	11	1	8.5	1	46	1
0.68	1	27	1	10	1	50	0
1	1	33	1	11.1	1	50	0
1.2	1	50	1	14	1	50	0
1.3	1	50	0	14	1	57.3	1
1.6	1	50	0	15	1	59	1
1.8	1	50	0	15.2	1	62	1
1.9	1	50	0	17.2	1	64	1
2.1	1	50	0	18	1	64	1
2.5	0	50	0	19	1	69.4	1
2.5	0	50	0	19	1	71	1
2.5	0	50	0	20	1	78.3	1
2.5	0	50	0	20.3	1	79	1
2.5	0	52	1	20.7	1	87.3	1
2.5	0	54.5	1	21	1	110	1
2.5	0	65	1	21	1	142	1
2.5	0	73	1	22	1	164	1
2.5	0	77	1	22	1	180	1
2.5	0	95	1	24	1	228	1
2.5	0	103	1	31	1	230	1
2.5	0	110	1	35	1	250	1
2.5	0	120	1	36	1	390	1
2.5	0	170	1	36.8	1	569	1
2.5	0	200	1	38	0	684	1
2.5	0	330	1	38	0	1060	1
2.5	0	463	1	38	0	1210	1
2.5	0			38	0		
2.5	0			38	0		
2.5	1			38	0		
2.7	0			38	0		
2.8	0			38	0		
2.8	0			38	0		
2.8	1			44.3	1		
3.34	1			44.7	1		
3.4	1			46	1		
3.9	0			47.8	1		
4.2	1			79	1		
4.6	1			83.3	1		
4.6	1			92	1		
4.82	1			120	1		
5.2	1			122	1		
5.5	1			140	1		
5.7	1			260	1		
5.8	1			265	1		
5.9	1			272	1		
6.1	1			340	1		
6.5	1			440	1		
6.7	1			947	1		
6.8	1			1050	1		
6.8	1			1260	1		
6.9	1			3100	1		
6.9	1			65300	1		
7	1						

7.1	1
7.3	1
8.1	1
8.1	1
8.50000	0
8.58000	0
8.6	1
8.78	1
8.9	1
9.11000	0
9.2	1
9.45000	0
9.49000	0
9.6	1
9.7	1
9.9	1
10	0
10	0
10	0
10	0
10	0
10	0
10	0
10	0
10	0
10	0
10	0
10	1
10	1
10.2	1
11	1
11	1
11	1
11.4	1
12	1
12	1
12	1
12	1
12	1
12	1
12.5	1
13	0
13	1
13	1
13	1
13	1
13	1
14	1
14	1
14	1
14	1
14	1
15	1
15	1
15	1

16	1
16	1
18	1
19	1
21.4	1
22	1
23	1
23	1
23	1
24	1
25	1
25.7	1
27	1
27	1
28	1
29	1
30	1
31	1
32	1
32	1
32	1
35	1
35	1
39	1
40	1
42	1
42.7	1
44	1
45	1
55.90000	1
59	1
62.6	1
66.6	1
73	1
77	1
88	1
91.6	1
110	1
118	1
160	1
170	1
170	1
180	1
180	1
190	1
195	1
215	1
217.7	1
230	1
240	1
243	1
250	1
250	1
340	1
361	1

432.5	1
460	1
549	1
590	1
710	1
730	1
780	1
952	1
1000	1
1200	1
3300	1

General Statistics on Uncensored Data

Date/Time of Computation 1/16/2014 2:55:40 PM

User Selected Options

From File Book1.xls

Full Precision OFF

From File: Book1.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	175	0	133	42	24.00%	0.54	13	94.83	93221	305.3	3.22
Copper	27	0	17	10	37.04%	2.6	50	83.6	10486	102.4	1.225
Lead	53	0	44	9	16.98%	38	38	1410	78728216	8873	6.295
Zinc	27	0	23	4	14.81%	20	50	224.9	91824	303	1.347

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	133	0	0.68	3300	124.1	15	119998	346.4	16.01	6.545	2.792
Copper	17	0	11	463	119.6	77	13797	117.5	48.93	2.03	0.982
Lead	44	0	5.4	65300	1694	35.5	96550160	9826	31.28	6.604	5.801
Zinc	23	0	46	1210	258.9	110	104534	323.3	78.13	2.06	1.249

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	175	0	2.5	3.388	5.75	11.4	35	59.72	225.1	486.7	1052
Copper	27	0	30.44	50	50	50	99	108.6	182	291	428.4
Lead	53	0	14.16	19	20.3	38	92	132.8	420	1134	32956
Zinc	27	0	50	57.6	60.4	79	229	246	615	947.2	1171

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	1/16/2014 2:56:08 PM
From File	**BFEL Subsurface Soils**
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics

Total Number of Observations	175	Number of Distinct Observations	110
Number of Detects	133	Number of Non-Detects	42
Number of Distinct Detects	101	Number of Distinct Non-Detects	13
Minimum Detect	0.68	Minimum Non-Detect	0.54
Maximum Detect	3300	Maximum Non-Detect	13
Variance Detects	119998	Percent Non-Detects	24%
Mean Detects	124.1	SD Detects	346.4
Median Detects	15	CV Detects	2.792
Skewness Detects	6.545	Kurtosis Detects	54.57
Mean of Logged Detects	3.223	SD of Logged Detects	1.692

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.393	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.361	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0768	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	94.83	Standard Error of Mean	23.17
SD	305.3	95% KM (BCA) UCL	137.6
95% KM (t) UCL	133.1	95% KM (Percentile Bootstrap) UCL	137.5
95% KM (z) UCL	132.9	95% KM Bootstrap t UCL	160.2
90% KM Chebyshev UCL	164.3	95% KM Chebyshev UCL	195.8
97.5% KM Chebyshev UCL	239.5	99% KM Chebyshev UCL	325.3

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	9.462	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.841	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.227	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.0866	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.41	k star (bias corrected MLE)	0.406
Theta hat (MLE)	302.5	Theta star (bias corrected MLE)	305.7
nu hat (MLE)	109.1	nu star (bias corrected)	108
MLE Mean (bias corrected)	124.1	MLE Sd (bias corrected)	194.7

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0965	nu hat (KM)	33.77
Approximate Chi Square Value (33.77, α)	21.48	Adjusted Chi Square Value (33.77, β)	21.4
95% Gamma Approximate KM-UCL (use when n>=50)	149.1	95% Gamma Adjusted KM-UCL (use when n<50)	149.7

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	94.3
Maximum	3300	Median	11
SD	306.4	CV	3.249
k hat (MLE)	0.226	k star (bias corrected MLE)	0.225
Theta hat (MLE)	418.2	Theta star (bias corrected MLE)	418.3
nu hat (MLE)	78.93	nu star (bias corrected)	78.91
MLE Mean (bias corrected)	94.3	MLE Sd (bias corrected)	198.6
		Adjusted Level of Significance (β)	0.0486
Approximate Chi Square Value (78.91, α)	59.44	Adjusted Chi Square Value (78.91, β)	59.3
95% Gamma Approximate UCL (use when n>=50)	125.2	95% Gamma Adjusted UCL (use when n<50)	125.5

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0768	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	94.72	Mean in Log Scale	2.479
SD in Original Scale	306.2	SD in Log Scale	2.046
95% t UCL (assumes normality of ROS data)	133	95% Percentile Bootstrap UCL	136.4
95% BCA Bootstrap UCL	148.9	95% Bootstrap t UCL	161.3
95% H-UCL (Log ROS)	160.3		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	94.95	Mean in Log Scale	2.624
SD in Original Scale	306.2	SD in Log Scale	1.861
95% t UCL (Assumes normality)	133.2	95% H-Stat UCL	119.8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	239.5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Copper

General Statistics

Total Number of Observations	27	Number of Distinct Observations	19
Number of Detects	17	Number of Non-Detects	10
Number of Distinct Detects	17	Number of Distinct Non-Detects	2
Minimum Detect	11	Minimum Non-Detect	2.6
Maximum Detect	463	Maximum Non-Detect	50
Variance Detects	13797	Percent Non-Detects	37.04%
Mean Detects	119.6	SD Detects	117.5
Median Detects	77	CV Detects	0.982
Skewness Detects	2.03	Kurtosis Detects	4.125
Mean of Logged Detects	4.405	SD of Logged Detects	0.915

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.762	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.263	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.215	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	83.6	Standard Error of Mean	20.56
SD	102.4	95% KM (BCA) UCL	122.4
95% KM (t) UCL	118.7	95% KM (Percentile Bootstrap) UCL	119.4
95% KM (z) UCL	117.4	95% KM Bootstrap t UCL	142.3
90% KM Chebyshev UCL	145.3	95% KM Chebyshev UCL	173.2
97.5% KM Chebyshev UCL	212	99% KM Chebyshev UCL	288.2

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.358	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.153	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.213	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.465	k star (bias corrected MLE)	1.245
Theta hat (MLE)	81.65	Theta star (bias corrected MLE)	96.03
nu hat (MLE)	49.79	nu star (bias corrected)	42.34
MLE Mean (bias corrected)	119.6	MLE Sd (bias corrected)	107.2

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.666	nu hat (KM)	35.99
Approximate Chi Square Value (35.99, α)	23.26	Adjusted Chi Square Value (35.99, β)	22.6
95% Gamma Approximate KM-UCL (use when n>=50)	129.3	95% Gamma Adjusted KM-UCL (use when n<50)	133.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	77.07
Maximum	463	Median	49.9
SD	108.2	CV	1.404
k hat (MLE)	0.28	k star (bias corrected MLE)	0.273
Theta hat (MLE)	275.7	Theta star (bias corrected MLE)	282.1
nu hat (MLE)	15.1	nu star (bias corrected)	14.75
MLE Mean (bias corrected)	77.07	MLE Sd (bias corrected)	147.5
		Adjusted Level of Significance (β)	0.0401
Approximate Chi Square Value (14.75, α)	7.09	Adjusted Chi Square Value (14.75, β)	6.751
95% Gamma Approximate UCL (use when n>=50)	160.4	95% Gamma Adjusted UCL (use when n<50)	168.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.118	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.215	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	82.75	Mean in Log Scale	3.815
SD in Original Scale	104.6	SD in Log Scale	1.137
95% t UCL (assumes normality of ROS data)	117.1	95% Percentile Bootstrap UCL	118.2
95% BCA Bootstrap UCL	129.2	95% Bootstrap t UCL	140.2
95% H-UCL (Log ROS)	158.3		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	3.745	95% H-UCL (KM -Log)	213.5
KM SD (logged)	1.311	95% Critical H Value (KM-Log)	2.952
KM Standard Error of Mean (logged)	0.329		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	83.67	Mean in Log Scale	3.856
SD in Original Scale	103.9	SD in Log Scale	1.162
95% t UCL (Assumes normality)	117.8	95% H-Stat UCL	173.3

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Percentile Bootstrap) UCL	119.4	95% GROS Adjusted Gamma UCL	168.4
95% Adjusted Gamma KM-UCL	133.1		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Lead

General Statistics

Total Number of Observations	53	Number of Distinct Observations	41
Number of Detects	44	Number of Non-Detects	9
Number of Distinct Detects	40	Number of Distinct Non-Detects	1
Minimum Detect	5.4	Minimum Non-Detect	38
Maximum Detect	65300	Maximum Non-Detect	38
Variance Detects	96550160	Percent Non-Detects	16.98%
Mean Detects	1694	SD Detects	9826
Median Detects	35.5	CV Detects	5.801
Skewness Detects	6.604	Kurtosis Detects	43.73
Mean of Logged Detects	4.123	SD of Logged Detects	1.834

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.176	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.944	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.472	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1410	Standard Error of Mean	1233
SD	8873	95% KM (BCA) UCL	3922
95% KM (t) UCL	3474	95% KM (Percentile Bootstrap) UCL	3835
95% KM (z) UCL	3437	95% KM Bootstrap t UCL	51128
90% KM Chebyshev UCL	5108	95% KM Chebyshev UCL	6784
97.5% KM Chebyshev UCL	9109	99% KM Chebyshev UCL	13677

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	8.534	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.902	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.319	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.148	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.219	k star (bias corrected MLE)	0.219
Theta hat (MLE)	7733	Theta star (bias corrected MLE)	7725
nu hat (MLE)	19.28	nu star (bias corrected)	19.29
MLE Mean (bias corrected)	1694	MLE Sd (bias corrected)	3617

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0252	nu hat (KM)	2.675
Approximate Chi Square Value (2.68, α)	0.283	Adjusted Chi Square Value (2.68, β)	0.266
95% Gamma Approximate KM-UCL (use when n>=50)	13321	95% Gamma Adjusted KM-UCL (use when n<50)	14161

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1406
Maximum	65300	Median	22
SD	8958	CV	6.371
k hat (MLE)	0.165	k star (bias corrected MLE)	0.168
Theta hat (MLE)	8547	Theta star (bias corrected MLE)	8380
nu hat (MLE)	17.44	nu star (bias corrected)	17.79
MLE Mean (bias corrected)	1406	MLE Sd (bias corrected)	3433
		Adjusted Level of Significance (β)	0.0455
Approximate Chi Square Value (17.79, α)	9.237	Adjusted Chi Square Value (17.79, β)	9.064
95% Gamma Approximate UCL (use when n>=50)	2708	95% Gamma Adjusted UCL (use when n<50)	2759

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.854	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.944	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1411	Mean in Log Scale	3.921
SD in Original Scale	8958	SD in Log Scale	1.768
95% t UCL (assumes normality of ROS data)	3471	95% Percentile Bootstrap UCL	3829
95% BCA Bootstrap UCL	5216	95% Bootstrap t UCL	51656
95% H-UCL (Log ROS)	540		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1409	Mean in Log Scale	3.923
SD in Original Scale	8958	SD in Log Scale	1.727
95% t UCL (Assumes normality)	3470	95% H-Stat UCL	487.8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	9109

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Zinc

General Statistics

Total Number of Observations	27	Number of Distinct Observations	24
Number of Detects	23	Number of Non-Detects	4
Number of Distinct Detects	22	Number of Distinct Non-Detects	2
Minimum Detect	46	Minimum Non-Detect	20
Maximum Detect	1210	Maximum Non-Detect	50
Variance Detects	104534	Percent Non-Detects	14.81%
Mean Detects	258.9	SD Detects	323.3
Median Detects	110	CV Detects	1.249
Skewness Detects	2.06	Kurtosis Detects	3.587
Mean of Logged Detects	5.015	SD of Logged Detects	0.992

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.672	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.294	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.185	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	224.9	Standard Error of Mean	59.64
SD	303	95% KM (BCA) UCL	333.9
95% KM (t) UCL	326.7	95% KM (Percentile Bootstrap) UCL	327.8
95% KM (z) UCL	323	95% KM Bootstrap t UCL	384.5
90% KM Chebyshev UCL	403.9	95% KM Chebyshev UCL	484.9
97.5% KM Chebyshev UCL	597.4	99% KM Chebyshev UCL	818.4

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.538	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.768	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.204	**Kolmogrov-Smirnoff GOF**	
5% K-S Critical Value	0.187	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.059	k star (bias corrected MLE)	0.95
Theta hat (MLE)	244.5	Theta star (bias corrected MLE)	272.6
nu hat (MLE)	48.7	nu star (bias corrected)	43.68
MLE Mean (bias corrected)	258.9	MLE Sd (bias corrected)	265.7

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.551	nu hat (KM)	29.75
Approximate Chi Square Value (29.75, α)	18.3	Adjusted Chi Square Value (29.75, β)	17.72
95% Gamma Approximate KM-UCL (use when n>=50)	365.7	95% Gamma Adjusted KM-UCL (use when n<50)	377.6

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	220.5
Maximum	1210	Median	79
SD	311.8	CV	1.414
k hat (MLE)	0.369	k star (bias corrected MLE)	0.353
Theta hat (MLE)	597.6	Theta star (bias corrected MLE)	625.2
nu hat (MLE)	19.93	nu star (bias corrected)	19.05
MLE Mean (bias corrected)	220.5	MLE Sd (bias corrected)	371.3
		Adjusted Level of Significance (β)	0.0401
Approximate Chi Square Value (19.05, α)	10.15	Adjusted Chi Square Value (19.05, β)	9.737
95% Gamma Approximate UCL (use when n>=50)	413.8	95% Gamma Adjusted UCL (use when n<50)	431.4

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.187	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.185	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	223.2	Mean in Log Scale	4.695
SD in Original Scale	309.9	SD in Log Scale	1.208
95% t UCL (assumes normality of ROS data)	325	95% Percentile Bootstrap UCL	329.2
95% BCA Bootstrap UCL	355.6	95% Bootstrap t UCL	378.7
95% H-UCL (Log ROS)	441.2		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	223.7	Mean in Log Scale	4.715
SD in Original Scale	309.6	SD in Log Scale	1.181
95% t UCL (Assumes normality)	325.3	95% H-Stat UCL	425

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	484.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

a, Beta, Delta-ha, Beta, Delta	alpha-BHC	D_alpha-BHC	beta-BHC	D_beta-BHC	Chlordane	D_Chlordane
0.0002	0	0.0005	0	0.0025	0	0.0099	0
0.0002	0	0.0005	0	0.0025	0	0.0025	0
0.0005	0	0.0005	0	0.002	0	0.025	0
0.0005	0	0.0005	0	0.0022	0	0.25	0
0.0005	0	0.001	0	0.002	0	0.025	0
0.0005	0	0.001	0	0.0022	0	0.505	0
0.0005	0	0.001	0	0.0024	0	0.0099	0
0.0005	0	0.001	0	0.0022	0	0.025	0
0.0005	0	0.001	0	0.0021	0	0.0022	0
0.0005	0	0.001	0	0.0022	0	0.0022	0
0.0005	0	0.001	0	0.0022	0	0.025	0
0.0005	0	0.001	0	0.0022	0	0.025	0
0.0005	0	0.001	0	0.0022	0	0.0025	0
0.0005	0	0.0021	0	0.0024	0	0.025	0
0.0005	0	0.0022	0	0.011	0	0.025	0
0.0005	0	0.0022	0	0.096	0	0.002	0
0.0005	0	0.0022	0	0.0086	0	0.002	0
0.0005	0	0.0022	0	0.002	0	0.0022	0
0.0005	0	0.0022	0	0.002	0	0.0025	0
0.0005	0	0.0022	0	0.0026	0	0.0022	0
0.0005	0	0.0022	0	0.002	0	0.0022	0
0.005	0	0.0024	0	0.002	0	0.0021	0
0.005	0	0.0024	0	0.002	0	0.0022	0
0.005	0	0.0025	0	0.002	0	0.0024	0
0.005	0	0.0025	0	0.002	0	0.0024	0
0.005	0	0.0034	1	0.00683	1	0.11	0
0.005	0	0.0044	1	0.039	1	0.086	0
0.005	0	0.00732	1	0.057	1	0.025	0
0.005	0	0.0086	0	10.6	1	0.0099	0
0.005	0	0.00885	1			0.0099	0
0.005	0	0.01	0			0.0026	0
0.005	0	0.01	0			0.025	0
0.005	0	0.01	0			0.025	0
0.005	0	0.01	0			0.025	0
0.005	0	0.01	0			0.025	0
0.005	0	0.01	0			0.0594	0
0.005	0	0.01	0			0.025	0
0.005	0	0.01	0			0.025	0
0.005	1	0.01	0			0.025	0
0.006	1	0.01	0			0.025	0
0.007	1	0.01	0			0.025	0
0.007	1	0.01	0			0.025	0
0.008	1	0.01	0			0.002	0
0.008	1	0.01	0			0.025	0
0.009	1	0.01	0			0.025	0
0.01	0	0.01	0			0.025	0
0.01	0	0.01	0			0.025	0
0.01	0	0.01	0			0.0099	0
0.01	1	0.01	0			0.025	0
0.01	1	0.01	0			0.025	0
0.0122	1	0.01	0			0.025	0
0.014	1	0.011	0			0.025	0
0.017	1	0.011	1			0.025	0
0.017	1	0.096	0			0.025	0

0.0306	1	0.098	1
0.0329	1	0.1	0
0.034	1	0.158	1
0.0344	1	0.38	1
0.041	1	1.5	1
0.0488	1	2.16	1
0.063	1	6.8	1
0.091	1	41	1
0.1072	1	0.02000	0
0.109	1	25.00000	1
0.11	1	0.00190	0
0.12	1	0.05700	1
0.134	1	0.00210	0
0.14	1	0.05500	1
0.19	1	0.00200	0
0.24	1	7.10000	1
0.27	1	0.00360	1
0.305	1	0.02700	1
0.36	1	0.00210	0
0.385	1	0.38000	1
0.44	1		
0.469	1		
0.508	1		
0.576	1		
0.67	1		
0.797	1		
0.91	1		
1.04	1		
1.22	1		
1.762	1		
3.4	1		
3.62	1		
3.75	1		
3.8	1		
10.52	1		
44	1		

0.0099	0
0.0099	0
0.025	0
0.025	0
0.002	0
0.025	0
0.002	0
0.002	0
0.0005	0
0.025	0
0.025	0
0.0099	0
0.025	0
0.025	0
0.025	0
0.05	0
0.025	0
0.025	0
0.025	0
0.025	0
0.002	0
0.025	0
0.025	0
0.0099	0
0.025	0
0.002	0
0.025	0
0.025	0
0.002	0
0.002	0
0.025	0
0.025	0
0.025	0
0.025	0
0.0099	0
0.025	0
0.025	0
0.025	0
0.025	0
0.025	0
0.002	0
0.002	0
0.002	0
0.025	0
0.002	1
0.0033	1
0.00344	1
0.00503	1
0.00603	1
0.0073	1
0.00989	1
0.0103	1
0.022	1
0.022	1
0.0257	1

0.0258	1
0.0305	1
0.031	1
0.0329	1
0.0436	1
0.055	1
0.0604	1
0.0707	1
0.0795	1
0.1	1
0.12	1
0.12	1
0.12	1
0.134	1
0.14	1
0.16	1
0.16	1
0.22	1
0.26	1
0.26	1
0.262	1
0.3	1
0.3	1
0.42	1
0.44	1
0.47	1
0.505	1
0.51	1
0.531	1
0.538	1
0.658	1
0.73	1
0.926	1
1.1	1
2	1
2.25	1
2.502	1
3	1
5.3	1
21	1
36.2	1
191	1
0.01400	1
1.20000	1
0.03500	1
0.00210	0
0.08100	1
0.00200	0

DDD	D_DDD	DDE	D_DDE	DDT	D_DDT	Dieldrin	D_Dieldrin
0.02	0	0.02	0	0.02	0	0.02	0
0.153	0	0.02	0	0.0025	0	0.02	0
0.02	0	0.02	0	0.003	0	0.02	0
0.0025	0	0.02	0	0.0025	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.003	0	0.02	0	0.0022	0	0.0025	0
0.02	0	0.02	0	0.003	0	0.001	0
0.0025	0	0.02	0	0.02	0	0.02	0
0.02	0	0.001	0	0.0022	0	0.02	0
0.0022	0	0.02	0	0.002	0	0.001	0
0.02	0	0.001	0	0.0021	0	0.02	0
0.02	0	0.051	0	0.0022	0	0.02	0
0.02	0	0.0025	0	0.002	0	0.02	0
0.02	0	0.0022	0	0.0022	0	0.0022	0
0.02	0	0.0025	0	0.0024	0	0.02	0
0.02	0	0.002	0	0.0022	0	0.0022	0
0.02	0	0.0022	0	0.022	0	0.02	0
0.003	0	0.0024	0	0.017	0	0.02	0
0.02	0	0.0021	0	0.003	0	0.02	0
0.02	0	0.0022	0	0.02	0	0.0025	0
0.0024	0	0.0022	0	0.02	0	0.0022	0
0.0022	0	0.002	0	0.003	0	0.0025	0
0.0022	0	0.022	0	0.02	0	0.0021	0
0.0025	0	0.19	0	0.02	0	0.0024	0
0.0021	0	0.017	0	0.002	0	0.0022	0
0.0022	0	0.02	0	0.02	0	0.0022	0
0.022	0	0.002	0	0.02	0	0.0022	0
0.017	0	0.02	0	0.02	0	0.022	0
0.02	0	0.02	0	0.02	0	0.017	0
0.0026	0	0.02	0	0.02	0	0.001	0
0.003	0	0.02	0	0.002	0	0.02	0
0.003	0	0.02	0	0.02	0	0.02	0
0.02	0	0.001	0	0.02	0	0.05	0
0.02	0	0.001	0	0.003	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.05	0	0.02	0	0.02	0	0.02	0
0.018	0	0.02	0	0.02	0	0.02	0
0.02	0	0.05	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.006	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.002	0	0.02	0	0.02	0
0.02	0	0.002	0	0.002	0	0.0026	0
0.02	0	0.002	0	0.002	0	0.02	0
0.02	0	0.02	0	0.002	0	0.001	0
0.02	0	0.02	0	0.002	0	0.1	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.001	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.001	0	0.02	0	0.02	0
0.02	0	0.001	0	0.02	0	0.02	0

0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.003	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.001	0
0.02	0	0.002	0	0.003	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.003	0	0.02	0	0.002	0	0.001	0
0.02	0	0.002	0	0.002	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.002	0	0.002	0	0.02	0
0.003	0	0.002	0	0.003	0	0.02	0
0.02	0	0.002	0	0.02	0	0.02	0
0.02	0	0.002	0	0.002	0	0.02	0
0.1	0	0.02	0	0.02	0	0.02	0
0.04	0	0.02	0	0.002	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.02	0	0.001	0	0.002	0	0.02	0
0.02	0	0.1	0	0.02	0	0.001	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.1	0
0.02	0	0.04	0	0.02	0	0.04	0
0.003	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.003	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.002	0	0.02	0	0.02	0
0.02	0	0.002	0	0.02	0	0.02	0
0.02	0	0.002	0	0.002	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.002	0	0.02	0
0.02	0	0.001	0	0.002	0	0.001	0
0.02	0	0.02	0	0.02	0	0.02	0
0.02	0	0.02	0	0.02	0	0.02	0
0.003	0	0.02	0	0.0036	1	0.02	0
0.02	0	0.002	0	0.02	1	0.02	0
0.02	0	0.02	0	0.021	1	0.02	0
0.02	0	0.002	0	0.0212	1	0.02	0
0.02	0	0.002	0	0.0222	1	0.001	0
0.02	0	0.002	0	0.0224	1	0.02	0
0.02	0	0.002	0	0.023	1	0.02	0
0.02	0	0.002	0	0.024	1	0.02	0
0.0022	1	0.002	0	0.0242	1	0.02	0
0.004	1	0.02	0	0.026	1	0.02	0
0.019	1	0.02	0	0.0266	1	0.02	0
0.0239	1	0.02	0	0.032	1	0.02	0
0.025	1	0.02	0	0.0349	1	0.02	0
0.05	1	0.02	0	0.044	1	0.00189	1
0.063	1	0.02	0	0.0452	1	0.0029	1
0.086	1	0.02	0	0.049	1	0.0036	1
0.2	1	0.02	0	0.052	1	0.00921	1
0.43	1	0.001	0	0.061	1	0.08	1
1.7	1	0.02	0	0.065	1	0.13	1

2.3	1	0.02	0	0.068	1	3.2	1
57	1	0.02	0	0.074	1	6.6	1
0.49000	1	0.002	0	0.078	1	0.02300	1
59.00000	1	0.002	0	0.0798	1	8.10000	1
0.22000	1	0.002	0	0.124	1	0.02500	1
0.04400	1	0.02	0	0.15	1	0.00420	0
0.09800	1	0.02	0	0.16	1	0.01700	1
0.00400	0	0.0025	1	0.193	1	0.00400	0
		0.0027	1	0.228	1		
		0.0028	1	0.24	1		
		0.003	1	0.26	1		
		0.006	1	0.317	1		
		0.0086	1	0.363	1		
		0.01	1	0.56	1		
		0.0129	1	0.628	1		
		0.0133	1	0.69	1		
		0.015	1	0.7	1		
		0.015	1	0.82	1		
		0.02	1	0.944	1		
		0.02	1	0.95	1		
		0.0214	1	1.1	1		
		0.0308	1	1.11	1		
		0.031	1	1.2	1		
		0.036	1	1.41	1		
		0.037	1	1.6	1		
		0.0403	1	2.62	1		
		0.0521	1	3	1		
		0.127	1	4.4	1		
		0.16	1	6.445	1		
		0.27	1	6.9	1		
		0.29	1	7.52	1		
		0.409	1	8.12	1		
		0.41	1	11.2	1		
		0.61	1	12.5	1		
		0.749	1	14	1		
		0.86	1	16.6	1		
		1.37	1	22.83	1		
		1.998	1	28	1		
		2.19	1	28.9	1		
		4.28	1	120	1		
		14.4	1	436	1		
		17	1	555	1		
		0.01600	1	0.47000	1		
		0.56000	0	47.00000	1		
		0.05800	1	0.06700	1		
		0.00420	0	0.06200	1		
		0.01900	1	0.01100	1		
		0.00400	0	0.00980	1		

ma-BHC (Lindn	ma-BHC (Lir	Heptachlor	D_Heptachlor	Toxaphene	D_Toxaphene	delta-BHC	D_delta-BHC
0.0005	0	0.005	0	0.056	0	0.002	0
0.0025	0	0.0025	0	0.2	0	0.0025	0
0.05	0	0.01	0	0.2	0	0.0022	0
0.001	0	0.005	0	0.056	0	0.0025	0
0.01	0	0.0005	0	0.062	0	0.0022	0
0.001	0	0.001	0	0.066	0	0.002	0
0.005	0	0.0022	0	0.2	0	10.3	0
0.0022	0	0.0022	0	0.5	0	0.0022	0
5.15	0	0.0025	0	0.2	0	0.0024	0
0.0025	0	0.001	0	0.063	0	0.0022	0
0.01	0	0.005	0	0.2	0	0.0022	0
0.005	0	0.005	0	3.4	0	0.0021	0
0.01	0	0.005	0	0.2	0	0.0024	0
0.001	0	0.0005	0	0.066	0	0.0022	0
0.0022	0	0.0021	0	0.2	0	0.0022	0
0.001	0	0.0022	0	0.5	0	0.011	0
0.0005	0	0.0022	0	0.2	0	0.0086	0
0.0022	0	0.0022	0	0.2	0	0.096	0
0.0025	0	0.0024	0	0.005	0	0.0026	0
0.0024	0	0.0022	0	0.005	0	0.002	0
0.0022	0	0.0024	0	0.054	0	0.002	0
0.0022	0	0.0025	0	0.054	0	0.002	0
0.0005	0	0.0022	0	0.056	0	0.002	0
0.0024	0	0.011	0	0.75	0	0.002	0
0.0022	0	0.096	0	0.059	0	0.002	0
0.0021	0	0.0086	0	0.061	0	0.002	0
0.0022	0	0.005	0	0.062	0	0.003	1
0.011	0	0.001	0	0.054	0	0.017	1
0.0086	0	0.005	0	0.056	0	0.0427	1
0.096	0	0.005	0	0.22	0		
0.0002	0	0.001	0	1.9	0		
0.001	0	0.006	0	0.17	0		
0.005	0	0.0026	0	0.2	0		
0.005	0	0.01	0	0.2	0		
0.001	0	0.01	0	0.2	0		
0.005	0	0.005	0	0.066	0		
0.01	0	0.005	0	0.066	0		
0.01	0	0.1	0	0.2	0		
0.1	0	0.0002	0	0.065	0		
0.01	0	0.005	0	0.2	0		
0.0005	0	0.005	0	0.2	0		
0.0005	0	0.005	0	0.396	0		
0.001	0	0.0005	0	0.2	0		
0.0005	0	0.0005	0	0.2	0		
0.0005	0	0.0002	0	0.2	0		
0.01	0	0.0005	0	0.005	0		
0.005	0	0.0005	0	0.26	0		
0.0005	0	0.01	0	0.2	0		
0.01	0	0.01	0	0.2	0		
0.0002	0	0.005	0	0.2	0		
0.005	0	0.01	0	0.2	0		
0.01	0	0.005	0	0.2	0		
0.001	0	0.005	0	0.005	0		
0.01	0	0.005	0	0.01	0		

0.005	0	0.005	0	0.005	0
0.001	0	0.01	0	0.005	0
0.0005	0	0.001	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.005	0	0.005	0	0.066	0
0.0005	0	0.001	0	0.2	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.2	0
0.01	0	0.001	0	0.2	0
0.005	0	0.0005	0	0.2	0
0.005	0	0.0005	0	0.066	0
0.005	0	0.005	0	0.2	0
0.01	0	0.0005	0	0.005	0
0.01	0	0.0005	0	0.2	0
0.005	0	0.0005	0	0.2	0
0.01	0	0.001	0	0.066	0
0.01	0	0.005	0	0.2	0
0.001	0	0.005	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.005	0	0.005	0	0.2	0
0.001	0	0.01	0	0.2	0
0.01	0	0.01	0	0.005	0
0.01	0	0.01	0	0.005	0
0.0002	0	0.005	0	0.005	0
0.01	0	0.0005	0	0.005	0
0.0005	0	0.0005	0	0.005	0
0.0005	0	0.0005	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.01	0	0.01	0	0.2	0
0.005	0	0.01	0	0.2	0
0.005	0	0.01	0	0.2	0
0.005	0	0.0005	0	0.2	0
0.01	0	0.001	0	0.066	0
0.005	0	0.0005	0	0.2	0
0.001	0	0.0005	0	0.2	0
0.01	0	0.0005	0	0.2	0
0.01	0	0.0005	0	0.2	0
0.01	0	0.005	0	0.2	0
0.0005	0	0.005	0	0.2	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.2	0
0.005	0	0.01	0	0.005	0
0.01	0	0.005	0	0.2	0
0.00111	1	0.001	0	0.2	0
0.0019	1	0.01	0	0.2	0
0.0048	1	0.005	0	0.005	0
0.005	1	0.01	0	0.2	0
0.007	1	0.0005	0	0.2	0
0.007	1	0.01	0	0.066	0
0.007	1	0.002	0	0.005	0
0.007	1	0.0005	0	0.005	0
0.008	1	0.0005	0	0.01	0

0.009	1	0.005	0	0.005	0
0.01	1	0.01	0	0.005	0
0.01	1	0.006	1	0.2	0
0.011	1	0.006	1	0.2	0
0.014	1	0.006	1	0.2	0
0.014	1	0.0062	1	0.2	0
0.017	1	0.0064	1	0.2	0
0.024	1	0.0065	1	0.2	0
0.0322	1	0.00682	1	0.2	0
0.0324	1	0.007	1	0.2	0
0.033	1	0.008	1	0.066	0
0.034	1	0.00885	1	0.2	0
0.0359	1	0.0096	1	0.2	0
0.038	1	0.01	1	0.2	0
0.038	1	0.01	1	0.005	0
0.0446	1	0.011	1	0.005	0
0.062	1	0.0111	1	0.005	0
0.0666	1	0.0121	1	0.2	0
0.072	1	0.01425	1	0.2	0
0.075	1	0.015	1	0.118	1
0.089	1	0.018	1	0.12	1
0.09	1	0.018	1	0.182	1
0.093	1	0.02	1	0.194	1
0.094	1	0.021	1	0.2	1
0.102	1	0.022	1	0.24	1
0.105	1	0.024	1	0.272	1
0.109	1	0.025	1	0.464	1
0.12	1	0.025	1	0.768	1
0.142	1	0.035	1	0.993	1
0.15	1	0.0538	1	1.491	1
0.166	1	0.06	1	3.07	1
0.19	1	0.074	1	3.62	1
0.25	1	0.0782	1	4.41	1
0.259	1	0.113	1	4.47	1
0.293	1	0.123	1	5.79	1
0.3293	1	0.17	1	6.01	1
0.62	1	0.3	1	6.266	1
0.77	1	0.47	1	9	1
0.975	1	0.82	1	12.5	1
1.87	1	2.61	1	38	1
2.29	1	3.12	1	260	1
3.3	1	6.2	1	592	1
19	1	0.00200	0	0.20000	0
0.00200	0	0.28000	0	28.00000	0
1.10000	1	0.00960	0	0.19000	0
0.00190	0	0.00210	0	0.21000	0
0.00390	1	0.02100	0	0.21000	0
0.00210	0	0.00200	0	0.20000	0
0.11000	1				

General Statistics on Uncensored Data

Date/Time of Computation 1/16/2014 3:10:47 PM

User Selected Options

From File Book1.xls

Full Precision OFF

From File: Book1.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Alpha, Beta, Delta-BHC	90	0	49	41	45.56%	2.0000E-4	0.01	0.894	22.63	4.758	5.321
alpha-BHC	74	0	19	55	74.32%	5.0000E-4	0.1	1.146	31.25	5.59	4.878
beta-BHC	29	0	4	25	86.21%	0.002	0.096	0.371	3.737	1.933	5.212
Chlordane	157	0	57	100	63.69%	5.0000E-4	0.505	1.751	240.8	15.52	8.864
DDD	117	0	18	99	84.62%	0.0021	0.153	1.043	56.51	7.517	7.207
DDE	157	0	38	119	75.80%	0.001	0.56	0.292	3.275	1.81	6.192
DDT	157	0	67	90	57.32%	0.002	0.022	8.577	3225	56.79	6.621
Dieldrin	117	0	12	105	89.74%	0.001	0.1	0.157	0.996	0.998	6.349
gamma-BHC (Lindane)	158	0	55	103	65.19%	2.0000E-4	5.15	0.212	2.388	1.545	7.289
Heptachlor	157	0	40	117	74.52%	2.0000E-4	0.28	0.0931	0.348	0.59	6.339
Toxaphene	157	0	23	134	85.35%	0.005	28	6.065	2638	51.36	8.468
delta-BHC	29	0	3	26	89.66%	0.002	10.3	0.0041	6.5302E-5	0.00808	1.969

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Alpha, Beta, Delta-BHC	49	0	0.005	44	1.642	0.12	41.19	6.418	0.168	6.294	3.908
alpha-BHC	19	0	0.0034	41	4.461	0.098	112.9	10.62	0.14	2.918	2.382
beta-BHC	4	0	0.00683	10.6	2.676	0.048	27.91	5.283	0.0372	2	1.974
Chlordane	57	0	0.002	191	4.818	0.14	660.2	25.69	0.193	7.075	5.333
DDD	18	0	0.0022	59	6.764	0.092	347.9	18.65	0.132	2.702	2.758
DDE	38	0	0.0025	17	1.2	0.0365	12.78	3.575	0.0474	3.892	2.979
DDT	67	0	0.0036	555	20.09	0.26	7437	86.24	0.356	5.494	4.292
Dieldrin	12	0	0.00189	8.1	1.516	0.024	8.35	2.89	0.032	1.773	1.906
gamma-BHC (Lindane)	55	0	0.00111	19	0.606	0.0666	6.743	2.597	0.0839	6.851	4.283
Heptachlor	40	0	0.006	6.2	0.364	0.019	1.301	1.141	0.0183	4.179	3.134
Toxaphene	23	0	0.118	592	41.31	3.07	17303	131.5	4.255	3.856	3.184
delta-BHC	3	0	0.003	0.0427	0.0209	0.017	4.0543E-4	0.0201	0.0208	0.839	0.963

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Alpha, Beta, Delta-BHC	90	0	5.0000E-4	5.0000E-4	0.005	0.0095	0.139	0.316	0.923	3.521	14.2
alpha-BHC	74	0	0.001	0.00206	0.0022	0.01	0.01	0.0228	0.313	3.784	29.32
beta-BHC	29	0	0.002	0.002	0.002	0.0022	0.0026	0.00754	0.0426	0.0804	7.659
Chlordane	157	0	0.00206	0.00376	0.0099	0.025	0.0795	0.131	0.507	1.36	27.69
DDD	117	0	0.003	0.0182	0.02	0.02	0.02	0.02	0.0722	0.262	48.25
DDE	157	0	0.002	0.002	0.0022	0.02	0.02	0.02	0.14	0.638	8.733
DDT	157	0	0.002	0.003	0.0036	0.02	0.124	0.354	3.56	14.52	259
Dieldrin	117	0	0.0022	0.00368	0.02	0.02	0.02	0.02	0.0208	0.084	6.056
gamma-BHC (Lindane)	158	0	5.0000E-4	0.001	0.0019	0.007	0.0324	0.0572	0.144	0.643	4.096
Heptachlor	157	0	5.0000E-4	0.001	0.0022	0.005	0.01	0.0108	0.0425	0.132	2.834
Toxaphene	157	0	0.005	0.056	0.066	0.2	0.2	0.2	1.192	5.834	135.7
delta-BHC	29	0	0.002	0.002	0.002	0.0022	0.0026	0.00524	0.0221	0.0747	7.443

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	1/16/2014 3:11:15 PM
From File	**BFEL Subsurface Soils**
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Alpha, Beta, Delta-BHC

General Statistics

Total Number of Observations	90	Number of Distinct Observations	47
Number of Detects	49	Number of Non-Detects	41
Number of Distinct Detects	45	Number of Distinct Non-Detects	4
Minimum Detect	0.005	Minimum Non-Detect	2.0000E-4
Maximum Detect	44	Maximum Non-Detect	0.01
Variance Detects	41.19	Percent Non-Detects	45.56%
Mean Detects	1.642	SD Detects	6.418
Median Detects	0.12	CV Detects	3.908
Skewness Detects	6.294	Kurtosis Detects	41.7
Mean of Logged Detects	-1.99	SD of Logged Detects	2.222

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.273	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.399	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.127	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.894	Standard Error of Mean	0.507
SD	4.758	95% KM (BCA) UCL	1.895
95% KM (t) UCL	1.736	95% KM (Percentile Bootstrap) UCL	1.809
95% KM (z) UCL	1.728	95% KM Bootstrap t UCL	4.911
90% KM Chebyshev UCL	2.414	95% KM Chebyshev UCL	3.103
97.5% KM Chebyshev UCL	4.058	99% KM Chebyshev UCL	5.936

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.316	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.872	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.188	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.138	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.28	k star (bias corrected MLE)	0.277
Theta hat (MLE)	5.854	Theta star (bias corrected MLE)	5.93
nu hat (MLE)	27.49	nu star (bias corrected)	27.14
MLE Mean (bias corrected)	1.642	MLE Sd (bias corrected)	3.12

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0353	nu hat (KM)	6.357
Approximate Chi Square Value (6.36, α)	1.825	Adjusted Chi Square Value (6.36, β)	1.786
95% Gamma Approximate KM-UCL (use when n>=50)	3.114	95% Gamma Adjusted KM-UCL (use when n<50)	3.182

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.005	Mean	0.899
Maximum	44	Median	0.01
SD	4.783	CV	5.324
k hat (MLE)	0.234	k star (bias corrected MLE)	0.233
Theta hat (MLE)	3.847	Theta star (bias corrected MLE)	3.853
nu hat (MLE)	42.04	nu star (bias corrected)	41.98
MLE Mean (bias corrected)	0.899	MLE Sd (bias corrected)	1.861
		Adjusted Level of Significance (β)	0.0473
Approximate Chi Square Value (41.98, α)	28.12	Adjusted Chi Square Value (41.98, β)	27.94
95% Gamma Approximate UCL (use when n>=50)	1.341	95% Gamma Adjusted UCL (use when n<50)	1.35

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.947	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0912	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.127	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.895	Mean in Log Scale	-4.609
SD in Original Scale	4.784	SD in Log Scale	3.527
95% t UCL (assumes normality of ROS data)	1.733	95% Percentile Bootstrap UCL	1.778
95% BCA Bootstrap UCL	2.641	95% Bootstrap t UCL	4.916
95% H-UCL (Log ROS)	38.39		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.945	95% H-UCL (KM -Log)	43.26
KM SD (logged)	3.624	95% Critical H Value (KM-Log)	5.582
KM Standard Error of Mean (logged)	0.387		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.895	Mean in Log Scale	-4.347
SD in Original Scale	4.784	SD in Log Scale	3.182
95% t UCL (Assumes normality)	1.733	95% H-Stat UCL	10.93

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	4.058

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

alpha-BHC

General Statistics

Total Number of Observations	74	Number of Distinct Observations	31
Number of Detects	19	Number of Non-Detects	55
Number of Distinct Detects	18	Number of Distinct Non-Detects	14
Minimum Detect	0.0034	Minimum Non-Detect	5.0000E-4
Maximum Detect	41	Maximum Non-Detect	0.1
Variance Detects	112.9	Percent Non-Detects	74.32%
Mean Detects	4.461	SD Detects	10.62
Median Detects	0.098	CV Detects	2.382
Skewness Detects	2.918	Kurtosis Detects	8.399
Mean of Logged Detects	-1.81	SD of Logged Detects	3.08

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.492	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.375	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.203	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1.146	Standard Error of Mean	0.668
SD	5.59	95% KM (BCA) UCL	2.435
95% KM (t) UCL	2.258	95% KM (Percentile Bootstrap) UCL	2.339
95% KM (z) UCL	2.244	95% KM Bootstrap t UCL	7.178
90% KM Chebyshev UCL	3.149	95% KM Chebyshev UCL	4.056
97.5% KM Chebyshev UCL	5.316	99% KM Chebyshev UCL	7.789

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.177	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.882	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.228	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.219	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.219	k star (bias corrected MLE)	0.22
Theta hat (MLE)	20.33	Theta star (bias corrected MLE)	20.29
nu hat (MLE)	8.339	nu star (bias corrected)	8.355
MLE Mean (bias corrected)	4.461	MLE Sd (bias corrected)	9.513

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.042	nu hat (KM)	6.22
Approximate Chi Square Value (6.22, α)	1.753	Adjusted Chi Square Value (6.22, β)	1.707
95% Gamma Approximate KM-UCL (use when n>=50)	4.066	95% Gamma Adjusted KM-UCL (use when n<50)	4.176

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0034	Mean	1.153
Maximum	41	Median	0.01
SD	5.627	CV	4.882
k hat (MLE)	0.185	k star (bias corrected MLE)	0.186
Theta hat (MLE)	6.236	Theta star (bias corrected MLE)	6.185
nu hat (MLE)	27.36	nu star (bias corrected)	27.58
MLE Mean (bias corrected)	1.153	MLE Sd (bias corrected)	2.67
		Adjusted Level of Significance (β)	0.0468
Approximate Chi Square Value (27.58, α)	16.6	Adjusted Chi Square Value (27.58, β)	16.44
95% Gamma Approximate UCL (use when n>=50)	1.915	95% Gamma Adjusted UCL (use when n<50)	1.935

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.203	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.146	Mean in Log Scale	-9.328
SD in Original Scale	5.629	SD in Log Scale	5.609
95% t UCL (assumes normality of ROS data)	2.236	95% Percentile Bootstrap UCL	2.283
95% BCA Bootstrap UCL	2.992	95% Bootstrap t UCL	5.717
95% H-UCL (Log ROS)	158419		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.987	95% H-UCL (KM -Log)	0.939
KM SD (logged)	2.938	95% Critical H Value (KM-Log)	4.675
KM Standard Error of Mean (logged)	0.36		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.149	Mean in Log Scale	-5.101
SD in Original Scale	5.628	SD in Log Scale	2.695
95% t UCL (Assumes normality)	2.239	95% H-Stat UCL	0.905

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	5.316

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

beta-BHC

General Statistics

Total Number of Observations	29	Number of Distinct Observations	13
Number of Detects	4	Number of Non-Detects	25
Number of Distinct Detects	4	Number of Distinct Non-Detects	9
Minimum Detect	0.00683	Minimum Non-Detect	0.002
Maximum Detect	10.6	Maximum Non-Detect	0.096
Variance Detects	27.91	Percent Non-Detects	86.21%
Mean Detects	2.676	SD Detects	5.283
Median Detects	0.048	CV Detects	1.974
Skewness Detects	2	Kurtosis Detects	4
Mean of Logged Detects	-2.184	SD of Logged Detects	3.167

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.633	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.44	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.443	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.371	Standard Error of Mean	0.415
SD	1.933	95% KM (BCA) UCL	N/A
95% KM (t) UCL	1.076	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	1.053	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	1.614	95% KM Chebyshev UCL	2.178
97.5% KM Chebyshev UCL	2.96	99% KM Chebyshev UCL	4.495

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.631	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.724	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.424	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.423	Detected Data Not Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.228	k star (bias corrected MLE)	0.224
Theta hat (MLE)	11.76	Theta star (bias corrected MLE)	11.97
nu hat (MLE)	1.821	nu star (bias corrected)	1.789
MLE Mean (bias corrected)	2.676	MLE Sd (bias corrected)	5.659

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0368	nu hat (KM)	2.135
Approximate Chi Square Value (2.14, α)	0.17	Adjusted Chi Square Value (2.14, β)	0.152
95% Gamma Approximate KM-UCL (use when n>=50)	4.648	95% Gamma Adjusted KM-UCL (use when n<50)	5.197

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.00683	Mean	0.378
Maximum	10.6	Median	0.01
SD	1.966	CV	5.206
k hat (MLE)	0.22	k star (bias corrected MLE)	0.22
Theta hat (MLE)	1.718	Theta star (bias corrected MLE)	1.716
nu hat (MLE)	12.75	nu star (bias corrected)	12.77
MLE Mean (bias corrected)	0.378	MLE Sd (bias corrected)	0.805
		Adjusted Level of Significance (β)	0.0407
Approximate Chi Square Value (12.77, α)	5.736	Adjusted Chi Square Value (12.77, β)	5.456
95% Gamma Approximate UCL (use when n>=50)	0.841	95% Gamma Adjusted UCL (use when n<50)	N/A

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.869	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.335	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.443	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.369	Mean in Log Scale	-13.72
SD in Original Scale	1.968	SD in Log Scale	6.138
95% t UCL (assumes normality of ROS data)	0.991	95% Percentile Bootstrap UCL	1.099
95% BCA Bootstrap UCL	1.828	95% Bootstrap t UCL	100.3
95% H-UCL (Log ROS)	53399905		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.645	95% H-UCL (KM -Log)	0.0492
KM SD (logged)	1.728	95% Critical H Value (KM-Log)	3.489
KM Standard Error of Mean (logged)	0.372		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.372	Mean in Log Scale	-5.952
SD in Original Scale	1.967	SD in Log Scale	2.011
95% t UCL (Assumes normality)	0.993	95% H-Stat UCL	0.0873

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	1.076	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Chlordane

General Statistics

Total Number of Observations	157	Number of Distinct Observations	64
Number of Detects	57	Number of Non-Detects	100
Number of Distinct Detects	51	Number of Distinct Non-Detects	15
Minimum Detect	0.002	Minimum Non-Detect	5.0000E-4
Maximum Detect	191	Maximum Non-Detect	0.505
Variance Detects	660.2	Percent Non-Detects	63.69%
Mean Detects	4.818	SD Detects	25.69
Median Detects	0.14	CV Detects	5.333
Skewness Detects	7.075	Kurtosis Detects	51.69
Mean of Logged Detects	-1.831	SD of Logged Detects	2.329

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.202	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.458	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.117	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1.751	Standard Error of Mean	1.25
SD	15.52	95% KM (BCA) UCL	4.16
95% KM (t) UCL	3.818	95% KM (Percentile Bootstrap) UCL	4.244
95% KM (z) UCL	3.806	95% KM Bootstrap t UCL	31.81
90% KM Chebyshev UCL	5.499	95% KM Chebyshev UCL	7.197
97.5% KM Chebyshev UCL	9.554	99% KM Chebyshev UCL	14.18

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	7.038	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.907	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.285	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.131	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.214	k star (bias corrected MLE)	0.214
Theta hat (MLE)	22.52	Theta star (bias corrected MLE)	22.47
nu hat (MLE)	24.39	nu star (bias corrected)	24.44
MLE Mean (bias corrected)	4.818	MLE Sd (bias corrected)	10.41

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0127	nu hat (KM)	3.996
Approximate Chi Square Value (4.00, α)	0.72	Adjusted Chi Square Value (4.00, β)	0.708
95% Gamma Approximate KM-UCL (use when n>=50)	9.714	95% Gamma Adjusted KM-UCL (use when n<50)	9.879

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.002	Mean	1.755
Maximum	191	Median	0.01
SD	15.57	CV	8.868
k hat (MLE)	0.18	k star (bias corrected MLE)	0.181
Theta hat (MLE)	9.764	Theta star (bias corrected MLE)	9.72
nu hat (MLE)	56.46	nu star (bias corrected)	56.71
MLE Mean (bias corrected)	1.755	MLE Sd (bias corrected)	4.131
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (56.71, α)	40.4	Adjusted Chi Square Value (56.71, β)	40.28
95% Gamma Approximate UCL (use when n>=50)	2.464	95% Gamma Adjusted UCL (use when n<50)	2.472

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.0735	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.117	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.75	Mean in Log Scale	-5.85
SD in Original Scale	15.57	SD in Log Scale	3.866
95% t UCL (assumes normality of ROS data)	3.806	95% Percentile Bootstrap UCL	4.1
95% BCA Bootstrap UCL	5.819	95% Bootstrap t UCL	15.73
95% H-UCL (Log ROS)	30.05		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.174	95% H-UCL (KM -Log)	1.602
KM SD (logged)	3.012	95% Critical H Value (KM-Log)	4.599
KM Standard Error of Mean (logged)	0.265		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.757	Mean in Log Scale	-3.917
SD in Original Scale	15.57	SD in Log Scale	2.338
95% t UCL (Assumes normality)	3.813	95% H-Stat UCL	0.615

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	9.554

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

DDD

General Statistics

Total Number of Observations	117	Number of Distinct Observations	30
Number of Detects	18	Number of Non-Detects	99
Number of Distinct Detects	18	Number of Distinct Non-Detects	15
Minimum Detect	0.0022	Minimum Non-Detect	0.0021
Maximum Detect	59	Maximum Non-Detect	0.153
Variance Detects	347.9	Percent Non-Detects	84.62%
Mean Detects	6.764	SD Detects	18.65
Median Detects	0.092	CV Detects	2.758
Skewness Detects	2.702	Kurtosis Detects	5.971
Mean of Logged Detects	-1.771	SD of Logged Detects	2.792

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.397	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.483	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.209	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1.043	Standard Error of Mean	0.715
SD	7.517	95% KM (BCA) UCL	2.518
95% KM (t) UCL	2.229	95% KM (Percentile Bootstrap) UCL	2.084
95% KM (z) UCL	2.219	95% KM Bootstrap t UCL	34.43
90% KM Chebyshev UCL	3.188	95% KM Chebyshev UCL	4.16
97.5% KM Chebyshev UCL	5.509	99% KM Chebyshev UCL	8.158

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.255	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.889	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.312	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.226	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.2	k star (bias corrected MLE)	0.204
Theta hat (MLE)	33.85	Theta star (bias corrected MLE)	33.23
nu hat (MLE)	7.194	nu star (bias corrected)	7.329
MLE Mean (bias corrected)	6.764	MLE Sd (bias corrected)	14.99

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0193	nu hat (KM)	4.505
Approximate Chi Square Value (4.50, α)	0.931	Adjusted Chi Square Value (4.50, β)	0.911
95% Gamma Approximate KM-UCL (use when n>=50)	5.048	95% Gamma Adjusted KM-UCL (use when n<50)	5.156

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0022	Mean	1.049
Maximum	59	Median	0.01
SD	7.549	CV	7.195
k hat (MLE)	0.178	k star (bias corrected MLE)	0.179
Theta hat (MLE)	5.903	Theta star (bias corrected MLE)	5.866
nu hat (MLE)	41.58	nu star (bias corrected)	41.85
MLE Mean (bias corrected)	1.049	MLE Sd (bias corrected)	2.481
		Adjusted Level of Significance (β)	0.0479
Approximate Chi Square Value (41.85, α)	28.02	Adjusted Chi Square Value (41.85, β)	27.88
95% Gamma Approximate UCL (use when n>=50)	1.567	95% Gamma Adjusted UCL (use when n<50)	1.575

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.897	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.134	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.209	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.041	Mean in Log Scale	-10.59
SD in Original Scale	7.55	SD in Log Scale	5.548
95% t UCL (assumes normality of ROS data)	2.198	95% Percentile Bootstrap UCL	2.477
95% BCA Bootstrap UCL	2.99	95% Bootstrap t UCL	35.75
95% H-UCL (Log ROS)	8098		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.403	95% H-UCL (KM -Log)	0.0503
KM SD (logged)	1.917	95% Critical H Value (KM-Log)	3.229
KM Standard Error of Mean (logged)	0.196		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.049	Mean in Log Scale	-4.469
SD in Original Scale	7.549	SD in Log Scale	1.772
95% t UCL (Assumes normality)	2.206	95% H-Stat UCL	0.091

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	5.509

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

DDE

General Statistics

Total Number of Observations	157	Number of Distinct Observations	51
Number of Detects	38	Number of Non-Detects	119
Number of Distinct Detects	36	Number of Distinct Non-Detects	18
Minimum Detect	0.0025	Minimum Non-Detect	0.001
Maximum Detect	17	Maximum Non-Detect	0.56
Variance Detects	12.78	Percent Non-Detects	75.8%
Mean Detects	1.2	SD Detects	3.575
Median Detects	0.0365	CV Detects	2.979
Skewness Detects	3.892	Kurtosis Detects	14.81
Mean of Logged Detects	-2.577	SD of Logged Detects	2.396

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.377	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.38	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.292	Standard Error of Mean	0.146
SD	1.81	95% KM (BCA) UCL	0.544
95% KM (t) UCL	0.534	95% KM (Percentile Bootstrap) UCL	0.566
95% KM (z) UCL	0.533	95% KM Bootstrap t UCL	1.316
90% KM Chebyshev UCL	0.731	95% KM Chebyshev UCL	0.93
97.5% KM Chebyshev UCL	1.206	99% KM Chebyshev UCL	1.749

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.178	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.88	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.248	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.157	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.256	k star (bias corrected MLE)	0.254
Theta hat (MLE)	4.68	Theta star (bias corrected MLE)	4.73
nu hat (MLE)	19.49	nu star (bias corrected)	19.28
MLE Mean (bias corrected)	1.2	MLE Sd (bias corrected)	2.382

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0261	nu hat (KM)	8.189
Approximate Chi Square Value (8.19, α)	2.845	Adjusted Chi Square Value (8.19, β)	2.816
95% Gamma Approximate KM-UCL (use when n>=50)	0.841	95% Gamma Adjusted KM-UCL (use when n<50)	0.85

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0025	Mean	0.298
Maximum	17	Median	0.01
SD	1.815	CV	6.089
k hat (MLE)	0.245	k star (bias corrected MLE)	0.245
Theta hat (MLE)	1.215	Theta star (bias corrected MLE)	1.217
nu hat (MLE)	77.05	nu star (bias corrected)	76.91
MLE Mean (bias corrected)	0.298	MLE Sd (bias corrected)	0.602
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (76.91, α)	57.71	Adjusted Chi Square Value (76.91, β)	57.55
95% Gamma Approximate UCL (use when n>=50)	0.397	95% Gamma Adjusted UCL (use when n<50)	0.398

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.931	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.938	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.157	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.291	Mean in Log Scale	-7.926
SD in Original Scale	1.816	SD in Log Scale	4.149
95% t UCL (assumes normality of ROS data)	0.531	95% Percentile Bootstrap UCL	0.546
95% BCA Bootstrap UCL	0.687	95% Bootstrap t UCL	1.318
95% H-UCL (Log ROS)	15.12		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.298	Mean in Log Scale	-4.749
SD in Original Scale	1.815	SD in Log Scale	2.046
95% t UCL (Assumes normality)	0.538	95% H-Stat UCL	0.122

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	1.206

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

DDT

General Statistics

Total Number of Observations	157	Number of Distinct Observations	75
Number of Detects	67	Number of Non-Detects	90
Number of Distinct Detects	67	Number of Distinct Non-Detects	9
Minimum Detect	0.0036	Minimum Non-Detect	0.002
Maximum Detect	555	Maximum Non-Detect	0.022
Variance Detects	7437	Percent Non-Detects	57.32%
Mean Detects	20.09	SD Detects	86.24
Median Detects	0.26	CV Detects	4.292
Skewness Detects	5.494	Kurtosis Detects	30.43
Mean of Logged Detects	-0.831	SD of Logged Detects	2.767

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.258	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.412	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.108	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	8.577	Standard Error of Mean	4.567
SD	56.79	95% KM (BCA) UCL	17.04
95% KM (t) UCL	16.13	95% KM (Percentile Bootstrap) UCL	16.51
95% KM (z) UCL	16.09	95% KM Bootstrap t UCL	45.72
90% KM Chebyshev UCL	22.28	95% KM Chebyshev UCL	28.48
97.5% KM Chebyshev UCL	37.09	99% KM Chebyshev UCL	54.01

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	6.793	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.921	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.247	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.121	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.193	k star (bias corrected MLE)	0.194
Theta hat (MLE)	104.1	Theta star (bias corrected MLE)	103.4
nu hat (MLE)	25.88	nu star (bias corrected)	26.05
MLE Mean (bias corrected)	20.09	MLE Sd (bias corrected)	45.57

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0228	nu hat (KM)	7.162
Approximate Chi Square Value (7.16, α)	2.26	Adjusted Chi Square Value (7.16, β)	2.234
95% Gamma Approximate KM-UCL (use when n>=50)	27.18	95% Gamma Adjusted KM-UCL (use when n<50)	27.49

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0036	Mean	8.581
Maximum	555	Median	0.01
SD	56.97	CV	6.639
k hat (MLE)	0.149	k star (bias corrected MLE)	0.151
Theta hat (MLE)	57.4	Theta star (bias corrected MLE)	56.88
nu hat (MLE)	46.94	nu star (bias corrected)	47.37
MLE Mean (bias corrected)	8.581	MLE Sd (bias corrected)	22.09
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (47.37, α)	32.58	Adjusted Chi Square Value (47.37, β)	32.46
95% Gamma Approximate UCL (use when n>=50)	12.48	95% Gamma Adjusted UCL (use when n<50)	12.52

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.133	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.108	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	8.576	Mean in Log Scale	-5.344
SD in Original Scale	56.97	SD in Log Scale	4.797
95% t UCL (assumes normality of ROS data)	16.1	95% Percentile Bootstrap UCL	17
95% BCA Bootstrap UCL	19.71	95% Bootstrap t UCL	44.76
95% H-UCL (Log ROS)	7041		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	8.579	Mean in Log Scale	-3.539
SD in Original Scale	56.97	SD in Log Scale	3.069
95% t UCL (Assumes normality)	16.1	95% H-Stat UCL	10.16

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	37.09

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Dieldrin

General Statistics

Total Number of Observations	117	Number of Distinct Observations	25
Number of Detects	12	Number of Non-Detects	105
Number of Distinct Detects	12	Number of Distinct Non-Detects	14
Minimum Detect	0.00189	Minimum Non-Detect	0.001
Maximum Detect	8.1	Maximum Non-Detect	0.1
Variance Detects	8.35	Percent Non-Detects	89.74%
Mean Detects	1.516	SD Detects	2.89
Median Detects	0.024	CV Detects	1.906
Skewness Detects	1.773	Kurtosis Detects	1.84
Mean of Logged Detects	-2.782	SD of Logged Detects	2.992

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.597	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.434	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.256	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.157	Standard Error of Mean	0.0964
SD	0.998	95% KM (BCA) UCL	0.326
95% KM (t) UCL	0.317	95% KM (Percentile Bootstrap) UCL	0.326
95% KM (z) UCL	0.316	95% KM Bootstrap t UCL	0.584
90% KM Chebyshev UCL	0.446	95% KM Chebyshev UCL	0.577
97.5% KM Chebyshev UCL	0.759	99% KM Chebyshev UCL	1.116

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.205	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.859	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.301	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.27	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.226	k star (bias corrected MLE)	0.225
Theta hat (MLE)	6.716	Theta star (bias corrected MLE)	6.742
nu hat (MLE)	5.418	nu star (bias corrected)	5.397
MLE Mean (bias corrected)	1.516	MLE Sd (bias corrected)	3.197

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0248	nu hat (KM)	5.805
Approximate Chi Square Value (5.80, α)	1.541	Adjusted Chi Square Value (5.80, β)	1.514
95% Gamma Approximate KM-UCL (use when n>=50)	0.592	95% Gamma Adjusted KM-UCL (use when n<50)	0.603

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.00189	Mean	0.171
Maximum	8.1	Median	0.01
SD	1.002	CV	5.873
k hat (MLE)	0.271	k star (bias corrected MLE)	0.27
Theta hat (MLE)	0.63	Theta star (bias corrected MLE)	0.633
nu hat (MLE)	63.36	nu star (bias corrected)	63.06
MLE Mean (bias corrected)	0.171	MLE Sd (bias corrected)	0.328
		Adjusted Level of Significance (β)	0.0479
Approximate Chi Square Value (63.06, α)	45.8	Adjusted Chi Square Value (63.06, β)	45.61
95% Gamma Approximate UCL (use when n>=50)	0.235	95% Gamma Adjusted UCL (use when n<50)	0.236

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.88	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.202	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.256	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.156	Mean in Log Scale	-11.04
SD in Original Scale	1.002	SD in Log Scale	4.854
95% t UCL (assumes normality of ROS data)	0.31	95% Percentile Bootstrap UCL	0.325
95% BCA Bootstrap UCL	0.39	95% Bootstrap t UCL	7.043
95% H-UCL (Log ROS)	53.23		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-6.248	95% H-UCL (KM -Log)	0.0108
KM SD (logged)	1.607	95% Critical H Value (KM-Log)	2.86
KM Standard Error of Mean (logged)	0.195		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.164	Mean in Log Scale	-4.856
SD in Original Scale	1.001	SD in Log Scale	1.552
95% t UCL (Assumes normality)	0.317	95% H-Stat UCL	0.0388

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	0.759

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

gamma-BHC (Lindane)

General Statistics

Total Number of Observations	158	Number of Distinct Observations	62
Number of Detects	55	Number of Non-Detects	103
Number of Distinct Detects	49	Number of Distinct Non-Detects	17
Minimum Detect	0.00111	Minimum Non-Detect	2.0000E-4
Maximum Detect	19	Maximum Non-Detect	5.15
Variance Detects	6.743	Percent Non-Detects	65.19%
Mean Detects	0.606	SD Detects	2.597
Median Detects	0.0666	CV Detects	4.283
Skewness Detects	6.851	Kurtosis Detects	48.96
Mean of Logged Detects	-2.803	SD of Logged Detects	1.976

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.245	**Normal GOF Test on Detected Observations Only**
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.408	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.119	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.212	Standard Error of Mean	0.124
SD	1.545	95% KM (BCA) UCL	0.451
95% KM (t) UCL	0.417	95% KM (Percentile Bootstrap) UCL	0.444
95% KM (z) UCL	0.416	95% KM Bootstrap t UCL	1.153
90% KM Chebyshev UCL	0.584	95% KM Chebyshev UCL	0.753
97.5% KM Chebyshev UCL	0.987	99% KM Chebyshev UCL	1.447

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.779	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.863	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.247	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.13	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.3	k star (bias corrected MLE)	0.295
Theta hat (MLE)	2.024	Theta star (bias corrected MLE)	2.052
nu hat (MLE)	32.95	nu star (bias corrected)	32.49
MLE Mean (bias corrected)	0.606	MLE Sd (bias corrected)	1.115

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0188	nu hat (KM)	5.948
Approximate Chi Square Value (5.95, α)	1.613	Adjusted Chi Square Value (5.95, β)	1.593
95% Gamma Approximate KM-UCL (use when n>=50)	0.782	95% Gamma Adjusted KM-UCL (use when n<50)	0.792

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.00111	Mean	0.218
Maximum	19	Median	0.01
SD	1.549	CV	7.122
k hat (MLE)	0.284	k star (bias corrected MLE)	0.283
Theta hat (MLE)	0.767	Theta star (bias corrected MLE)	0.77
nu hat (MLE)	89.66	nu star (bias corrected)	89.29
MLE Mean (bias corrected)	0.218	MLE Sd (bias corrected)	0.409
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (89.29, α)	68.51	Adjusted Chi Square Value (89.29, β)	68.34
95% Gamma Approximate UCL (use when n>=50)	0.284	95% Gamma Adjusted UCL (use when n<50)	0.284

Lognormal GOF Test on Detected Observations Only

Lilliefors Test Statistic	0.074	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.119	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.212	Mean in Log Scale	-6.488
SD in Original Scale	1.55	SD in Log Scale	3.362
95% t UCL (assumes normality of ROS data)	0.416	95% Percentile Bootstrap UCL	0.442
95% BCA Bootstrap UCL	0.593	95% Bootstrap t UCL	1.158
95% H-UCL (Log ROS)	1.689		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-6.379	95% H-UCL (KM -Log)	0.368
KM SD (logged)	2.94	95% Critical H Value (KM-Log)	4.507
KM Standard Error of Mean (logged)	0.245		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.229	Mean in Log Scale	-5.272
SD in Original Scale	1.561	SD in Log Scale	2.481
95% t UCL (Assumes normality)	0.435	95% H-Stat UCL	0.242

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.753

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Heptachlor

General Statistics

Total Number of Observations	157	Number of Distinct Observations	49
Number of Detects	40	Number of Non-Detects	117
Number of Distinct Detects	35	Number of Distinct Non-Detects	19
Minimum Detect	0.006	Minimum Non-Detect	2.0000E-4
Maximum Detect	6.2	Maximum Non-Detect	0.28
Variance Detects	1.301	Percent Non-Detects	74.52%
Mean Detects	0.364	SD Detects	1.141
Median Detects	0.019	CV Detects	3.134
Skewness Detects	4.179	Kurtosis Detects	18.72
Mean of Logged Detects	-3.375	SD of Logged Detects	1.85

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.366	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.94	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.418	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0931	Standard Error of Mean	0.0477
SD	0.59	95% KM (BCA) UCL	0.183
95% KM (t) UCL	0.172	95% KM (Percentile Bootstrap) UCL	0.181
95% KM (z) UCL	0.172	95% KM Bootstrap t UCL	0.279
90% KM Chebyshev UCL	0.236	95% KM Chebyshev UCL	0.301
97.5% KM Chebyshev UCL	0.391	99% KM Chebyshev UCL	0.568

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.821	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.861	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.297	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.152	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.293	k star (bias corrected MLE)	0.287
Theta hat (MLE)	1.243	Theta star (bias corrected MLE)	1.266
nu hat (MLE)	23.42	nu star (bias corrected)	23
MLE Mean (bias corrected)	0.364	MLE Sd (bias corrected)	0.679

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0249	nu hat (KM)	7.813
Approximate Chi Square Value (7.81, α)	2.627	Adjusted Chi Square Value (7.81, β)	2.6
95% Gamma Approximate KM-UCL (use when n>=50)	0.277	95% Gamma Adjusted KM-UCL (use when n<50)	0.28

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.006	Mean	0.1
Maximum	6.2	Median	0.01
SD	0.591	CV	5.898
k hat (MLE)	0.339	k star (bias corrected MLE)	0.337
Theta hat (MLE)	0.295	Theta star (bias corrected MLE)	0.297
nu hat (MLE)	106.6	nu star (bias corrected)	105.9
MLE Mean (bias corrected)	0.1	MLE Sd (bias corrected)	0.173
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (105.87, α)	83.12	Adjusted Chi Square Value (105.87, β)	82.94
95% Gamma Approximate UCL (use when n>=50)	0.128	95% Gamma Adjusted UCL (use when n<50)	0.128

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.94	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.217	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.14	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.093	Mean in Log Scale	-7.918
SD in Original Scale	0.592	SD in Log Scale	3.431
95% t UCL (assumes normality of ROS data)	0.171	95% Percentile Bootstrap UCL	0.18
95% BCA Bootstrap UCL	0.235	95% Bootstrap t UCL	0.287
95% H-UCL (Log ROS)	0.541		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0958	Mean in Log Scale	-5.717
SD in Original Scale	0.592	SD in Log Scale	1.988
95% t UCL (Assumes normality)	0.174	95% H-Stat UCL	0.04

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.301

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

Toxaphene

General Statistics

Total Number of Observations	157	Number of Distinct Observations	44
Number of Detects	23	Number of Non-Detects	134
Number of Distinct Detects	23	Number of Distinct Non-Detects	22
Minimum Detect	0.118	Minimum Non-Detect	0.005
Maximum Detect	592	Maximum Non-Detect	28
Variance Detects	17303	Percent Non-Detects	85.35%
Mean Detects	41.31	SD Detects	131.5
Median Detects	3.07	CV Detects	3.184
Skewness Detects	3.856	Kurtosis Detects	15.36
Mean of Logged Detects	0.804	SD of Logged Detects	2.336

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.353	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.456	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.185	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	6.065	Standard Error of Mean	4.191
SD	51.36	95% KM (BCA) UCL	13.58
95% KM (t) UCL	13	95% KM (Percentile Bootstrap) UCL	13.48
95% KM (z) UCL	12.96	95% KM Bootstrap t UCL	151.3
90% KM Chebyshev UCL	18.64	95% KM Chebyshev UCL	24.33
97.5% KM Chebyshev UCL	32.24	99% KM Chebyshev UCL	47.77

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.566	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.876	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.295	**Kolmogrov-Smirnoff GOF**
5% K-S Critical Value	0.199	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.244	k star (bias corrected MLE)	0.242
Theta hat (MLE)	169	Theta star (bias corrected MLE)	171.1
nu hat (MLE)	11.24	nu star (bias corrected)	11.11
MLE Mean (bias corrected)	41.31	MLE Sd (bias corrected)	84.06

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0139	nu hat (KM)	4.379
Approximate Chi Square Value (4.38, α)	0.877	Adjusted Chi Square Value (4.38, β)	0.863
95% Gamma Approximate KM-UCL (use when n>=50)	30.29	95% Gamma Adjusted KM-UCL (use when n<50)	30.77

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	6.061
Maximum	592	Median	0.01
SD	51.53	CV	8.502
k hat (MLE)	0.138	k star (bias corrected MLE)	0.14
Theta hat (MLE)	43.77	Theta star (bias corrected MLE)	43.27
nu hat (MLE)	43.48	nu star (bias corrected)	43.98
MLE Mean (bias corrected)	6.061	MLE Sd (bias corrected)	16.19
		Adjusted Level of Significance (β)	0.0485
Approximate Chi Square Value (43.98, α)	29.77	Adjusted Chi Square Value (43.98, β)	29.67
95% Gamma Approximate UCL (use when n>=50)	8.953	95% Gamma Adjusted UCL (use when n<50)	8.986

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.914	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.121	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.185	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	6.06	Mean in Log Scale	-7.168
SD in Original Scale	51.53	SD in Log Scale	4.797
95% t UCL (assumes normality of ROS data)	12.86	95% Percentile Bootstrap UCL	13.76
95% BCA Bootstrap UCL	17.59	95% Bootstrap t UCL	95.8
95% H-UCL (Log ROS)	1139		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.258	95% H-UCL (KM -Log)	0.491
KM SD (logged)	2.378	95% Critical H Value (KM-Log)	3.777
KM Standard Error of Mean (logged)	0.213		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	6.22	Mean in Log Scale	-2.532
SD in Original Scale	51.52	SD in Log Scale	2.196
95% t UCL (Assumes normality)	13.02	95% H-Stat UCL	1.651

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	32.24

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

delta-BHC

General Statistics

Total Number of Observations	29	Number of Distinct Observations	13
Number of Detects	3	Number of Non-Detects	26
Number of Distinct Detects	3	Number of Distinct Non-Detects	10
Minimum Detect	0.003	Minimum Non-Detect	0.002
Maximum Detect	0.0427	Maximum Non-Detect	10.3
Variance Detects	4.0543E-4	Percent Non-Detects	89.66%
Mean Detects	0.0209	SD Detects	0.0201
Median Detects	0.017	CV Detects	0.963
Skewness Detects	0.839	Kurtosis Detects	N/A
Mean of Logged Detects	-4.346	SD of Logged Detects	1.348

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.243	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.512	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0041	Standard Error of Mean	0.0019
SD	0.00808	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00734	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00724	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00982	95% KM Chebyshev UCL	0.0124
97.5% KM Chebyshev UCL	0.016	99% KM Chebyshev UCL	0.0231

Gamma GOF Tests on Detected Observations Only

Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.185	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0176	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	7.113	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.258	nu hat (KM)	14.95
		Adjusted Level of Significance (β)	0.0407
Approximate Chi Square Value (14.95, α)	7.229	Adjusted Chi Square Value (14.95, β)	6.909
95% Gamma Approximate KM-UCL (use when n>=50)	0.00849	95% Gamma Adjusted KM-UCL (use when n<50)	0.00888

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.512	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00221	Mean in Log Scale	-10.95
SD in Original Scale	0.00841	SD in Log Scale	3.138
95% t UCL (assumes normality of ROS data)	0.00486	95% Percentile Bootstrap UCL	0.00506
95% BCA Bootstrap UCL	0.00719	95% Bootstrap t UCL	0.116
95% H-UCL (Log ROS)	0.0741		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-6.006	95% H-UCL (KM -Log)	0.00414
KM SD (logged)	0.693	95% Critical H Value (KM-Log)	2.121
KM Standard Error of Mean (logged)	0.163		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.183	Mean in Log Scale	-6.044
SD in Original Scale	0.955	SD in Log Scale	1.842
95% t UCL (Assumes normality)	0.484	95% H-Stat UCL	0.0464

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00734	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: MKB 1/16/14
Checked by: LMS 1/17/14

PROPERTY	Location	StartDepth	EndDepth	Substance	Result MG/KG	Flag	Result UG/KG	ResultCode	DL ug/kg or mg/kg	SDate	Material
CSX	SO-C1-3-5	3	5	4,4´-DDD	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-D1-3-5	3	5	4,4´-DDD	0.0037	U	0	U	3.7	11/28/12	Soil
CSX	SO-D1-6-8	6	8	4,4´-DDD	0.0037	U	0	U	3.7	11/28/12	Soil
CSX	SO-C1-14-16	14	16	4,4´-DDD	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C1-16-18	16	18	4,4´-DDD	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C2-3-5	3	5	4,4´-DDD	0.0038	U	0	U	3.8	11/28/12	Soil
CSX	SO-C1-6-8	6	8	4,4´-DDD	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-8-10	8	10	4,4´-DDD	0.0038	U	0.59	J	3.8	11/27/12	Soil
CSX	SO-C1-12-14	12	14	4,4´-DDD	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-D1-8-10	8	10	4,4´-DDD	0.0039	U	0	U	3.9	11/28/12	Soil
CSX	SO-C1-10-12	10	12	4,4´-DDD	0.0039	U	0	U	3.9	11/27/12	Soil
CSX	SO-D2-14-16	14	16	4,4´-DDD	0.0039	U	0.65	J	3.9	11/29/12	Soil
CSX	SO-D2-16-18	16	18	4,4´-DDD	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-SB104-2-4	2	4	4,4´-DDD	0.004	U	2.1	J	4	11/27/12	Soil
CSX	SO-C2-6-8	6	8	4,4´-DDD	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	4,4´-DDD	0.0041	U	1.4	J	4.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	4,4´-DDD	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	4,4´-DDD	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	4,4´-DDD	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	4,4´-DDD	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	4,4´-DDD	0.0041	U	0	U	4.1	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	4,4´-DDD	0.0042	U	0.99	J	4.2	11/27/12	Soil
CSX	SO-C2-10-12	10	12	4,4´-DDD	0.0042	U	0.68	J	4.2	11/28/12	Soil
CSX	SO-D1-12-14	12	14	4,4´-DDD	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-14-16	14	16	4,4´-DDD	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D2-18-20	18	20	4,4´-DDD	0.0043	U	0	U	4.3	11/29/12	Soil
CSX	SO-C2-18-20	18	20	4,4´-DDD	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-16-18	16	18	4,4´-DDD	0.0044	U	0	U	4.4	11/28/12	Soil
CSX	SO-D1-18-20	18	20	4,4´-DDD	0.0045	U	0	U	4.5	11/28/12	Soil
CSX	SO-D2-3-5	3	5	4,4´-DDD	0.0056		5.6		3.7	11/29/12	Soil
CSX	SO-D2-6-8	6	8	4,4´-DDD	0.018		18		3.9	11/29/12	Soil
CSX	SO-D2-8-10	8	10	4,4´-DDD	0.061		61		3.8	11/29/12	Soil
CSX	SO-D2-10-12	10	12	4,4´-DDD	0.68		680		40	11/29/12	Soil
CSX	SO-D2-12-14	12	14	4,4´-DDD	0.75		750		40	11/29/12	Soil
CSX	SO-C1-3-5	3	5	4,4´-DDE	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-D1-6-8	6	8	4,4´-DDE	0.0037	U	0	U	3.7	11/28/12	Soil
CSX	SO-C1-14-16	14	16	4,4´-DDE	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C1-16-18	16	18	4,4´-DDE	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C2-3-5	3	5	4,4´-DDE	0.0038	U	0	U	3.8	11/28/12	Soil
CSX	SO-C1-6-8	6	8	4,4´-DDE	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-8-10	8	10	4,4´-DDE	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-12-14	12	14	4,4´-DDE	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-D2-6-8	6	8	4,4´-DDE	0.0039	U	1.6	J	3.9	11/29/12	Soil
CSX	SO-D1-8-10	8	10	4,4´-DDE	0.0039	U	0	U	3.9	11/28/12	Soil
CSX	SO-C1-10-12	10	12	4,4´-DDE	0.0039	U	0	U	3.9	11/27/12	Soil
CSX	SO-D2-14-16	14	16	4,4´-DDE	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-D2-16-18	16	18	4,4´-DDE	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-SB104-2-4	2	4	4,4´-DDE	0.004	U	0	U	4	11/27/12	Soil
CSX	SO-C2-6-8	6	8	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	4,4´-DDE	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	4,4´-DDE	0.0041	U	0	U	4.1	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	4,4´-DDE	0.0042	U	0	U	4.2	11/27/12	Soil
CSX	SO-C2-10-12	10	12	4,4´-DDE	0.0042	U	0	U	4.2	11/28/12	Soil
CSX	SO-D1-12-14	12	14	4,4´-DDE	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-14-16	14	16	4,4´-DDE	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D2-18-20	18	20	4,4´-DDE	0.0043	U	0	U	4.3	11/29/12	Soil
CSX	SO-C2-18-20	18	20	4,4´-DDE	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-16-18	16	18	4,4´-DDE	0.0044	U	0	U	4.4	11/28/12	Soil
CSX	SO-D1-18-20	18	20	4,4´-DDE	0.0045	U	0	U	4.5	11/28/12	Soil
CSX	SO-D2-3-5	3	5	4,4´-DDE	0.0083		8.3		3.7	11/29/12	Soil
CSX	SO-D1-3-5	3	5	4,4´-DDE	0.013		13		3.7	11/28/12	Soil
CSX	SO-D2-8-10	8	10	4,4´-DDE	0.013		13		3.8	11/29/12	Soil
CSX	SO-D2-10-12	10	12	4,4´-DDE	0.027		27		4	11/29/12	Soil
CSX	SO-D2-12-14	12	14	4,4´-DDE	0.036		36		4	11/29/12	Soil
CSX	SO-C1-3-5	3	5	4,4´-DDT	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-D1-6-8	6	8	4,4´-DDT	0.0037	U	3.3	J	3.7	11/28/12	Soil
CSX	SO-C1-14-16	14	16	4,4´-DDT	0.0037	U	3	J	3.7	11/27/12	Soil
CSX	SO-C1-16-18	16	18	4,4´-DDT	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C1-6-8	6	8	4,4´-DDT	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-8-10	8	10	4,4´-DDT	0.0038	U	3.4	J	3.8	11/27/12	Soil
CSX	SO-C1-12-14	12	14	4,4´-DDT	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-D1-8-10	8	10	4,4´-DDT	0.0039	U	2.8	J	3.9	11/28/12	Soil
CSX	SO-C1-10-12	10	12	4,4´-DDT	0.0039	U	0	U	3.9	11/27/12	Soil
CSX	SO-D2-14-16	14	16	4,4´-DDT	0.0039	U	3.8	J	3.9	11/29/12	Soil
CSX	SO-D2-16-18	16	18	4,4´-DDT	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-C2-6-8	6	8	4,4´-DDT	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	4,4´-DDT	0.0041	U	4	J	4.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	4,4´-DDT	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	4,4´-DDT	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	4,4´-DDT	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	4,4´-DDT	0.0041	U	3.4	J	4.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	4,4´-DDT	0.0041	U	0	U	4.1	11/27/12	Soil

CSX	SO-D1-12-14	12	14	4,4´-DDT	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-14-16	14	16	4,4´-DDT	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D2-18-20	18	20	4,4´-DDT	0.0043	U	0	U	4.3	11/29/12	Soil
CSX	SO-C2-18-20	18	20	4,4´-DDT	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-16-18	16	18	4,4´-DDT	0.0044	U	0	U	4.4	11/28/12	Soil
CSX	SO-D1-18-20	18	20	4,4´-DDT	0.0045	U	0	U	4.5	11/28/12	Soil
CSX	SO-C2-3-5	3	5	4,4´-DDT	0.0049		4.9		3.8	11/28/12	Soil
CSX	SO-C2-10-12	10	12	4,4´-DDT	0.0054		5.4		4.2	11/28/12	Soil
CSX	SO-SB104-4-6	4	6	4,4´-DDT	0.0061		6.1		4.2	11/27/12	Soil
CSX	SO-D2-6-8	6	8	4,4´-DDT	0.01		10		3.9	11/29/12	Soil
CSX	SO-SB104-2-4	2	4	4,4´-DDT	0.012		12		4	11/27/12	Soil
CSX	SO-D1-3-5	3	5	4,4´-DDT	0.013		13		3.7	11/28/12	Soil
CSX	SO-D2-8-10	8	10	4,4´-DDT	0.018		18		3.8	11/29/12	Soil
CSX	SO-D2-3-5	3	5	4,4´-DDT	0.024		24		3.7	11/29/12	Soil
CSX	SO-D2-10-12	10	12	4,4´-DDT	0.11		110		4	11/29/12	Soil
CSX	SO-D2-12-14	12	14	4,4´-DDT	0.58		580		40	11/29/12	Soil
CSX	SO-D2-3-5	3	5	alpha-BHC	0.0018	U	1.5	J	1.8	11/29/12	Soil
CSX	SO-D1-6-8	6	8	alpha-BHC	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-3-5	3	5	alpha-BHC	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-12-14	12	14	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	alpha-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	alpha-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-C1-10-12	10	12	alpha-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	alpha-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-6-8	6	8	alpha-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	alpha-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	alpha-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	alpha-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	alpha-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	alpha-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-18-20	18	20	alpha-BHC	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-8-10	8	10	alpha-BHC	0.0026		2.6		1.9	11/28/12	Soil
CSX	SO-D2-14-16	14	16	alpha-BHC	0.0061		6.1		2	11/29/12	Soil
CSX	SO-D1-16-18	16	18	alpha-BHC	0.0064		6.4		2.2	11/28/12	Soil
CSX	SO-D2-6-8	6	8	alpha-BHC	0.0071		7.1		2	11/29/12	Soil
CSX	SO-D2-10-12	10	12	alpha-BHC	0.0084		8.4		2	11/29/12	Soil
CSX	SO-D1-18-20	18	20	alpha-BHC	0.0092		9.2		2.2	11/28/12	Soil
CSX	SO-C2-3-5	3	5	alpha-BHC	0.0095		9.5		1.9	11/28/12	Soil
CSX	SO-D2-16-18	16	18	alpha-BHC	0.0098		9.8		2	11/29/12	Soil
CSX	SO-C2-8-10	8	10	alpha-BHC	0.01		10		2.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	alpha-BHC	0.011		11		2.1	11/28/12	Soil
CSX	SO-D1-14-16	14	16	alpha-BHC	0.018		18		2.2	11/28/12	Soil
CSX	SO-D1-12-14	12	14	alpha-BHC	0.023	U	23		2.1	11/28/12	Soil
CSX	SO-D2-18-20	18	20	alpha-BHC	0.023		23		2.1	11/29/12	Soil
CSX	SO-D2-8-10	8	10	alpha-BHC	0.024		2.4		1.9	11/29/12	Soil
CSX	SO-D2-12-14	12	14	alpha-BHC	0.035		35		2	11/29/12	Soil
CSX	SO-D1-6-8	6	8	alpha-Chlordane	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	alpha-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C2-3-5	3	5	alpha-Chlordane	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-D1-3-5	3	5	alpha-Chlordane	0.0019	U	0.71	J	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	alpha-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	alpha-Chlordane	0.0019	U	0.68	J	1.9	11/27/12	Soil
CSX	SO-D1-8-10	8	10	alpha-Chlordane	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-12-14	12	14	alpha-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	alpha-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	alpha-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	alpha-Chlordane	0.002	U	1.1	J	2	11/27/12	Soil
CSX	SO-C1-10-12	10	12	alpha-Chlordane	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-14-16	14	16	alpha-Chlordane	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-D2-16-18	16	18	alpha-Chlordane	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-SB104-4-6	4	6	alpha-Chlordane	0.0021	U	0.45	J	2.1	11/27/12	Soil
CSX	SO-C2-6-8	6	8	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-12-14	12	14	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	alpha-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D2-18-20	18	20	alpha-Chlordane	0.0021	U	0	U	2.1	11/29/12	Soil
CSX	SO-C1-18-20	18	20	alpha-Chlordane	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-D1-14-16	14	16	alpha-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-16-18	16	18	alpha-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-C2-18-20	18	20	alpha-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-18-20	18	20	alpha-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D2-6-8	6	8	alpha-Chlordane	0.0053		5.3		2	11/29/12	Soil
CSX	SO-D2-3-5	3	5	alpha-Chlordane	0.0068		6.8		1.8	11/29/12	Soil
CSX	SO-D2-12-14	12	14	alpha-Chlordane	0.024		24		2	11/29/12	Soil
CSX	SO-D2-10-12	10	12	alpha-Chlordane	0.038		38		2	11/29/12	Soil
CSX	SO-D2-8-10	8	10	alpha-Chlordane	0.068		6.8		1.9	11/29/12	Soil
CSX	SO-C1-12-14	12	14	Arsenic	0.485	J	0.485	J	83.9	11/27/12	Soil
CSX	SO-C1-10-12	10	12	Arsenic	0.619	J	0.619	J	88.3	11/27/12	Soil
CSX	SO-C2-12-14	12	14	Arsenic	0.673	J	0.673	J	86.9	11/28/12	Soil

CSX	SO-C1-14-16	14	16	Arsenic	0.764	J	0.764	J	80.5	11/27/12	Soil
CSX	SO-C1-18-20	18	20	Arsenic	0.848	J	0.848	J	86.7	11/27/12	Soil
CSX	SO-D1-16-18	16	18	Arsenic	1.17	J	1.17	J	96.8	11/28/12	Soil
CSX	SO-SB104-4-6	4	6	Arsenic	1.51	J	1.51	J	90.8	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Arsenic	1.92	J	1.92	J	79.4	11/28/12	Soil
CSX	SO-SB104-2-4	2	4	Arsenic	2.3	J	2.3	J	88.8	11/27/12	Soil
CSX	SO-D1-6-8	6	8	Arsenic	2.3	J	2.3	J	82.4	11/28/12	Soil
CSX	SO-C1-8-10	8	10	Arsenic	2.52	J	2.52	J	85.8	11/27/12	Soil
CSX	SO-C2-10-12	10	12	Arsenic	3.44	J	3.44	J	90.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Arsenic	5.18	J	5.18	J	90	11/28/12	Soil
CSX	SO-D1-3-5	3	5	Arsenic	6.56	J	6.56	J	76.4	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Arsenic	7	J	7	J	94.4	11/28/12	Soil
CSX	SO-D1-14-16	14	16	Arsenic	7.86	J	7.86	J	94.9	11/28/12	Soil
CSX	SO-D1-12-14	12	14	Arsenic	8	J	8	J	94.9	11/28/12	Soil
CSX	SO-D2-8-10	8	10	Arsenic	9.7	J	9.7	J	84.1	11/29/12	Soil
CSX	SO-D2-10-12	10	12	Arsenic	10.4	J	10.4	J	83	11/29/12	Soil
CSX	SO-SB-156-4-6	4	6	Arsenic	18.1	J	18.1	J	84.6	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Arsenic	18.1	J	18.1	J	83.9	11/29/12	Soil
CSX	SO-D2-12-14	12	14	Arsenic	20.1	J	20.1	J	90.2	11/29/12	Soil
CSX	SO-SB156-2-4	2	4	Arsenic	20.4	J	20.4	J	80.6	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Arsenic	77.1	U	0	U	77.1	11/27/12	Soil
CSX	SO-D2-14-16	14	16	Arsenic	81.2	U	0	U	81.2	11/29/12	Soil
CSX	SO-C2-16-18	16	18	Arsenic	84.9	U	0	U	84.9	11/28/12	Soil
CSX	SO-D2-16-18	16	18	Arsenic	88.1	U	0	U	88.1	11/29/12	Soil
CSX	SO-D2-3-5	3	5	Arsenic	90.1		90.1		78.8	11/29/12	Soil
CSX	SO-C2-14-16	14	16	Arsenic	91.2	U	0	U	91.2	11/28/12	Soil
CSX	SO-D2-18-20	18	20	Arsenic	92.6	U	0	U	92.6	11/29/12	Soil
CSX	SO-C2-18-20	18	20	Arsenic	95.1	U	0	U	95.1	11/28/12	Soil
CSX	SO-C2-6-8	6	8	Arsenic	123		123		90.6	11/28/12	Soil
CSX	SO-C1-6-8	6	8	Arsenic	239		239		82.5	11/27/12	Soil
CSX	SO-C1-3-5	3	5	Arsenic	320		320		79.4	11/27/12	Soil
CSX	SO-C2-8-10	8	10	Arsenic	410		410		90.7	11/28/12	Soil
CSX	SO-C2-3-5	3	5	Arsenic	529		529		83	11/28/12	Soil
CSX	SO-D2-3-5	3	5	beta-BHC	0.0018	U	1.6	J	1.8	11/29/12	Soil
CSX	SO-D1-6-8	6	8	beta-BHC	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	beta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-3-5	3	5	beta-BHC	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	beta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	beta-BHC	0.0019	U	0.7	J	1.9	11/27/12	Soil
CSX	SO-C1-12-14	12	14	beta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	beta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	beta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	beta-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-C1-10-12	10	12	beta-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	beta-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-12-14	12	14	beta-BHC	0.0021	U	1.1	J	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	beta-BHC	0.0021	U	0.95	J	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	beta-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	beta-BHC	0.0021	U	1.6	J	2.1	11/27/12	Soil
CSX	SO-D1-8-10	8	10	beta-BHC	0.0022		2.2		1.9	11/28/12	Soil
CSX	SO-D1-16-18	16	18	beta-BHC	0.0022		2.2		2.2	11/28/12	Soil
CSX	SO-C2-18-20	18	20	beta-BHC	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-C2-10-12	10	12	beta-BHC	0.0027		2.7		2.1	11/28/12	Soil
CSX	SO-D1-18-20	18	20	beta-BHC	0.0027		2.7		2.2	11/28/12	Soil
CSX	SO-C2-6-8	6	8	beta-BHC	0.0033		3.3		2.1	11/28/12	Soil
CSX	SO-D2-16-18	16	18	beta-BHC	0.0054		5.4		2	11/29/12	Soil
CSX	SO-D2-14-16	14	16	beta-BHC	0.0056		5.6		2	11/29/12	Soil
CSX	SO-D1-10-12	10	12	beta-BHC	0.0098		9.8		2.1	11/28/12	Soil
CSX	SO-D1-14-16	14	16	beta-BHC	0.01		10		2.2	11/28/12	Soil
CSX	SO-D2-6-8	6	8	beta-BHC	0.012		12		2	11/29/12	Soil
CSX	SO-D2-18-20	18	20	beta-BHC	0.012		12		2.1	11/29/12	Soil
CSX	SO-D1-12-14	12	14	beta-BHC	0.013		13		2.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	beta-BHC	0.017		17		2.1	11/28/12	Soil
CSX	SO-C2-3-5	3	5	beta-BHC	0.023		23		1.9	11/28/12	Soil
CSX	SO-D2-10-12	10	12	beta-BHC	0.03		30		2	11/29/12	Soil
CSX	SO-D2-8-10	8	10	beta-BHC	0.044		44		1.9	11/29/12	Soil
CSX	SO-D2-12-14	12	14	beta-BHC	0.074		74		20	11/29/12	Soil
CSX	MW-121-8-10	8	10	Copper	13.5		13.5		1.02	11/28/12	Soil
CSX	MW-119-40-42	40	42	Copper	21.7		21.7		1.15	11/29/12	Soil
CSX	MW-121-13-15	13	15	Copper	22.7		22.7		0.976	11/28/12	Soil
CSX	SO-C1-14-16	14	16	Copper	31.9		31.9		1.07	11/27/12	Soil
CSX	SO-D1-6-8	6	8	Copper	33.9		33.9		1.1	11/28/12	Soil
CSX	MW-119-20-22	20	22	Copper	34.8		34.8		1.23	11/29/12	Soil
CSX	SO-C1-18-20	18	20	Copper	36.1		36.1		1.16	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Copper	36.3		36.3		1.06	11/28/12	Soil
CSX	SO-C1-10-12	10	12	Copper	37.5		37.5		1.18	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Copper	37.8		37.8		1.03	11/27/12	Soil
CSX	SO-D1-3-5	3	5	Copper	44.9		44.9		1.02	11/28/12	Soil
CSX	SO-C1-12-14	12	14	Copper	48.2		48.2		1.12	11/27/12	Soil
CSX	SO-SB-156-4-6	4	6	Copper	49.3		49.3		1.13	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Copper	49.6		49.6		1.14	11/27/12	Soil
CSX	SO-D2-18-20	18	20	Copper	51.6		51.6		1.24	11/29/12	Soil
CSX	SO-C1-6-8	6	8	Copper	53.7		53.7		1.1	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Copper	54.7		54.7		1.12	11/29/12	Soil
CSX	SO-C2-18-20	18	20	Copper	55.1		55.1		1.27	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Copper	60.5		60.5		1.2	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Copper	62.1		62.1		1.13	11/28/12	Soil

CSX	SO-SB156-2-4	2	4	Copper	63.6		63.6		1.08	11/27/12	Soil
CSX	SO-D2-10-12	10	12	Copper	65.6		65.6		1.11	11/29/12	Soil
CSX	SO-D2-8-10	8	10	Copper	70.3		70.3		1.12	11/29/12	Soil
CSX	SO-C2-12-14	12	14	Copper	74.1		74.1		1.16	11/28/12	Soil
CSX	SO-C2-14-16	14	16	Copper	80.8		80.8		1.22	11/28/12	Soil
CSX	MW-119-32-34	32	34	Copper	85.6		85.6		1.17	11/29/12	Soil
CSX	SO-C1-3-5	3	5	Copper	86		86		1.06	11/27/12	Soil
CSX	SO-D1-12-14	12	14	Copper	99.7		99.7		1.27	11/28/12	Soil
CSX	SO-D2-14-16	14	16	Copper	99.8		99.8		1.08	11/29/12	Soil
CSX	SO-C2-10-12	10	12	Copper	111		111		1.2	11/28/12	Soil
CSX	SO-D2-12-14	12	14	Copper	119		119		1.2	11/29/12	Soil
CSX	SO-D2-16-18	16	18	Copper	134		134		1.17	11/29/12	Soil
CSX	SO-D1-14-16	14	16	Copper	150		150		1.27	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Copper	164		164		1.29	11/28/12	Soil
CSX	SO-D2-3-5	3	5	Copper	223		223		1.05	11/29/12	Soil
CSX	SO-D1-18-20	18	20	Copper	252		252		1.26	11/28/12	Soil
CSX	SO-C2-6-8	6	8	Copper	366		366		1.21	11/28/12	Soil
CSX	SO-C2-8-10	8	10	Copper	803		803		1.21	11/28/12	Soil
CSX	SO-C2-3-5	3	5	Copper	1140		1140		1.11	11/28/12	Soil
CSX	SO-D1-6-8	6	8	delta-BHC	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-3-5	3	5	delta-BHC	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-12-14	12	14	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	delta-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	delta-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-6-8	6	8	delta-BHC	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-C1-10-12	10	12	delta-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	delta-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-12-14	12	14	delta-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	delta-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	delta-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	delta-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-18-20	18	20	delta-BHC	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D2-3-5	3	5	delta-BHC	0.0023		2.3		1.8	11/29/12	Soil
CSX	SO-D1-8-10	8	10	delta-BHC	0.0023		2.3		1.9	11/28/12	Soil
CSX	SO-D2-8-10	8	10	delta-BHC	0.0023		2.3		1.9	11/29/12	Soil
CSX	SO-C2-6-8	6	8	delta-BHC	0.0025		2.5		2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	delta-BHC	0.0025		2.5		2.1	11/28/12	Soil
CSX	SO-D1-16-18	16	18	delta-BHC	0.0036		3.6		2.2	11/28/12	Soil
CSX	SO-C2-8-10	8	10	delta-BHC	0.0045		4.5		2.1	11/28/12	Soil
CSX	SO-D1-18-20	18	20	delta-BHC	0.0052		5.2		2.2	11/28/12	Soil
CSX	SO-D1-10-12	10	12	delta-BHC	0.0067		6.7		2.1	11/28/12	Soil
CSX	SO-C2-3-5	3	5	delta-BHC	0.0068		6.8		1.9	11/28/12	Soil
CSX	SO-D1-12-14	12	14	delta-BHC	0.01		10		2.1	11/28/12	Soil
CSX	SO-D2-12-14	12	14	delta-BHC	0.012		12		2	11/29/12	Soil
CSX	SO-D2-10-12	10	12	delta-BHC	0.013		13		2	11/29/12	Soil
CSX	SO-D1-14-16	14	16	delta-BHC	0.014		14		2.2	11/28/12	Soil
CSX	SO-D2-16-18	16	18	delta-BHC	0.068		68		9.8	11/29/12	Soil
CSX	SO-D2-18-20	18	20	delta-BHC	0.14		140		11	11/29/12	Soil
CSX	SO-D2-14-16	14	16	delta-BHC	0.15		150		9.9	11/29/12	Soil
CSX	SO-C1-3-5	3	5	Dieldrin	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-D1-3-5	3	5	Dieldrin	0.0037	U	0.64	J	3.7	11/28/12	Soil
CSX	SO-D1-6-8	6	8	Dieldrin	0.0037	U	0	U	3.7	11/28/12	Soil
CSX	SO-C1-14-16	14	16	Dieldrin	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Dieldrin	0.0037	U	0	U	3.7	11/27/12	Soil
CSX	SO-C1-6-8	6	8	Dieldrin	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Dieldrin	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-C1-12-14	12	14	Dieldrin	0.0038	U	0	U	3.8	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Dieldrin	0.0039		0.97	J	3.9	11/29/12	Soil
CSX	SO-D1-8-10	8	10	Dieldrin	0.0039		0.63	J	3.9	11/28/12	Soil
CSX	SO-C1-10-12	10	12	Dieldrin	0.0039	U	0	U	3.9	11/27/12	Soil
CSX	SO-D2-14-16	14	16	Dieldrin	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-D2-16-18	16	18	Dieldrin	0.0039	U	0	U	3.9	11/29/12	Soil
CSX	SO-SB104-2-4	2	4	Dieldrin	0.004	U	0	U	4	11/27/12	Soil
CSX	SO-C2-6-8	6	8	Dieldrin	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	Dieldrin	0.0041	U	1.9	J	4.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Dieldrin	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	Dieldrin	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	Dieldrin	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Dieldrin	0.0041	U	0	U	4.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	Dieldrin	0.0041	U	0	U	4.1	11/27/12	Soil
CSX	SO-SB104-4-6	4	6	Dieldrin	0.0042	U	0	U	4.2	11/27/12	Soil
CSX	SO-C2-10-12	10	12	Dieldrin	0.0042	U	0	U	4.2	11/28/12	Soil
CSX	SO-D1-12-14	12	14	Dieldrin	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-14-16	14	16	Dieldrin	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D2-18-20	18	20	Dieldrin	0.0043	U	0.48	J	4.3	11/29/12	Soil
CSX	SO-C2-18-20	18	20	Dieldrin	0.0043	U	0	U	4.3	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Dieldrin	0.0044	U	0	U	4.4	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Dieldrin	0.0045	U	0	U	4.5	11/28/12	Soil
CSX	SO-D2-8-10	8	10	Dieldrin	0.0075		7.5		3.8	11/29/12	Soil
CSX	SO-D2-3-5	3	5	Dieldrin	0.0076		7.6		3.7	11/29/12	Soil
CSX	SO-C2-3-5	3	5	Dieldrin	0.011		11		3.8	11/28/12	Soil
CSX	SO-D2-12-14	12	14	Dieldrin	0.018		18		4	11/29/12	Soil
CSX	SO-D2-10-12	10	12	Dieldrin	0.027		27		4	11/29/12	Soil

CSX	SO-D2-3-5	3	5	gamma-BHC	0.0018	U	0	U	1.8	11/29/12	Soil
CSX	SO-D1-6-8	6	8	gamma-BHC	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-3-5	3	5	gamma-BHC	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-8-10	8	10	gamma-BHC	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-D2-8-10	8	10	gamma-BHC	0.0019	U	0	U	1.9	11/29/12	Soil
CSX	SO-C1-12-14	12	14	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	gamma-BHC	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	gamma-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-6-8	6	8	gamma-BHC	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-C1-10-12	10	12	gamma-BHC	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-10-12	10	12	gamma-BHC	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-D2-14-16	14	16	gamma-BHC	0.002	U	1.1	J	2	11/29/12	Soil
CSX	SO-SB104-4-6	4	6	gamma-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-6-8	6	8	gamma-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	gamma-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	gamma-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	gamma-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	gamma-BHC	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C1-18-20	18	20	gamma-BHC	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-C2-18-20	18	20	gamma-BHC	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-16-18	16	18	gamma-BHC	0.0028		2.8		2.2	11/28/12	Soil
CSX	SO-C2-8-10	8	10	gamma-BHC	0.003		3		2.1	11/28/12	Soil
CSX	SO-D2-12-14	12	14	gamma-BHC	0.0034		3.4		2	11/29/12	Soil
CSX	SO-D1-10-12	10	12	gamma-BHC	0.0037		3.7		2.1	11/28/12	Soil
CSX	SO-D1-18-20	18	20	gamma-BHC	0.0037		3.7		2.2	11/28/12	Soil
CSX	SO-C2-3-5	3	5	gamma-BHC	0.005		5		1.9	11/28/12	Soil
CSX	SO-D1-14-16	14	16	gamma-BHC	0.0076		7.6		2.2	11/28/12	Soil
CSX	SO-D1-12-14	12	14	gamma-BHC	0.0084		8.4		2.1	11/28/12	Soil
CSX	SO-D2-16-18	16	18	gamma-BHC	0.016		16		2	11/29/12	Soil
CSX	SO-D2-18-20	18	20	gamma-BHC	0.048		48		2.1	11/29/12	Soil
CSX	SO-D1-6-8	6	8	gamma-Chlordane	0.0018	U	0	U	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	gamma-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C2-3-5	3	5	gamma-Chlordane	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-D1-3-5	3	5	gamma-Chlordane	0.0019	U	0.66	J	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	gamma-Chlordane	0.0019	U	1.1	J	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	gamma-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-8-10	8	10	gamma-Chlordane	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-12-14	12	14	gamma-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	gamma-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	gamma-Chlordane	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	gamma-Chlordane	0.002	U	1.3	J	2	11/27/12	Soil
CSX	SO-C1-10-12	10	12	gamma-Chlordane	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-14-16	14	16	gamma-Chlordane	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-D2-16-18	16	18	gamma-Chlordane	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-SB104-4-6	4	6	gamma-Chlordane	0.0021	U	0.67	J	2.1	11/27/12	Soil
CSX	SO-C2-6-8	6	8	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-12-14	12	14	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	gamma-Chlordane	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D2-18-20	18	20	gamma-Chlordane	0.0021	U	0	U	2.1	11/29/12	Soil
CSX	SO-C1-18-20	18	20	gamma-Chlordane	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-D1-14-16	14	16	gamma-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-16-18	16	18	gamma-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-C2-18-20	18	20	gamma-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-18-20	18	20	gamma-Chlordane	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D2-6-8	6	8	gamma-Chlordane	0.0045		4.5		2	11/29/12	Soil
CSX	SO-D2-3-5	3	5	gamma-Chlordane	0.006		6		1.8	11/29/12	Soil
CSX	SO-D2-8-10	8	10	gamma-Chlordane	0.009		9		1.9	11/29/12	Soil
CSX	SO-D2-12-14	12	14	gamma-Chlordane	0.027		27		2	11/29/12	Soil
CSX	SO-D2-10-12	10	12	gamma-Chlordane	0.035		35		2	11/29/12	Soil
CSX	SO-D2-3-5	3	5	Heptachlor	0.0018	U	0.86	J	1.8	11/29/12	Soil
CSX	SO-D1-6-8	6	8	Heptachlor	0.0018	U	0.55	J	1.8	11/28/12	Soil
CSX	SO-C1-3-5	3	5	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C2-3-5	3	5	Heptachlor	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-D1-3-5	3	5	Heptachlor	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-C1-6-8	6	8	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Heptachlor	0.0019	U	0	U	1.9	11/28/12	Soil
CSX	SO-D2-8-10	8	10	Heptachlor	0.0019	U	0	U	1.9	11/29/12	Soil
CSX	SO-C1-12-14	12	14	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-14-16	14	16	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Heptachlor	0.0019	U	0	U	1.9	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	Heptachlor	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Heptachlor	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-C1-10-12	10	12	Heptachlor	0.002	U	0	U	2	11/27/12	Soil
CSX	SO-D2-10-12	10	12	Heptachlor	0.002	U	1.7	J	2	11/29/12	Soil
CSX	SO-D2-12-14	12	14	Heptachlor	0.002	U	0.97	J	2	11/29/12	Soil
CSX	SO-D2-14-16	14	16	Heptachlor	0.002	U	0	U	2	11/29/12	Soil
CSX	SO-D2-16-18	16	18	Heptachlor	0.002	U	0	U	2	11/29/12	Soil

CSX	SO-SB104-4-6	4	6	Heptachlor	0.0021	U	0.59	J	2.1	11/27/12	Soil
CSX	SO-C2-6-8	6	8	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-8-10	8	10	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-10-12	10	12	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-12-14	12	14	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D1-12-14	12	14	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-14-16	14	16	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Heptachlor	0.0021	U	0	U	2.1	11/28/12	Soil
CSX	SO-D2-18-20	18	20	Heptachlor	0.0021	U	0	U	2.1	11/29/12	Soil
CSX	SO-C1-18-20	18	20	Heptachlor	0.0021	U	0	U	2.1	11/27/12	Soil
CSX	SO-D1-14-16	14	16	Heptachlor	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Heptachlor	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-C2-18-20	18	20	Heptachlor	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Heptachlor	0.0022	U	0	U	2.2	11/28/12	Soil
CSX	SO-D2-3-5	3	5	Methoxychlor	0.018	U	0	U	18	11/29/12	Soil
CSX	SO-D1-6-8	6	8	Methoxychlor	0.018	U	0	U	18	11/28/12	Soil
CSX	SO-C1-3-5	3	5	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-C2-3-5	3	5	Methoxychlor	0.019	U	0	U	19	11/28/12	Soil
CSX	SO-D1-3-5	3	5	Methoxychlor	0.019	U	0	U	19	11/28/12	Soil
CSX	SO-C1-6-8	6	8	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Methoxychlor	0.019	U	0	U	19	11/28/12	Soil
CSX	SO-D2-8-10	8	10	Methoxychlor	0.019	U	0	U	19	11/29/12	Soil
CSX	SO-C1-12-14	12	14	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-C1-14-16	14	16	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Methoxychlor	0.019	U	0	U	19	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	Methoxychlor	0.02	U	0	U	20	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Methoxychlor	0.02	U	0	U	20	11/29/12	Soil
CSX	SO-C1-10-12	10	12	Methoxychlor	0.02	U	0	U	20	11/27/12	Soil
CSX	SO-D2-10-12	10	12	Methoxychlor	0.02	U	0	U	20	11/29/12	Soil
CSX	SO-D2-12-14	12	14	Methoxychlor	0.02	U	0	U	20	11/29/12	Soil
CSX	SO-D2-14-16	14	16	Methoxychlor	0.02	U	0	U	20	11/29/12	Soil
CSX	SO-D2-16-18	16	18	Methoxychlor	0.02	U	0	U	20	11/29/12	Soil
CSX	SO-SB104-4-6	4	6	Methoxychlor	0.021	U	0	U	21	11/27/12	Soil
CSX	SO-C2-6-8	6	8	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-C2-8-10	8	10	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-C2-10-12	10	12	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-C2-12-14	12	14	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-D1-12-14	12	14	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-C2-14-16	14	16	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Methoxychlor	0.021	U	0	U	21	11/28/12	Soil
CSX	SO-D2-18-20	18	20	Methoxychlor	0.021	U	0	U	21	11/29/12	Soil
CSX	SO-C1-18-20	18	20	Methoxychlor	0.021	U	0	U	21	11/27/12	Soil
CSX	SO-D1-14-16	14	16	Methoxychlor	0.022	U	0	U	22	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Methoxychlor	0.022	U	0	U	22	11/28/12	Soil
CSX	SO-C2-18-20	18	20	Methoxychlor	0.022	U	0	U	22	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Methoxychlor	0.022	U	0	U	22	11/28/12	Soil
CSX	SO-D2-3-5	3	5	Toxaphene	0.18	U	0	U	180	11/29/12	Soil
CSX	SO-D1-6-8	6	8	Toxaphene	0.18	U	0	U	180	11/28/12	Soil
CSX	SO-C1-3-5	3	5	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-C2-3-5	3	5	Toxaphene	0.19	U	0	U	190	11/28/12	Soil
CSX	SO-D1-3-5	3	5	Toxaphene	0.19	U	0	U	190	11/28/12	Soil
CSX	SO-C1-6-8	6	8	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Toxaphene	0.19	U	0	U	190	11/28/12	Soil
CSX	SO-D2-8-10	8	10	Toxaphene	0.19	U	0	U	190	11/29/12	Soil
CSX	SO-C1-12-14	12	14	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-C1-14-16	14	16	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-C1-16-18	16	18	Toxaphene	0.19	U	0	U	190	11/27/12	Soil
CSX	SO-SB104-2-4	2	4	Toxaphene	0.2	U	0	U	200	11/27/12	Soil
CSX	SO-D2-6-8	6	8	Toxaphene	0.2	U	0	U	200	11/29/12	Soil
CSX	SO-C1-10-12	10	12	Toxaphene	0.2	U	0	U	200	11/27/12	Soil
CSX	SO-D2-10-12	10	12	Toxaphene	0.2	U	0	U	200	11/29/12	Soil
CSX	SO-D2-12-14	12	14	Toxaphene	0.2	U	0	U	200	11/29/12	Soil
CSX	SO-D2-14-16	14	16	Toxaphene	0.2	U	0	U	200	11/29/12	Soil
CSX	SO-D2-16-18	16	18	Toxaphene	0.2	U	0	U	200	11/29/12	Soil
CSX	SO-SB104-4-6	4	6	Toxaphene	0.21	U	0	U	210	11/27/12	Soil
CSX	SO-C2-6-8	6	8	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-C2-8-10	8	10	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-C2-10-12	10	12	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-C2-12-14	12	14	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-D1-12-14	12	14	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-C2-14-16	14	16	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Toxaphene	0.21	U	0	U	210	11/28/12	Soil
CSX	SO-D2-18-20	18	20	Toxaphene	0.21	U	0	U	210	11/29/12	Soil
CSX	SO-C1-18-20	18	20	Toxaphene	0.21	U	0	U	210	11/27/12	Soil
CSX	SO-D1-14-16	14	16	Toxaphene	0.22	U	0	U	220	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Toxaphene	0.22	U	0	U	220	11/28/12	Soil
CSX	SO-C2-18-20	18	20	Toxaphene	0.22	U	0	U	220	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Toxaphene	0.22	U	0	U	220	11/28/12	Soil
CSX	MW-119-40-42	40	42	Zinc	25.4		25.4		5.77	11/29/12	Soil
CSX	SO-C1-16-18	16	18	Zinc	33.6		33.6		5.14	11/27/12	Soil
CSX	SO-D1-8-10	8	10	Zinc	34.5		34.5		5.29	11/28/12	Soil
CSX	SO-C1-10-12	10	12	Zinc	35.1		35.1		5.89	11/27/12	Soil

CSX	SO-C1-14-16	14	16	Zinc	40.4		40.4		5.37	11/27/12	Soil
CSX	SO-C1-12-14	12	14	Zinc	41.0		41		5.59	11/27/12	Soil
CSX	SO-C1-8-10	8	10	Zinc	45.4		45.4		5.72	11/27/12	Soil
CSX	MW-121-8-10	8	10	Zinc	47.3		47.3		5.12	11/28/12	Soil
CSX	MW-119-20-22	20	22	Zinc	47.7		47.7		6.13	11/29/12	Soil
CSX	SO-SB-156-4-6	4	6	Zinc	48.3		48.3		5.64	11/27/12	Soil
CSX	SO-D1-6-8	6	8	Zinc	49.1		49.1		5.5	11/28/12	Soil
CSX	SO-C2-18-20	18	20	Zinc	50.7		50.7		6.34	11/28/12	Soil
CSX	MW-121-13-15	13	15	Zinc	52.3		52.3		4.88	11/28/12	Soil
CSX	SO-C1-6-8	6	8	Zinc	53.9		53.9		5.5	11/27/12	Soil
CSX	SO-SB156-2-4	2	4	Zinc	55.5		55.5		5.38	11/27/12	Soil
CSX	SO-C2-14-16	14	16	Zinc	59.3		59.3		6.08	11/28/12	Soil
CSX	SO-C1-18-20	18	20	Zinc	59.5		59.5		5.78	11/27/12	Soil
CSX	SO-C2-12-14	12	14	Zinc	66.4		66.4		5.79	11/28/12	Soil
CSX	SO-D1-10-12	10	12	Zinc	69.4		69.4		6	11/28/12	Soil
CSX	SO-C2-16-18	16	18	Zinc	70.2		70.2		5.66	11/28/12	Soil
CSX	SO-D1-16-18	16	18	Zinc	70.7		70.7		6.45	11/28/12	Soil
CSX	SO-D1-18-20	18	20	Zinc	76		76		6.3	11/28/12	Soil
CSX	SO-D2-6-8	6	8	Zinc	76.9		76.9		5.59	11/29/12	Soil
CSX	SO-D1-3-5	3	5	Zinc	79.1		79.1		5.09	11/28/12	Soil
CSX	SO-D2-14-16	14	16	Zinc	80		80		5.42	11/29/12	Soil
CSX	SO-D1-12-14	12	14	Zinc	83.8		83.8		6.33	11/28/12	Soil
CSX	MW-119-32-34	32	34	Zinc	89.2		89.2		5.84	11/29/12	Soil
CSX	SO-C1-3-5	3	5	Zinc	93.2		93.2		5.29	11/27/12	Soil
CSX	SO-D2-16-18	16	18	Zinc	106		106		5.87	11/29/12	Soil
CSX	SO-D1-14-16	14	16	Zinc	114		114		6.33	11/28/12	Soil
CSX	SO-C2-10-12	10	12	Zinc	120		120		6	11/28/12	Soil
CSX	SO-D2-10-12	10	12	Zinc	140		140		5.53	11/29/12	Soil
CSX	SO-D2-18-20	18	20	Zinc	195		195		6.18	11/29/12	Soil
CSX	SO-D2-8-10	8	10	Zinc	280		280		5.61	11/29/12	Soil
CSX	SO-D2-12-14	12	14	Zinc	390		390		6.01	11/29/12	Soil
CSX	SO-C2-6-8	6	8	Zinc	426		426		6.04	11/28/12	Soil
CSX	SO-D2-3-5	3	5	Zinc	453		453		5.26	11/29/12	Soil
CSX	SO-C2-8-10	8	10	Zinc	730		730		6.05	11/28/12	Soil
CSX	SO-C2-3-5	3	5	Zinc	1520		1520		5.53	11/28/12	Soil

Arsenic	D_Arsenic	Lead	D_Lead	Copper	D_Copper	Zinc	D_Zinc
0.054	0	2.9	1	13.5	1	25.4	1
0.061	1	3	1	21.7	1	47.3	1
0.56	0	6.5	1	22.7	1	47.7	1
1	0	7.3	1	34.8	1	52.3	1
1	0	9.9	1	85.6	1	89.2	1
1.1	0	10.1	1				
1.2	1	11	1				
1.2	1	14.3	1				
1.2	1	15.2	1				
1.3	1	16.2	1				
1.7	1	17.1	1				
1.9	1	17.1	1				
2	1	18.6	1				
2.1	1	18.6	1				
2.4	1	18.9	1				
2.5	0	19.5	1				
2.5	0	21	1				
2.5	0	22	1				
2.5	0	22	1				
2.5	0	22.6	1				
2.5	0	23.5	1				
2.5	0	25.2	1				
2.5	0	25.4	1				
2.5	0	26.2	1				
2.5	0	29.2	1				
2.5	0	29.7	1				
2.5	0	29.8	1				
2.5	0	31.8	1				
2.5	0	31.8	1				
2.5	0	38.5	1				
2.5	0	38.6	1				
2.5	0	39	1				
2.5	0	41.3	1				
2.5	0	56.5	1				
2.5	0	78.4	1				
2.5	0	94.6	1				
2.5	0	200	1				
2.5	0						
2.5	0						
2.5	0	

2.5	0
2.5	0
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2.5	0
2.5	0
2.5	0
2.5	0
2.5	0
2.5	0
2.6	1
2.6	1
2.7	1
2.7	1
2.9	1
3	1
3	1
3.3	1
3.4	1
3.64	1
3.65	1
3.8	1
3.94	1
4	1
4.1	1
4.6	1
4.8	1
4.8	1
5.8	1
5.8	1
6	1
6.2	1
6.4	1
6.5	1
6.5	1
6.6	1
7	1
7.3	1
7.7	1
7.8	1
7.8	1
8.02	1
8.4	1
8.5	1
8.7	1
8.7	1
8.9	1
8.9	1
9.2	1
9.8	1
10	1
10.9	1
11.4	1
12	1
12	1
13	1

13	1
13	1
13	1
15	1
15	1
15	1
15	1
21	1
22	1
28	1
28	1
29	1
35	1
40	1
42	1
52	1
87	1
116	1
120	1
122	1
133	1
140	1
155	1
200	1
223	1
243	1
287	1
297	1
340	1
350	1
373	1
405	1
620	1
686	1
840	1

Alpha, Be	D_Alpha,	alpha-BH(	D_alpha-E	Chlordane	D_Chlordi	DDD	D_DDD	DDE	D_DDE
0.0005	0	0.002	0	0.025	0	0.02	0	0.02	0
0.0005	0	0.002	0	0.02	0	0.02	0	0.02	0
0.0005	0	0.002	0	0.025	0	2	0	0.02	0
0.0005	0	0.002	0	0.0025	0	0.02	0	0.02	0
0.0005	0	0.002	0	0.0026	0	0.02	0	0.0025	0
0.0005	0	0.0022	0	0.0026	0	0.02	0	0.0026	0
0.0005	0	0.0022	0	0.0028	0	0.0025	0	0.0026	0
0.0005	0	0.0023	0	0.0026	0	0.0026	0	0.0028	0
0.0005	0	0.0023	0	0.002	0	0.0026	0	0.0026	0
0.0005	0	0.0023	0	0.0024	0	0.0028	0	0.002	0
0.0005	0	0.0024	0	0.0023	0	0.0026	0	0.0024	0
0.0005	0	0.0024	0	0.002	0	0.002	0	0.0023	0
0.0005	0	0.0024	0	0.002	0	0.0024	0	0.002	0
0.0005	0	0.0024	0	0.002	0	0.0023	0	0.002	0
0.0005	0	0.0024	0	0.002	0	0.0022	0	0.002	0
0.0005	0	0.0024	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.05	0	0.002	0
0.0005	0	0.0025	0	0.0005	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.05	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0025	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.02	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.0026	0	0.002	0
0.0005	0	0.0026	0	0.002	0	0.0025	0	0.002	0
0.0005	0	0.0028	0	0.002	0	0.0026	0	0.002	0
0.0005	0	0.0028	0	0.002	0	0.0025	0	0.002	0
0.0005	0	0.0028	0	0.002	0	0.012	0	0.002	0
0.0005	0	0.0028	1	0.002	0	0.0025	0	0.002	0
0.0005	0	0.0032	0	0.0022	0	0.0026	0	0.002	0
0.0005	0	0.0036	1	0.002	0	0.0023	0	0.0022	0
0.0005	0	0.004	0	0.002	0	0.0025	0	0.002	0
0.0005	0	0.004	0	0.002	0	0.0025	0	0.002	0
0.005	0	0.005	0	0.002	0	0.0025	0	0.002	0
0.005	0	0.0052	0	0.002	0	0.002	0	0.002	0
0.005	0	0.0057	1	0.002	0	0.002	0	0.002	0
0.005	0	0.01	0	0.002	0	0.002	0	0.002	0
0.005	0	0.01	0	0.002	0	0.004	0	0.002	0
0.005	0	0.01	0	0.002	0	0.004	0	0.002	0
0.005	0	0.01	0	0.025	0	0.005	0	0.002	0
0.0005	0	0.01	0	0.025	0	0.0052	0	0.002	0
0.0005	0	0.01	0	0.02	0	0.02	0	0.002	0
0.0005	0	0.01	0	0.05	0	0.02	0	0.0002	0
0.0002	0	0.01	0	0.01	0	0.02	0	0.002	0
0.0005	0	0.01	0	0.025	0	0.0023	0	0.02	0

0.0005	0	0.01	0	0.05	0	0.0025	0	0.02	0
0.0005	0	0.01	0	0.025	0	0.0024	0	0.05	0
0.0005	0	0.01	1	0.025	0	0.0026	0	0.025	0
0.0005	0	0.011	1	0.025	0	0.0028	0	0.02	0
0.01	0	0.03	1	0.025	0	0.0028	0	0.02	0
0.01	0	0.031	1	0.025	0	0.0025	0	0.02	0
0.01	0	0.091	1	0.025	0	0.0024	0	0.02	0
0.01	0	0.15	1	0.025	0	0.0025	0	0.02	0
0.01	0	0.49	1	0.025	0	0.0025	0	0.02	0
0.01	0	2.2	1	0.025	0	0.0026	0	0.02	0
0.0032	1	4.4	1	0.025	0	0.0024	0	0.02	0
0.006	1	26	1	0.0026	0	0.0024	0	0.02	0
0.0105	1			0.0025	0	0.0024	0	0.02	0
0.012	1			0.0026	0	0.0022	0	0.02	0
0.0128	1			0.0026	0	0.0032	0	0.02	0
0.015	1			0.0023	0	0.02	0	0.0026	0
0.016	1			0.0025	0	0.02	0	0.0025	0
0.018	1			0.0025	0	0.02	0	0.0026	0
0.019	1			0.0025	0	0.02	0	0.002	0
0.0201	1			0.0025	0	0.02	0	0.002	0
0.0208	1			0.002	0	0.02	0	0.002	0
0.0212	1			0.002	0	0.05	0	0.004	0
0.0308	1			0.002	0	0.02	0	0.004	0
0.0437	1			0.002	0	0.02	0	0.005	0
0.05	1			0.004	0	0.02	0	0.0052	0
0.0626	1			0.004	0	0.02	0	0.02	0
0.14	1			0.005	0	0.02	0	0.02	0
0.19	1			0.0052	0	0.02	0	0.02	0
0.19	1			0.025	0	0.02	0	0.0023	0
0.51	1			0.025	0	0.02	0	0.0025	0
6.5	1			0.025	0	0.02	0	0.0024	0
222	1			0.0023	0	0.02	0	0.0026	0
				0.0025	0	0.02	0	0.0028	0
				0.0024	0	0.0021	1	0.0028	0
				0.0026	0	0.015	1	0.0025	0
				0.0028	0	0.29	1	0.0024	0
				0.0028	0	3.8	1	0.0025	0
				0.0025	0			0.0026	0
				0.0024	0			0.0024	0
				0.0025	0			0.0024	0
				0.0025	0			0.0022	0
				0.0026	0			0.0032	0
				0.0024	0			0.002	0
				0.0024	0			0.002	0
				0.0022	0			0.002	0
				0.0032	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0
				0.002	0			0.002	0

0.002	0	0.002	0
0.025	0	0.002	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.05	0
0.025	0	0.02	0
0.05	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.025	0	0.02	0
0.0031	1	0.02	0
0.0037	1	0.02	0
0.00477	1	0.0045	1
0.00532	1	0.0054	1
0.00557	1	0.0097	1
0.0057	1	0.00974	1
0.00802	1	0.013	1
0.0083	1	0.014	1
0.0095	1	0.015	1
0.01	1	0.02	1
0.012	1	0.025	1
0.0124	1	0.027	1
0.0131	1	0.035	1
0.0162	1	0.039	1
0.0807	1	0.042	1
0.11	1	0.045	1
0.16	1	0.048	1
0.18	1	0.057	1
0.21	1	0.0626	1
0.26	1	0.174	1
0.356	1	0.2	1
0.372	1	0.23	1
0.985	1	0.27	1
1.52	1	0.59	1
1.6	1	0.86	1
466	1	1.77	1
		78	1

DDT	D_DDT	gamma-B	D_gamma	Heptachlo	D_Heptac	Toxaphen	D_Toxaph	Dieldrin	D_Dieldrin
0.002	0	0.0002	0	0.005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.01	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.025	0	0.005	0	2	0
0.002	0	0.0005	0	0.005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0025	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0026	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0026	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0028	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.0026	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.002	0	0.005	0	0.0028	0
0.002	0	0.0005	0	0.0024	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.0023	0	0.005	0	0.002	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0024	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0023	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0022	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.05	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.05	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.02	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0026	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0023	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0022	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.0025	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.002	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.002	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.002	0
0.002	0	0.0005	0	0.0005	0	0.005	0	0.002	0
0.0022	0	0.0005	0	0.0005	0	0.005	0	0.004	0
0.0022	0	0.0005	0	0.0005	0	0.005	0	0.004	0
0.0022	1	0.0005	0	0.0005	0	0.005	0	0.005	0
0.0023	0	0.0005	0	0.01	0	0.0064	0	0.0052	0
0.0023	0	0.0005	0	0.01	0	0.02	0	0.02	0
0.0024	0	0.002	0	0.01	0	0.05	0	0.02	0

0.0024	0	0.002	0	0.02	0	0.05	0	0.02	0
0.0024	0	0.002	0	0.01	0	0.05	0	0.0023	0
0.0024	0	0.002	0	0.01	0	0.05	0	0.0025	0
0.0024	0	0.002	0	0.05	0	0.05	0	0.0024	0
0.0025	0	0.0022	0	0.01	0	0.056	0	0.0026	0
0.0025	0	0.0022	0	0.01	0	0.056	0	0.0028	0
0.0025	0	0.0023	0	0.01	0	0.057	0	0.0028	0
0.0025	0	0.0023	0	0.01	0	0.058	0	0.0025	0
0.0025	0	0.0023	0	0.005	0	0.059	0	0.0024	0
0.0026	0	0.0024	0	0.005	0	0.059	0	0.0025	0
0.0026	0	0.0024	0	0.005	0	0.059	0	0.0025	0
0.0026	0	0.0024	0	0.005	0	0.06	0	0.0026	0
0.0026	0	0.0024	0	0.005	0	0.06	0	0.0024	0
0.0026	0	0.0024	0	0.005	0	0.06	0	0.0024	0
0.0026	0	0.0024	0	0.005	0	0.061	0	0.0024	0
0.0026	0	0.0025	0	0.0026	0	0.061	0	0.0022	0
0.0028	0	0.0025	0	0.0025	0	0.062	0	0.0032	0
0.0028	0	0.0025	0	0.0026	0	0.062	0	0.02	0
0.0028	0	0.0025	0	0.0025	0	0.062	0	0.02	0
0.0032	0	0.0025	0	0.012	0	0.062	0	0.02	0
0.004	0	0.0025	0	0.0025	0	0.062	0	0.02	0
0.004	0	0.0025	0	0.0026	0	0.062	0	0.02	0
0.005	0	0.0025	0	0.0023	0	0.063	0	0.02	0
0.0052	0	0.0025	0	0.0025	0	0.063	0	0.02	0
0.00751	1	0.0025	0	0.0025	0	0.063	0	0.02	0
0.0079	1	0.0025	0	0.0025	0	0.064	0	0.05	0
0.0128	1	0.0025	0	0.0025	0	0.064	0	0.02	0
0.0182	1	0.0026	0	0.002	0	0.064	0	0.02	0
0.019	1	0.0026	0	0.002	0	0.064	0	0.02	0
0.02	0	0.0026	0	0.002	0	0.065	0	0.02	0
0.02	0	0.0026	0	0.002	0	0.065	0	0.02	0
0.02	0	0.0026	0	0.004	0	0.065	0	0.02	0
0.02	0	0.0026	0	0.004	0	0.065	0	0.02	0
0.02	0	0.0026	0	0.005	0	0.065	0	0.02	0
0.02	0	0.0026	0	0.0052	0	0.069	0	0.02	0
0.02	0	0.0028	0	0.005	0	0.07	0	0.02	0
0.02	0	0.0028	0	0.005	0	0.071	0	0.065	1
0.02	0	0.0028	0	0.005	0	0.077	1	0.22	1
0.02	0	0.0032	0	0.0023	0	0.078	0		
0.02	0	0.004	0	0.0025	0	0.1	0		
0.02	0	0.004	0	0.0024	0	0.1	0		
0.02	0	0.005	0	0.0026	0	0.1	0		
0.02	0	0.005	0	0.0028	0	0.12	0		
0.02	0	0.005	0	0.0028	0	0.123	1		
0.02	0	0.005	0	0.0025	0	0.13	0		
0.02	0	0.005	0	0.0024	0	0.2	0		
0.02	0	0.005	0	0.0025	0	0.2	0		
0.02	0	0.005	0	0.0025	0	0.2	0		
0.02	0	0.005	0	0.0026	0	0.2	0		
0.02	0	0.005	0	0.0024	0	0.2	0		
0.02	0	0.005	0	0.0024	0	0.2	0		
0.02	0	0.005	0	0.0024	0	0.2	0		
0.02	0	0.005	0	0.0022	0	0.2	0		
0.02	0	0.005	0	0.0032	0	0.2	0		
0.02	0	0.005	0	0.0005	0	0.2	0		

0.02	0	0.005	0	0.0005	0	0.2	0
0.02	0	0.005	1	0.0005	0	0.2	0
0.02	0	0.0052	0	0.0002	0	0.2	0
0.02	0	0.00664	1	0.0005	0	0.2	0
0.02	0	0.007	1	0.0005	0	0.2	0
0.02	1	0.0076	1	0.0005	0	0.2	0
0.023	1	0.00765	1	0.005	0	0.2	0
0.0284	1	0.0084	1	0.0005	0	0.2	0
0.032	1	0.01	0	0.0005	0	0.2	0
0.0356	1	0.01	0	0.01	0	0.2	0
0.041	1	0.01	0	0.01	0	0.2	0
0.0462	1	0.01	0	0.01	0	0.2	0
0.048	1	0.01	0	0.01	0	0.2	0
0.0507	1	0.01	0	0.01	0	0.2	0
0.057	1	0.01	0	0.06	0	0.2	0
0.069	1	0.01	0	0.02	0	0.2	0
0.07	1	0.01	0	0.01	0	0.2	0
0.092	1	0.01	0	0.005	0	0.2	0
0.104	1	0.01	0	0.005	0	0.2	0
0.124	1	0.01	0	0.005	0	0.2	0
0.14	1	0.01	1	0.005	0	0.2	0
0.1736	1	0.01	1	0.005	0	0.2	0
0.18	1	0.01	1	0.005	0	0.2	0
0.2	0	0.011	1	0.01	0	0.2	0
0.262	1	0.012	0	0.01	0	0.2	0
0.269	1	0.015	1	0.01	0	0.2	0
0.28	1	0.016	1	0.0021	1	0.2	0
0.33	1	0.027	1	0.0028	1	0.2	0
0.35	0	0.0344	1	0.00313	1	0.2	0
0.41	1	0.05	0	0.0045	1	0.213	1
0.471	1	0.0502	1	0.005	1	0.24	0
0.51	1	0.0519	1	0.0063	1	0.5	0
0.594	1	0.062	1	0.0065	1	0.5	0
0.74	1	0.064	1	0.00657	1	0.5	0
0.76	1	0.096	1	0.00935	1	0.75	1
1.3	1	0.096	1	0.0099	1	1.48	1
1.4	1	0.252	1	0.011	1	1.6	1
1.5	1	0.26	1	0.014	1	1.854	1
1.6	1	0.36	1	0.022	1	2.023	1
3.1	1	0.41	1	0.028	1	10	1
4.8	1	0.67	1	0.0324	1	14.8	1
7.3	1	1.7	1	0.056	1	17.1	1
110	1	18	1	0.0722	1	700	1
774	1	33	1	1.3	1		

General Statistics on Uncensored Data

Date/Time of Computation	12/20/2013 15:51
User Selected Options	
From File	CSX Subsurface Soils Revised UCLs no composites_a.xls
Full Precision	OFF

From File: CSX Subsurface Soils Revised UCLs no composites_a.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	144	0	91	53	36.81%	0.054	2.5	45.12	15654	125.1	2.773
Lead	37	0	37	0	0.00%	N/A	N/A	30.63	1167	34.16	1.115
Copper	5	0	5	0	0.00%	N/A	N/A	35.66	837.2	28.93	0.811
Zinc	5	0	5	0	0.00%	N/A	N/A	52.38	532.8	23.08	0.441

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	91	0	0.061	840	70.85	8.7	23227	152.4	8.895	3.132	2.151
Lead	37	0	2.9	200	30.63	22	1167	34.16	11.42	3.779	1.115
Copper	5	0	13.5	85.6	35.66	22.7	837.2	28.93	13.64	1.871	0.811
Zinc	5	0	25.4	89.2	52.38	47.7	532.8	23.08	6.82	1.018	0.441

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	144	0	2.43	2.5	2.5	3.52	12.25	15	129.7	295.5	657.6
Lead	37	0	8.86	14.48	16.2	22	31.8	37.16	47.38	81.64	162.1
Copper	5	0	16.78	20.06	21.7	22.7	34.8	44.96	65.28	75.44	83.57
Zinc	5	0	34.16	42.92	47.3	47.7	52.3	59.68	74.44	81.82	87.72

General Statistics on Uncensored Data

Date/Time of Computation 12/20/2013 15:52
User Selected Options
From File CSX Subsurface Soils Revised UCLs no composites_b.xls
Full Precision OFF

From File: CSX Subsurface Soils Revised UCLs no composites_b.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Alpha, Beta, Delta-BHC	86	0	22	64	74.42%	2.00E-04	0.01	2.673	566.4	23.8	8.903
alpha-BHC	66	0	13	53	80.30%	0.002	0.01	0.508	10.36	3.218	6.334
Chlordane	152	0	26	126	82.89%	5.00E-04	0.05	3.106	1419	37.67	12.13
DDD	91	0	4	87	95.60%	0.002	2	0.0472	0.157	0.397	8.398
DDE	153	0	25	128	83.66%	2.00E-04	0.05	0.54	39.5	6.285	11.64
DDT	153	0	43	110	71.90%	0.002	0.35	5.956	3960	62.93	10.56
gamma-BHC (Lindane)	153	0	28	125	81.70%	2.00E-04	0.05	0.361	9.13	3.022	8.363
Heptachlor	153	0	18	135	88.24%	2.00E-04	0.06	0.0107	0.011	0.105	9.799
Toxaphene	152	0	12	140	92.11%	0.005	0.5	4.94	3203	56.6	11.46
beta_BHC	45	0	0	45	100.00%	0.002	0.012	N/A	N/A	N/A	N/A
delta_BHC	44	0	0	44	100.00%	0.002	0.012	N/A	N/A	N/A	N/A
Dieldrin	92	0	2	90	97.83%	0.002	2	0.00509	5.56E-04	0.0236	4.636

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.67	Skewness	CV
Alpha, Beta, Delta-BHC	22	0	0.0032	222	10.45	0.021	2234	47.27	0.0189	4.684	4.524
alpha-BHC	13	0	0.0028	26	2.571	0.031	51.21	7.156	0.0418	3.416	2.783
Chlordane	26	0	0.0031	466	18.15	0.0147	8344	91.34	0.0167	5.099	5.032
DDD	4	0	0.0021	3.8	1.027	0.153	3.436	1.854	0.213	1.97	1.805
DDE	25	0	0.0045	78	3.303	0.042	242.3	15.57	0.043	4.995	4.713
DDT	43	0	0.0022	774	21.19	0.14	14095	118.7	0.189	6.372	5.604
gamma-BHC (Lindane)	28	0	0.005	33	1.973	0.0423	48.44	6.96	0.0514	4.001	3.527
Heptachlor	18	0	0.0021	1.3	0.0884	0.00963	0.0918	0.303	0.00861	4.214	3.426
Toxaphene	12	0	0.077	700	62.5	1.727	40341	200.8	2.311	3.459	3.214
beta_BHC	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
delta_BHC	0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	2	0	0.065	0.22	0.143	0.143	0.012	0.11	0.115	N/A	0.769

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q	50%ile(Q	75%ile(Q	80%ile	90%ile	95%ile	99%ile
Alpha, Beta, Delta-BHC	86	0	5.00E-04	5.00E-04	5.00E-04	5.00E-04	0.01	0.0128	0.0373	0.178	38.83
alpha-BHC	66	0	0.00225	0.0024	0.0025	0.0026	0.01	0.01	0.0305	0.405	11.96
Chlordane	152	0	0.002	0.002	0.002	0.0026	0.025	0.025	0.025	0.194	1.559
DDD	91	0	0.0023	0.0025	0.0025	0.02	0.02	0.02	0.02	0.05	2.18
DDE	153	0	0.002	0.002	0.002	0.0026	0.02	0.02	0.0382	0.107	1.297
DDT	153	0	0.002	0.002	0.002	0.005	0.02	0.0496	0.346	1.34	56.6
gamma-BHC (Lindane)	153	0	5.00E-04	5.00E-04	5.00E-04	0.0025	0.0076	0.01	0.0329	0.158	9.524
Heptachlor	153	0	5.00E-04	5.00E-04	5.00E-04	0.0026	0.0052	0.01	0.01	0.0232	0.0659
Toxaphene	152	0	0.005	0.005	0.005	0.0625	0.2	0.2	0.2	1.078	15.93
beta_BHC	45	0	0.00208	0.0023	0.0024	0.0025	0.0026	0.00264	0.00368	0.0048	0.00901
delta_BHC	44	0	0.0022	0.00236	0.0024	0.0025	0.0026	0.00268	0.00376	0.00485	0.00908
Dieldrin	92	0	0.00231	0.0025	0.0025	0.02	0.02	0.02	0.02	0.05	0.38

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	12/20/2013 15:53
From File	CSX Subsurface Soils Revised UCLs no composites_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics			
Total Number of Observations	144	Number of Distinct Observations	77
Number of Detects	91	Number of Non-Detects	53
Number of Distinct Detects	72	Number of Distinct Non-Detects	5
Minimum Detect	0.061	Minimum Non-Detect	0.054
Maximum Detect	840	Maximum Non-Detect	2.5
Variance Detects	23227	Percent Non-Detects	36.81%
Mean Detects	70.85	SD Detects	152.4
Median Detects	8.7	CV Detects	2.151
Skewness Detects	3.132	Kurtosis Detects	10.63
Mean of Logged Detects	2.603	SD of Logged Detects	1.788

Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.521	Normal GOF Test on Detected Observations Only	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.355	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.0929	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
Mean	45.12	Standard Error of Mean	10.48
SD	125.1	95% KM (BCA) UCL	64.96
95% KM (t) UCL	62.47	95% KM (Percentile Bootstrap) UCL	62.77
95% KM (z) UCL	62.36	95% KM Bootstrap t UCL	68.73
90% KM Chebyshev UCL	76.57	95% KM Chebyshev UCL	90.82
97.5% KM Chebyshev UCL	110.6	99% KM Chebyshev UCL	149.4

Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	7.559	Anderson-Darling GOF Test	
5% A-D Critical Value	0.844	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.281	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.1	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics on Detected Data Only			
k hat (MLE)	0.397	k star (bias corrected MLE)	0.392
Theta hat (MLE)	178.2	Theta star (bias corrected MLE)	180.9
nu hat (MLE)	72.34	nu star (bias corrected)	71.29
MLE Mean (bias corrected)	70.85	MLE Sd (bias corrected)	113.2

Gamma Kaplan-Meier (KM) Statistics			
k hat (KM)	0.13	nu hat (KM)	37.45
Approximate Chi Square Value (37.45, α)	24.44	Adjusted Chi Square Value (37.45, β)	24.33
95% Gamma Approximate KM-UCL (use when n>=50	69.14	95% Gamma Adjusted KM-UCL (use when n<50)	69.44

Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detected data is small such as < 0.1			
For such situations, GROS method tends to yield inflated values of UCLs and BTVs			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	44.78
Maximum	840	Median	3.52
SD	125.7	CV	2.807
k hat (MLE)	0.192	k star (bias corrected MLE)	0.193
Theta hat (MLE)	232.9	Theta star (bias corrected MLE)	232.2
nu hat (MLE)	55.37	nu star (bias corrected)	55.55
MLE Mean (bias corrected)	44.78	MLE Sd (bias corrected)	102
		Adjusted Level of Significance (β)	0.0483
Approximate Chi Square Value (55.55, α)	39.42	Adjusted Chi Square Value (55.55, β)	39.28
95% Gamma Approximate UCL (use when n>=50)	63.1	95% Gamma Adjusted UCL (use when n<50)	63.32

Lognormal GOF Test on Detected Observations Only			
Lilliefors Test Statistic	0.169	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.0929	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			

Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	45.01	Mean in Log Scale	1.24
SD in Original Scale	125.6	SD in Log Scale	2.426
95% t UCL (assumes normality of ROS data)	62.34	95% Percentile Bootstrap UCL	62.64
95% BCA Bootstrap UCL	66.6	95% Bootstrap t UCL	67.55
95% H-UCL (Log ROS)	142		

DL/2 Statistics			
DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	45.2	Mean in Log Scale	1.672
SD in Original Scale	125.5	SD in Log Scale	1.908
95% t UCL (Assumes normality)	62.52	95% H-Stat UCL	54.49
DL/2 is not a recommended method, provided for comparisons and historical reasons			

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use	
97.5% KM (Chebyshev) UCL	110.6

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	12/20/2013 15:52
From File	CSX Subsurface Soils Revised UCLs no composites_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Lead

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	0
Minimum	2.9	Mean	30.63
Maximum	200	Median	22
SD	34.16	Std. Error of Mean	5.616
Coefficient of Variation	1.115	Skewness	3.779

Normal GOF Test

Shapiro Wilk Test Statistic	0.599	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.27	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.146	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	40.11	95% Adjusted-CLT UCL (Chen-1995)	43.59
		95% Modified-t UCL (Johnson-1978)	40.69

Gamma GOF Test

A-D Test Statistic	1.105	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.765	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.161	Kolmogrov-Smirnoff Gamma GOF Test	
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics

k hat (MLE)	1.598	k star (bias corrected MLE)	1.486
Theta hat (MLE)	19.17	Theta star (bias corrected MLE)	20.61
nu hat (MLE)	118.2	nu star (bias corrected)	110
MLE Mean (bias corrected)	30.63	MLE Sd (bias corrected)	25.13
		Approximate Chi Square Value (0.05)	86.77
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	85.88

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	38.82	95% Adjusted Gamma UCL (use when n<50)	39.23

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.119	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.146	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Lognormal Statistics

Minimum of Logged Data	1.065	Mean of logged Data	3.077
Maximum of Logged Data	5.298	SD of logged Data	0.827

Assuming Lognormal Distribution

95% H-UCL	41.37	90% Chebyshev (MVUE) UCL	43.92
95% Chebyshev (MVUE) UCL	50.15	97.5% Chebyshev (MVUE) UCL	58.79
99% Chebyshev (MVUE) UCL	75.77		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	39.87	95% Jackknife UCL	40.11
95% Standard Bootstrap UCL	39.68	95% Bootstrap-t UCL	48.63
95% Hall's Bootstrap UCL	79.72	95% Percentile Bootstrap UCL	41.3
95% BCA Bootstrap UCL	44.8		
90% Chebyshev(Mean, Sd) UCL	47.48	95% Chebyshev(Mean, Sd) UCL	55.11
97.5% Chebyshev(Mean, Sd) UCL	65.7	99% Chebyshev(Mean, Sd) UCL	86.5

Suggested UCL to Use

95% H-UCL	41.37

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

ProUCL computes and outputs H-statistic based UCLs for historical reasons only.
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

Copper

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
		Number of Missing Observations	0
Minimum	13.5	Mean	35.66
Maximum	85.6	Median	22.7
SD	28.93	Std. Error of Mean	12.94
Coefficient of Variation	0.811	Skewness	1.871

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.779	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.312	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	63.25	95% Adjusted-CLT UCL (Chen-1995)	68.51
		95% Modified-t UCL (Johnson-1978)	65.05

Gamma GOF Test

A-D Test Statistic	0.425	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.684	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.271	Kolmogrov-Smirnoff Gamma GOF Test	
5% K-S Critical Value	0.36	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.494	k star (bias corrected MLE)	1.131
Theta hat (MLE)	14.3	Theta star (bias corrected MLE)	31.53
nu hat (MLE)	24.94	nu star (bias corrected)	11.31
MLE Mean (bias corrected)	35.66	MLE Sd (bias corrected)	33.53
		Approximate Chi Square Value (0.05)	4.775
Adjusted Level of Significance	0.0086	Adjusted Chi Square Value	3.105

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	84.45	95% Adjusted Gamma UCL (use when n<50)	129.9

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.931	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.234	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.603	Mean of logged Data	3.36
Maximum of Logged Data	4.45	SD of logged Data	0.695

Assuming Lognormal Distribution

95% H-UCL	130.1	90% Chebyshev (MVUE) UCL	66.54
95% Chebyshev (MVUE) UCL	80.94	97.5% Chebyshev (MVUE) UCL	100.9
99% Chebyshev (MVUE) UCL	140.2		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	56.94	95% Jackknife UCL	63.25
95% Standard Bootstrap UCL	54.49	95% Bootstrap-t UCL	141.8
95% Hall's Bootstrap UCL	184.8	95% Percentile Bootstrap UCL	58.6
95% BCA Bootstrap UCL	62.66		
90% Chebyshev(Mean, Sd) UCL	74.48	95% Chebyshev(Mean, Sd) UCL	92.06
97.5% Chebyshev(Mean, Sd) UCL	116.5	99% Chebyshev(Mean, Sd) UCL	164.4

Suggested UCL to Use

95% Student's-t UCL	63.25

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

Zinc

General Statistics

Total Number of Observations	5	Number of Distinct Observations	5
		Number of Missing Observations	0
Minimum	25.4	Mean	52.38
Maximum	89.2	Median	47.7
SD	23.08	Std. Error of Mean	10.32
Coefficient of Variation	0.441	Skewness	1.018

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.892	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.301	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	74.39	95% Adjusted-CLT UCL (Chen-1995)	74.38
		95% Modified-t UCL (Johnson-1978)	75.17

Gamma GOF Test

A-D Test Statistic	0.381	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.68	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.25	Kolmogrov-Smirnoff Gamma GOF Test	
5% K-S Critical Value	0.358	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.596	k star (bias corrected MLE)	2.772
Theta hat (MLE)	7.941	Theta star (bias corrected MLE)	18.9
nu hat (MLE)	65.96	nu star (bias corrected)	27.72
MLE Mean (bias corrected)	52.38	MLE Sd (bias corrected)	31.46
		Approximate Chi Square Value (0.05)	16.71
Adjusted Level of Significance	0.0086	Adjusted Chi Square Value	13.12

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	86.89	95% Adjusted Gamma UCL (use when n<50)	110.7

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.927	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.762	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.278	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.396	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.235	Mean of logged Data	3.881
Maximum of Logged Data	4.491	SD of logged Data	0.446

Assuming Lognormal Distribution

95% H-UCL	99.57	90% Chebyshev (MVUE) UCL	83.59
95% Chebyshev (MVUE) UCL	97.7	97.5% Chebyshev (MVUE) UCL	117.3
99% Chebyshev (MVUE) UCL	155.8		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	69.36	95% Jackknife UCL	74.39
95% Standard Bootstrap UCL	68.01	95% Bootstrap-t UCL	81.87
95% Hall's Bootstrap UCL	174.6	95% Percentile Bootstrap UCL	68.06
95% BCA Bootstrap UCL	69.06		
90% Chebyshev(Mean, Sd) UCL	83.35	95% Chebyshev(Mean, Sd) UCL	97.38
97.5% Chebyshev(Mean, Sd) UCL	116.8	99% Chebyshev(Mean, Sd) UCL	155.1

Suggested UCL to Use

95% Student's-t UCL	74.39

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	12/26/2013 12:43
From File	CSX Subsurface Soils Revised UCLs no composites_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Alpha, Beta, Delta-BHC

General Statistics

Total Number of Observations	86	Number of Distinct Observations	25
Number of Detects	22	Number of Non-Detects	64
Number of Distinct Detects	21	Number of Distinct Non-Detects	4
Minimum Detect	0.0032	Minimum Non-Detect	2.00E-04
Maximum Detect	222	Maximum Non-Detect	0.01
Variance Detects	2234	Percent Non-Detects	74.42%
Mean Detects	10.45	SD Detects	47.27
Median Detects	0.021	CV Detects	4.524
Skewness Detects	4.684	Kurtosis Detects	21.96
Mean of Logged Detects	-2.873	SD of Logged Detects	2.485

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.231	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.492	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.189	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	2.673	Standard Error of Mean	2.627
SD	23.8	95% KM (BCA) UCL	7.922
95% KM (t) UCL	7.042	95% KM (Percentile Bootstrap) UCL	7.827
95% KM (z) UCL	6.994	95% KM Bootstrap t UCL	1086
90% KM Chebyshev UCL	10.55	95% KM Chebyshev UCL	14.12
97.5% KM Chebyshev UCL	19.08	99% KM Chebyshev UCL	28.81

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.204	Anderson-Darling GOF Test	
5% A-D Critical Value	0.946	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.417	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.209	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.148	k star (bias corrected MLE)	0.158
Theta hat (MLE)	70.8	Theta star (bias corrected MLE)	66.23
nu hat (MLE)	6.494	nu star (bias corrected)	6.942
MLE Mean (bias corrected)	10.45	MLE Sd (bias corrected)	26.31

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0126	nu hat (KM)	2.17
Approximate Chi Square Value (2.17, α)	0.176	Adjusted Chi Square Value (2.17, β)	0.17
95% Gamma Approximate KM-UCL (use when n>=50)	32.94	95% Gamma Adjusted KM-UCL (use when n<50)	34.06

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0032	Mean	2.681
Maximum	222	Median	0.01
SD	23.94	CV	8.93
k hat (MLE)	0.149	k star (bias corrected MLE)	0.152
Theta hat (MLE)	17.94	Theta star (bias corrected MLE)	17.64
nu hat (MLE)	25.69	nu star (bias corrected)	26.13
MLE Mean (bias corrected)	2.681	MLE Sd (bias corrected)	6.877
		Adjusted Level of Significance (β)	0.0472
Approximate Chi Square Value (26.13, α)	15.48	Adjusted Chi Square Value (26.13, β)	15.34
95% Gamma Approximate UCL (use when n>=50)	4.525	95% Gamma Adjusted UCL (use when n<50)	4.566

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.774	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.211	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.189	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.673	Mean in Log Scale	-9.334
SD in Original Scale	23.94	SD in Log Scale	5.004
95% t UCL (assumes normality of ROS data)	6.966	95% Percentile Bootstrap UCL	7.833
95% BCA Bootstrap UCL	10.56	95% Bootstrap t UCL	1150
95% H-UCL (Log ROS)	1417		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	2.674	Mean in Log Scale	-6.522
SD in Original Scale	23.94	SD in Log Scale	2.652
95% t UCL (Assumes normality)	6.967	95% H-Stat UCL	0.167

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	19.08

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

alpha-BHC

General Statistics

Total Number of Observations	66	Number of Distinct Observations	23
Number of Detects	13	Number of Non-Detects	53
Number of Distinct Detects	13	Number of Distinct Non-Detects	12
Minimum Detect	0.0028	Minimum Non-Detect	0.002
Maximum Detect	26	Maximum Non-Detect	0.01
Variance Detects	51.21	Percent Non-Detects	80.30%
Mean Detects	2.571	SD Detects	7.156
Median Detects	0.031	CV Detects	2.783
Skewness Detects	3.416	Kurtosis Detects	11.93
Mean of Logged Detects	-2.481	SD of Logged Detects	2.917

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.418	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.384	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.246	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.508	Standard Error of Mean	0.412
SD	3.218	95% KM (BCA) UCL	1.394
95% KM (t) UCL	1.196	95% KM (Percentile Bootstrap) UCL	1.291
95% KM (z) UCL	1.186	95% KM Bootstrap t UCL	6.057
90% KM Chebyshev UCL	1.745	95% KM Chebyshev UCL	2.305
97.5% KM Chebyshev UCL	3.083	99% KM Chebyshev UCL	4.61

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.167	Anderson-Darling GOF Test	
5% A-D Critical Value	0.868	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.264	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.261	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.213	k star (bias corrected MLE)	0.215
Theta hat (MLE)	12.08	Theta star (bias corrected MLE)	11.96
nu hat (MLE)	5.533	nu star (bias corrected)	5.589
MLE Mean (bias corrected)	2.571	MLE Sd (bias corrected)	5.545

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0249	nu hat (KM)	3.291
Approximate Chi Square Value (3.29, α)	0.463	Adjusted Chi Square Value (3.29, β)	0.443
95% Gamma Approximate KM-UCL (use when n>=50)	3.607	95% Gamma Adjusted KM-UCL (use when n<50)	3.776

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0028	Mean	0.514
Maximum	26	Median	0.01
SD	3.242	CV	6.301
k hat (MLE)	0.208	k star (bias corrected MLE)	0.208
Theta hat (MLE)	2.477	Theta star (bias corrected MLE)	2.469
nu hat (MLE)	27.42	nu star (bias corrected)	27.51
MLE Mean (bias corrected)	0.514	MLE Sd (bias corrected)	1.127
		Adjusted Level of Significance (β)	0.0464
Approximate Chi Square Value (27.51, α)	16.54	Adjusted Chi Square Value (27.51, β)	16.35
95% Gamma Approximate UCL (use when n>=50)	0.855	95% Gamma Adjusted UCL (use when n<50)	0.865

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.923	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.172	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.246	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.506	Mean in Log Scale	-12.02
SD in Original Scale	3.243	SD in Log Scale	6.092
95% t UCL (assumes normality of ROS data)	1.173	95% Percentile Bootstrap UCL	1.29
95% BCA Bootstrap UCL	1.971	95% Bootstrap t UCL	6.152
95% H-UCL (Log ROS)	169813		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.47	95% H-UCL (KM -Log)	0.0553
KM SD (logged)	1.935	95% Critical H Value (KM-Log)	2.922
KM Standard Error of Mean (logged)	0.248		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.508	Mean in Log Scale	-5.604
SD in Original Scale	3.243	SD in Log Scale	2.068
95% t UCL (Assumes normality)	1.174	95% H-Stat UCL	0.0684

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	3.083

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Chlordane

General Statistics

Total Number of Observations	152	Number of Distinct Observations	41
Number of Detects	26	Number of Non-Detects	126
Number of Distinct Detects	26	Number of Distinct Non-Detects	16
Minimum Detect	0.0031	Minimum Non-Detect	5.00E-04
Maximum Detect	466	Maximum Non-Detect	0.05
Variance Detects	8344	Percent Non-Detects	82.89%
Mean Detects	18.15	SD Detects	91.34
Median Detects	0.0147	CV Detects	5.032
Skewness Detects	5.099	Kurtosis Detects	26
Mean of Logged Detects	-2.871	SD of Logged Detects	2.726

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.205	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.533	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.174	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	3.106	Standard Error of Mean	3.116
SD	37.67	95% KM (BCA) UCL	9.251
95% KM (t) UCL	8.263	95% KM (Percentile Bootstrap) UCL	9.233
95% KM (z) UCL	8.231	95% KM Bootstrap t UCL	942.9
90% KM Chebyshev UCL	12.45	95% KM Chebyshev UCL	16.69
97.5% KM Chebyshev UCL	22.56	99% KM Chebyshev UCL	34.11

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	5.533	Anderson-Darling GOF Test	
5% A-D Critical Value	0.962	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.377	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.195	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.135	k star (bias corrected MLE)	0.145
Theta hat (MLE)	134.3	Theta star (bias corrected MLE)	125
nu hat (MLE)	7.03	nu star (bias corrected)	7.553
MLE Mean (bias corrected)	18.15	MLE Sd (bias corrected)	47.63

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0068	nu hat (KM)	2.066
Approximate Chi Square Value (2.07, α)	0.16	Adjusted Chi Square Value (2.07, β)	0.157
95% Gamma Approximate KM-UCL (use when n>=50)	40.14	95% Gamma Adjusted KM-UCL (use when n<50)	40.84

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0031	Mean	3.113
Maximum	466	Median	0.01
SD	37.79	CV	12.14
k hat (MLE)	0.142	k star (bias corrected MLE)	0.144
Theta hat (MLE)	21.88	Theta star (bias corrected MLE)	21.64
nu hat (MLE)	43.25	nu star (bias corrected)	43.73
MLE Mean (bias corrected)	3.113	MLE Sd (bias corrected)	8.209
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (43.73, α)	29.56	Adjusted Chi Square Value (43.73, β)	29.45
95% Gamma Approximate UCL (use when n>=50)	4.605	95% Gamma Adjusted UCL (use when n<50)	4.622

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.843	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.215	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.174	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.105	Mean in Log Scale	-11
SD in Original Scale	37.79	SD in Log Scale	5.282
95% t UCL (assumes normality of ROS data)	8.179	95% Percentile Bootstrap UCL	9.238
95% BCA Bootstrap UCL	12.32	95% Bootstrap t UCL	876.1
95% H-UCL (Log ROS)	518.3		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	3.109	Mean in Log Scale	-5.504
SD in Original Scale	37.79	SD in Log Scale	1.945
95% t UCL (Assumes normality)	8.182	95% H-Stat UCL	0.045

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	22.56

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDD

General Statistics

Total Number of Observations	91	Number of Distinct Observations	19
Number of Detects	4	Number of Non-Detects	87
Number of Distinct Detects	4	Number of Distinct Non-Detects	15
Minimum Detect	0.0021	Minimum Non-Detect	0.002
Maximum Detect	3.8	Maximum Non-Detect	2
Variance Detects	3.436	Percent Non-Detects	95.60%
Mean Detects	1.027	SD Detects	1.854
Median Detects	0.153	CV Detects	1.805
Skewness Detects	1.97	Kurtosis Detects	3.893
Mean of Logged Detects	-2.567	SD of Logged Detects	3.297

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.684	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.404	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0472	Standard Error of Mean	0.048
SD	0.397	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.127	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.126	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.191	95% KM Chebyshev UCL	0.257
97.5% KM Chebyshev UCL	0.347	99% KM Chebyshev UCL	0.525

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.294	Anderson-Darling GOF Test	
5% A-D Critical Value	0.712	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.252	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.42	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.27	k star (bias corrected MLE)	0.234
Theta hat (MLE)	3.797	Theta star (bias corrected MLE)	4.383
nu hat (MLE)	2.163	nu star (bias corrected)	1.874
MLE Mean (bias corrected)	1.027	MLE Sd (bias corrected)	2.121

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0142	nu hat (KM)	2.58
Approximate Chi Square Value (2.58, α)	0.26	Adjusted Chi Square Value (2.58, β)	0.251
95% Gamma Approximate KM-UCL (use when n>=50)	0.469	95% Gamma Adjusted KM-UCL (use when n<50)	0.486

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0021	Mean	0.0578
Maximum	3.8	Median	0.01
SD	0.399	CV	6.902
k hat (MLE)	0.404	k star (bias corrected MLE)	0.398
Theta hat (MLE)	0.143	Theta star (bias corrected MLE)	0.145
nu hat (MLE)	73.48	nu star (bias corrected)	72.39
MLE Mean (bias corrected)	0.0578	MLE Sd (bias corrected)	0.0916
		Adjusted Level of Significance (β)	0.0474
Approximate Chi Square Value (72.39, α)	53.8	Adjusted Chi Square Value (72.39, β)	53.54
95% Gamma Approximate UCL (use when n>=50)	0.0777	95% Gamma Adjusted UCL (use when n<50)	N/A

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.979	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.748	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.19	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.443	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0457	Mean in Log Scale	-12.25
SD in Original Scale	0.399	SD in Log Scale	4.353
95% t UCL (assumes normality of ROS data)	0.115	95% Percentile Bootstrap UCL	0.129
95% BCA Bootstrap UCL	0.213	95% Bootstrap t UCL	6.564
95% H-UCL (Log ROS)	1.301		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-6.023	95% H-UCL (KM -Log)	0.0049
KM SD (logged)	0.977	95% Critical H Value (KM-Log)	2.223
KM Standard Error of Mean (logged)	0.124		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.062	Mean in Log Scale	-5.382
SD in Original Scale	0.411	SD in Log Scale	1.472
95% t UCL (Assumes normality)	0.134	95% H-Stat UCL	0.0208

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.127	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDE

General Statistics

Total Number of Observations	153	Number of Distinct Observations	38
Number of Detects	25	Number of Non-Detects	128
Number of Distinct Detects	25	Number of Distinct Non-Detects	15
Minimum Detect	0.0045	Minimum Non-Detect	2.00E-04
Maximum Detect	78	Maximum Non-Detect	0.05
Variance Detects	242.3	Percent Non-Detects	83.66%
Mean Detects	3.303	SD Detects	15.57
Median Detects	0.042	CV Detects	4.713
Skewness Detects	4.995	Kurtosis Detects	24.97
Mean of Logged Detects	-2.694	SD of Logged Detects	2.144

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.219	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.499	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.177	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.54	Standard Error of Mean	0.519
SD	6.285	95% KM (BCA) UCL	1.56
95% KM (t) UCL	1.398	95% KM (Percentile Bootstrap) UCL	1.56
95% KM (z) UCL	1.393	95% KM Bootstrap t UCL	43.17
90% KM Chebyshev UCL	2.096	95% KM Chebyshev UCL	2.801
97.5% KM Chebyshev UCL	3.779	99% KM Chebyshev UCL	5.7

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.873	Anderson-Darling GOF Test	
5% A-D Critical Value	0.908	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.35	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.194	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.191	k star (bias corrected MLE)	0.194
Theta hat (MLE)	17.32	Theta star (bias corrected MLE)	16.98
nu hat (MLE)	9.533	nu star (bias corrected)	9.723
MLE Mean (bias corrected)	3.303	MLE Sd (bias corrected)	7.49

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.00738	nu hat (KM)	2.259
Approximate Chi Square Value (2.26, α)	0.192	Adjusted Chi Square Value (2.26, β)	0.188
95% Gamma Approximate KM-UCL (use when n>=50)	6.364	95% Gamma Adjusted KM-UCL (use when n<50)	6.489

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0045	Mean	0.548
Maximum	78	Median	0.01
SD	6.305	CV	11.51
k hat (MLE)	0.199	k star (bias corrected MLE)	0.2
Theta hat (MLE)	2.748	Theta star (bias corrected MLE)	2.742
nu hat (MLE)	61.03	nu star (bias corrected)	61.17
MLE Mean (bias corrected)	0.548	MLE Sd (bias corrected)	1.226
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (61.17, α)	44.18	Adjusted Chi Square Value (61.17, β)	44.04
95% Gamma Approximate UCL (use when n>=50)	0.759	95% Gamma Adjusted UCL (use when n<50)	0.761

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.874	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.194	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.177	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.54	Mean in Log Scale	-9.831
SD in Original Scale	6.306	SD in Log Scale	4.504
95% t UCL (assumes normality of ROS data)	1.384	95% Percentile Bootstrap UCL	1.555
95% BCA Bootstrap UCL	2.102	95% Bootstrap t UCL	40.46
95% H-UCL (Log ROS)	15.3		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.543	Mean in Log Scale	-5.56
SD in Original Scale	6.305	SD in Log Scale	1.83
95% t UCL (Assumes normality)	1.387	95% H-Stat UCL	0.0325

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	3.779

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDT

General Statistics

Total Number of Observations	153	Number of Distinct Observations	55
Number of Detects	43	Number of Non-Detects	110
Number of Distinct Detects	43	Number of Distinct Non-Detects	14
Minimum Detect	0.0022	Minimum Non-Detect	0.002
Maximum Detect	774	Maximum Non-Detect	0.35
Variance Detects	14095	Percent Non-Detects	71.90%
Mean Detects	21.19	SD Detects	118.7
Median Detects	0.14	CV Detects	5.604
Skewness Detects	6.372	Kurtosis Detects	41.19
Mean of Logged Detects	-1.623	SD of Logged Detects	2.469

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.19	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.943	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.5	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.135	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	5.956	Standard Error of Mean	5.148
SD	62.93	95% KM (BCA) UCL	15.34
95% KM (t) UCL	14.48	95% KM (Percentile Bootstrap) UCL	16.04
95% KM (z) UCL	14.42	95% KM Bootstrap t UCL	571.7
90% KM Chebyshev UCL	21.4	95% KM Chebyshev UCL	28.39
97.5% KM Chebyshev UCL	38.1	99% KM Chebyshev UCL	57.17

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	7.866	Anderson-Darling GOF Test	
5% A-D Critical Value	0.946	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.358	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.152	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.162	k star (bias corrected MLE)	0.167
Theta hat (MLE)	130.4	Theta star (bias corrected MLE)	127.2
nu hat (MLE)	13.97	nu star (bias corrected)	14.33
MLE Mean (bias corrected)	21.19	MLE Sd (bias corrected)	51.91

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.00896	nu hat (KM)	2.742
Approximate Chi Square Value (2.74, α)	0.3	Adjusted Chi Square Value (2.74, β)	0.294
95% Gamma Approximate KM-UCL (use when n>=50)	54.4	95% Gamma Adjusted KM-UCL (use when n<50)	55.54

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0022	Mean	5.962
Maximum	774	Median	0.01
SD	63.13	CV	10.59
k hat (MLE)	0.14	k star (bias corrected MLE)	0.141
Theta hat (MLE)	42.64	Theta star (bias corrected MLE)	42.15
nu hat (MLE)	42.79	nu star (bias corrected)	43.28
MLE Mean (bias corrected)	5.962	MLE Sd (bias corrected)	15.85
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (43.28, α)	29.2	Adjusted Chi Square Value (43.28, β)	29.09
95% Gamma Approximate UCL (use when n>=50)	8.838	95% Gamma Adjusted UCL (use when n<50)	8.871

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.937	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.943	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0831	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.135	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	5.955	Mean in Log Scale	-7.423
SD in Original Scale	63.13	SD in Log Scale	4.648
95% t UCL (assumes normality of ROS data)	14.4	95% Percentile Bootstrap UCL	16.02
95% BCA Bootstrap UCL	25.5	95% Bootstrap t UCL	567.8
95% H-UCL (Log ROS)	380.2		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.893	95% H-UCL (KM -Log)	0.309
KM SD (logged)	2.433	95% Critical H Value (KM-Log)	3.84
KM Standard Error of Mean (logged)	0.2		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	5.959	Mean in Log Scale	-4.833
SD in Original Scale	63.13	SD in Log Scale	2.584
95% t UCL (Assumes normality)	14.41	95% H-Stat UCL	0.522

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	38.1

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

gamma-BHC (Lindane)

General Statistics

Total Number of Observations	153	Number of Distinct Observations	39
Number of Detects	28	Number of Non-Detects	125
Number of Distinct Detects	25	Number of Distinct Non-Detects	16
Minimum Detect	0.005	Minimum Non-Detect	2.00E-04
Maximum Detect	33	Maximum Non-Detect	0.05
Variance Detects	48.44	Percent Non-Detects	81.70%
Mean Detects	1.973	SD Detects	6.96
Median Detects	0.0423	CV Detects	3.527
Skewness Detects	4.001	Kurtosis Detects	16.22
Mean of Logged Detects	-2.776	SD of Logged Detects	2.326

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.32	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.924	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.467	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.167	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.361	Standard Error of Mean	0.249
SD	3.022	95% KM (BCA) UCL	0.871
95% KM (t) UCL	0.773	95% KM (Percentile Bootstrap) UCL	0.798
95% KM (z) UCL	0.77	95% KM Bootstrap t UCL	7.299
90% KM Chebyshev UCL	1.108	95% KM Chebyshev UCL	1.446
97.5% KM Chebyshev UCL	1.915	99% KM Chebyshev UCL	2.836

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.268	Anderson-Darling GOF Test	
5% A-D Critical Value	0.897	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.299	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.183	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.211	k star (bias corrected MLE)	0.212
Theta hat (MLE)	9.345	Theta star (bias corrected MLE)	9.293
nu hat (MLE)	11.82	nu star (bias corrected)	11.89
MLE Mean (bias corrected)	1.973	MLE Sd (bias corrected)	4.282

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0143	nu hat (KM)	4.375
Approximate Chi Square Value (4.38, α)	0.875	Adjusted Chi Square Value (4.38, β)	0.861
95% Gamma Approximate KM-UCL (use when n>=50)	1.806	95% Gamma Adjusted KM-UCL (use when n<50)	1.836

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.005	Mean	0.369
Maximum	33	Median	0.01
SD	3.03	CV	8.207
k hat (MLE)	0.221	k star (bias corrected MLE)	0.221
Theta hat (MLE)	1.669	Theta star (bias corrected MLE)	1.669
nu hat (MLE)	67.69	nu star (bias corrected)	67.7
MLE Mean (bias corrected)	0.369	MLE Sd (bias corrected)	0.785
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (67.70, α)	49.76	Adjusted Chi Square Value (67.70, β)	49.62
95% Gamma Approximate UCL (use when n>=50)	0.502	95% Gamma Adjusted UCL (use when n<50)	0.504

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.863	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.924	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.149	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.167	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.361	Mean in Log Scale	-10.39
SD in Original Scale	3.031	SD in Log Scale	4.926
95% t UCL (assumes normality of ROS data)	0.767	95% Percentile Bootstrap UCL	0.808
95% BCA Bootstrap UCL	1.097	95% Bootstrap t UCL	7.726
95% H-UCL (Log ROS)	100.9		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-7.447	95% H-UCL (KM -Log)	0.0239
KM SD (logged)	2.431	95% Critical H Value (KM-Log)	3.837
KM Standard Error of Mean (logged)	0.201		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.362	Mean in Log Scale	-6.322
SD in Original Scale	3.031	SD in Log Scale	2.203
95% t UCL (Assumes normality)	0.768	95% H-Stat UCL	0.0384

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	1.915

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Heptachlor

General Statistics

Total Number of Observations	153	Number of Distinct Observations	35
Number of Detects	18	Number of Non-Detects	135
Number of Distinct Detects	18	Number of Distinct Non-Detects	19
Minimum Detect	0.0021	Minimum Non-Detect	2.00E-04
Maximum Detect	1.3	Maximum Non-Detect	0.06
Variance Detects	0.0918	Percent Non-Detects	88.24%
Mean Detects	0.0884	SD Detects	0.303
Median Detects	0.00963	CV Detects	3.426
Skewness Detects	4.214	Kurtosis Detects	17.83
Mean of Logged Detects	-4.321	SD of Logged Detects	1.522

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.298	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.897	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.466	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.209	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0107	Standard Error of Mean	0.00873
SD	0.105	95% KM (BCA) UCL	0.0356
95% KM (t) UCL	0.0252	95% KM (Percentile Bootstrap) UCL	0.0278
95% KM (z) UCL	0.0251	95% KM Bootstrap t UCL	0.175
90% KM Chebyshev UCL	0.0369	95% KM Chebyshev UCL	0.0488
97.5% KM Chebyshev UCL	0.0652	99% KM Chebyshev UCL	0.0975

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.835	Anderson-Darling GOF Test	
5% A-D Critical Value	0.831	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.306	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.219	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.354	k star (bias corrected MLE)	0.332
Theta hat (MLE)	0.25	Theta star (bias corrected MLE)	0.266
nu hat (MLE)	12.75	nu star (bias corrected)	11.96
MLE Mean (bias corrected)	0.0884	MLE Sd (bias corrected)	0.153

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0104	nu hat (KM)	3.187
Approximate Chi Square Value (3.19, α)	0.43	Adjusted Chi Square Value (3.19, β)	0.421
95% Gamma Approximate KM-UCL (use when n>=50)	0.0794	95% Gamma Adjusted KM-UCL (use when n<50)	0.081

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0021	Mean	0.0192
Maximum	1.3	Median	0.01
SD	0.104	CV	5.432
k hat (MLE)	0.938	k star (bias corrected MLE)	0.924
Theta hat (MLE)	0.0205	Theta star (bias corrected MLE)	0.0208
nu hat (MLE)	286.9	nu star (bias corrected)	282.6
MLE Mean (bias corrected)	0.0192	MLE Sd (bias corrected)	0.02
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (282.65, α)	244.7	Adjusted Chi Square Value (282.65, β)	244.4
95% Gamma Approximate UCL (use when n>=50)	0.0222	95% Gamma Adjusted UCL (use when n<50)	0.0222

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.868	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.897	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.16	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.209	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0106	Mean in Log Scale	-9.828
SD in Original Scale	0.105	SD in Log Scale	3.053
95% t UCL (assumes normality of ROS data)	0.0247	95% Percentile Bootstrap UCL	0.0273
95% BCA Bootstrap UCL	0.0439	95% Bootstrap t UCL	0.181
95% H-UCL (Log ROS)	0.018		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-7.939	95% H-UCL (KM -Log)	0.00153
KM SD (logged)	1.501	95% Critical H Value (KM-Log)	2.717
KM Standard Error of Mean (logged)	0.135		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0124	Mean in Log Scale	-6.547
SD in Original Scale	0.105	SD in Log Scale	1.508
95% t UCL (Assumes normality)	0.0265	95% H-Stat UCL	0.00624

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	0.0488

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Toxaphene

General Statistics			
Total Number of Observations	152	Number of Distinct Observations	36
Number of Detects	12	Number of Non-Detects	140
Number of Distinct Detects	12	Number of Distinct Non-Detects	24
Minimum Detect	0.077	Minimum Non-Detect	0.005
Maximum Detect	700	Maximum Non-Detect	0.5
Variance Detects	40341	Percent Non-Detects	92.11%
Mean Detects	62.5	SD Detects	200.8
Median Detects	1.727	CV Detects	3.214
Skewness Detects	3.459	Kurtosis Detects	11.97
Mean of Logged Detects	0.84	SD of Logged Detects	2.518
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.349	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.506	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.256	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
Mean	4.94	Standard Error of Mean	4.795
SD	56.6	95% KM (BCA) UCL	14.13
95% KM (t) UCL	12.88	95% KM (Percentile Bootstrap) UCL	14.1
95% KM (z) UCL	12.83	95% KM Bootstrap t UCL	216.5
90% KM Chebyshev UCL	19.32	95% KM Chebyshev UCL	25.84
97.5% KM Chebyshev UCL	34.88	99% KM Chebyshev UCL	52.65
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.588	Anderson-Darling GOF Test	
5% A-D Critical Value	0.862	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.333	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.271	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.22	k star (bias corrected MLE)	0.221
Theta hat (MLE)	284.1	Theta star (bias corrected MLE)	283.4
nu hat (MLE)	5.28	nu star (bias corrected)	5.293
MLE Mean (bias corrected)	62.5	MLE Sd (bias corrected)	133.1
Gamma Kaplan-Meier (KM) Statistics			
k hat (KM)	0.00762	nu hat (KM)	2.315
Approximate Chi Square Value (2.32, α)	0.202	Adjusted Chi Square Value (2.32, β)	0.198
95% Gamma Approximate KM-UCL (use when n>=50)	56.52	95% Gamma Adjusted KM-UCL (use when n<50)	57.66
Gamma (KM) may not be used when k hat (KM) is < 0.1			
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detected data is small such as < 0.1			
For such situations, GROS method tends to yield inflated values of UCLs and BTVs			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	4.944
Maximum	700	Median	0.01
SD	56.79	CV	11.49
k hat (MLE)	0.135	k star (bias corrected MLE)	0.137
Theta hat (MLE)	36.58	Theta star (bias corrected MLE)	36.12
nu hat (MLE)	41.08	nu star (bias corrected)	41.6
MLE Mean (bias corrected)	4.944	MLE Sd (bias corrected)	13.36
		Adjusted Level of Significance (β)	0.0484
Approximate Chi Square Value (41.60, α)	27.82	Adjusted Chi Square Value (41.60, β)	27.71
95% Gamma Approximate UCL (use when n>=50)	7.393	95% Gamma Adjusted UCL (use when n<50)	7.422
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.934	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.188	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.256	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	4.936	Mean in Log Scale	-12.41
SD in Original Scale	56.79	SD in Log Scale	6.414
95% t UCL (assumes normality of ROS data)	12.56	95% Percentile Bootstrap UCL	14.12
95% BCA Bootstrap UCL	23.07	95% Bootstrap t UCL	232.6
95% H-UCL (Log ROS)	435943		
UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed			
KM Mean (logged)	-4.794	95% H-UCL (KM -Log)	0.0654
KM SD (logged)	1.799	95% Critical H Value (KM-Log)	3.056
KM Standard Error of Mean (logged)	0.154		
DL/2 Statistics			
DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	4.976	Mean in Log Scale	-3.636
SD in Original Scale	56.78	SD in Log Scale	2.136
95% t UCL (Assumes normality)	12.6	95% H-Stat UCL	0.472
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
97.5% KM (Chebyshev) UCL	34.88		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dieldrin

General Statistics

Total Number of Observations	92	Number of Distinct Observations	16
Number of Detects	2	Number of Non-Detects	90
Number of Distinct Detects	2	Number of Distinct Non-Detects	14
Minimum Detect	0.065	Minimum Non-Detect	0.002
Maximum Detect	0.22	Maximum Non-Detect	2
Variance Detects	0.012	Percent Non-Detects	97.83%
Mean Detects	0.143	SD Detects	0.11
Median Detects	0.143	CV Detects	0.769
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-2.124	SD of Logged Detects	0.862

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.00509	Standard Error of Mean	0.0035
SD	0.0236	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0109	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0108	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0156	95% KM Chebyshev UCL	0.0203
97.5% KM Chebyshev UCL	0.0269	99% KM Chebyshev UCL	0.0399

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	3.008	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0474	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	12.03	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0465	nu hat (KM)	8.562
		Adjusted Level of Significance (β)	0.0474
Approximate Chi Square Value (8.56, α)	3.065	Adjusted Chi Square Value (8.56, β)	3.012
95% Gamma Approximate KM-UCL (use when n>=50)	0.0142	95% Gamma Adjusted KM-UCL (use when n<50)	0.0145

Gamma (KM) may not be used when k hat (KM) is < 0.1

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00327	Mean in Log Scale	-12.84
SD in Original Scale	0.0238	SD in Log Scale	3.896
95% t UCL (assumes normality of ROS data)	0.0074	95% Percentile Bootstrap UCL	0.00774
95% BCA Bootstrap UCL	0.0122	95% Bootstrap t UCL	0.103
95% H-UCL (Log ROS)	0.0599		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.02	Mean in Log Scale	-5.451
SD in Original Scale	0.106	SD in Log Scale	1.315
95% t UCL (Assumes normality)	0.0383	95% H-Stat UCL	0.0145

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0109	95% KM (% Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared/Date: LMS 1/7/14
Checked/Date: MKB 1/16/14

Arsenic	D_Arsenic
0.01	0
0.53	0
2.5	0
2.5	0
2.5	0
2.5	0
23	0
1.2	1
1.3	1
1.6	1
2	1
2.4	1
2.8	1
2.8	1
3.45	1
4.28	1
4.8	1
5.2	1
6.6	1
7.8	1
7.8	1
7.9	1
8.1	1
8.6	1
8.7	1
8.78	1
10	1
12	1
14	1
15	1
15.9	1
16	1
16.7	1
18	1
19	1
20.2	1
25	1
26	1
31	1
31	1
34	1
42	1
43	1
45	1
53	1
75.7	1
114	1
252	1
480	1
1547	1

UCL Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	4/11/2014 14:56
From File	Book1.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics

Total Number of Observations	49	Number of Distinct Observations	43
Number of Detects	42	Number of Non-Detects	7
Number of Distinct Detects	39	Number of Distinct Non-Detects	4
Minimum Detect	1.2	Minimum Non-Detect	0.01
Maximum Detect	480	Maximum Non-Detect	23
Variance Detects	6701	Percent Non-Detects	14.29%
Mean Detects	35.82	SD Detects	81.86
Median Detects	13	CV Detects	2.285
Skewness Detects	4.558	Kurtosis Detects	22.66
Mean of Logged Detects	2.556	SD of Logged Detects	1.336

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.416	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.942	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.336	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.137	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	30.96	Standard Error of Mean	10.97
SD	75.83	95% KM (BCA) UCL	53.43
95% KM (t) UCL	49.35	95% KM (Percentile Bootstrap) UCL	49.2
95% KM (z) UCL	48.99	95% KM Bootstrap t UCL	91.81
90% KM Chebyshev UCL	63.85	95% KM Chebyshev UCL	78.75
97.5% KM Chebyshev UCL	99.43	99% KM Chebyshev UCL	140.1

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.093	Anderson-Darling GOF Test	
5% A-D Critical Value	0.803	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.174	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.143	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.603	k star (bias corrected MLE)	0.576
Theta hat (MLE)	59.36	Theta star (bias corrected MLE)	62.17
nu hat (MLE)	50.69	nu star (bias corrected)	48.4
MLE Mean (bias corrected)	35.82	MLE Sd (bias corrected)	47.19

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.167	nu hat (KM)	16.33
Approximate Chi Square Value (16.33, α)	8.196	Adjusted Chi Square Value (16.33, β)	8.021
95% Gamma Approximate KM-UCL (use when n>=50)	61.68	95% Gamma Adjusted KM-UCL (use when n<50)	63.03

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	30.71
Maximum	480	Median	8.7
SD	76.71	CV	2.498
k hat (MLE)	0.355	k star (bias corrected MLE)	0.347
Theta hat (MLE)	86.58	Theta star (bias corrected MLE)	88.61
nu hat (MLE)	34.76	nu star (bias corrected)	33.96
MLE Mean (bias corrected)	30.71	MLE Sd (bias corrected)	52.16
		Adjusted Level of Significance (β)	0.0451
Approximate Chi Square Value (33.96, α)	21.63	Adjusted Chi Square Value (33.96, β)	21.34
95% Gamma Approximate UCL (use when n>=50)	48.21	95% Gamma Adjusted UCL (use when n<50)	48.88

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.935	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.942	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.068	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.137	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	30.94	Mean in Log Scale	2.21
SD in Original Scale	76.62	SD in Log Scale	1.535
95% t UCL (assumes normality of ROS data)	49.3	95% Percentile Bootstrap UCL	50.5
95% BCA Bootstrap UCL	62.13	95% Bootstrap t UCL	92.62
95% H-UCL (Log ROS)	57.29		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	1.948	95% H-UCL (KM -Log)	261.1
KM SD (logged)	2.188	95% Critical H Value (KM-Log)	3.876
KM Standard Error of Mean (logged)	0.342		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	31.05	Mean in Log Scale	2.123
SD in Original Scale	76.59	SD in Log Scale	1.84
95% t UCL (Assumes normality)	49.4	95% H-Stat UCL	111.8

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	78.75

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Location	Substance	Result	ResultCode	Unit	StartDepth	EndDepth	Group	Site	Material	SDate
SB-118 0-2	Arsenic	0.01	U	mg/L	0	2	Metal	CSX	soil	6/21/2005
MW-106	Arsenic	0.53	U	mg/Kg	0	2	Metal	CSX	soil	6/26/1997
MW-107	Arsenic	1.2		mg/Kg	0	2	Metal	CSX	soil	6/27/1997
MW-105	Arsenic	1.3		mg/Kg	0	2	Metal	CSX	soil	6/27/1997
SB-167	Arsenic	1.6		mg/Kg	1.1	2	Metal	CSX	soil	10/10/2005
SB-154	Arsenic	2		mg/Kg	1	1.9	Metal	CSX	soil	10/10/2005
SB-168	Arsenic	2.4		mg/Kg	0.9	2	Metal	CSX	soil	10/10/2005
MW-17	Arsenic	2.5	U	mg/Kg	0	1.5	Metal	CSX	soil	6/19/1985
MW-18	Arsenic	2.5	U	mg/Kg	0	1.5	Metal	CSX	soil	6/19/1985
MW-19	Arsenic	2.5	U	mg/Kg	0	1.5	Metal	CSX	soil	6/20/1985
MW-20	Arsenic	2.5	U	mg/Kg	0	1.5	Metal	CSX	soil	6/20/1985
MW-3	Arsenic	2.8		mg/Kg	0	1	Metal	CSX	soil	8/16/1983
SS-102	Arsenic	2.8		mg/Kg	0	2	Metal	CSX	soil	7/1/1997
SB-19	Arsenic	3.45		mg/Kg	0	1.5	Metal	CSX	soil	4/19/1985
SB-18	Arsenic	4.28		mg/Kg	0	1.5	Metal	CSX	soil	4/19/1985
SB-126 0-2	Arsenic	4.8		mg/Kg	0	2	Metal	CSX	soil	6/21/2005
SB-157	Arsenic	5.2		mg/Kg	1.5	2	Metal	CSX	soil	10/10/2005
SB-120 0-2	Arsenic	6.6		mg/Kg	0	2	Metal	CSX	soil	6/21/2005
MW-104	Arsenic	7.8		mg/Kg	0	2	Metal	CSX	soil	6/25/1997
MW-4	Arsenic	7.8		mg/Kg	0	1	Metal	CSX	soil	8/17/1983
MW-6	Arsenic	7.9		mg/Kg	0	0.5	Metal	CSX	soil	1/31/1984
SB-159	Arsenic	8.1		mg/Kg	1.2	1.9	Metal	CSX	soil	10/10/2005
SB-107	Arsenic	8.6		mg/Kg	0	2	Metal	CSX	soil	6/25/1997
DW-2B	Arsenic	8.7		mg/Kg	0	0.5	Metal	CSX	soil	1/31/1984
SB-17	Arsenic	8.78		mg/Kg	0	1.5	Metal	CSX	soil	4/19/1985
SB-177 /1-2	Arsenic	10		mg/Kg	1	2	Metal	CSX	soil	8/13/2007
SB-108	Arsenic	12		mg/Kg	0	2	Metal	CSX	soil	6/25/1997
SB-119 0-2	Arsenic	14		mg/Kg	0	2	Metal	CSX	soil	6/22/2005
MW-5	Arsenic	15		mg/Kg	0	0.5	Metal	CSX	soil	1/24/1984
SS-101	Arsenic	15.9		mg/Kg	0	0.6	Metal	CSX	soil	7/1/1997
SB-5	Arsenic	16		mg/Kg	0	0.5	Metal	CSX	soil	1/17/1984
SB-103	Arsenic	16.7		mg/Kg	0	2	Metal	CSX	soil	6/26/1997
SB-4	Arsenic	18		mg/Kg	0	0.5	Metal	CSX	soil	1/12/1984
SB-158	Arsenic	19		mg/Kg	0.5	1.8	Metal	CSX	soil	10/10/2005
SB-105	Arsenic	20.2		mg/Kg	0	2	Metal	CSX	soil	6/26/1997
SS-12	Arsenic	23	U	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-10	Arsenic	25		mg/Kg	0	2	Metal	CSX	soil	2/8/1984
SB-11	Arsenic	26		mg/Kg	0	0.5	Metal	CSX	soil	1/25/1984
SB-178 /1-2	Arsenic	31		mg/Kg	1	2	Metal	CSX	soil	8/13/2007
SB-7	Arsenic	31		mg/Kg	0	1	Metal	CSX	soil	8/16/1983
MW-16	Arsenic	34		mg/Kg	0	1.5	Metal	CSX	soil	6/18/1985
SB-179 /1-2	Arsenic	42		mg/Kg	1	2	Metal	CSX	soil	8/13/2007
SB-6	Arsenic	43		mg/Kg	0	2	Metal	CSX	soil	1/20/1984
SB-176 /1-2	Arsenic	45		mg/Kg	1	2	Metal	CSX	soil	8/13/2007
SB-118 0-2	Arsenic	53		mg/Kg	0	2	Metal	CSX	soil	6/21/2005
MW-1A	Arsenic	75.7		mg/Kg	0	2	Metal	CSX	soil	6/25/1997
SB-104	Arsenic	114		mg/Kg	0	2	Metal	CSX	soil	6/26/1997
MW-25	Arsenic	252		mg/Kg	0	1.5	Metal	CSX	soil	4/17/1985
SB-156	Arsenic	480		mg/Kg	1	2	Metal	CSX	soil	10/10/2005
MW-24	Arsenic	1547		mg/Kg	0	1.5	Metal	CSX	soil	4/17/1985
MW-121-0-2	Copper	18.3		mg/Kg	0	2	Metal	CSX	soil	11/28/12
SS-17	Copper	20	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
MW-119-0-2	Copper	30.2		mg/Kg	0	2	Metal	CSX	soil	11/29/12
SS-11	Copper	34	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-12	Copper	51	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-06	Copper	820	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
MW-121-0-2	Zinc	44.1		mg/Kg	0	2	Metal	CSX	soil	11/28/12
MW-119-0-2	Zinc	48.2		mg/Kg	0	2	Metal	CSX	soil	11/29/12
SS-11	Zinc	93	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-17	Zinc	94	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-12	Zinc	200	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988
SS-06	Zinc	1500	J	mg/Kg	0	1	Metal	CSX	soil	2/5/1988

Location	Substance	Result	ResultCod	DL	Unit	StartDepth	EndDepth	Group	Site	Material	SDate
MW-3	Aldrin	0.005	U	0.005	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-4	Aldrin	0.005	U	0.005	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SS-11	Aldrin	0.095	U	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	Aldrin	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	Aldrin	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	Aldrin	1.1	U	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-106	alpha-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	alpha-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	alpha-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	alpha-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	alpha-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	alpha-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	alpha-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	alpha-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
MW-1A	alpha-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-102	alpha-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	alpha-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113	alpha-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103	alpha-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	alpha-BHC	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101	alpha-BHC	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112	alpha-BHC	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	alpha-BHC	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	alpha-BHC	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	alpha-BHC	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	alpha-BHC	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	alpha-BHC	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	alpha-BHC	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-4	alpha-BHC	0.01		0	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5	alpha-BHC	0.01		0	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-104	alpha-BHC	0.023		0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-11	alpha-BHC	0.095	U	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	alpha-BHC	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	alpha-BHC	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	alpha-BHC	1.1	U	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-106	beta-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	beta-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	beta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	beta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	beta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	beta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	beta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	beta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102	beta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	beta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113	beta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103	beta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	beta-BHC	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101	beta-BHC	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112	beta-BHC	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	beta-BHC	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	beta-BHC	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	beta-BHC	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	beta-BHC	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	beta-BHC	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	beta-BHC	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-104	beta-BHC	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-12	beta-BHC	0.073	JN	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-11	beta-BHC	0.095	U	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	beta-BHC	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-1A	beta-BHC	0.4		0.012	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-17	beta-BHC	1.1	U	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-3	DDD	0.0018	U	0.0018	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-106	DDD	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	DDD	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	DDD	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	DDD	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	DDD	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	DDD	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	DDD	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	DDD	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
MW-1A	DDD	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-102	DDD	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	DDD	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-151	DDD	0.0025	U	0.0025	mg/Kg	0	1.8	Pest	CSX	soil	10/11/2005
SS-103	DDD	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-165	DDD	0.0027	U	0.0027	mg/Kg	1.2	1.7	Pest	CSX	soil	10/10/2005
SS-101	DDD	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997

SB-112	DDD	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	DDD	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	DDD	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	DDD	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	DDD	0.0039		0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-107	DDD	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-154	DDD	0.0047		0.0027	mg/Kg	1	1.9	Pest	CSX	soil	10/10/2005
SB-116 0-2	DDD	0.0066	U	0.0066	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
MW-4	DDD	0.01	U	0.01	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SB-113	DDD	0.015		0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
DW-2B	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
MW-5	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
MW-6	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-11	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5	DDD	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-6	DDD	0.02	U	0.02	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
SB-7	DDD	0.02	U	0.02	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SS-10	DDD	0.02	U	0.02	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
SS-11	DDD	0.028	C	0.19	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-123	DDD	0.044		0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SS-06	DDD	0.071	JC	0.21	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	DDD	0.077	JC	2.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	DDD	0.096	JC	0.2	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-104	DDD	3.7		0.55	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-106	DDE	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-16	DDE	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	6/18/1985
MW-19	DDE	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-20	DDE	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
SB-108	DDE	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-19	DDE	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-107	DDE	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	DDE	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	DDE	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	DDE	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	DDE	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	DDE	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102	DDE	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	DDE	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-103	DDE	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-112	DDE	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	DDE	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	DDE	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
MW-104	DDE	0.0031		0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-126 0-2	DDE	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	DDE	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	DDE	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	DDE	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-3	DDE	0.01	U	0.01	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-4	DDE	0.01	U	0.01	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SB-11	DDE	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4	DDE	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5	DDE	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-7	DDE	0.02	U	0.02	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SB-104	DDE	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-101	DDE	0.041		0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
MW-18	DDE	0.0449		0	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-1A	DDE	0.058		0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-11	DDE	0.068	JC	0.19	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-17	DDE	0.0872		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-17	DDE	0.106		0	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-5	DDE	0.133		0	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
SB-18	DDE	0.202		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-24	DDE	0.252		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
SB-6	DDE	0.34		0	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
SB-113	DDE	0.35		0.013	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-25	DDE	0.394		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
SS-12	DDE	0.51	C	0.2	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	DDE	0.53		2.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	DDE	0.91		0.21	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-6	DDE	0.98		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
DW-2B	DDE	1.2		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SS-10	DDE	24		0	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
MW-106	DDT	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-19	DDT	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-20	DDT	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
SB-108	DDT	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-19	DDT	0.002	U	0.002	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-107	DDT	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997

SB-103	DDT	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	DDT	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	DDT	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	DDT	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	DDT	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102	DDT	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	DDT	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-103	DDT	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	DDT	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-154	DDT	0.0027	U	0.0027	mg/Kg	1	1.9	Pest	CSX	soil	10/10/2005
SB-117 0-2	DDT	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	DDT	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	DDT	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	DDT	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-25	DDT	0.01	U	0.01	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
SB-123	DDT	0.014	P	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
MW-18	DDT	0.0156		0	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
SB-112	DDT	0.017		0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-11	DDT	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-107	DDT	0.024		0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-17	DDT	0.0248		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-16	DDT	0.0354		0	mg/Kg	0	1.5	Pest	CSX	soil	6/18/1985
MW-17	DDT	0.0362		0	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
SS-101	DDT	0.045		0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-18	DDT	0.0476		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-3	DDT	0.142		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-24	DDT	0.212		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
MW-1A	DDT	0.29		0.012	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-113	DDT	0.37		0.013	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-6	DDT	0.38		0	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
SS-11	DDT	0.64	C	0.19	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-4	DDT	1.6		0	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-7	DDT	2		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-5	DDT	2.18		0	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
SS-06	DDT	2.2	C	0.21	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	DDT	2.4	C	0.2	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	DDT	2.6	C	2.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
DW-2B	DDT	3.7		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-5	DDT	4.6		0	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
MW-6	DDT	5.4		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-104	DDT	5.7		0.55	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-10	DDT	6.3		0	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
MW-4	DDT	11.1		0	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
MW-106	delta-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	delta-BHC	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	delta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	delta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	delta-BHC	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	delta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	delta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	delta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102	delta-BHC	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	delta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113	delta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103	delta-BHC	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	delta-BHC	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101	delta-BHC	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112	delta-BHC	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	delta-BHC	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	delta-BHC	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	delta-BHC	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	delta-BHC	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	delta-BHC	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	delta-BHC	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-1A	delta-BHC	0.012		0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-104	delta-BHC	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-11	delta-BHC	0.095	U	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	delta-BHC	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	delta-BHC	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17	delta-BHC	1.1	U	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-106	Dieldrin	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	Dieldrin	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	Dieldrin	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	Dieldrin	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	Dieldrin	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	Dieldrin	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	Dieldrin	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	Dieldrin	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
MW-1A	Dieldrin	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997

SS-102		Dieldrin	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105		Dieldrin	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113		Dieldrin	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103		Dieldrin	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104		Dieldrin	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101		Dieldrin	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112		Dieldrin	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117	0-2	Dieldrin	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116	0-2	Dieldrin	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126	0-2	Dieldrin	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123		Dieldrin	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114		Dieldrin	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107		Dieldrin	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-3		Dieldrin	0.0099		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
DW-2B		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
MW-5		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
MW-6		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-11		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5		Dieldrin	0.02	U	0.02	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-6		Dieldrin	0.02	U	0.02	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
SS-10		Dieldrin	0.02	U	0.02	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
SS-12		Dieldrin	0.086	J	0.2	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-7		Dieldrin	0.18		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SB-104		Dieldrin	0.19		0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SS-11		Dieldrin	0.19	U	0.19	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06		Dieldrin	0.21	U	0.21	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-4		Dieldrin	0.514		0	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SS-17		Dieldrin	2.1	U	2.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-24		gamma-BHC (Lindane)	0.0002	U	0.0002	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
MW-17		gamma-BHC (Lindane)	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-18		gamma-BHC (Lindane)	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-19		gamma-BHC (Lindane)	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-20		gamma-BHC (Lindane)	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
SB-19		gamma-BHC (Lindane)	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-106		gamma-BHC (Lindane)	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108		gamma-BHC (Lindane)	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107		gamma-BHC (Lindane)	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103		gamma-BHC (Lindane)	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115		gamma-BHC (Lindane)	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103		gamma-BHC (Lindane)	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D		gamma-BHC (Lindane)	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105		gamma-BHC (Lindane)	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102		gamma-BHC (Lindane)	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105		gamma-BHC (Lindane)	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113		gamma-BHC (Lindane)	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103		gamma-BHC (Lindane)	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104		gamma-BHC (Lindane)	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101		gamma-BHC (Lindane)	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112		gamma-BHC (Lindane)	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117	0-2	gamma-BHC (Lindane)	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116	0-2	gamma-BHC (Lindane)	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126	0-2	gamma-BHC (Lindane)	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123		gamma-BHC (Lindane)	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114		gamma-BHC (Lindane)	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107		gamma-BHC (Lindane)	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-4		gamma-BHC (Lindane)	0.005	U	0.005	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SB-11		gamma-BHC (Lindane)	0.005	U	0.005	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4		gamma-BHC (Lindane)	0.01	U	0.01	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5		gamma-BHC (Lindane)	0.015		0	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
DW-2B		gamma-BHC (Lindane)	0.022		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
MW-5		gamma-BHC (Lindane)	0.022		0	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
SB-104		gamma-BHC (Lindane)	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-3		gamma-BHC (Lindane)	0.027		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SB-18		gamma-BHC (Lindane)	0.0292		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
SB-6		gamma-BHC (Lindane)	0.036		0	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
MW-16		gamma-BHC (Lindane)	0.0445		0	mg/Kg	0	1.5	Pest	CSX	soil	6/18/1985
MW-1A		gamma-BHC (Lindane)	0.05		0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-7		gamma-BHC (Lindane)	0.075		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SS-11		gamma-BHC (Lindane)	0.095	UR	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06		gamma-BHC (Lindane)	0.1	UR	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12		gamma-BHC (Lindane)	0.1	UR	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-17		gamma-BHC (Lindane)	0.21		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
SS-10		gamma-BHC (Lindane)	0.22		0	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
MW-6		gamma-BHC (Lindane)	0.43		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SS-17		gamma-BHC (Lindane)	1.1	UR	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-25		gamma-BHC (Lindane)	1.78		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
MW-24		Heptachlor	0.0002	U	0.0002	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
MW-16		Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/18/1985

MW-17	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-18	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-19	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-20	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-25	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
SB-19	Heptachlor	0.0005	U	0.0005	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-106	Heptachlor	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	Heptachlor	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	Heptachlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	Heptachlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	Heptachlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	Heptachlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	Heptachlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	Heptachlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
MW-1A	Heptachlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-102	Heptachlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	Heptachlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113	Heptachlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103	Heptachlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	Heptachlor	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101	Heptachlor	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112	Heptachlor	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	Heptachlor	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	Heptachlor	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	Heptachlor	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	Heptachlor	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	Heptachlor	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	Heptachlor	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
DW-2B	Heptachlor	0.005	U	0.005	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-11	Heptachlor	0.005	U	0.005	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-6	Heptachlor	0.005	U	0.005	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
SB-18	Heptachlor	0.00902		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-3	Heptachlor	0.0094		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SB-4	Heptachlor	0.01	U	0.01	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5	Heptachlor	0.01		0	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-17	Heptachlor	0.0196		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
SB-7	Heptachlor	0.021		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SB-104	Heptachlor	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-5	Heptachlor	0.036		0	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
MW-4	Heptachlor	0.044		0	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
MW-6	Heptachlor	0.06		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SS-11	Heptachlor	0.095	U	0.095	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06	Heptachlor	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12	Heptachlor	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-10	Heptachlor	0.3		0	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
SS-17	Heptachlor	1.1	U	1.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-106	Methoxychlor	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108	Methoxychlor	0.002	U	0.002	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-107	Methoxychlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103	Methoxychlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-115	Methoxychlor	0.0023	U	0.0023	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-103	Methoxychlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-104D	Methoxychlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-105	Methoxychlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
MW-1A	Methoxychlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-102	Methoxychlor	0.0024	U	0.0024	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-105	Methoxychlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-113	Methoxychlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103	Methoxychlor	0.0025	U	0.0025	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-104	Methoxychlor	0.0027	U	0.0027	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SS-101	Methoxychlor	0.0027	U	0.0027	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112	Methoxychlor	0.0028	U	0.0028	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117 0-2	Methoxychlor	0.0029	U	0.0029	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-116 0-2	Methoxychlor	0.003	U	0.003	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126 0-2	Methoxychlor	0.0031	U	0.0031	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123	Methoxychlor	0.0033	U	0.0033	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114	Methoxychlor	0.0035	U	0.0035	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-107	Methoxychlor	0.004	U	0.004	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-3	Methoxychlor	0.02	U	0.02	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-4	Methoxychlor	0.02	U	0.02	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SB-104	Methoxychlor	0.022	U	0.022	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-7	Methoxychlor	0.05	U	0.05	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
DW-2B	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
MW-5	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
MW-6	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-11	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5	Methoxychlor	0.1	U	0.1	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-6	Methoxychlor	0.1	U	0.1	mg/Kg	0	2	Pest	CSX	soil	1/20/1984

SS-10		Methoxychlor	0.1	U	0.1	mg/Kg	0	2	Pest	CSX	soil	2/8/1984
SS-11		Methoxychlor	0.95	U	0.95	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06		Methoxychlor	1	U	1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12		Methoxychlor	1	U	1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-17		Methoxychlor	11	U	11	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
MW-16		Toxaphene	0.005	U	0.005	mg/Kg	0	1.5	Pest	CSX	soil	6/18/1985
MW-18		Toxaphene	0.005	U	0.005	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-19		Toxaphene	0.005	U	0.005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
MW-20		Toxaphene	0.005	U	0.005	mg/Kg	0	1.5	Pest	CSX	soil	6/20/1985
SB-19		Toxaphene	0.005	U	0.005	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-104		Toxaphene	0.0067	U	0.0067	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
MW-106		Toxaphene	0.05	U	0.05	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
SB-108		Toxaphene	0.05	U	0.05	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-115		Toxaphene	0.056	U	0.056	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-107		Toxaphene	0.058	U	0.058	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SB-103		Toxaphene	0.058	U	0.058	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-104D		Toxaphene	0.06	U	0.06	mg/Kg	0	2	Pest	CSX	soil	12/15/1997
MW-103		Toxaphene	0.061	U	0.061	mg/Kg	0	2	Pest	CSX	soil	6/30/1997
MW-105		Toxaphene	0.061	U	0.061	mg/Kg	0	2	Pest	CSX	soil	6/27/1997
SS-102		Toxaphene	0.061	U	0.061	mg/Kg	0	2	Pest	CSX	soil	7/1/1997
SB-113		Toxaphene	0.063	U	0.063	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-103		Toxaphene	0.063	U	0.063	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SS-101		Toxaphene	0.068	U	0.068	mg/Kg	0	0.6	Pest	CSX	soil	7/1/1997
SB-112		Toxaphene	0.07	U	0.07	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
SB-117	0-2	Toxaphene	0.071	U	0.071	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-17		Toxaphene	0.071		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
SB-116	0-2	Toxaphene	0.073	U	0.073	mg/Kg	0	2	Pest	CSX	soil	6/22/2005
SB-126	0-2	Toxaphene	0.077	U	0.077	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-123		Toxaphene	0.082	U	0.082	mg/Kg	0	2	Pest	CSX	soil	6/21/2005
SB-114		Toxaphene	0.087	U	0.087	mg/Kg	0	2	Pest	CSX	soil	12/16/1997
MW-3		Toxaphene	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
MW-4		Toxaphene	0.1	U	0.1	mg/Kg	0	1	Pest	CSX	soil	8/17/1983
SB-107		Toxaphene	0.1	U	0.1	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-18		Toxaphene	0.162		0	mg/Kg	0	1.5	Pest	CSX	soil	4/19/1985
MW-17		Toxaphene	0.194		0	mg/Kg	0	1.5	Pest	CSX	soil	6/19/1985
MW-5		Toxaphene	0.2	U	0.2	mg/Kg	0	0.5	Pest	CSX	soil	1/24/1984
SB-11		Toxaphene	0.2	U	0.2	mg/Kg	0	0.5	Pest	CSX	soil	1/25/1984
SB-4		Toxaphene	0.2	U	0.2	mg/Kg	0	0.5	Pest	CSX	soil	1/12/1984
SB-5		Toxaphene	0.2	U	0.2	mg/Kg	0	0.5	Pest	CSX	soil	1/17/1984
SB-6		Toxaphene	0.2	U	0.2	mg/Kg	0	2	Pest	CSX	soil	1/20/1984
MW-1A		Toxaphene	0.24	U	0.24	mg/Kg	0	2	Pest	CSX	soil	6/25/1997
SB-105		Toxaphene	0.25	U	0.25	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
MW-6		Toxaphene	0.5	U	0.5	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
MW-25		Toxaphene	0.5668		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
MW-24		Toxaphene	0.802		0	mg/Kg	0	1.5	Pest	CSX	soil	4/17/1985
SS-11		Toxaphene	1.9	U	1.9	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-12		Toxaphene	2	U	2	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-06		Toxaphene	2.1	U	2.1	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SB-104		Toxaphene	2.2	U	2.2	mg/Kg	0	2	Pest	CSX	soil	6/26/1997
DW-2B		Toxaphene	3.5		0	mg/Kg	0	0.5	Pest	CSX	soil	1/31/1984
SB-7		Toxaphene	11.6		0	mg/Kg	0	1	Pest	CSX	soil	8/16/1983
SS-17		Toxaphene	21	U	21	mg/Kg	0	1	Pest	CSX	soil	2/5/1988
SS-10		Toxaphene	190		0	mg/Kg	0	2	Pest	CSX	soil	2/8/1984

Arsenic	D_Arsenic	Copper	D_Copper	Zinc	D_Zinc	alpha-BHC	D_alpha-BI	beta-BHC	D_beta-BH
0.01	0	18.3	1	44.1	1	0.002	0	0.002	0
0.53	0	20	1	48.2	1	0.002	0	0.002	0
1.2	1	30.2	1	93	1	0.0023	0	0.0023	0
1.3	1	34	1	94	1	0.0023	0	0.0023	0
1.6	1	51	1	200	1	0.0023	0	0.0023	0
2	1	820	1	1500	1	0.0024	0	0.0024	0
2.4	1					0.0024	0	0.0024	0
2.5	0					0.0024	0	0.0024	0
2.5	0					0.0024	0	0.0024	0
2.5	0					0.0024	0	0.0025	0
2.5	0					0.0025	0	0.0025	0
2.8	1					0.0025	0	0.0025	0
2.8	1					0.0025	0	0.0027	0
3.45	1					0.0027	0	0.0027	0
4.28	1					0.0027	0	0.0028	0
4.8	1					0.0028	0	0.0029	0
5.2	1					0.0029	0	0.003	0
6.6	1					0.003	0	0.0031	0
7.8	1					0.0031	0	0.0033	0
7.8	1					0.0033	0	0.0035	0
7.9	1					0.0035	0	0.004	0
8.1	1					0.004	0	0.022	0
8.6	1					0.01	1	0.073	1
8.7	1					0.01	1	0.095	0
8.78	1					0.023	1	0.1	0
10	1					0.095	0	0.4	1
12	1					0.1	0	1.1	0
14	1					0.1	0		
15	1					1.1	0		
15.9	1								
16	1								
16.7	1								
18	1								
19	1								
20.2	1								
23	0								
25	1								
26	1								
31	1								
31	1								
34	1								
42	1								
43	1								
45	1								
53	1								
75.7	1								
114	1								
252	1								
480	1								
1547	1								

DDD	D_DDD	DDE	D_DDE	DDT	D_DDT	delta-BHC	D_delta-BH	Dieldrin	D_Dieldrin
0.0018	0	0.002	0	0.002	0	0.002	0	0.0002	0
0.002	0	0.002	0	0.002	0	0.002	0	0.0005	0
0.002	0	0.002	0	0.002	0	0.0023	0	0.0005	0
0.0023	0	0.002	0	0.002	0	0.0023	0	0.0005	0
0.0023	0	0.002	0	0.002	0	0.0023	0	0.0005	0
0.0023	0	0.002	0	0.0023	0	0.0024	0	0.0005	0
0.0024	0	0.0023	0	0.0023	0	0.0024	0	0.002	0
0.0024	0	0.0023	0	0.0023	0	0.0024	0	0.002	0
0.0024	0	0.0023	0	0.0024	0	0.0024	0	0.0023	0
0.0024	0	0.0024	0	0.0024	0	0.0025	0	0.0023	0
0.0024	0	0.0024	0	0.0024	0	0.0025	0	0.0023	0
0.0025	0	0.0024	0	0.0024	0	0.0025	0	0.0024	0
0.0025	0	0.0024	0	0.0025	0	0.0027	0	0.0024	0
0.0025	0	0.0025	0	0.0025	0	0.0027	0	0.0024	0
0.0027	0	0.0025	0	0.0027	0	0.0028	0	0.0024	0
0.0027	0	0.0028	0	0.0027	0	0.0029	0	0.0025	0
0.0028	0	0.0029	0	0.0029	0	0.003	0	0.0025	0
0.0029	0	0.003	0	0.003	0	0.0031	0	0.0025	0
0.0031	0	0.0031	1	0.0031	0	0.0033	0	0.0027	0
0.0035	0	0.0031	0	0.0035	0	0.0035	0	0.0027	0
0.0039	1	0.0033	0	0.01	0	0.004	0	0.0028	0
0.004	0	0.0035	0	0.014	1	0.012	1	0.0029	0
0.0047	1	0.004	0	0.0156	1	0.022	0	0.0099	1
0.0066	0	0.01	0	0.017	1	0.095	0	0.0031	0
0.01	0	0.01	0	0.02	0	0.1	0	0.0033	0
0.015	1	0.02	0	0.024	1	0.1	0	0.0035	0
0.02	0	0.02	0	0.0248	1	1.1	0	0.004	0
0.02	0	0.02	0	0.0354	1			0.005	0
0.02	0	0.02	0	0.0362	1			0.005	0
0.02	0	0.022	0	0.045	1			0.01	0
0.02	0	0.041	1	0.0476	1			0.015	0
0.02	0	0.0449	1	0.142	1			0.086	1
0.02	0	0.058	1	0.212	1			0.18	1
0.02	0	0.068	1	0.29	1			0.19	1
0.02	0	0.0872	1	0.37	1			0.027	0
0.028	1	0.106	1	0.38	1			0.0292	0
0.044	1	0.133	1	0.64	1			0.514	1
0.071	1	0.202	1	1.6	1			0.0445	0
0.077	1	0.252	1	2	1				
0.096	1	0.34	1	2.18	1				
3.7	1	0.35	1	2.2	1				
		0.394	1	2.4	1				
		0.51	1	2.6	1				
		0.53	1	3.7	1				
		0.91	1	4.6	1				
		0.98	1	5.4	1				
		1.2	1	5.7	1				
		24	1	6.3	1				
				11.1	1				

gamma-BH	D_gamma-	Heptachlor	D_Heptach	Toxaphene	D_Toxaphene
0.0002	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.005	0	0.005	0
0.0005	0	0.0067	0	0.0067	0
0.002	0	0.05	0	0.05	0
0.002	0	0.05	0	0.05	0
0.0023	0	0.056	0	0.056	0
0.0023	0	0.058	0	0.058	0
0.0023	0	0.058	0	0.058	0
0.0024	0	0.06	0	0.06	0
0.0024	0	0.061	0	0.061	0
0.0024	0	0.061	0	0.061	0
0.0024	0	0.061	0	0.061	0
0.0025	0	0.063	0	0.063	0
0.0025	0	0.063	0	0.063	0
0.0025	0	0.068	0	0.068	0
0.0027	0	0.07	0	0.07	0
0.0027	0	0.071	0	0.071	0
0.0028	0	0.071	0	0.071	1
0.0029	0	0.073	0	0.073	0
0.003	0	0.077	0	0.077	0
0.0031	0	0.082	0	0.082	0
0.0033	0	0.087	0	0.087	0
0.0035	0	0.1	0	0.1	0
0.004	0	0.1	0	0.1	0
0.005	0	0.1	0	0.1	0
0.005	0	0.162	0	0.162	1
0.01	0	0.194	0	0.194	1
0.015	1	0.2	0	0.2	0
0.022	1	0.2	0	0.2	0
0.022	1	0.2	0	0.2	0
0.022	0	0.00902	1	0.2	0
0.027	1	0.0094	1	0.2	0
0.0292	1	0.24	0	0.24	0
0.036	1	0.01	1	0.25	0
0.0445	1	0.0196	1	0.5	0
0.05	1	0.021	1	0.5668	1
0.075	1	0.802	0	0.802	1
0.21	1	0.036	1	1.9	0
0.22	1	0.044	1	2	0
0.43	1	0.06	1	2.1	0
1.78	1	2.2	0	2.2	0
		3.5	0	3.5	1
		11.6	0	11.6	1
		0.3	1	21	0
		190	0	190	1

General Statistics on Uncensored Data

Date/Time of Computation 12/20/2013 10:08
User Selected Options
From File CSX SS Refined DatasetsUCLs NO COMPOSITES_b.xls
Full Precision OFF

From File: CSX SS Refined DatasetsUCLs NO COMPOSITES_b.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
Arsenic	50	0	43	7	14.00%	0.01	23	61.28	50684	225.1	3.674
Copper	6	0	6	0	0.00%	N/A	N/A	162.3	103971	322.4	1.987
Zinc	6	0	6	0	0.00%	N/A	N/A	329.9	331763	576	1.746
alpha-BHC	29	0	3	26	89.66%	0.002	1.1	0.00348	2.06E-05	0.00454	1.303
beta-BHC	27	0	2	25	92.59%	0.002	1.1	0.0203	0.00597	0.0773	3.81
DDD	41	0	9	32	78.05%	0.0018	0.02	0.1	0.324	0.57	5.69
DDE	48	0	19	29	60.42%	0.002	0.022	0.631	11.69	3.419	5.423
DDT	49	0	27	22	44.90%	0.002	0.02	1.064	4.765	2.183	2.052
delta-BHC	27	0	1	26	96.30%	0.002	1.1	0.00245	4.34E-06	0.00208	0.849
Dieldrin	38	0	5	33	86.84%	2.00E-04	0.0445	0.026	0.00828	0.091	3.498
gamma-BHC	44	0	13	31	70.45%	2.00E-04	0.022	0.0674	0.0741	0.272	4.036
Heptachlor	48	0	9	39	81.25%	0.005	190	0.0227	0.00207	0.0455	2.007
Toxaphene	48	0	8	40	83.33%	0.005	21	4.329	736.5	27.14	6.269

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
Arsenic	43	0	1.2	1547	70.97	14	59649	244.2	15.64	5.627	3.441
Copper	6	0	18.3	820	162.3	32.1	103971	322.4	19.2	2.442	1.987
Zinc	6	0	44.1	1500	329.9	93.5	331763	576	70.2	2.399	1.746
alpha-BHC	3	0	0.01	0.023	0.0143	0.01	5.63E-05	0.00751	0	1.732	0.524
beta-BHC	2	0	0.073	0.4	0.237	0.237	0.0535	0.231	0.242	N/A	0.978
DDD	9	0	0.0039	3.7	0.449	0.044	1.488	1.22	0.0489	2.996	2.717
DDE	19	0	0.0031	24	1.59	0.252	29.57	5.438	0.288	4.329	3.42
DDT	27	0	0.014	11.1	1.929	0.38	7.25	2.693	0.54	1.892	1.396
delta-BHC	1	0	0.012	0.012	0.012	0.012	N/A	N/A	0	N/A	N/A
Dieldrin	5	0	0.0099	0.514	0.196	0.18	0.037	0.192	0.139	1.425	0.982
gamma-BHC	13	0	0.015	1.78	0.228	0.0445	0.232	0.482	0.0334	3.243	2.116
Heptachlor	9	0	0.00902	0.3	0.0566	0.021	0.00864	0.093	0.0178	2.802	1.644
Toxaphene	8	0	0.071	190	25.86	0.684	4414	66.44	0.842	2.809	2.569

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Arsenic	50	0	1.96	2.5	2.963	9.39	25.75	31.6	55.27	189.9	1024
Copper	6	0	19.15	20	22.55	32.1	46.75	51	435.5	627.8	781.6
Zinc	6	0	46.15	48.2	59.4	93.5	173.5	200	850	1175	1435
alpha-BHC	29	0	0.0023	0.0024	0.0024	0.0027	0.004	0.01	0.096	0.1	0.82
beta-BHC	27	0	0.0023	0.0024	0.0024	0.0027	0.00375	0.0184	0.097	0.31	0.918
DDD	41	0	0.0023	0.0024	0.0024	0.0039	0.02	0.02	0.044	0.077	2.258
DDE	48	0	0.002	0.0024	0.0024	0.01	0.113	0.232	0.516	0.956	13.28
DDT	49	0	0.00224	0.0024	0.0025	0.02	0.64	2.072	3.88	5.58	8.796
delta-BHC	27	0	0.0023	0.0024	0.0024	0.0027	0.00375	0.0104	0.097	0.1	0.84
Dieldrin	38	0	5.00E-04	0.00212	0.0023	0.0027	0.00868	0.013	0.057	0.182	0.394
gamma-BHC	44	0	5.00E-04	0.0023	0.00238	0.00295	0.022	0.0279	0.0675	0.219	1.2
Heptachlor	48	0	0.00619	0.0202	0.042	0.063	0.116	0.198	0.451	3.045	106.2
Toxaphene	48	0	0.00619	0.058	0.0608	0.0845	0.243	0.54	2.13	8.765	110.6

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	12/20/2013 10:08
From File	CSX SS Refined DatasetsUCLs NO COMPOSITES_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Copper

General Statistics

Total Number of Observations	6	Number of Distinct Observations	6
		Number of Missing Observations	0
Minimum	18.3	Mean	162.3
Maximum	820	Median	32.1
SD	322.4	Std. Error of Mean	131.6
Coefficient of Variation	1.987	Skewness	2.442

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.529	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.788	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.468	Lilliefors GOF Test
5% Lilliefors Critical Value	0.362	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	427.5	95% Adjusted-CLT UCL (Chen-1995)	519
		95% Modified-t UCL (Johnson-1978)	449.4

Gamma GOF Test

A-D Test Statistic	1.167	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.734	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.423	Kolmogrov-Smirnoff Gamma GOF Test
5% K-S Critical Value	0.348	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.535	k star (bias corrected MLE)	0.378
Theta hat (MLE)	303.5	Theta star (bias corrected MLE)	428.8
nu hat (MLE)	6.414	nu star (bias corrected)	4.541
MLE Mean (bias corrected)	162.3	MLE Sd (bias corrected)	263.8
		Approximate Chi Square Value (0.05)	0.946
Adjusted Level of Significance	0.0122	Adjusted Chi Square Value	0.487

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	778.6	95% Adjusted Gamma UCL (use when n<50)	1511

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.733	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.788	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.328	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.362	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.907	Mean of logged Data	3.913
Maximum of Logged Data	6.709	SD of logged Data	1.42

Assuming Lognormal Distribution

95% H-UCL	4773	90% Chebyshev (MVUE) UCL	283.3
95% Chebyshev (MVUE) UCL	363.3	97.5% Chebyshev (MVUE) UCL	474.2
99% Chebyshev (MVUE) UCL	692.2		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	378.8	95% Jackknife UCL	427.5
95% Standard Bootstrap UCL	361.1	95% Bootstrap-t UCL	6417
95% Hall's Bootstrap UCL	3921	95% Percentile Bootstrap UCL	421.7
95% BCA Bootstrap UCL	552.8		
90% Chebyshev(Mean, Sd) UCL	557.2	95% Chebyshev(Mean, Sd) UCL	736
97.5% Chebyshev(Mean, Sd) UCL	984.3	99% Chebyshev(Mean, Sd) UCL	1472

Suggested UCL to Use
95% Hall's Bootstrap UCL 3921

Recommended UCL exceeds the maximum observation

In Case Bootstrap t and/or Hall's Bootstrap yields an unreasonably large UCL value, use 97.5% or 99% Chebyshev (Mean, Sd) UCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
Checked by: MKB 1/16/14

Zinc

General Statistics

Total Number of Observations	6	Number of Distinct Observations	6
		Number of Missing Observations	0
Minimum	44.1	Mean	329.9
Maximum	1500	Median	93.5
SD	576	Std. Error of Mean	235.1
Coefficient of Variation	1.746	Skewness	2.399

Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use
guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.
For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).
Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0

Normal GOF Test

Shapiro Wilk Test Statistic	0.578	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.788	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.423	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.362	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	803.7	95% Adjusted-CLT UCL (Chen-1995)	962.7
		95% Modified-t UCL (Johnson-1978)	842.1

Gamma GOF Test

A-D Test Statistic	0.844	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.726	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.328	Kolmogrov-Smirnoff Gamma GOF Test	
5% K-S Critical Value	0.345	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.67	k star (bias corrected MLE)	0.446
Theta hat (MLE)	492.2	Theta star (bias corrected MLE)	739.3
nu hat (MLE)	8.043	nu star (bias corrected)	5.355
MLE Mean (bias corrected)	329.9	MLE Sd (bias corrected)	493.8
		Approximate Chi Square Value (0.05)	1.32
Adjusted Level of Significance	0.0122	Adjusted Chi Square Value	0.73

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	1339	95% Adjusted Gamma UCL (use when n<50)	2420

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.834	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.788	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.272	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.362	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.786	Mean of logged Data	4.892
Maximum of Logged Data	7.313	SD of logged Data	1.306

Assuming Lognormal Distribution

95% H-UCL	6480	90% Chebyshev (MVUE) UCL	647.9
95% Chebyshev (MVUE) UCL	825.7	97.5% Chebyshev (MVUE) UCL	1073
99% Chebyshev (MVUE) UCL	1557		

Nonparametric Distribution Free UCL Statistics
Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	716.7	95% Jackknife UCL	803.7
95% Standard Bootstrap UCL	689.8	95% Bootstrap-t UCL	6296
95% Hall's Bootstrap UCL	3599	95% Percentile Bootstrap UCL	781.1
95% BCA Bootstrap UCL	814.5		
90% Chebyshev(Mean, Sd) UCL	1035	95% Chebyshev(Mean, Sd) UCL	1355
97.5% Chebyshev(Mean, Sd) UCL	1798	99% Chebyshev(Mean, Sd) UCL	2670

Suggested UCL to Use

95% Adjusted Gamma UCL	2420

Recommended UCL exceeds the maximum observation

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	12/20/2013 10:09
From File	CSX SS Refined DatasetsUCLs NO COMPOSITES_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics

Total Number of Observations	50	Number of Distinct Observations	44
Number of Detects	43	Number of Non-Detects	7
Number of Distinct Detects	40	Number of Distinct Non-Detects	4
Minimum Detect	1.2	Minimum Non-Detect	0.01
Maximum Detect	1547	Maximum Non-Detect	23
Variance Detects	59649	Percent Non-Detects	14%
Mean Detects	70.97	SD Detects	244.2
Median Detects	14	CV Detects	3.441
Skewness Detects	5.627	Kurtosis Detects	33.64
Mean of Logged Detects	2.667	SD of Logged Detects	1.509

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.298	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.943	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.413	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.135	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	61.28	Standard Error of Mean	32.22
SD	225.1	95% KM (BCA) UCL	127.6
95% KM (t) UCL	115.3	95% KM (Percentile Bootstrap) UCL	120.6
95% KM (z) UCL	114.3	95% KM Bootstrap t UCL	318.3
90% KM Chebyshev UCL	157.9	95% KM Chebyshev UCL	201.7
97.5% KM Chebyshev UCL	262.5	99% KM Chebyshev UCL	381.8

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.28	Anderson-Darling GOF Test	
5% A-D Critical Value	0.834	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.257	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.144	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.411	k star (bias corrected MLE)	0.398
Theta hat (MLE)	172.8	Theta star (bias corrected MLE)	178.5
nu hat (MLE)	35.32	nu star (bias corrected)	34.19
MLE Mean (bias corrected)	70.97	MLE Sd (bias corrected)	112.5

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0741	nu hat (KM)	7.408
Approximate Chi Square Value (7.41, α)	2.397	Adjusted Chi Square Value (7.41, β)	2.314
95% Gamma Approximate KM-UCL (use when n>=50)	189.4	95% Gamma Adjusted KM-UCL (use when n<50)	196.2

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	61.03
Maximum	1547	Median	8.74
SD	227.5	CV	3.727
k hat (MLE)	0.283	k star (bias corrected MLE)	0.279
Theta hat (MLE)	215.9	Theta star (bias corrected MLE)	218.7
nu hat (MLE)	28.27	nu star (bias corrected)	27.91
MLE Mean (bias corrected)	61.03	MLE Sd (bias corrected)	115.5
		Adjusted Level of Significance (β)	0.0452
Approximate Chi Square Value (27.91, α)	16.86	Adjusted Chi Square Value (27.91, β)	16.6
95% Gamma Approximate UCL (use when n>=50)	101	95% Gamma Adjusted UCL (use when n<50)	102.6

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.952	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.943	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0856	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.135	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	61.24	Mean in Log Scale	2.288
SD in Original Scale	227.4	SD in Log Scale	1.724
95% t UCL (assumes normality of ROS data)	115.2	95% Percentile Bootstrap UCL	117.4
95% BCA Bootstrap UCL	166.3	95% Bootstrap t UCL	333.3
95% H-UCL (Log ROS)	96.64		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	2.056	95% H-UCL (KM -Log)	407.4
KM SD (logged)	2.294	95% Critical H Value (KM-Log)	4.039
KM Standard Error of Mean (logged)	0.352		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	61.37	Mean in Log Scale	2.228
SD in Original Scale	227.4	SD in Log Scale	1.965
95% t UCL (Assumes normality)	115.3	95% H-Stat UCL	174.6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	262.5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
Checked by: MKB 1/16/14

alpha-BHC

General Statistics

Total Number of Observations	29	Number of Distinct Observations	17
Number of Detects	3	Number of Non-Detects	26
Number of Distinct Detects	2	Number of Distinct Non-Detects	15
Minimum Detect	0.01	Minimum Non-Detect	0.002
Maximum Detect	0.023	Maximum Non-Detect	1.1
Variance Detects	5.63E-05	Percent Non-Detects	89.66%
Mean Detects	0.0143	SD Detects	0.00751
Median Detects	0.01	CV Detects	0.524
Skewness Detects	1.732	Kurtosis Detects	N/A
Mean of Logged Detects	-4.328	SD of Logged Detects	0.481

Warning: Data set has only 3 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.75	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.385	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.512	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.00348	Standard Error of Mean	0.00111
SD	0.00454	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00537	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00531	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00681	95% KM Chebyshev UCL	0.00832
97.5% KM Chebyshev UCL	0.0104	99% KM Chebyshev UCL	0.0145

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	6.232	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0023	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	37.39	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.589	nu hat (KM)	34.15
		Adjusted Level of Significance (β)	0.0407
Approximate Chi Square Value (34.15, α)	21.78	Adjusted Chi Square Value (34.15, β)	21.19
95% Gamma Approximate KM-UCL (use when n>=50)	0.00546	95% Gamma Adjusted KM-UCL (use when n<50)	0.00561

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.75	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.385	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.512	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00235	Mean in Log Scale	-6.852
SD in Original Scale	0.00464	SD in Log Scale	1.081
95% t UCL (assumes normality of ROS data)	0.00381	95% Percentile Bootstrap UCL	0.00388
95% BCA Bootstrap UCL	0.00442	95% Bootstrap t UCL	0.00553
95% H-UCL (Log ROS)	0.00321		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.988	95% H-UCL (KM -Log)	0.0039
KM SD (logged)	0.628	95% Critical H Value (KM-Log)	2.059
KM Standard Error of Mean (logged)	0.154		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0265	Mean in Log Scale	-5.817
SD in Original Scale	0.102	SD in Log Scale	1.62
95% t UCL (Assumes normality)	0.0587	95% H-Stat UCL	0.0306

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00537	95% KM (Percentile Bootstrap) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

beta-BHC

General Statistics

Total Number of Observations	27	Number of Distinct Observations	18
Number of Detects	2	Number of Non-Detects	25
Number of Distinct Detects	2	Number of Distinct Non-Detects	16
Minimum Detect	0.073	Minimum Non-Detect	0.002
Maximum Detect	0.4	Maximum Non-Detect	1.1
Variance Detects	0.0535	Percent Non-Detects	92.59%
Mean Detects	0.237	SD Detects	0.231
Median Detects	0.237	CV Detects	0.978
Skewness Detects	N/A	Kurtosis Detects	N/A
Mean of Logged Detects	-1.767	SD of Logged Detects	1.203

Warning: Data set has only 2 Detected Values.
This is not enough to compute meaningful or reliable statistics and estimates.

Normal GOF Test on Detects Only
Not Enough Data to Perform GOF Test

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0203	Standard Error of Mean	0.0215
SD	0.0773	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0569	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0556	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0847	95% KM Chebyshev UCL	0.114
97.5% KM Chebyshev UCL	0.154	99% KM Chebyshev UCL	0.234

Gamma GOF Tests on Detected Observations Only
Not Enough Data to Perform GOF Test

Gamma Statistics on Detected Data Only

k hat (MLE)	1.686	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.14	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	6.744	nu star (bias corrected)	N/A
MLE Mean (bias corrected)	N/A	MLE Sd (bias corrected)	N/A

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0689	nu hat (KM)	3.719
		Adjusted Level of Significance (β)	0.0401
Approximate Chi Square Value (3.72, α)	0.614	Adjusted Chi Square Value (3.72, β)	0.542
95% Gamma Approximate KM-UCL (use when n>=50)	0.123	95% Gamma Adjusted KM-UCL (use when n<50)	0.139

Gamma (KM) may not be used when k hat (KM) is < 0.1

Lognormal GOF Test on Detected Observations Only
Not Enough Data to Perform GOF Test

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0181	Mean in Log Scale	-7.684
SD in Original Scale	0.0776	SD in Log Scale	2.108
95% t UCL (assumes normality of ROS data)	0.0435	95% Percentile Bootstrap UCL	0.0476
95% BCA Bootstrap UCL	0.0651	95% Bootstrap t UCL	1.965
95% H-UCL (Log ROS)	0.0243		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0429	Mean in Log Scale	-5.705
SD in Original Scale	0.128	SD in Log Scale	1.893
95% t UCL (Assumes normality)	0.0848	95% H-Stat UCL	0.0838

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (BCA) UCL	N/A

Warning: One or more Recommended UCL(s) not available!

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDD

General Statistics

Total Number of Observations	41	Number of Distinct Observations	23
Number of Detects	9	Number of Non-Detects	32
Number of Distinct Detects	9	Number of Distinct Non-Detects	14
Minimum Detect	0.0039	Minimum Non-Detect	0.0018
Maximum Detect	3.7	Maximum Non-Detect	0.02
Variance Detects	1.488	Percent Non-Detects	78.05%
Mean Detects	0.449	SD Detects	1.22
Median Detects	0.044	CV Detects	2.717
Skewness Detects	2.996	Kurtosis Detects	8.981
Mean of Logged Detects	-3.117	SD of Logged Detects	2.032

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.415	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.503	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.295	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.1	Standard Error of Mean	0.0944
SD	0.57	95% KM (BCA) UCL	0.285
95% KM (t) UCL	0.259	95% KM (Percentile Bootstrap) UCL	0.28
95% KM (z) UCL	0.255	95% KM Bootstrap t UCL	3.502
90% KM Chebyshev UCL	0.383	95% KM Chebyshev UCL	0.511
97.5% KM Chebyshev UCL	0.689	99% KM Chebyshev UCL	1.039

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.328	Anderson-Darling GOF Test	
5% A-D Critical Value	0.808	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.406	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.302	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.298	k star (bias corrected MLE)	0.273
Theta hat (MLE)	1.506	Theta star (bias corrected MLE)	1.645
nu hat (MLE)	5.366	nu star (bias corrected)	4.911
MLE Mean (bias corrected)	0.449	MLE Sd (bias corrected)	0.859

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0309	nu hat (KM)	2.533
Approximate Chi Square Value (2.53, α)	0.249	Adjusted Chi Square Value (2.53, β)	0.23
95% Gamma Approximate KM-UCL (use when n>=50)	1.02	95% Gamma Adjusted KM-UCL (use when n<50)	1.104

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0039	Mean	0.106
Maximum	3.7	Median	0.01
SD	0.576	CV	5.413
k hat (MLE)	0.333	k star (bias corrected MLE)	0.325
Theta hat (MLE)	0.32	Theta star (bias corrected MLE)	0.327
nu hat (MLE)	27.29	nu star (bias corrected)	26.63
MLE Mean (bias corrected)	0.106	MLE Sd (bias corrected)	0.187
		Adjusted Level of Significance (β)	0.0441
Approximate Chi Square Value (26.63, α)	15.86	Adjusted Chi Square Value (26.63, β)	15.56
95% Gamma Approximate UCL (use when n>=50)	0.178	95% Gamma Adjusted UCL (use when n<50)	0.182

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.891	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.241	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.295	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0987	Mean in Log Scale	-8.802
SD in Original Scale	0.577	SD in Log Scale	3.692
95% t UCL (assumes normality of ROS data)	0.25	95% Percentile Bootstrap UCL	0.278
95% BCA Bootstrap UCL	0.372	95% Bootstrap t UCL	3.65
95% H-UCL (Log ROS)	5.044		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-5.578	95% H-UCL (KM -Log)	0.0298
KM SD (logged)	1.601	95% Critical H Value (KM-Log)	3.089
KM Standard Error of Mean (logged)	0.269		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.102	Mean in Log Scale	-5.382
SD in Original Scale	0.576	SD in Log Scale	1.736
95% t UCL (Assumes normality)	0.253	95% H-Stat UCL	0.0509

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

99% KM (Chebyshev) UCL	1.039

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

DDE

General Statistics

Total Number of Observations	48	Number of Distinct Observations	32
Number of Detects	19	Number of Non-Detects	29
Number of Distinct Detects	19	Number of Distinct Non-Detects	14
Minimum Detect	0.0031	Minimum Non-Detect	0.002
Maximum Detect	24	Maximum Non-Detect	0.022
Variance Detects	29.57	Percent Non-Detects	60.42%
Mean Detects	1.59	SD Detects	5.438
Median Detects	0.252	CV Detects	3.42
Skewness Detects	4.329	Kurtosis Detects	18.82
Mean of Logged Detects	-1.495	SD of Logged Detects	1.821

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.294	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.901	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.476	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.203	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.631	Standard Error of Mean	0.507
SD	3.419	95% KM (BCA) UCL	1.654
95% KM (t) UCL	1.481	95% KM (Percentile Bootstrap) UCL	1.611
95% KM (z) UCL	1.465	95% KM Bootstrap t UCL	9.688
90% KM Chebyshev UCL	2.152	95% KM Chebyshev UCL	2.841
97.5% KM Chebyshev UCL	3.797	99% KM Chebyshev UCL	5.676

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.146	Anderson-Darling GOF Test	
5% A-D Critical Value	0.834	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.286	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.214	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.344	k star (bias corrected MLE)	0.325
Theta hat (MLE)	4.619	Theta star (bias corrected MLE)	4.893
nu hat (MLE)	13.08	nu star (bias corrected)	12.35
MLE Mean (bias corrected)	1.59	MLE Sd (bias corrected)	2.789

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.034	nu hat (KM)	3.265
Approximate Chi Square Value (3.26, α)	0.455	Adjusted Chi Square Value (3.26, β)	0.427
95% Gamma Approximate KM-UCL (use when n>=50)	4.525	95% Gamma Adjusted KM-UCL (use when n<50)	4.824

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0031	Mean	0.635
Maximum	24	Median	0.01
SD	3.455	CV	5.437
k hat (MLE)	0.244	k star (bias corrected MLE)	0.243
Theta hat (MLE)	2.603	Theta star (bias corrected MLE)	2.617
nu hat (MLE)	23.44	nu star (bias corrected)	23.3
MLE Mean (bias corrected)	0.635	MLE Sd (bias corrected)	1.29
		Adjusted Level of Significance (β)	0.045
Approximate Chi Square Value (23.30, α)	13.32	Adjusted Chi Square Value (23.30, β)	13.09
95% Gamma Approximate UCL (use when n>=50)	1.112	95% Gamma Adjusted UCL (use when n<50)	1.132

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.945	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.901	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.126	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.203	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.631	Mean in Log Scale	-4.599
SD in Original Scale	3.456	SD in Log Scale	2.933
95% t UCL (assumes normality of ROS data)	1.468	95% Percentile Bootstrap UCL	1.626
95% BCA Bootstrap UCL	2.565	95% Bootstrap t UCL	9.597
95% H-UCL (Log ROS)	6.185		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.342	95% H-UCL (KM -Log)	1.785
KM SD (logged)	2.56	95% Critical H Value (KM-Log)	4.402
KM Standard Error of Mean (logged)	0.38		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.631	Mean in Log Scale	-4.354
SD in Original Scale	3.455	SD in Log Scale	2.679
95% t UCL (Assumes normality)	1.468	95% H-Stat UCL	2.784

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL	2.841

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
Checked by: MKB 1/16/14

DDT

General Statistics

Total Number of Observations	49	Number of Distinct Observations	38
Number of Detects	27	Number of Non-Detects	22
Number of Distinct Detects	27	Number of Distinct Non-Detects	11
Minimum Detect	0.014	Minimum Non-Detect	0.002
Maximum Detect	11.1	Maximum Non-Detect	0.02
Variance Detects	7.25	Percent Non-Detects	44.90%
Mean Detects	1.929	SD Detects	2.693
Median Detects	0.38	CV Detects	1.396
Skewness Detects	1.892	Kurtosis Detects	4.003
Mean of Logged Detects	-0.919	SD of Logged Detects	2.241

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.746	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.923	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.239	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.171	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	1.064	Standard Error of Mean	0.318
SD	2.183	95% KM (BCA) UCL	1.599
95% KM (t) UCL	1.597	95% KM (Percentile Bootstrap) UCL	1.595
95% KM (z) UCL	1.586	95% KM Bootstrap t UCL	1.839
90% KM Chebyshev UCL	2.017	95% KM Chebyshev UCL	2.449
97.5% KM Chebyshev UCL	3.048	99% KM Chebyshev UCL	4.226

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.812	Anderson-Darling GOF Test	
5% A-D Critical Value	0.827	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.165	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.18	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.415	k star (bias corrected MLE)	0.394
Theta hat (MLE)	4.646	Theta star (bias corrected MLE)	4.899
nu hat (MLE)	22.41	nu star (bias corrected)	21.26
MLE Mean (bias corrected)	1.929	MLE Sd (bias corrected)	3.074

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.237	nu hat (KM)	23.27
Approximate Chi Square Value (23.27, α)	13.29	Adjusted Chi Square Value (23.27, β)	13.06
95% Gamma Approximate KM-UCL (use when n>=50)	1.862	95% Gamma Adjusted KM-UCL (use when n<50)	1.894

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detected data is small such as < 0.1

For such situations, GROS method tends to yield inflated values of UCLs and BTVs

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	1.067
Maximum	11.1	Median	0.017
SD	2.204	CV	2.065
k hat (MLE)	0.266	k star (bias corrected MLE)	0.264
Theta hat (MLE)	4.006	Theta star (bias corrected MLE)	4.047
nu hat (MLE)	26.11	nu star (bias corrected)	25.84
MLE Mean (bias corrected)	1.067	MLE Sd (bias corrected)	2.078
		Adjusted Level of Significance (β)	0.0451
Approximate Chi Square Value (25.84, α)	15.26	Adjusted Chi Square Value (25.84, β)	15.01
95% Gamma Approximate UCL (use when n>=50)	1.808	95% Gamma Adjusted UCL (use when n<50)	1.837

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.898	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.923	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.177	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.171	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.064	Mean in Log Scale	-3.357
SD in Original Scale	2.205	SD in Log Scale	3.27
95% t UCL (assumes normality of ROS data)	1.592	95% Percentile Bootstrap UCL	1.624
95% BCA Bootstrap UCL	1.755	95% Bootstrap t UCL	1.813
95% H-UCL (Log ROS)	96.92		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	1.064	Mean in Log Scale	-3.447
SD in Original Scale	2.206	SD in Log Scale	3.295
95% t UCL (Assumes normality)	1.592	95% H-Stat UCL	99.92

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (BCA) UCL	1.599	95% GROS Adjusted Gamma UCL	1.837
95% Adjusted Gamma KM-UCL	1.894		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

delta-BHC

General Statistics

Total Number of Observations	27	Number of Distinct Observations	17
Number of Detects	1	Number of Non-Detects	26
Number of Distinct Detects	1	Number of Distinct Non-Detects	16

Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BT

The data set for variable delta-BHC was not processed!

Dieldrin

General Statistics

Total Number of Observations	38	Number of Distinct Observations	24
Number of Detects	5	Number of Non-Detects	33
Number of Distinct Detects	5	Number of Distinct Non-Detects	19
Minimum Detect	0.0099	Minimum Non-Detect	2.00E-04
Maximum Detect	0.514	Maximum Non-Detect	0.0445
Variance Detects	0.037	Percent Non-Detects	86.84%
Mean Detects	0.196	SD Detects	0.192
Median Detects	0.18	CV Detects	0.982
Skewness Detects	1.425	Kurtosis Detects	2.547
Mean of Logged Detects	-2.222	SD of Logged Detects	1.481

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.875	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.312	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.026	Standard Error of Mean	0.0165
SD	0.091	95% KM (BCA) UCL	0.0575
95% KM (t) UCL	0.0538	95% KM (Percentile Bootstrap) UCL	0.0556
95% KM (z) UCL	0.0531	95% KM Bootstrap t UCL	0.0596
90% KM Chebyshev UCL	0.0755	95% KM Chebyshev UCL	0.0979
97.5% KM Chebyshev UCL	0.129	99% KM Chebyshev UCL	0.19

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.262	Anderson-Darling GOF Test	
5% A-D Critical Value	0.692	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.203	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.365	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.977	k star (bias corrected MLE)	0.524
Theta hat (MLE)	0.201	Theta star (bias corrected MLE)	0.374
nu hat (MLE)	9.773	nu star (bias corrected)	5.243
MLE Mean (bias corrected)	0.196	MLE Sd (bias corrected)	0.271

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0817	nu hat (KM)	6.21
Approximate Chi Square Value (6.21, α)	1.748	Adjusted Chi Square Value (6.21, β)	1.652
95% Gamma Approximate KM-UCL (use when n>=50)	0.0924	95% Gamma Adjusted KM-UCL (use when n<50)	0.0977

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0099	Mean	0.0345
Maximum	0.514	Median	0.01
SD	0.0898	CV	2.605
k hat (MLE)	0.66	k star (bias corrected MLE)	0.625
Theta hat (MLE)	0.0523	Theta star (bias corrected MLE)	0.0551
nu hat (MLE)	50.13	nu star (bias corrected)	47.51
MLE Mean (bias corrected)	0.0345	MLE Sd (bias corrected)	0.0436
		Adjusted Level of Significance (β)	0.0434
Approximate Chi Square Value (47.51, α)	32.69	Adjusted Chi Square Value (47.51, β)	32.18
95% Gamma Approximate UCL (use when n>=50)	0.0501	95% Gamma Adjusted UCL (use when n<50)	0.0509

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.904	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.762	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.238	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.396	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.026	Mean in Log Scale	-8.434
SD in Original Scale	0.0922	SD in Log Scale	2.917
95% t UCL (assumes normality of ROS data)	0.0512	95% Percentile Bootstrap UCL	0.0517
95% BCA Bootstrap UCL	0.0688	95% Bootstrap t UCL	0.0916
95% H-UCL (Log ROS)	0.181		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-7.671	95% H-UCL (KM -Log)	0.0219
KM SD (logged)	2.191	95% Critical H Value (KM-Log)	4.029
KM Standard Error of Mean (logged)	0.401		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0283	Mean in Log Scale	-6.03
SD in Original Scale	0.0916	SD in Log Scale	1.932
95% t UCL (Assumes normality)	0.0534	95% H-Stat UCL	0.0495

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics
Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0538	95% KM (Percentile Bootstrap) UCL	0.0556

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

gamma-BHC

General Statistics

Total Number of Observations	44	Number of Distinct Observations	28
Number of Detects	13	Number of Non-Detects	31
Number of Distinct Detects	12	Number of Distinct Non-Detects	17
Minimum Detect	0.015	Minimum Non-Detect	2.00E-04
Maximum Detect	1.78	Maximum Non-Detect	0.022
Variance Detects	0.232	Percent Non-Detects	70.45%
Mean Detects	0.228	SD Detects	0.482
Median Detects	0.0445	CV Detects	2.116
Skewness Detects	3.243	Kurtosis Detects	10.96
Mean of Logged Detects	-2.642	SD of Logged Detects	1.407

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.488	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.353	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.246	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0674	Standard Error of Mean	0.0427
SD	0.272	95% KM (BCA) UCL	0.15
95% KM (t) UCL	0.139	95% KM (Percentile Bootstrap) UCL	0.147
95% KM (z) UCL	0.138	95% KM Bootstrap t UCL	0.388
90% KM Chebyshev UCL	0.196	95% KM Chebyshev UCL	0.254
97.5% KM Chebyshev UCL	0.334	99% KM Chebyshev UCL	0.492

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.302	Anderson-Darling GOF Test	
5% A-D Critical Value	0.787	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.275	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.249	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.54	k star (bias corrected MLE)	0.467
Theta hat (MLE)	0.422	Theta star (bias corrected MLE)	0.488
nu hat (MLE)	14.04	nu star (bias corrected)	12.13
MLE Mean (bias corrected)	0.228	MLE Sd (bias corrected)	0.333

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.0614	nu hat (KM)	5.402
Approximate Chi Square Value (5.40, α)	1.342	Adjusted Chi Square Value (5.40, β)	1.276
95% Gamma Approximate KM-UCL (use when n>=50)	0.271	95% Gamma Adjusted KM-UCL (use when n<50)	0.286

Gamma (KM) may not be used when k hat (KM) is < 0.1

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0743
Maximum	1.78	Median	0.01
SD	0.274	CV	3.681
k hat (MLE)	0.452	k star (bias corrected MLE)	0.437
Theta hat (MLE)	0.164	Theta star (bias corrected MLE)	0.17
nu hat (MLE)	39.82	nu star (bias corrected)	38.44
MLE Mean (bias corrected)	0.0743	MLE Sd (bias corrected)	0.112
		Adjusted Level of Significance (β)	0.0445
Approximate Chi Square Value (38.44, α)	25.24	Adjusted Chi Square Value (38.44, β)	24.88
95% Gamma Approximate UCL (use when n>=50)	0.113	95% Gamma Adjusted UCL (use when n<50)	0.115

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.881	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.215	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.246	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0679	Mean in Log Scale	-6.074
SD in Original Scale	0.275	SD in Log Scale	2.544
95% t UCL (assumes normality of ROS data)	0.138	95% Percentile Bootstrap UCL	0.149
95% BCA Bootstrap UCL	0.218	95% Bootstrap t UCL	0.379
95% H-UCL (Log ROS)	0.333		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-6.778	95% H-UCL (KM -Log)	0.422
KM SD (logged)	2.78	95% Critical H Value (KM-Log)	4.836
KM Standard Error of Mean (logged)	0.437		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	0.0684	Mean in Log Scale	-5.594
SD in Original Scale	0.275	SD in Log Scale	2.218
95% t UCL (Assumes normality)	0.138	95% H-Stat UCL	0.168

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (BCA) UCL	0.15

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
Checked by: MKB 1/16/14

Heptachlor

General Statistics

Total Number of Observations	48	Number of Distinct Observations	33
Number of Detects	9	Number of Non-Detects	39
Number of Distinct Detects	9	Number of Distinct Non-Detects	25
Minimum Detect	0.00902	Minimum Non-Detect	0.005
Maximum Detect	0.3	Maximum Non-Detect	190
Variance Detects	0.00864	Percent Non-Detects	81.25%
Mean Detects	0.0566	SD Detects	0.093
Median Detects	0.021	CV Detects	1.644
Skewness Detects	2.802	Kurtosis Detects	8.091
Mean of Logged Detects	-3.582	SD of Logged Detects	1.13

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.556	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.374	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.295	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

Mean	0.0227	Standard Error of Mean	0.00805
SD	0.0455	95% KM (BCA) UCL	0.0363
95% KM (t) UCL	0.0362	95% KM (Percentile Bootstrap) UCL	0.0367
95% KM (z) UCL	0.0359	95% KM Bootstrap t UCL	0.0496
90% KM Chebyshev UCL	0.0468	95% KM Chebyshev UCL	0.0578
97.5% KM Chebyshev UCL	0.073	99% KM Chebyshev UCL	0.103

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.804	Anderson-Darling GOF Test	
5% A-D Critical Value	0.749	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.225	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.289	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.832	k star (bias corrected MLE)	0.629
Theta hat (MLE)	0.068	Theta star (bias corrected MLE)	0.09
nu hat (MLE)	14.97	nu star (bias corrected)	11.32
MLE Mean (bias corrected)	0.0566	MLE Sd (bias corrected)	0.0713

Gamma Kaplan-Meier (KM) Statistics

k hat (KM)	0.248	nu hat (KM)	23.82
Approximate Chi Square Value (23.82, α)	13.71	Adjusted Chi Square Value (23.82, β)	13.48
95% Gamma Approximate KM-UCL (use when n>=50)	0.0394	95% Gamma Adjusted KM-UCL (use when n<50)	0.0401

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
GROS may not be used when kstar of detected data is small such as < 0.1
For such situations, GROS method tends to yield inflated values of UCLs and BTVs
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.00902	Mean	0.0196
Maximum	0.3	Median	0.01
SD	0.0425	CV	2.165
k hat (MLE)	1.313	k star (bias corrected MLE)	1.245
Theta hat (MLE)	0.0149	Theta star (bias corrected MLE)	0.0158
nu hat (MLE)	126	nu star (bias corrected)	119.5
MLE Mean (bias corrected)	0.0196	MLE Sd (bias corrected)	0.0176
		Adjusted Level of Significance (β)	0.045
Approximate Chi Square Value (119.50, α)	95.26	Adjusted Chi Square Value (119.50, β)	94.59
95% Gamma Approximate UCL (use when n>=50)	0.0246	95% Gamma Adjusted UCL (use when n<50)	0.0248

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.89	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.16	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.295	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0171	Mean in Log Scale	-4.759
SD in Original Scale	0.0431	SD in Log Scale	0.955
95% t UCL (assumes normality of ROS data)	0.0275	95% Percentile Bootstrap UCL	0.029
95% BCA Bootstrap UCL	0.0381	95% Bootstrap t UCL	0.0604
95% H-UCL (Log ROS)	0.0186		

UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed

KM Mean (logged)	-4.449	95% H-UCL (KM -Log)	0.0262
KM SD (logged)	0.977	95% Critical H Value (KM-Log)	2.31
KM Standard Error of Mean (logged)	0.243		

DL/2 Statistics

DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	2.207	Mean in Log Scale	-3.124
SD in Original Scale	13.71	SD in Log Scale	1.945
95% t UCL (Assumes normality)	5.527	95% H-Stat UCL	0.792

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.0362	95% GROS Adjusted Gamma UCL	0.0248
95% Adjusted Gamma KM-UCL	0.0401		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
Checked by: MKB 1/16/14

Toxaphene

General Statistics			
Total Number of Observations	48	Number of Distinct Observations	32
Number of Detects	8	Number of Non-Detects	40
Number of Distinct Detects	8	Number of Distinct Non-Detects	25
Minimum Detect	0.071	Minimum Non-Detect	0.005
Maximum Detect	190	Maximum Non-Detect	21
Variance Detects	4414	Percent Non-Detects	83.33%
Mean Detects	25.86	SD Detects	66.44
Median Detects	0.684	CV Detects	2.569
Skewness Detects	2.809	Kurtosis Detects	7.916
Mean of Logged Detects	0.257	SD of Logged Detects	2.617
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.46	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.46	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.313	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
Mean	4.329	Standard Error of Mean	4.188
SD	27.14	95% KM (BCA) UCL	12.39
95% KM (t) UCL	11.36	95% KM (Percentile Bootstrap) UCL	12.29
95% KM (z) UCL	11.22	95% KM Bootstrap t UCL	220.3
90% KM Chebyshev UCL	16.89	95% KM Chebyshev UCL	22.58
97.5% KM Chebyshev UCL	30.48	99% KM Chebyshev UCL	46
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.915	Anderson-Darling GOF Test	
5% A-D Critical Value	0.821	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.285	Kolmogrov-Smirnoff GOF	
5% K-S Critical Value	0.321	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.239	k star (bias corrected MLE)	0.233
Theta hat (MLE)	108.3	Theta star (bias corrected MLE)	111.2
nu hat (MLE)	3.822	nu star (bias corrected)	3.722
MLE Mean (bias corrected)	25.86	MLE Sd (bias corrected)	53.62
Gamma Kaplan-Meier (KM) Statistics			
k hat (KM)	0.0254	nu hat (KM)	2.443
Approximate Chi Square Value (2.44, α)	0.229	Adjusted Chi Square Value (2.44, β)	0.214
95% Gamma Approximate KM-UCL (use when n>=50)	46.28	95% Gamma Adjusted KM-UCL (use when n<50)	49.47
Gamma (KM) may not be used when k hat (KM) is < 0.1			
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detected data is small such as < 0.1			
For such situations, GROS method tends to yield inflated values of UCLs and BTVs			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	4.319
Maximum	190	Median	0.01
SD	27.43	CV	6.351
k hat (MLE)	0.147	k star (bias corrected MLE)	0.151
Theta hat (MLE)	29.45	Theta star (bias corrected MLE)	28.53
nu hat (MLE)	14.08	nu star (bias corrected)	14.53
MLE Mean (bias corrected)	4.319	MLE Sd (bias corrected)	11.1
		Adjusted Level of Significance (β)	0.045
Approximate Chi Square Value (14.53, α)	6.938	Adjusted Chi Square Value (14.53, β)	6.775
95% Gamma Approximate UCL (use when n>=50)	9.047	95% Gamma Adjusted UCL (use when n<50)	9.264
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.923	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.197	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.313	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	4.311	Mean in Log Scale	-7.479
SD in Original Scale	27.43	SD in Log Scale	4.098
95% t UCL (assumes normality of ROS data)	10.95	95% Percentile Bootstrap UCL	12.35
95% BCA Bootstrap UCL	16.39	95% Bootstrap t UCL	231.1
95% H-UCL (Log ROS)	138.6		
UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed			
KM Mean (logged)	-4.228	95% H-UCL (KM -Log)	0.941
KM SD (logged)	2.35	95% Critical H Value (KM-Log)	4.098
KM Standard Error of Mean (logged)	0.384		
DL/2 Statistics			
DL/2 Normal		DL/2 Log-Transformed	
Mean in Original Scale	4.651	Mean in Log Scale	-2.482
SD in Original Scale	27.41	SD in Log Scale	2.296
95% t UCL (Assumes normality)	11.29	95% H-Stat UCL	4.477
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Gamma Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	11.36	95% GROS Adjusted Gamma UCL	9.264
95% Adjusted Gamma KM-UCL	49.47		

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Prepared by: LMS 12/20/13
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