CMC Commercial Metals

September 29, 2017

Ms. Antonia Beavers
Environmental Engineer
Georgia Environmental Protection Division- Response and Remediation Program
Georgia Department of Natural Resources
2 Martin Luther King Drive, S.E. Suite 1054 East
Atlanta, Georgia 30334

Re: 6th Semi-Annual Progress Report and Parcel Status Update
Former Loef Site-590 Old Hull Road, Athens, Georgia- HSI Site No 10376
VRP Site No 802705980

Dear Ms. Beavers,

Commercial Metals Company (CMC) is pleased to submit the 6th Semi Annual Progress Report for the above captioned site. The progress report was completed by Apex Companies, LLC (Apex) on behalf of CMC. The report contains CMC's response to the department's comment letter on the 5th Progress Report dated August 1, 2017. In addition, the current report details the results of the most recent limited groundwater sampling event at the property and a work plan for additional groundwater assessment. Please note that CMC intends to begin the additional assessment the week of October 9, 2017.

The VRP site is comprised of three parcels. CMC initially purchased two of the parcels in March of 2017. The third parcel was inadvertently omitted from the acquisition. The additional parcel was purchased on September 7, 2017 by Owen Electric Steel Corporation of South Carolina (d/b/a Commercial Metals Company).

Apex is in the process of completing the updated VRP application for CMC. An update to the Conceptual Site Model and an anticipated VRP schedule are contained in this report.

Thank you for your assistance with the project and in reviewing this progress report. If you have any questions regarding this submittal or require any additional information, please contact me at 803-724-3463.

Sincerely,

Joseph F. Williams
Environmental Manager, Southeast

Enclosure

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Athens, Georgia 30601
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6th SEMI-ANNUAL PROGRESS REPORT
COMMERCIAL METALS COMPANY/OWEN ELECTRIC STEEL FACILITY
(FORMER LOEF COMPANY SITE)
590 OLD HULL ROAD
ATHENS, GEORGIA
HSI SITE NO. 10376
VRP SITE NO. 802705980

Submitted to:

Georgia Department of Natural Resources
Environmental Protection Division
Response and Remediation Program
2 Martin Luther King Dr., S.E., Suite 1054 East
Atlanta, Georgia, 30334

Submitted by:

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Apex Project No. 510507-001.04

September 29, 2017

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Program Manager

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APPENDICES

1.0 INTRODUCTION

Apex Companies, LLC (Apex) has prepared this 6th Progress Report on behalf of Commercial Metals Company (CMC) for the Former Loef Company Site located on three parcels at 610 Old Hull Road (Parcel #221002C), 590 Old Hull Road (Parcel #221001), and 305 Athena Drive (Parcel #162037) in Athens, Clarke County, Georgia (the "site"). The site is an active industrial scrap metals recycling facility that occupies 21.34 acres of land, inclusive of the three property parcels that are identified as the "VRP Property" under the Georgia Department of Natural Resources (DNR) Voluntary Remediation Program (VRP).

The three parcels that comprise the VRP site property were previously owned by OmniSource Athens Division, LLC (OmniSource) and R.H. Realty, Inc. (c/o OmniSource Southeast). OmniSource entered into an Asset Purchase Agreement with Owen Electric Steel Company of South Carolina (a subsidiary of CMC) for the sale of the property. The transaction for the central and northern parcels of the VRP property closed on March 6, 2017. The southern-most parcel transaction closed on September 7, 2017. As a result of these transactions, Owen Electric Steel Company of South Carolina (a subsidiary of CMC) is currently the legal owner of all three parcels that comprise the VRP site.

The site was listed on the Georgia Hazardous Site Inventory (HSI) as a Class II site on June 9, 1995 (Site Number 10376) following discovery of soil and groundwater contamination at the facility. The site location on a regional topographic map is shown on **Figure 1**. A site plan that includes the facility layout and existing monitoring well locations is shown on **Figure 2**.

This report was prepared for submittal to the Georgia Environmental Protection Division (EPD) and it documents work completed at the site by CMC since acquisition in March 2017 through September 2017. Findings of the most recent groundwater sampling event for the site are included herein.

1.1 Site Background and Regulatory Summary

Hull Real Estate, LLC (Hull) was the prior owner of the site before OmniSource's acquisition of the property. On November 7, 2011 Peachtree Environmental (Peachtree) submitted a VRP application to the EPD on behalf of Hull, and EPD accepted the site into the VRP in May 2012. Hull had committed to completing the site remediation under the VRP after selling the property to OmniSource. However, Hull later reneged on that commitment and informed the EPD that they were no longer willing to complete site remediation work.

On March 12, 2015 OmniSource submitted a VRP application with the intent to complete regulatory closure at the site. The VRP application identified additional activities to be conducted for site closure. EPD accepted OmniSource as a participant in the VRP for the referenced property in a letter dated May 8, 2015.

Prior remedial activities at the site include excavation and off-site disposal of approximately 43,000 tons of soil impacted by volatile organic compounds (VOCs) and metals from 2002 through 2003. An in-situ groundwater treatment event was also completed in 2003. The groundwater treatment event included injection of Hydrogen Release Compound (HRC®) as a carbon substrate to promote enhanced anaerobic biodegradation of chlorinated volatile organic compounds (cVOCs) in groundwater.

Both Hull and OmniSource performed ongoing, routine groundwater sampling events to monitor migration of the VOC plume and the long-term effectiveness of the enhanced biodegradation treatment program combined with monitored natural attenuation as a groundwater cleanup remedy. As described later in this Progress Report, CMC completed supplemental groundwater sampling at several existing monitoring wells in May 2017 to confirm the most recent analytical results obtained by OmniSource.

The most recent Progress Report previously submitted by OmniSource to EPD was the *5th Semi-Annual Progress Report* (Apex: February 27, 2017). Previous VRP site field activities and evaluations addressed by that 5th Progress Report included:

- Methods and results of the November 2016 semi-annual groundwater monitoring event, which included gauging and sampling the 13 existing site monitoring wells;
- Supplemental plume stability evaluations using Mann-Kendall statistical tests; and,
- An updated Conceptual Site Model.

1.2 Work Scope for Current Progress Report

This 6*th* *Semi-Annual Progress Report* presents information regarding VRP site activities performed since submittal of the last progress report and a work plan to conduct additional site investigation activities. This progress report also contains a formal request to EPD for an extension of time for CMC to complete the site corrective actions and to submit the final Compliance Status Report (CSR).

Work completed since submittal of the last progress report, and presented for the current reporting period, includes the following:

1. Response to comments provided by EPD in their correspondence of August 1, 2017;
2. Methods and results of the confirmation groundwater sampling event which included wells MW-3a, MW-4a, and MW-10;
3. A work plan for additional groundwater assessment to further evaluate the vertical and horizontal distribution of volatile organic compounds (VOCs) in groundwater along the eastern and southeastern property boundaries;
4. An updated Conceptual Site Model;
5. A formal request for an extension to submit the final VRP compliance status report; and
6. An updated VRP schedule.

1.3 Response to EPD Correspondence of August 1, 2017

In a letter dated August 1, 2017, EPD provided comments to the February 27, 2017 *5th Semiannual Progress Report* submitted on behalf of OmniSource. The EPD comments are shown in italics, followed by CMC's responses to those comments.

1. *The property was accepted into the VRP in a letter dated May 3, 2012, which required the submittal of a final VRP compliance status report (CSR) by April 30, 2017. As that date has passed, CMC may submit a request for an extension of time to 1) complete corrective actions at the Property (and any associated impacted property) and 2) submit a final CSR*

with a certification of compliance with applicable risk reduction standards (RRS). The request for an extension of time should be submitted in the next semiannual progress report.

As the pending new VRP applicant, CMC hereby requests an extension to the schedule for the completion of any corrective actions required and the submittal of the final CSR with a certification of compliance with applicable RRS. A work plan and schedule is included in this progress report which outlines additional assessment work that will be used for further delineation of the VOC plume in groundwater along the eastern and southeastern property boundary. The results of this assessment will be utilized to determine if additional corrective actions will be required for closure.

2. *Section 5.2 of the 4th Progress Report provided recommendations for future VRP Activities including conducting one additional semiannual sampling of the existing monitoring well network, minus MW-6, that will incorporate the following: EPA Method 8260B analysis to confirm plume stability prior to site closeout via the execution/filing of a UEC, sampling a subset of monitoring wells for bio-geochemical analysis, plume stability reassessment using an updated Mann Kendall statistical analysis, etc. However, with the pending sale of the property in November 2016, no recommendations for future VRP activities were provided in the 5th Progress Report despite the detection of volatile organic compounds (VOCs) above Type 1 RRS at MW-4A and MW-10 near the eastern property boundary in November 2016. As discussed in the April 12, 2017 meeting, amended recommendations for continuing VRP corrective action activities for the Property, including additional monitoring and the development of institutional controls, should be submitted in the next progress report with an accompanying revised milestone schedule of VRP activities.*

   CMC is unable to officially respond on OmniSource's behalf regarding any omissions in their 5th Progress Report. However, as discussed in our April 12, 2017 meeting with EPD, CMC understands that OmniSource chose not to include recommendations in their 5th Progress Report that would obligate CMC to future site work. Knowing that they would soon withdraw as the VRP applicant, OmniSource elected to give the future VRP applicant the opportunity to develop the scope for future site work and closure activities.

   To this end, CMC intends to continue with the corrective action strategy that was initiated by Hull in the Remedial Action Plan (RAP) and that was followed by OmniSource. CMC's recommendations for additional site work, developing institutional controls, and completing the CSR with completion certification are discussed in this 6th Progress Report. An updated schedule of VRP activities is also included in this report.

3. *Section 2.2 of the 4th Progress Report and Section 3.1 of the 5th Progress Report provide a discussion of groundwater elevations and flow rates. Please note that for any pertinent hydrogeologic data and calculations (seepage velocity, hydraulic conductivity, hydraulic gradient, etc.) that are presented in progress reports, a representative example of the calculations used to generate these results should be provided. Please provide the supporting calculations in the next progress report. The 4th and 5th Progress Reports also mention that MW-1 was repaired on May 15, 2015 and converted from stick-up well to a flush-mount well, which lowered the casing elevation by 3-feet. Please ensure that the change in top of casing elevation is cited in future tables and figures, as appropriate.*

   Example calculations used for linear seepage velocity are included below. This calculation, along with other applicable calculations, will be included in future submittals.

Linear Seepage Velocity: $v_s = -K\ i / q$

Where:

v_s = linear seepage velocity [units of L/T]

K = hydraulic conductivity [units of L/T; determined from slug tests]

i = hydraulic gradient [units of L/L; determined from potentiometric map]

q = effective porosity [units of percent V/V; literature values from soil type]

A reference to the change in top of casing (TOC) elevation for well MW-1 is included in the footnotes for Table 2 in both progress reports. The top of well casing for MW-1 was resurveyed in July 2016. The current surveyed TOC elevation is 711.50 feet mean sea level, as shown in Table 2 of both progress reports. Therefore, the groundwater elevation data for MW-1 listed in the tables and figures is correct in both reports.

4. *Based on the data provided in the 4th and 5th Progress Reports, EPD concurs that the VOC groundwater plume generally appears to be stable and/or decreasing with the exception of the eastern property boundary. EPD will defer further evaluation of the status of the plume pending the completion of the additional investigations at POD well MW-4A and MW-10.*

   Acknowledged. CMC will further evaluate distribution of the VOC plume, and update the CSM if required, once the additional investigation at the eastern property boundary is completed. This 6th Progress Report includes a work plan that describes the initial phase of additional groundwater investigations that will be performed.

5. *Based on EPD's review of the BIOCHLOR Model discussion and update in Section 3.3 of the 4th Progress Report, no further BIOCHLOR model information will be required at this time.*

   Acknowledged. This change is reflected below and no additional BIOCHLOR model results are included herein.

6. *Point of demonstration monitoring for groundwater was selected as the Property's VRP remediation criteria pursuant to Section 12-8-108-4 of the Act. EPD's Comment #4 of the March 9, 2016 response letter requested the identification of the point of exposure (POE) for MW-4A and MW-9A, which were previously identified as the point of demonstration (POD) wells. The 4th and 5th Progress Reports identified the established point of exposure (POE) for both wells as a hypothetical location that is 1,000-feet down gradient of the boundary of the plume. Based on the detection of VOCs above Type 1 delineation standards at POD well MW-4A and MW-10, additional investigation and monitoring appear to be warranted down gradient of the eastern property boundary. Various options for addressing potential migration of plume were discussed during the April 12, 2017 meeting with EPD. Please submit a remediation plan to complete delineation along the eastern property boundary, which should achieve the following:*
   a. *Demonstrate groundwater delineation to Type 1 RRS to the extent practicable.*
   b. *Identify any potentially complete exposure pathways that may be impacted by the VOC plume beyond the Property boundary. Any existing remedial measures and/or institutional controls should be modified as necessary.*

CMC's response to this comment is addressed primarily by the work plan for additional groundwater investigation that is included in Section 4.0 of this Progress Report. Results of the initial phase of the supplemental groundwater investigation will determine if additional investigation is necessary to delineate to the Type 1 RRS.

The 5th Progress Report submitted by OmniSource noted long-term fluctuations of VOC concentrations in POD wells, especially at MW-4A. CMC's confirmation groundwater sampling in May 2017 (results included herein) further demonstrated the dynamic nature of VOC concentrations in several site wells, including POD well MW-4A. One goal of the supplemental groundwater investigation is to determine the cause or source of these VOC fluctuations.

Regarding comment 6.b., CMC will not know if modifications to the corrective actions and/or institutional controls will be necessary until the proposed supplemental groundwater investigation is sufficiently complete. This may require additional phases of investigation. For this reason, we will address the issues raised by comment 6.b. in future submittals to EPD.

7. *Based on EPD's review of the Groundwater Exposure Pathway as it pertains to impacting the Surface Water Exposure Pathway, the assertion that the pathway is incomplete because subsurface storm water piping is positioned at elevations above the water table in the areas containing VOCs does not provide convincing evidence in support of an incomplete Surface Water Exposure Pathway. Conversely, EPD recommends emphasizing that the nearest surface water body, East Fork Trail Creek, currently lies more than 1,000-feet from the known extent of the VOC plume to adequately support the determination that the surface water pathway is incomplete. Depending upon the results of the additional groundwater investigations, reassessment of the surface water exposure pathway may be warranted.*

   The current Conceptual Site Model (Section 5.0 below) has been updated to reflect this recommended change by EPD.

8. *The 4th and 5th Progress Reports conclude that the vapor intrusion (VI) exposure pathway is incomplete and exposure to a VI exposure hazard was unlikely, as there were no buildings or structures that overlay the known groundwater plume boundary on-Property and the nearest occupied downgradient structure is greater than 100-feet from the edge of the VOC plume. EPD requires revaluation of the VI Exposure Pathway pending further delineation of the downgradient extent of the VOC plume at the eastern property boundary, and potentially off-Property. As discussed in the above referenced meeting with EPD, CMC has the option to address VI mitigation requirements in the Property's uniform environmental covenant (UEC).*

   Following the completion of groundwater assessment activities, a determination will be made to determine if the VI Exposure Pathway requires additional evaluation. If so, a VI evaluation workplan will be provided to EPD for review and approval. The first step of the VI evaluation will include a comparison to USEPA Groundwater Screening Levels.

9. *Former source area monitoring well MW-2A was last sampled on May 20, 2015, prior to its closure. The final sampling results were not posted to Figure 4, Groundwater Sampling Results, of the 4th and 5th Progress Reports. Please post the results to the figure in future reports to document plume conditions prior to the decommissioning of the well.*

Historical VOC results from well MW-2A will be included on maps summarizing groundwater sampling results in future submittals. Note that the intent of Figure 4 in both reports was to show the current VOC detection results, not historical results.

10. *Pursuant to Chapter 391-3-26 of Commercial Environmental Laboratories, the Reports should include a laboratory certification for all sample media that includes the name of the laboratory, name of the accreditor, accreditation ID number, scope of accreditation, and effective expiration dates of accreditation. Please provide the information for the data presented in the subject Report and all future reports in which lab data is submitted.*

    Accreditation documentation for past laboratory results found in the 4th Progress Report and the 5th Progress Report is included in **Appendix A**. This information will be provided in future reports. Also note that certification documentation for analytical data obtained during this reporting period is also included in Appendix A for Shealy Laboratories and in the laboratory report prepared by Environmental Monitoring & Laboratory Analysis (now Pace Laboratories), where split samples were collected during the May 2017 confirmation sampling event. Both laboratories meet the Georgia Chapter 391-3-26 certification requirement via their NELAC accreditations through the State of Florida.

2.0 CONFIRMATION GROUNDWATER MONITORING METHODS

This section describes the methods and results of the most recent groundwater monitoring event conducted at the site in May 2017. On behalf of CMC, Apex completed a groundwater sampling event limited to three monitoring wells to confirm groundwater analytical results obtained in the November 2016 sampling event. The sections below outline the methods utilized and sampling results.

2.1 Groundwater Gauging and Sampling

The limited groundwater sampling event was conducted on May 5, 2017 by Apex. Groundwater levels were first gauged from six monitoring wells (MW-3A, MW-4A, MW-7A, MW-8A, MW-9, and MW-10). Gauging was followed by groundwater purging and sampling from three wells: MW-3A, MW-4A and MW-10. Split samples were also collected from well MW-4A and submitted to two separate laboratories for analyses of VOCs. Groundwater samples were collected from monitoring wells MW-3A, MW-4A, and MW-10 to verify analytical results obtained during the previous (November 2016) sampling event.

Prior to purging and sampling, each of the wells were opened and allowed to equilibrate. Groundwater levels in the three wells were then gauged with a decontaminated electronic water level probe and were recorded to the nearest 0.01-foot. Historical groundwater gauging and elevation measurements for wells MW-3A, MW-4A, and MW-10, including data from the May 2017 gauging event, are provided in **Table 1.**

Each of the three wells were purged and sampled by low flow protocol in accordance with the U.S. EPA Region IV Science & Ecosystem Support Division (SESD) Operating Procedure for Groundwater Sampling (SESDPROC-301-R3). The wells were purged using a peristaltic pump equipped with Teflon-lined tubing with the intake placed near the middle of the screened interval. The wells were sampled in order of lowest to highest VOC concentrations based on historical sampling results.

During low-flow well purging, groundwater water quality indicator parameters of pH, temperature, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were recorded at five-minute intervals using a Horiba U-52 multi-probe water quality meter. As a general practice, groundwater samples are collected when water chemistry parameters are stable (e.g., pH values within 0.1 standard unit, specific conductance within 5% and turbidity <10 NTUs) for a minimum of three consecutive five-minute intervals. Groundwater sampling forms documenting the groundwater quality indicator parameters are provided in **Appendix B**. Each of the purged wells had stabilized turbidity levels below 10 NTUs.

Following purging, groundwater samples from each well were collected into laboratory supplied sample containers using the peristaltic pump. In accordance with SESDPROC-301-R3, samples for VOC analyses were collected using the "soda straw" method. The sample containers were labelled with a unique sample number, date and time of collection, sampler's initials and analyses required. Following collection, the samples were placed in a cooler with ice. Chain-of-custody documentation was maintained throughout the sampling event.

Samples from wells MW-3A, MW-4A and MW-10, and a trip blank were transported under chain-of-custody to Shealy Environmental Services, Inc. (Shealy) of Columbia, South Carolina and analyzed for VOCs by EPA Method 8260B. The split groundwater sample collected from well MW-4A was submitted to Pace Analytical Services (formerly Environmental Monitoring & Laboratory Analyses) of Peachtree Corners, Georgia for VOC analysis by Method 8260B. A field duplicate sample was not collected during this sampling event because the split sample collected from MW-4A and submitted to a separate laboratory served a similar purpose.

The laboratory analytical reports and chain-of-custody records are found in **Appendix C**. Discussion of the May 2017 groundwater monitoring results are provided in Section 3.0 herein.

3.0 CONFIRMATION GROUNDWATER MONITORING RESULTS

3.1 May 2017 Groundwater Gauging Results

Table 1 summarizes the historical groundwater gauging and elevation measurements from six wells (MW-3A, MW-4A, MW-7A, MW-8A, MW-9, and MW-10), inclusive of the May 5, 2017 gauging event. Water level elevations were generally higher in these wells during the May 2017 gauging event when compared to their prior water level elevations in November 2016. For the three wells that were sampled in May 2017, the water level elevation increases during that preceding six-month period ranged from 0.70 feet at MW-3A to 2.44 feet at MW-4A. These results confirm prior observations that water level fluctuations of several feet can occur in the shallow site wells over relatively short time periods.

3.2 May 2017 Groundwater Analytical Results

Table 2 summarizes the VOC analytical results from the limited May 2017 sampling event along with historical groundwater VOC results for wells MW-3A, MW-4A, and MW-10. The purpose of the limited sampling event was to confirm the previous November 2016 sampling results for these three wells, where anomalous increases in one or more VOCs had been indicated.

Laboratory analytical results in Table 2 show that fourteen different VOCs were detected at quantified or estimated (J-flagged) concentrations in one or more groundwater samples from the three wells sampled in May 2017. However, only one of these wells (MW-3A) had one or more

VOCs that exceeded their Type 1 Risk Reduction Standards (RRSs) for groundwater. Specifically, benzene was detected at a concentration of 7.3 micrograms per liter (µg/L) at MW-3A, which exceeds its Type 1 RRS. No other VOCs were detected above their Type 1 RRS during this event.

When compared to the November 2016 sampling results, the detected VOCs were generally lower concentrations during the May 2017 event (see Table 2). During the November 2016 sampling event, benzene exceeded its Type 1 RRS at wells MW-3A, MW-4A, and MW-10. Benzene concentrations subsequently declined more than 50 percent at each of these three wells in the May 2017 event, with the largest benzene reduction observed at MW-4A. Similarly, TCE concentrations equaled or exceeded its Type 1 RRS at wells MW-3A and MW-4A during the November 2016 sampling event, and the TCE concentrations were significantly lower and below the Type 1 RRS at the three wells during the limited sampling event in May 2017.

The inverse relationship between TCE concentrations and water level elevations continued to be demonstrated at wells MW-3A, MW-4A and MW-10 during the May 2017 sampling event. This relationship is most pronounced at MW-4A, where the water level elevation increased by 2.44 feet and the TCE concentration declined by 97.9 percent during the time period from November 2016 to May 2017. This phenomenon was discussed in more detail in the 5th Progress Report and will be further investigated by CMC during the pending supplemental groundwater investigation.

3.2.1 Field QA/QC Samples

No VOCs were detected in the trip blank submitted to Shealy Laboratories during the May 2017 sampling event. A field duplicate was not submitted since split sampling was conducted.

The split sample for well MW-4A that was submitted to Pace Analytical Services showed no detections of any Method 8260 VOCs. The TCE concentration for MW-4A was reported by Pace as <2 µg/L (below the reporting limit). Shealy reported a detected TCE concentration of 1.7 µg/L with a reporting limit (RL) of 1.0 µg/L for sample MW-4A. The MW-4A split sample results between two different laboratories are comparable in accuracy, with the only differentiator being the reporting limits (detection limits) by each lab for the samples.

4.0 WORK PLAN FOR SUPPLEMENTAL GROUNDWATER INVESTIGATION

4.1 Supplemental Groundwater Investigation

CMC proposes to conduct a supplemental groundwater investigation at the VRP site. The groundwater investigation will have several objectives, listed below, as they relate to the future CSR completion under the VRP program:

- Further investigate the vertical and horizontal extent of VOCs in groundwater along the eastern, southeastern, and southern property boundaries. Specific attention will be given to assessing whether or not higher VOC concentrations are present in groundwater at depths below the shallow screened intervals of wells MW-4a, MW-7a and MW-10a, and if VOCs have potentially migrated off-site in these downgradient areas;
- Investigate the current vertical and lateral distribution and trends of VOCs in groundwater in the plume source areas, which are the areas located around MW-11 and in the suspected mid-plume area around MW-3a.

- Install optional permanent monitoring wells as needed to complete the plume delineation and to re-establish an appropriate POD monitoring location.

4.1.1 Direct-Push Groundwater Sampling (On-Site)

The supplemental groundwater investigation may be implemented in multiple phases based on the findings of each preceding phase of investigation. The initial phase of the groundwater investigation will include a limited on-site groundwater assessment using direct-push technology (DPT; i.e., Geoprobe®) sampling methods. Multi-depth DPT groundwater samples will be collected at the six boring locations shown on **Figure 3**. The proposed locations of these borings will address the investigation objective of on-site vertical and horizontal assessment of the VOC plume. CMC does not propose to perform any off-site DPT groundwater sampling during the initial phase of the investigation. The need for an off-site investigation will be assessed based on plume conditions established along the eastern property boundary of the VRP site.

For the initial phase of DPT sampling, a Geoprobe® model 7822 track-mount DPT rig will be used to advance borings and collect groundwater samples. A retractable screen sampler with a nominal 4-foot sampling interval will be used to collect in-situ groundwater samples from each boring. However, small diameter temporary PVC wells may be installed at any boring locations where in-situ groundwater sampling and water recovery is problematic with the retractable screen sampler. Any temporary small-diameter PVC wells that are installed will be removed after sampling is complete, and all DPT boreholes will be abandoned with a bentonite/cement grout mixture upon completion of sampling.

The DPT sampling program will be designed to collect multi-depth groundwater samples at various locations based on the screened intervals and vertical data gaps at the existing on-site monitoring well network. Up to 12 primary groundwater samples, plus two duplicates, will be collected from the DPT boreholes for laboratory analyses of VOCs by Method 8260B. The sampling program will consist of the following sampling scheme and depths at the six boring locations shown in Figure 3:

- Shallow groundwater samples near the water table (21-25 feet deep) at one of the six DPT boring locations;
- Mid-depth samples (ranging from 35 to 50 feet deep) from each of the six locations; and,
- Deep groundwater samples (ranging from 55 feet deep to either DPT refusal or 80 feet deep) at five out of six locations.

No soil cores or soil samples will be collected during this DPT sampling program since there is adequate historical lithologic characterization at the site. Based on past lithologic characterization and direct push sampling, DPT refusal will be interpreted to represent the deep saprolite hydrostratigraphic zone or the top of the partially weathered rock (i.e., transition) zone of the aquifer system.

4.1.2 Optional Off-Site DPT Groundwater Investigation

Based on the results of the supplemental on-site DPT groundwater investigation, CMC will evaluate the necessity of a subsequent off-site phase of DPT groundwater sampling. The necessity and scope of an off-site groundwater investigation will be determined by the results of the initial phase of on-site DPT groundwater sampling. Due to the current uncertainties associated with any potential off-site investigation, CMC is not proposing details of subsequent or optional

phases of investigation in this work plan. If required by EPD, a separate work plan for additional on-site or off-site investigations will be submitted at the appropriate time.

4.1.3 Installation of Additional Permanent Wells

CMC recognizes that one or more additional permanent groundwater monitoring wells may be needed to further delineate the VOC plume and to re-establish a POD well location. For the same reasons cited above in Section 4.1.2 for the optional DPT investigation, CMC is currently not proposing any details regarding additional permanent wells in this work plan. These decisions will be deferred until results of the eastern property boundary and/or the off-site DPT groundwater investigation(s) can be evaluated. If required by EPD, a separate work plan for installation of additional permanent wells will be submitted at the appropriate time.

4.2 Semi-Annual Groundwater Sampling Event

CMC proposes to conduct another semi-annual groundwater sampling event in accordance with a revised groundwater sampling plan described in this section. For the next sampling event, water levels will be gauged in each of the 13 site wells, and 10 of the existing site wells will be purged and sampled for laboratory analyses of VOCs. The remaining three site wells that will not be sampled during the next semi-annual event include MW-6, MW-13, and MW-7a. These three wells are either a background location and/or did not contain VOC detections during the past one or two sampling events. As a result, wells MW-6, MW-13 and MW-7a will be changed to an annual monitoring schedule unless otherwise notified in a future progress report.

Following water level gauging, the ten wells will be purged and sampled using low-flow methods as was done during previous monitoring events. Groundwater sampling methods specified in previously approved work plans will be followed. During low-flow purging, the groundwater quality field parameters of pH, temperature, dissolved oxygen, conductivity, and oxidation-reduction potential will be measured at three to five minute intervals to determine groundwater stabilization.

Once the groundwater field parameters are stabilized, groundwater samples will be collected from each of the ten wells and placed in laboratory-provided bottle ware. Samples will be placed on ice and shipped to a Georgia-certified laboratory for analyses of VOCs by EPA Method 8260. The following primary and quality control samples are proposed for Method 8260 VOC analyses:

- 10-Primary samples
- 1-Trip blank (provided by lab)
- 1-Blind field duplicate

Purge water and decontamination water will be containerized and disposed of in accordance with local, state, and federal requirements.

4.3 7th Semi-Annual Progress Report and UEC Submittal

CMC will submit the 7th Progress Report to EPD after completing the activities described in the work plan herein. Unless otherwise requested by EPD, the 7th Progress Report will include the data and results of the semi-annual groundwater monitoring event and results of the DPT groundwater assessment proposed herein. If specifically requested by EPD, CMC may submit the findings of the initial DPT groundwater sampling program in a separate report to EPD prior to the 7th Progress Report. An updated conceptual site model (CSM), responses to any EPD

comment to the 6th Progress Report, and any necessary updates to the VRP schedule will be included in the 7th Progress Report.

As the pending new VRP applicant, CMC will pursue the Uniform Environmental Covenants (UECs) for the three Site parcels. The draft UECs for the three on-site VRP parcels will be submitted prior to the next progress report unless subsequent investigations determine a VI issue for the site. If potential VI issues will be addressed in the UECs, their draft submittals may be delayed until after the next progress report.

5.0 REVIEW OF CONCEPTUAL SITE MODEL

This section provides a review and update of the CSM, including the current status of each exposure pathway. The initial VRP application submitted by Hull in 2011 included a description of the CSM developed by Peachtree Environmental, Inc. A CSM update was provided in the *2nd Semi-Annual Progress Report* (April 2013) prepared by Peachtree and in subsequent progress reports submitted by Apex. With a few exceptions described below, findings of the current monitoring period do not create any major changes to the prior CSM understanding of the site.

5.1 CSM Update

Site Hydrogeology

Based on groundwater gauging data obtained by Apex in January 2015, May 2015, April 2016 and November 2016, groundwater consistently flows toward the southeast. The current estimated vertical hydraulic gradient in groundwater is 0.0771 ft/ft, and the flow direction is downward at the MW-1D well location. Changes in vertical gradients have occurred between sampling events, but the flow direction remains downward in each event.

The upper 80 feet or more of the soil column consists of saprolitic regolith. Partially weathered rock (PWR) and/or consolidated bedrock was not encountered in well MW-1D drilled to approximately 74 feet deep. Well MW-1D sampling data from June 2015, April 2016 and November 2016 verify that VOC concentrations in the deeper portions of the saprolite are one to two orders of magnitude lower than the VOC concentrations in the overlying shallow zones. These results suggest that the plume attenuates rapidly with depth, before reaching the PWR hydrostratigrahic zone. This limits the potential seepage velocity of the plume.

Slug test data indicate that the saprolitic material has a hydraulic conductivity (K) ranging from 0.3843 ft/day (downgradient perimeter) to 2.299 ft/day (upgradient). Groundwater flows to the southeast based on potentiometric map interpretations. For the November 2016 event, a hydraulic gradient of 0.0128 ft/ft was calculated for the upgradient portion of the site near wells MW-12, MW-1, and MW-13. A steeper hydraulic gradient of 0.0376 ft/ft was seen around wells MW-11, MW-10 and MW-4A located near the east-southeastern property boundary. An even steeper gradient exists in the vicinity of wells MW-14 and MW-7a near the southwest property boundary, where an approximate hydraulic gradient of 0.0667 ft/ft is estimated.

The *4th Semi-Annual Progress Repor*t estimated an average groundwater linear seepage velocity of approximately 30.4 feet/year based on an effective porosity of 18%, an average K of 0.6632 ft/day (average of 2015 values from MW-4A and MW-11), and a gradient of 0.023 ft/ft (measured in the plume area perpendicular to potentiometric lines between MW-11 to MW-4A). The slightly higher gradient of 0.0376 ft/ft measured between MW-11 and MW-4A indicates that a higher

seepage velocity (estimated 50.6 ft/year) was present in the plume area during the November 2016 sampling event. Previous progress reports by Apex stated that the linear seepage velocity could range from 65 ft/year to 107 ft/year at various locations across the site using the variable hydraulic gradients, variable K values, and an 18% effective porosity value. The linear seepage velocity is derived from the following calculation:

$$\mathbf{v_s = -K\ i\ /\ q}$$

Where:

v_s = linear seepage velocity [units of L/T]

K = hydraulic conductivity [units of L/T; determined from slug tests]

i = hydraulic gradient [units of L/L; determined from potentiometric map]

q = effective porosity [units of percent V/V; literature values from soil type]

A trend graph was developed and presented in the *5th Progress Report* that compares long-term precipitation data from a nearby USGS monitoring station with long-term water level elevations at well MW-4A. This graph can be used to illustrate the time period (delay) between seasonal high and major precipitation events compared to increases in site groundwater levels due to recharge. The trend graph indicates that the highest water level elevations in MW-4A occur approximately six to eight months following the peak of seasonal high precipitation trends. Shorter recharge time periods between four to six months were also evident during one period on the graph. These results provide a broad estimation of the time period required for precipitation to recharge the shallow aquifer at the site in the vicinity of well MW-4A.

Regulated Constituents

The list of regulated constituents for soil and groundwater was established in previous progress reports. During the April 2016 sampling event, seven VOCs that had previously not been tested or reported in site groundwater were detected at quantified or estimated (J-flagged) concentrations at one or more wells. For the subsequent sampling event in November 2016, five of these newly-reported VOCs were again detected at quantified or estimated (J-flagged) concentrations in one or more wells:

- 1,1,2-Trichloro-1,1,1-Trifluoroethane
- 1,2-Dichloroethane (in one duplicate sample only)
- Isopropylbenzene
- Methylcyclohexane
- Methylene Chloride

The following VOCs that were detected do not have an assigned Type 1 RRS for groundwater: Isopropylbenzene; and Methylcyclohexane. None of the other three VOCs exceeded their respective Type 1 RRSs during the 2016 sampling events.

Soil Exposure Pathway

Soil COCs were previously identified and delineated to background concentrations by Peachtree. Remedial activities were conducted in 2002 and 2003 to address soil and groundwater. Prior remedial activities at the site include excavation and off-site disposal of approximately 43,000

tons of impacted soil. Compliance with non-residential Type 3 and Type 4 RRSs for soil was demonstrated in prior submittals to GAEPD. Based on this work, the impacts to unsaturated soil have been addressed and there is no known exposure pathway that remains in soil. The soil exposure pathway in the CSM remains unchanged from the previous progress report.

Groundwater and Surface Water Exposure Pathways

The COCs are now limited to those VOCs that have a RRS. The 4th and 5th Progress Reports stated that impacted groundwater above RRSs was limited to on-site areas, which was accurate based on the monitoring data from those events. Horizontal delineation of shallow groundwater COCs to their Type 1 RRS appears to remain completed to the south.

Periodic fluctuations of TCE and benzene concentrations at wells MW-4A and MW-10 suggest that these VOCs could have migrated beyond the eastern fence line (approximately 50 feet from the property line), and possibly off-site to the east, above their Type 1 RRSs. The confirmation groundwater sampling event in May 2017 continues to demonstrate an inverse relationship between TCE concentrations and water level elevations at wells MW-3A, MW-4A, and MW-10. These fluctuations have introduced questions about the suitability of well MW-4A as a POD well, and the cause of the VOC fluctuations at multiple wells has not been determined to date.

Vertical delineation is sufficiently complete at MW-1D, even though one constituent (TCE) slightly exceeds its RRS at a depth of 74 feet (633 ft MSL elevation) at this well in the mid-plume area. Sampling data from 2015 and 2016 confirm that the plume is attenuating vertically, with TCE concentrations in the deeper saprolite that are one to two orders of magnitude lower than the upper (shallow) saprolite zones.

The closest surface water body is East Fork Trail Creek which is more than 1,000 feet from the known extent of the plume. Based on the shallow groundwater data obtained, the surface water exposure pathway is not complete.

Subsurface Vapor Intrusion Exposure Pathway

CMC's understanding of the potential VI conditions at the site are unchanged from the previous progress report. The *5th Progress Report* stated that there are no occupied structures which overlay the then-known groundwater plume boundary which could result in a VI exposure hazard. The EPD has requested that CMC further evaluate the VI potential at the site, with emphasis on the potential for off-site impacts. The VI exposure pathway in the CSM will be updated if as new data become available.

5.2 Point of Exposure Determination

Well MW-9A was the original POD well identified since it is hydraulically downgradient of the historical source area in the vicinity of well MW-2A. Well MW-4A was added as a POD well in 2015 since it was determined to be positioned more directly downgradient from the secondary source area in the vicinity of MW-11. Both wells MW-9A and MW-4A are currently being used as POD wells. As stated earlier in this report, the continued suitability of MW-4A as a POD well will be further evaluated as the supplemental DPT groundwater investigation progresses.

The basis of establishing a point of exposure (POE) for well MW-4A is similar to that previously used for MW-9A since these two POD wells are positioned at similar distances downgradient of their respective source areas and those source areas are in close proximity near the center of the

site. Thus, the POE for well MW-4A will be a location similar to the POE established for MW-9A, which is 1,000 feet downgradient of the current plume boundary. These areas are known to be on municipal water supplies and do not have any known water supply wells.

6.0 RECOMMENDATIONS FOR FUTURE VRP ACTIVITIES

The following recommendations are made for continuing the VRP activities at the Former Loef Facility VRP site in Athens, Georgia:

- CMC will finalize and submit to EPD the VRP Application to officially transfer the VRP applicant status from OmniSource to Owen Electric Steel Company of South Carolina (a subsidiary of CMC). The VRP transfer application was delayed by CMC until the third (southern) parcel of the VRP site could be legally transferred with warranty deed. The legal transfer of the third parcel was recently completed.
- Perform another semi-annual groundwater event using the modified sampling plan presented in this progress report. Results of the groundwater sampling event will be presented in a future 7th Progress Report. Statistical trend analyses of the historical groundwater VOC data should be updated using the Mann-Kendall tests. These statistical evaluations should continue to be used to supplement the evaluations of primary lines of evidence for plume attenuation and stability.
- Perform the first phase of the on-site supplemental groundwater investigation using DPT sampling methods as described in the work plan herein. Evaluate the sampling results to determine if subsequent phases of DPT sampling are required to delineate the VOC plume to Type 1 RRSs and to establish a new POD well. If required by EPD, submit a work plan addendum to expand the DPT groundwater investigation.
- Based on the results of the DPT sampling phases of the investigation, determine if additional permanent groundwater monitoring wells are required. If they are required, develop and implement a work plan for their installation (Note: work plans for further DPT investigation and permanent well installations may be combined).
- Evaluate the potential for VI exposure pathways as additional groundwater data becomes available.
- Submit the 7th Progress Report to EPD. This report will include results of the next semi-annual groundwater monitoring event, results of the initial DPT sampling phase, and any preliminary VI evaluation data that are available at that time. If specifically requested by EPD, results of the DPT investigation(s) may be submitted in a separate report on a separate schedule.
- Prepare and submit the UECs for the on-site parcels.

Apex has included a monthly summary of hours invoiced to this project by a Georgia licensed professional geologist as **Appendix D.**

6.1 VRP Schedule of Activities

The following table presents a preliminary schedule of potential future VRP activities. Past milestone tasks already completed at the site are not included in the revised schedule. This schedule will be updated with a more detailed Gantt chart in the next progress report.

Table - Schedule of Future VRP Activities

VRP Task or Milestone	Estimated Start Date or Sequencing Timeframe
Submit VRP Application (to transfer to CMC)	October 6, 2017
Initiate on-site DPT groundwater investigation (1st Phase)	October 9, 2017
Perform semi-annual groundwater monitoring event using modified sampling plan	October 10, 2017
Evaluate DPT groundwater data; Determine if additional DPT sampling is required to complete plume delineation	November 6, 2017
Submit 7th Progress Report	December 15, 2017
Submit Work Plan(s) for subsequent phase of groundwater investigations	TBD (or in 7th Progress Report)
Implement subsequent phases of groundwater investigations (if required) and vapor intrusion investigation (if required)	TBD
Conduct a semi-annual groundwater monitoring event	April 2018
Submit draft and final UECs	TBD
Submit CSR with Completion Certification	TBD
Modify RAP and implement additional remedial measures (if required for Type 1 RRS and UEC compliance)	TBD

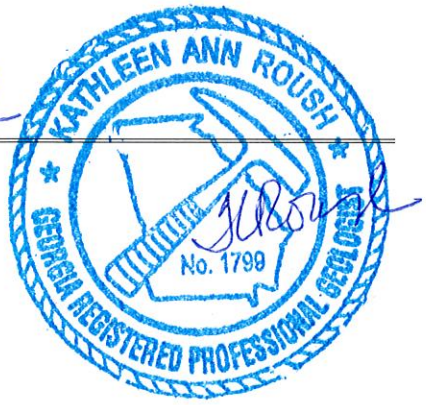
7.0 Registered Professional Supporting Documentation

CERTIFICATION

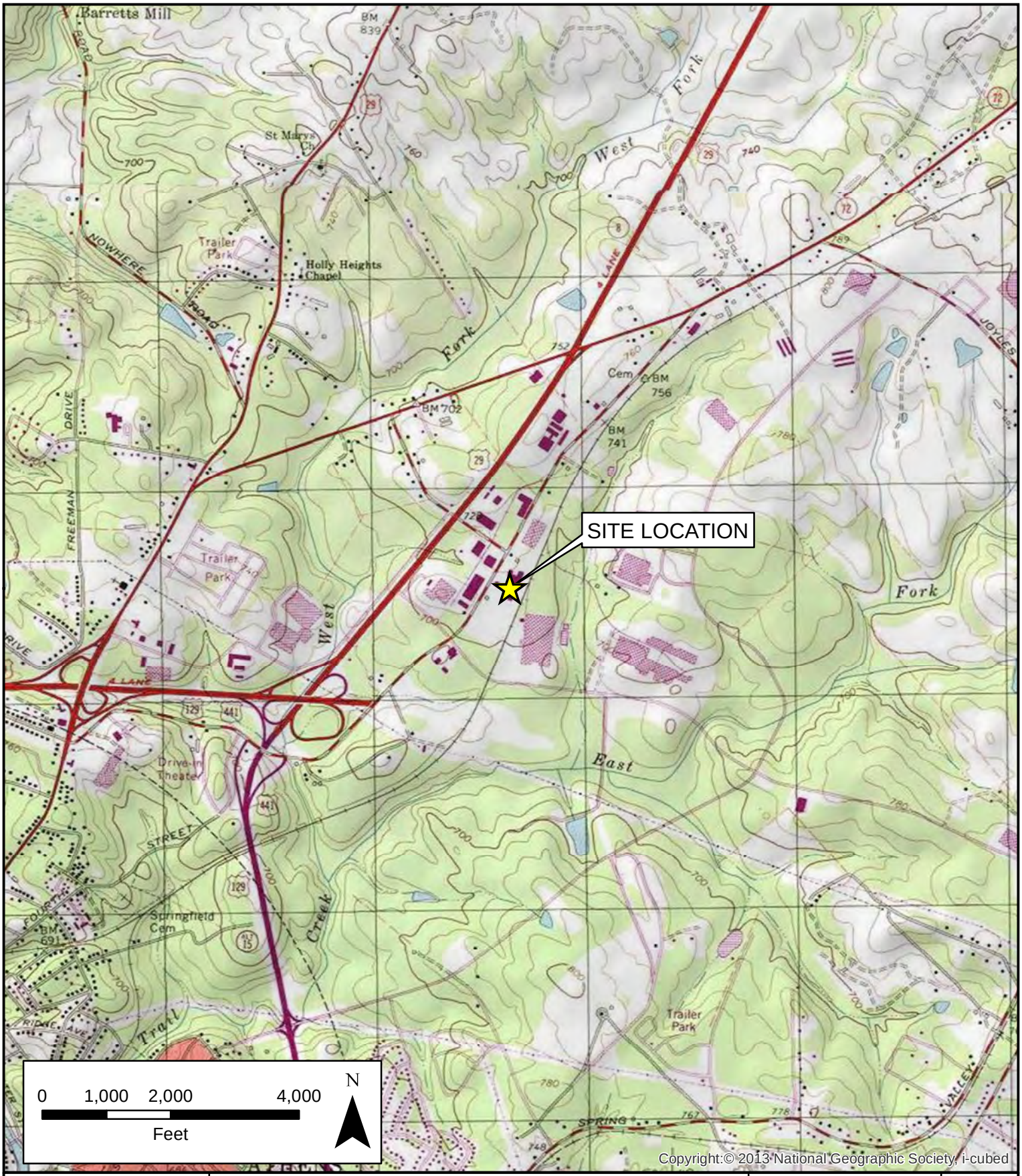
"I certify that I am a qualified groundwater scientist who has received a baccalaureate or post graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgements regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by my subordinate working under my direction."

Kathleen Roush

Kathleen Roush, P.G.
Georgia Registration No. 1799



FIGURES



CHECK BY: GW	SITE LOCATION MAP	FIGURE
DRAWN BY: SP		
DATE: 9/28/17	FORMER LOEF COMPANY PROPERTY	1
SCALE: 1in = 2,000 ft	590 OLD HULL ROAD	
CAD NO.: 510507-001	ATHENS, GEORGIA	
PRJ NO.: 510507-001		
	APEX	

CHECK BY	SGW
DRAWN BY	SJP
DATE	9-28-17
SCALE	AS SHOWN
CAD NO.	510507-002
PRJ NO.	510507-001

SITE PLAN WITH WELL LOCATIONS

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
2

CHECK BY	GW
DRAWN BY	SP
DATE	9-26-17
SCALE	AS SHOWN
CAD NO.	510507-001-04
PRJ NO.	510507-001-04

PROPOSED DIRECT-PUSH GROUNDWATER SAMPLE BORINGS

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
3

TABLES

TABLE 1
HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS
FORMER LOEF FACILITY
ATHENS, CLARK COUNTY, GEORGIA

Well Number	Date Measured	TOC Elevation (ft MSL)	Screen Interval (ft BGS)	Depth to Water (ft BTOC)	Water Table Elevation (ft MSL)
MW-1	5/18/2015	NS	14 to 24 ft	22.87	--
	5/21/2015	711.50		18.52	692.98
	6/3/2015			19.53	691.97
	4/25/2016			18.43	693.07
	11/16/2016			21.54	689.96
MW-1D	5/21/2015	710.17	70 to 75 ft	22.18	687.99
	6/3/2015			26.75	683.42
	4/25/2016			25.36	684.81
	11/16/2016			30.45	679.72
MW-2A*	5/9/2006	710.20	23.15 to 33.15 ft	21.50	688.70
	6/17/2009			22.87	687.33
	6/24/2010			21.00	689.20
	2/24/2011			18.05	692.15
	8/4/2011*	706.70	20 to 30 ft	18.00	688.70
	2/24/2012			19.13	687.57
	9/20/2012			18.89	687.81
	3/7/2013			NM	NM
	3/7/2013			NM	NM
	1/21/2015	706.26		18.15	688.11
	5/18/2015			16.86	689.40
MW-3A	5/9/2006	712.23	20 to 30 ft	25.44	686.79
	6/17/2009			26.79	685.44
	6/24/2010			24.82	687.41
	2/24/2011			25.15	687.08
	8/4/2011			26.15	686.08
	2/24/2012			26.83	685.40
	9/20/2012			26.76	685.47
	3/7/2013			25.72	686.51
	1/22/2015	712.20		25.59	686.61
	5/18/2015			24.31	687.89
	4/25/2016			23.30	688.90
	11/16/2016			27.08	685.12
	5/5/2017			26.38	685.82
MW-4A	5/9/2006	709.18	19.5 to 29.5 ft	27.10	682.08
	6/17/2009			24.76	684.42
	6/24/2010			23.21	685.97
	2/24/2011			22.94	686.24
	8/4/2011			25.49	683.69
	2/24/2012			24.77	684.41
	9/20/2012			24.84	684.34
	3/7/2013			22.96	686.22
	1/22/2015	706.08		23.34	682.74
	5/18/2015			22.21	683.87
	4/25/2016			21.78	684.30
	11/16/2016			26.70	679.38
	5/5/2017			24.26	681.82
MW-6	6/22/2006	720.15	20 to 30 ft	21.67	698.48
	6/17/2009			23.00	697.15
	6/24/2010			20.42	699.73
	2/24/2011			20.62	699.53
	8/4/2011			20.50	699.65
	2/24/2012			22.90	697.25
	9/20/2012			23.81	696.34
	3/7/2013			22.38	697.77
	1/22/2015	719.87		22.36	697.51
	5/18/2015			20.54	699.33
	4/25/2016			19.28	700.59
	11/16/2016			23.75	696.12

TABLE 1
HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS
FORMER LOEF FACILITY
ATHENS, CLARK COUNTY, GEORGIA

Well Number	Date Measured	TOC Elevation (ft MSL)	Screen Interval (ft BGS)	Depth to Water (ft BTOC)	Water Table Elevation (ft MSL)
MW-7A	5/9/2006	696.08	9.5 to 19.5 ft	15.09	680.99
	6/17/2009			15.47	680.61
	6/24/2010			12.46	683.62
	2/24/2011			12.81	683.27
	8/4/2011			18.05	678.03
	2/24/2012			14.51	681.57
	9/20/2012			15.52	680.56
	3/7/2013			11.97	684.11
	1/22/2015	697.15		12.61	684.54
	5/18/2015			13.05	684.10
	4/25/2016			12.52	684.63
	11/16/2016			18.90	678.25
	5/5/2017			13.52	683.63
MW-8A	5/9/2006	695.23	9.5 to 19.5 Ft	12.49	682.74
	6/17/2009			14.02	681.21
	6/24/2010			11.30	683.93
	2/24/2011			11.54	683.69
	8/4/2011			16.87	678.36
	2/24/2012			12.93	682.30
	9/20/2012			13.89	681.34
	3/7/2013			10.91	684.32
	1/22/2015	695.26		11.39	683.87
	5/18/2015			11.75	683.51
	4/25/2016			11.39	683.87
	11/16/2016			17.96	677.30
	5/5/2017			12.04	683.22
MW-9A	5/9/2006	697.13	10 to 20 Ft	13.91	683.22
	6/17/2009			16.51	680.62
	6/24/2010			12.79	684.34
	2/24/2010			12.65	684.48
	8/4/2011			19.80	677.33
	2/24/2012			11.21	685.92
	9/20/2012			10.46	686.67
	3/7/2013			10.21	686.92
	1/22/2015	696.14		12.42	683.72
	5/18/2015			13.58	682.56
	4/25/2016			13.18	682.96
	11/16/2016			21.18	674.96
	5/5/2017			8.97	687.17
MW-10**	3/7/2013	NS	25 to 35 Ft	20.86	NS
	1/22/2015	708.16		21.28	686.88
	5/18/2015			20.23	687.93
	4/25/2016			19.72	688.44
	11/16/2016			23.82	684.34
	5/5/2017			22.34	685.82

Notes:

TOC = Top of Casing

BTOC = Below Top of Casing

ft BGS = feet Below Ground Surface

ft MSL - feet Mean Sea Level

NM = MW-2A was inaccessible in March 2013, so groundwater was not gauged in the well during that event.

NS = Not Surveyed. Wells MW-10 thru MW-14 were installed in December 2013 and were surveyed in January 2015.

Apex resurveyed all wells in January 2015 except MW-1 and MW-1D, which were surveyed in July 2016.

* - MW-2A was reinstalled and surveyed on March 18, 2011 then permanently abandoned in May 2015

**- Top of casing cut by Apex prior to survey

Yellow-highlighted rows represent May 5, 2017 gauging event at six wells only (was not site-wide gauging).

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
WELLS MW-3A, MW-4A and MW-10
FORMER LOEF FACILITY
ATHENS, CLARKE COUNTY, GEORGIA

Monitoing Well ID	Type 1 Risk Reduction Standard (µg/L)	1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Benzene	Bromoform	Cyclohexane	Ethylbenzene	Isopropylbenzene (Cumene)	Methylene chloride	Xylenes (Total)	MTBE	Trichloroethene	Trichlorofluoromethane	Cis-1,2-Dichloroethene
		4,000	7	4,000	5	80	NE	700	NE	5	10,000	NE	5	2,000	70
	DATE	Analytical Results (µg/L)													
MW-3A	6/23/2000	<1	<1	--	**36**	**--**	--	<1	--	--	<3	<1	**30**	--	<1
	5/7/2004	<5	<5	--	<5	--	--	<5	--	--	<5	<5	**11**	--	<5
	5/9/2006	<5	<5	--	**7.4**	**--**	--	<5	--	--	<5	<5	**22**	--	<5
	6/17/2009	<5	<5	--	**13**	--	--	<5	--	--	<5	<5	**15**	--	<5
	6/24/2010	<5	<5	--	**16**	**--**	--	<5	--	--	<5	<5	**17**	--	<5
	2/24/2011	<5	<5	<50	**14**	--	--	<5	--	--	<10	<5	**13**	<5	<5
	8/4/2011	<5	<5	<50	**13**	**--**	--	<5	--	--	<10	<5	**11**	<5	<5
	2/24/2012	<5	<5	<50	**10**	--	--	<5	--	--	<10	<5	**8**	<5	<5
	9/20/2012	<5	<5	<50	**14**	**--**	--	<5	--	--	<10	<5	**9.8**	<5	<5
	3/7/2013	<5	<5	<50	**14**	--	--	<5	--	--	<10	<5	**9.6**	<5	<5
	1/22/2015	<5.0	<5.0	<50	**22**	<5.0	--	<5.0	--	--	<10	<5.0	**8.8**	<5.0	<5.0
	4/26/2016	<1.0	<1.0	<20	**8.2**	<1.0	0.90 J	<1.0	<1.0	<1.0	<1.0	<1.0	3.9	<1.0	0.97 J
	11/17/2016	<1.0	<1.0	<20	**14**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**5.0**	<1.0	0.70 J
	5/5/2017	<1	<1	2.2J	**7.3**	<1	0.72J	<1	<1	<1	<1	<1	3.4	<1	1.5
MW-4A	6/23/2000	<1	<1	--	**12**	**--**	--	<1	--	--	<1	<1	<1	--	<1
	5/7/2004	<5	<5	--	**27**	**--**	--	<5	--	--	<5	<5	**29**	--	<5
	5/9/2006	<5	<5	--	**37**	**--**	--	<5	--	--	<5	<5	**51**	--	<5
	6/17/2009	<5	<5	--	<5	**--**	--	<5	--	--	<5	<5	**7.2**	--	<5
	6/24/2010	<5	<5	--	4.9	**--**	--	<5	--	--	<5	<5	**6.1**	--	<5
	2/24/2011	<5	<5	<50	**7**	**--**	--	<5	--	--	<10	<5	**13**	<5	<5
	8/4/2011	<5	<5	<50	**29**	**--**	--	<5	--	--	<10	<5	**51**	<5	9.5
	2/24/2012	<5	<5	<50	<5	**--**	--	<5	--	--	<10	<5	<5	<5	<5
	9/20/2012	<5	<5	<50	<5	**--**	--	<5	--	--	<10	<5	**6.3**	<5	<5
	3/7/2013	<5	<5	<50	<5	**--**	--	<5	--	--	<10	<5	<5	<5	<5
	1/22/2015	<5.0	<5.0	<50	<5.0	<5.0	--	<5.0	--	--	<10	<5.0	<5.0	<5.0	<5.0
	4/26/2016	<1.0	<1.0	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.35 J	<1.0	<1.0
	11/17/2016	<1.0	<1.0	<20	**34**	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	**81**	<1.0	21
	5/5/2017	<1	<1	<20	<1	<1	<1	<1	<1	<1	<1	<1	1.7	<1	0.53J
	5/5/2017[\A]	<2	<2	<100	<2	<10	--	<2	<10	<5	<5	<10	<2	<10	<2
MW-10	3/7/2013	<5	<5	<50	**5.3**	**--**	--	<5	--	--	34	<5	<5	<5	<5
	1/22/2015	<5.0	<5.0	<50	<5.0	<5.0	--	<5.0	--	--	8.6	<5.0	<5.0	<5.0	<5.0
	4/26/2016	<1.0	<1.0	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0
	11/17/2016	0.94 J	1.3	<20	**8.9**	1.4	<1.0	4.2	1.2	0.88 J	30	2.6	2.5	2.8	<1.0
	5/5/2017	0.71J	0.75J	2.2J	2.6	0.52J	<1	1.2	0.5J	0.63J	6.4	2.5	1.1	3.2	<1

NOTES:

Results shown in units of micrograms per liter (ug/L). Only those VOCs detected in one or more samples are listed in the table.

VOC - Volatile Organic Compounds

"14" - Numbers in bold exceed the applicable Type 1 Risk Reduction Standard criteria.

J - Result is an estimated value below the laboratory reporting limit.

NE - Not Established (no Type 1 Groundwater Risk Reduction Standard is assigned).

-- (or NA) - Compound Not Analyzed.

MW-10 thru MW-14 were installed December 19 - 21, 2013 .

[\A] Split sample at MW-4A analyzed by Pace Analytical Services

Yellow-highlighted cells represent samples collected on May 5, 2017 only at wells MW-3A MW-4A, and MW-10.

Shaded cell: VOC was previously not reported or tested by lab. First reporting for this compound was April 2016 sampling event.

APPENDIX A

LABORATORY ACCREDITATION DOCUMENTATION

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87653

SHEALY ENVIRONMENTAL SERVICES, INC. - 1
106 VANTAGE POINT DRIVE
WEST COLUMBIA, SC 29172

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, DRINKING WATER - SYNTHETIC ORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: July 01, 2017 Expiration Date: June 30, 2018

Susanne Crowe

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87653-35-07/01/2017
Supersedes all previously issued certificates

Laboratory Scope of Accreditation

Attachment to Certificate #: E87653-35, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E87653** EPA Lab Code: **SC00162** **(803) 791-9700**

E87653
Shealy Environmental Services, Inc. - 1
106 Vantage Point Drive
West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
1,1,1,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,1-Trichloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,1,1-Trichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,2,2-Tetrachloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,1,2,2-Tetrachloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260	Volatile Organics	NELAP	5/12/2014
1,1,2-Trichloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,1,2-Trichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,1-Dichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloroethylene	EPA 624	Volatile Organics	NELAP	7/3/2001
1,1-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,1-Dichloropropene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,3-Trichlorobenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
1,2,3-Trichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,4,5-Tetrachlorobenzene	EPA 8270	Extractable Organics	NELAP	5/12/2014
1,2,4-Trichlorobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
1,2,4-Trichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2,4-Trichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,2,4-Trimethylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011	Volatile Organics	NELAP	7/1/2003
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8011	Volatile Organics	NELAP	7/1/2003
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	7/3/2001
1,2-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
1,2-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,2-Dichloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,2-Dichloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Dichloropropane	EPA 624	Volatile Organics	NELAP	7/3/2001
1,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,2-Diphenylhydrazine	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,3,5-Trimethylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8270	Extractable Organics	NELAP	5/12/2014
1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8330	Extractable Organics	NELAP	5/12/2014

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West Columbia, SC 29172

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Analyte	Method/Tech	Category	Certification Type	Effective Date
1,3-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	7/3/2001
1,3-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
1,3-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,3-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,3-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,3-Dinitrobenzene (1,3-DNB)	EPA 8330	Extractable Organics	NELAP	5/12/2014
1,4-Dichlorobenzene	EPA 624	Volatile Organics	NELAP	7/3/2001
1,4-Dichlorobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
1,4-Dichlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,4-Dichlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
1,4-Dioxane (1,4-Diethyleneoxide)	EPA 8270	Extractable Organics	NELAP	5/12/2014
1,4-Naphthoquinone	EPA 8270	Extractable Organics	NELAP	5/12/2014
1,4-Phenylenediamine	EPA 8270	Extractable Organics	NELAP	5/12/2014
1-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	5/12/2014
1-Methylnaphthalene	EPA 8270	Volatile Organics	NELAP	5/12/2014
2,2-Dichloropropane	EPA 8260	Volatile Organics	NELAP	7/1/2003
2,2'-Oxybis(1-chloropropane),bis(2-Chloro-1-methylethyl)ether (fka bis(2-Chloroisopropyl) ether	EPA 625	Extractable Organics	NELAP	7/3/2001
2,2'-Oxybis(1-chloropropane),bis(2-Chloro-1-methylethyl)ether (fka bis(2-Chloroisopropyl) ether	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,3,4,6-Tetrachlorophenol	EPA 8270	Extractable Organics	NELAP	5/12/2014
2,4,5-T	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	10/17/2005
2,4,5-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4,6-Trichlorophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2,4,6-Trichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4,6-Trinitrotoluene (2,4,6-TNT)	EPA 8330	Extractable Organics	NELAP	5/12/2014
2,4-D	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	10/17/2005
2,4-DB	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
2,4-Dichlorophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2,4-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dimethylphenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2,4-Dimethylphenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dinitrophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2,4-Dinitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,4-Dinitrotoluene (2,4-DNT)	EPA 625	Extractable Organics	NELAP	7/3/2001
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270	Extractable Organics	NELAP	7/1/2003

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Analyte	Method/Tech	Category	Certification Type	Effective Date
2,4-Dinitrotoluene (2,4-DNT)	EPA 8330	Extractable Organics	NELAP	5/12/2014
2,6-Dichlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,6-Dinitrotoluene (2,6-DNT)	EPA 625	Extractable Organics	NELAP	7/3/2001
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270	Extractable Organics	NELAP	7/1/2003
2,6-Dinitrotoluene (2,6-DNT)	EPA 8330	Extractable Organics	NELAP	5/12/2014
2-Acetylaminofluorene	EPA 8270	Extractable Organics	NELAP	5/12/2014
2-Amino-4,6-dinitrotoluene (2-am-dnt)	EPA 8330	Extractable Organics	NELAP	5/12/2014
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Butoxyethanol (Butyl cellosolve)	EPA 8015	Volatile Organics	NELAP	5/12/2014
2-Chloroethyl vinyl ether	EPA 624	Volatile Organics	NELAP	7/3/2001
2-Chloroethyl vinyl ether	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Chloronaphthalene	EPA 625	Extractable Organics	NELAP	7/3/2001
2-Chloronaphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Chlorophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2-Chlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	10/17/2005
2-Hexanone	EPA 8260	Volatile Organics	NELAP	7/1/2003
2-Methyl-4,6-dinitrophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2-Methyl-4,6-dinitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Methylnaphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Methylphenol (o-Cresol)	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitrophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
2-Nitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
2-Nitrotoluene	EPA 8330	Extractable Organics	NELAP	5/12/2014
2-Picoline (2-Methylpyridine)	EPA 8270	Extractable Organics	NELAP	5/12/2014
3,3'-Dichlorobenzidine	EPA 625	Extractable Organics	NELAP	7/3/2001
3,3'-Dichlorobenzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
3,3'-Dimethylbenzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
3/4-Methylphenols (m/p-Cresols)	EPA 8270	Extractable Organics	NELAP	10/17/2005
3-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
3-Nitrotoluene	EPA 8330	Extractable Organics	NELAP	5/12/2014
4,4'-DDD	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
4,4'-DDD	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
4,4'-DDE	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
4,4'-DDE	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003

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Analyte	Method/Tech	Category	Certification Type	Effective Date
4,4'-DDT	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
4,4'-DDT	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
4-Amino-2,6-dinitrotoluene (4-am-dnt)	EPA 8330	Extractable Organics	NELAP	10/21/2015
4-Bromophenyl phenyl ether	EPA 625	Extractable Organics	NELAP	7/3/2001
4-Bromophenyl phenyl ether	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chloro-3-methylphenol	EPA 625	Extractable Organics	NELAP	7/3/2001
4-Chloro-3-methylphenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chloroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chlorophenyl phenylether	EPA 625	Extractable Organics	NELAP	7/3/2001
4-Chlorophenyl phenylether	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Chlorotoluene	EPA 8260	Volatile Organics	NELAP	10/17/2005
4-Dimethyl aminoazobenzene	EPA 8270	Extractable Organics	NELAP	5/12/2014
4-Methyl-2-pentanone (MIBK)	EPA 8260	Volatile Organics	NELAP	7/1/2003
4-Nitroaniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Nitrophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
4-Nitrophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
4-Nitroquinoline 1-oxide	EPA 8270	Extractable Organics	NELAP	5/12/2014
4-Nitrotoluene	EPA 8330	Extractable Organics	NELAP	5/12/2014
5-Nitro-o-toluidine	EPA 8270	Extractable Organics	NELAP	5/12/2014
7,12-Dimethylbenz(a) anthracene	EPA 8270	Extractable Organics	NELAP	5/12/2014
Acenaphthene	EPA 625	Extractable Organics	NELAP	7/3/2001
Acenaphthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acenaphthylene	EPA 625	Extractable Organics	NELAP	7/3/2001
Acenaphthylene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acetone	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acetonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acetophenone	EPA 8270	Extractable Organics	NELAP	7/1/2003
Acidity, as CaCO3	SM 2310 B	General Chemistry	NELAP	3/22/2012
Acrolein (Propenal)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Acrylonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003
Aldrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Alkalinity as CaCO3	SM 2320 B	General Chemistry	NELAP	12/31/2008
Allyl alcohol	EPA 8015	Volatile Organics	NELAP	5/12/2014
Allyl chloride (3-Chloropropene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001

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Analyte	Method/Tech	Category	Certification Type	Effective Date
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
alpha-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/24/2008
Aluminum	EPA 200.7	Metals	NELAP	7/3/2001
Aluminum	EPA 200.8	Metals	NELAP	10/17/2005
Aluminum	EPA 6010	Metals	NELAP	7/1/2003
Aluminum	EPA 6020	Metals	NELAP	10/17/2005
Amenable cyanide	EPA 9012	General Chemistry	NELAP	7/1/2003
Amenable cyanide	SM 4500-CN- G	General Chemistry	NELAP	12/31/2008
Ammonia as N	EPA 350.1	General Chemistry	NELAP	7/3/2001
Aniline	EPA 8270	Extractable Organics	NELAP	7/1/2003
Anthracene	EPA 625	Extractable Organics	NELAP	7/3/2001
Anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Antimony	EPA 200.7	Metals	NELAP	7/3/2001
Antimony	EPA 200.8	Metals	NELAP	10/17/2005
Antimony	EPA 6010	Metals	NELAP	7/1/2003
Antimony	EPA 6020	Metals	NELAP	10/17/2005
Aramite	EPA 8270	Extractable Organics	NELAP	5/12/2014
Aroclor-1016 (PCB-1016)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1016 (PCB-1016)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1221 (PCB-1221)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1221 (PCB-1221)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1232 (PCB-1232)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1232 (PCB-1232)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1242 (PCB-1242)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1242 (PCB-1242)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1248 (PCB-1248)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1248 (PCB-1248)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1254 (PCB-1254)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1254 (PCB-1254)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1260 (PCB-1260)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Aroclor-1260 (PCB-1260)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Aroclor-1262 (PCB-1262)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	3/22/2012
Aroclor-1268 (PCB-1268)	EPA 8082	Pesticides-Herbicides-PCB's	NELAP	3/22/2012
Arsenic	EPA 200.7	Metals	NELAP	7/3/2001
Arsenic	EPA 200.8	Metals	NELAP	10/17/2005
Arsenic	EPA 6010	Metals	NELAP	7/1/2003

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Analyte	Method/Tech	Category	Certification Type	Effective Date
Arsenic	EPA 6020	Metals	NELAP	10/17/2005
Atrazine	EPA 8270	Extractable Organics	NELAP	5/12/2014
Barium	EPA 200.7	Metals	NELAP	1/17/2012
Barium	EPA 200.8	Metals	NELAP	10/17/2005
Barium	EPA 6010	Metals	NELAP	1/17/2012
Barium	EPA 6020	Metals	NELAP	10/17/2005
Benzaldehyde	EPA 8270	Extractable Organics	NELAP	5/12/2014
Benzene	EPA 624	Volatile Organics	NELAP	7/3/2001
Benzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Benzidine	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzidine	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(a)anthracene	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzo(a)anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(a)pyrene	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzo(a)pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(b)fluoranthene	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzo(b)fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(g,h,i)perylene	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzo(g,h,i)perylene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzo(k)fluoranthene	EPA 625	Extractable Organics	NELAP	7/3/2001
Benzo(k)fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzoic acid	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzyl alcohol	EPA 8270	Extractable Organics	NELAP	7/1/2003
Benzyl chloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Beryllium	EPA 200.7	Metals	NELAP	7/3/2001
Beryllium	EPA 200.8	Metals	NELAP	10/17/2005
Beryllium	EPA 6010	Metals	NELAP	7/1/2003
Beryllium	EPA 6020	Metals	NELAP	10/17/2005
beta-BHC (beta-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
beta-BHC (beta-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Biochemical oxygen demand	SM 5210 B	General Chemistry	NELAP	12/31/2008
Biphenyl	EPA 8270	Extractable Organics	NELAP	5/12/2014
bis(2-Chloroethoxy)methane	EPA 625	Extractable Organics	NELAP	7/3/2001
bis(2-Chloroethoxy)methane	EPA 8270	Extractable Organics	NELAP	7/1/2003
bis(2-Chloroethyl) ether	EPA 625	Extractable Organics	NELAP	7/3/2001
bis(2-Chloroethyl) ether	EPA 8270	Extractable Organics	NELAP	7/1/2003

Laboratory Scope of Accreditation

Attachment to Certificate #: E87653-35, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E87653** EPA Lab Code: **SC00162** **(803) 791-9700**

E87653
Shealy Environmental Services, Inc. - 1
106 Vantage Point Drive
West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 625	Extractable Organics	NELAP	7/3/2001
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 8270	Extractable Organics	NELAP	7/1/2003
Boron	EPA 200.7	Metals	NELAP	7/3/2001
Boron	EPA 6010	Metals	NELAP	7/1/2003
Boron	EPA 6020	Metals	NELAP	10/17/2005
Bromide	EPA 300.0	General Chemistry	NELAP	7/3/2001
Bromide	EPA 9056	General Chemistry	NELAP	7/1/2003
Bromobenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Bromochloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Bromodichloromethane	EPA 624	Volatile Organics	NELAP	7/3/2001
Bromodichloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Bromoform	EPA 624	Volatile Organics	NELAP	7/3/2001
Bromoform	EPA 8260	Volatile Organics	NELAP	7/1/2003
Butyl benzyl phthalate	EPA 625	Extractable Organics	NELAP	7/3/2001
Butyl benzyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Cadmium	EPA 200.7	Metals	NELAP	7/3/2001
Cadmium	EPA 200.8	Metals	NELAP	10/17/2005
Cadmium	EPA 6010	Metals	NELAP	7/1/2003
Cadmium	EPA 6020	Metals	NELAP	10/17/2005
Calcium	EPA 200.7	Metals	NELAP	7/3/2001
Calcium	EPA 6010	Metals	NELAP	7/1/2003
Calcium	EPA 6020	Metals	NELAP	10/17/2005
Caprolactam	EPA 8270	Extractable Organics	NELAP	3/22/2012
Carbazole	EPA 8270	Extractable Organics	NELAP	7/1/2003
Carbon disulfide	EPA 8260	Volatile Organics	NELAP	7/1/2003
Carbon tetrachloride	EPA 624	Volatile Organics	NELAP	7/3/2001
Carbon tetrachloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Carbonaceous BOD (CBOD)	SM 5210 B	General Chemistry	NELAP	7/3/2001
Chemical oxygen demand	SM 5220 D	General Chemistry	NELAP	12/31/2008
Chlorate	EPA 300.0	General Chemistry	NELAP	3/22/2012
Chlordane (tech.)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Chlordane (tech.)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	10/17/2005
Chloride	EPA 300.0	General Chemistry	NELAP	7/3/2001
Chloride	EPA 9056	General Chemistry	NELAP	10/17/2005
Chlorobenzene	EPA 624	Volatile Organics	NELAP	7/3/2001
Chlorobenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003

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Analyte	Method/Tech	Category	Certification Type	Effective Date
Chlorobenzilate	EPA 8270	Extractable Organics	NELAP	5/12/2014
Chloroethane	EPA 624	Volatile Organics	NELAP	7/3/2001
Chloroethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chloroform	EPA 624	Volatile Organics	NELAP	7/3/2001
Chloroform	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chloroprene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Chromium	EPA 200.7	Metals	NELAP	7/3/2001
Chromium	EPA 200.8	Metals	NELAP	10/17/2005
Chromium	EPA 6010	Metals	NELAP	7/1/2003
Chromium	EPA 6020	Metals	NELAP	10/17/2005
Chromium VI	EPA 218.6	General Chemistry	NELAP	10/21/2015
Chromium VI	EPA 7196	General Chemistry	NELAP	10/17/2005
Chromium VI	EPA 7199	General Chemistry	NELAP	10/21/2015
Chromium VI	SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS	General Chemistry	NELAP	5/12/2014
Chrysene	EPA 625	Extractable Organics	NELAP	7/3/2001
Chrysene	EPA 8270	Extractable Organics	NELAP	7/1/2003
cis-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
cis-1,3-Dichloropropene	EPA 624	Volatile Organics	NELAP	7/3/2001
cis-1,3-Dichloropropene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Cobalt	EPA 200.7	Metals	NELAP	7/3/2001
Cobalt	EPA 200.8	Metals	NELAP	10/17/2005
Cobalt	EPA 6010	Metals	NELAP	7/1/2003
Cobalt	EPA 6020	Metals	NELAP	10/17/2005
Color	SM 2120 B	General Chemistry	NELAP	12/31/2008
Color	SM 2120 E	General Chemistry	NELAP	12/31/2008
Conductivity	EPA 120.1	General Chemistry	NELAP	7/3/2001
Conductivity	SM 2510 B	General Chemistry	NELAP	3/22/2012
Copper	EPA 200.7	Metals	NELAP	7/3/2001
Copper	EPA 200.8	Metals	NELAP	10/17/2005
Copper	EPA 6010	Metals	NELAP	7/1/2003
Copper	EPA 6020	Metals	NELAP	10/17/2005
Cyanide	EPA 335.4	General Chemistry	NELAP	12/31/2008
Cyanide	SM 4500-CN E	General Chemistry	NELAP	3/22/2012
Cyclohexane	EPA 8260	Volatile Organics	NELAP	5/12/2014
Cyclohexanone	EPA 8260	Volatile Organics	NELAP	5/12/2014

Laboratory Scope of Accreditation

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E87653
Shealy Environmental Services, Inc. - 1
106 Vantage Point Drive
West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Dalapon	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
DEET	EPA 8270	Extractable Organics	NELAP	5/12/2014
delta-BHC	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
delta-BHC	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Diallate	EPA 8270	Extractable Organics	NELAP	5/12/2014
Dibenz(a,h)anthracene	EPA 625	Extractable Organics	NELAP	7/3/2001
Dibenz(a,h)anthracene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dibenzofuran	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dibromochloromethane	EPA 624	Volatile Organics	NELAP	7/3/2001
Dibromochloromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dibromomethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dicamba	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	10/17/2005
Dichlorodifluoromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Dichloroprop (Dichlorprop)	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Dieldrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Dieldrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Diesel range organics (DRO)	EPA 8015	Extractable Organics	NELAP	7/1/2003
Diesel range organics (DRO)	MADEP-EPH (MA-EPH)	Extractable Organics	NELAP	3/22/2012
Diethyl ether	EPA 8260	Volatile Organics	NELAP	7/1/2003
Diethyl phthalate	EPA 625	Extractable Organics	NELAP	7/3/2001
Diethyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dimethyl phthalate	EPA 625	Extractable Organics	NELAP	7/3/2001
Dimethyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Di-n-butyl phthalate	EPA 625	Extractable Organics	NELAP	7/3/2001
Di-n-butyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Di-n-octyl phthalate	EPA 625	Extractable Organics	NELAP	7/3/2001
Di-n-octyl phthalate	EPA 8270	Extractable Organics	NELAP	7/1/2003
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endosulfan I	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Endosulfan I	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endosulfan II	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Endosulfan II	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endosulfan sulfate	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Endosulfan sulfate	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endrin	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Endrin	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003

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Analyte	Method/Tech	Category	Certification Type	Effective Date
Endrin aldehyde	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Endrin aldehyde	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Endrin ketone	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Ethane	RSK-175	Volatile Organics	NELAP	5/12/2014
Ethanol	EPA 8015	Volatile Organics	NELAP	5/12/2014
Ethyl acetate	EPA 8260	Volatile Organics	NELAP	5/12/2014
Ethyl methacrylate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Ethyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	5/12/2014
Ethylbenzene	EPA 624	Volatile Organics	NELAP	7/3/2001
Ethylbenzene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Ethylene	RSK-175	Volatile Organics	NELAP	5/12/2014
Ethylene glycol	EPA 8015	Volatile Organics	NELAP	5/12/2014
Fecal coliforms	COLILERT®-18 (Fecal Coliforms)	Microbiology	NELAP	3/22/2012
Fluoranthene	EPA 625	Extractable Organics	NELAP	7/3/2001
Fluoranthene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Fluorene	EPA 625	Extractable Organics	NELAP	7/3/2001
Fluorene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Fluoride	EPA 300.0	General Chemistry	NELAP	3/27/2003
Fluoride	EPA 9056	General Chemistry	NELAP	7/1/2003
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
gamma-Chlordane	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/24/2008
Gasoline range organics (GRO)	EPA 8015	Extractable Organics	NELAP	7/1/2003
Gasoline range organics (GRO)	MADEP-VPH (MA-VPH)	Volatile Organics	NELAP	3/22/2012
Hardness	SM 2340 C	General Chemistry	NELAP	12/31/2008
Heptachlor	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Heptachlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Heptachlor epoxide	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Heptachlor epoxide	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Hexachlorobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
Hexachlorobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachlorobutadiene	EPA 625	Extractable Organics	NELAP	7/3/2001
Hexachlorobutadiene	EPA 8260	Volatile Organics	NELAP	3/22/2012
Hexachlorobutadiene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachlorocyclopentadiene	EPA 625	Extractable Organics	NELAP	7/3/2001

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West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Hexachlorocyclopentadiene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachloroethane	EPA 625	Extractable Organics	NELAP	7/3/2001
Hexachloroethane	EPA 8270	Extractable Organics	NELAP	7/1/2003
Hexachloropropene	EPA 8270	Extractable Organics	NELAP	5/12/2014
Hexane	EPA 8260	Volatile Organics	NELAP	5/12/2014
Ignitability	EPA 1010	General Chemistry	NELAP	7/1/2003
Indeno(1,2,3-cd)pyrene	EPA 625	Extractable Organics	NELAP	7/3/2001
Indeno(1,2,3-cd)pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Iodomethane (Methyl iodide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Iron	EPA 200.7	Metals	NELAP	7/3/2001
Iron	EPA 6010	Metals	NELAP	7/1/2003
Iron	EPA 6020	Metals	NELAP	10/17/2005
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Isodrin	EPA 8270	Extractable Organics	NELAP	5/12/2014
Isophorone	EPA 625	Extractable Organics	NELAP	7/3/2001
Isophorone	EPA 8270	Extractable Organics	NELAP	7/1/2003
Isopropyl alcohol (2-Propanol)	EPA 8015	Volatile Organics	NELAP	5/12/2014
Isopropyl ether	EPA 8260	Volatile Organics	NELAP	5/12/2014
Isopropylbenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Isosafrole	EPA 8270	Extractable Organics	NELAP	5/12/2014
Kepone	EPA 8270	Pesticides-Herbicides-PCB's	NELAP	5/12/2014
Kjeldahl nitrogen - total	EPA 351.2	General Chemistry	NELAP	11/7/2002
Lead	EPA 200.7	Metals	NELAP	1/17/2012
Lead	EPA 200.8	Metals	NELAP	10/17/2005
Lead	EPA 6010	Metals	NELAP	1/17/2012
Lead	EPA 6020	Metals	NELAP	10/17/2005
Magnesium	EPA 200.7	Metals	NELAP	7/3/2001
Magnesium	EPA 6010	Metals	NELAP	7/1/2003
Magnesium	EPA 6020	Metals	NELAP	10/17/2005
Manganese	EPA 200.7	Metals	NELAP	7/3/2001
Manganese	EPA 200.8	Metals	NELAP	10/17/2005
Manganese	EPA 6010	Metals	NELAP	7/1/2003
Manganese	EPA 6020	Metals	NELAP	10/17/2005
MCPA	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
MCPP	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Mercury	EPA 1631	Metals	NELAP	10/17/2005

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Shealy Environmental Services, Inc. - 1
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Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Mercury	EPA 245.1	Metals	NELAP	2/5/2003
Mercury	EPA 7470	Metals	NELAP	7/1/2003
Methacrylonitrile	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methane	RSK-175	Volatile Organics	NELAP	5/12/2014
Methanol	EPA 8015	Volatile Organics	NELAP	5/12/2014
Methoxychlor	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Methyl acetate	EPA 8260	Volatile Organics	NELAP	3/22/2012
Methyl bromide (Bromomethane)	EPA 624	Volatile Organics	NELAP	7/3/2001
Methyl bromide (Bromomethane)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl chloride (Chloromethane)	EPA 624	Volatile Organics	NELAP	7/3/2001
Methyl chloride (Chloromethane)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl methacrylate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methyl methanesulfonate	EPA 8270	Extractable Organics	NELAP	5/12/2014
Methyl tert-butyl ether (MTBE)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Methylcyclohexane	EPA 8260	Volatile Organics	NELAP	3/22/2012
Methylene chloride	EPA 624	Volatile Organics	NELAP	7/3/2001
Methylene chloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Molybdenum	EPA 200.7	Metals	NELAP	7/3/2001
Molybdenum	EPA 200.8	Metals	NELAP	10/17/2005
Molybdenum	EPA 6010	Metals	NELAP	7/1/2003
Molybdenum	EPA 6020	Metals	NELAP	10/17/2005
Naphthalene	EPA 625	Extractable Organics	NELAP	7/3/2001
Naphthalene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Naphthalene	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Butyl alcohol	EPA 8015	Volatile Organics	NELAP	5/12/2014
n-Butylbenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
n-Decane	EPA 8270	Extractable Organics	NELAP	5/12/2014
Nickel	EPA 200.7	Metals	NELAP	7/3/2001
Nickel	EPA 200.8	Metals	NELAP	10/17/2005
Nickel	EPA 6010	Metals	NELAP	7/1/2003
Nickel	EPA 6020	Metals	NELAP	10/17/2005
Nitrate	EPA 9056	General Chemistry	NELAP	7/1/2003
Nitrate as N	EPA 300.0	General Chemistry	NELAP	3/27/2003
Nitrate as N	EPA 353.2	General Chemistry	NELAP	7/3/2001
Nitrate-nitrite	EPA 353.2	General Chemistry	NELAP	7/3/2001
Nitrite	EPA 9056	General Chemistry	NELAP	7/1/2003

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Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Nitrite as N	EPA 300.0	General Chemistry	NELAP	3/27/2003
Nitrite as N	EPA 353.2	General Chemistry	NELAP	8/25/2008
Nitrobenzene	EPA 625	Extractable Organics	NELAP	7/3/2001
Nitrobenzene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Nitrobenzene	EPA 8330	Extractable Organics	NELAP	5/12/2014
n-Nitrosodiethylamine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Nitrosodimethylamine	EPA 625	Extractable Organics	NELAP	7/3/2001
n-Nitrosodimethylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitroso-di-n-butylamine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Nitrosodi-n-propylamine	EPA 625	Extractable Organics	NELAP	7/3/2001
n-Nitrosodi-n-propylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosodiphenylamine	EPA 625	Extractable Organics	NELAP	7/3/2001
n-Nitrosodiphenylamine	EPA 8270	Extractable Organics	NELAP	7/1/2003
n-Nitrosomethylethylamine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Nitrosomorpholine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Nitrosopiperidine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Nitrosopyrrolidine	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Octadecane	EPA 8270	Extractable Organics	NELAP	5/12/2014
n-Propanol	EPA 8015	Volatile Organics	NELAP	5/12/2014
n-Propylbenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	EPA 8330	Extractable Organics	NELAP	5/12/2014
Oil & Grease	EPA 1664B	General Chemistry	NELAP	5/12/2014
Orthophosphate as P	EPA 365.1	General Chemistry	NELAP	3/22/2012
Pentachlorobenzene	EPA 8270	Extractable Organics	NELAP	5/12/2014
Pentachloroethane	EPA 8270	Extractable Organics	NELAP	5/12/2014
Pentachloronitrobenzene (Quintozene)	EPA 8270	Extractable Organics	NELAP	5/12/2014
Pentachlorophenol	EPA 625	Extractable Organics	NELAP	7/3/2001
Pentachlorophenol	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
Pentachlorophenol	EPA 8270	Extractable Organics	NELAP	7/1/2003
pH	EPA 9040	General Chemistry	NELAP	7/1/2003
pH	SM 4500-H+-B	General Chemistry	NELAP	12/31/2008
Phenacetin	EPA 8270	Extractable Organics	NELAP	5/12/2014
Phenanthrene	EPA 625	Extractable Organics	NELAP	7/3/2001
Phenanthrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Phenol	EPA 625	Extractable Organics	NELAP	7/3/2001
Phenol	EPA 8270	Extractable Organics	NELAP	7/1/2003

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Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Phosphorus, total	EPA 365.1	General Chemistry	NELAP	3/22/2012
Piperonyl butoxide	EPA 8270	Extractable Organics	NELAP	5/12/2014
p-Isopropyltoluene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Potassium	EPA 200.7	Metals	NELAP	10/17/2005
Potassium	EPA 6010	Metals	NELAP	7/1/2003
Potassium	EPA 6020	Metals	NELAP	10/17/2005
Pronamide (Kerb)	EPA 8270	Extractable Organics	NELAP	5/12/2014
Propane	RSK-175	Volatile Organics	NELAP	5/12/2014
Propionitrile (Ethyl cyanide)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Pyrene	EPA 625	Extractable Organics	NELAP	7/3/2001
Pyrene	EPA 8270	Extractable Organics	NELAP	7/1/2003
Pyridine	EPA 8270	Extractable Organics	NELAP	7/1/2003
RDX (hexahydro-1,3,5-trinitro-1,3,5-triazine)	EPA 8330	Extractable Organics	NELAP	5/12/2014
Residue-filterable (TDS)	SM 2540 C	General Chemistry	NELAP	12/31/2008
Residue-nonfilterable (TSS)	SM 2540 D	General Chemistry	NELAP	12/31/2008
Residue-total	SM 2540 B	General Chemistry	NELAP	12/31/2008
Safrole	EPA 8270	Extractable Organics	NELAP	5/12/2014
Salinity	SM 2520 B	General Chemistry	NELAP	10/17/2005
sec-Butylbenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Selenium	EPA 200.7	Metals	NELAP	7/3/2001
Selenium	EPA 200.8	Metals	NELAP	10/17/2005
Selenium	EPA 6010	Metals	NELAP	7/1/2003
Selenium	EPA 6020	Metals	NELAP	10/17/2005
Silver	EPA 200.7	Metals	NELAP	7/3/2001
Silver	EPA 200.8	Metals	NELAP	10/17/2005
Silver	EPA 6010	Metals	NELAP	7/1/2003
Silver	EPA 6020	Metals	NELAP	10/17/2005
Silvex (2,4,5-TP)	EPA 8151	Pesticides-Herbicides-PCB's	NELAP	10/17/2005
Sodium	EPA 200.7	Metals	NELAP	7/3/2001
Sodium	EPA 6010	Metals	NELAP	7/1/2003
Sodium	EPA 6020	Metals	NELAP	12/13/2011
Strontium	EPA 200.8	Metals	NELAP	10/21/2015
Styrene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Sulfate	EPA 300.0	General Chemistry	NELAP	7/3/2001
Sulfate	EPA 9056	General Chemistry	NELAP	7/1/2003
Sulfide	SM 4500-S F	General Chemistry	NELAP	5/12/2014

Laboratory Scope of Accreditation

Attachment to Certificate #: E87653-35, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E87653** EPA Lab Code: **SC00162** **(803) 791-9700**

E87653
Shealy Environmental Services, Inc. - 1
106 Vantage Point Drive
West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Sulfite-SO3	SM 4500-SO3 B	General Chemistry	NELAP	12/31/2008
Surfactants - MBAS	SM 5540 C	General Chemistry	NELAP	3/22/2012
tert-Butylbenzene	EPA 8260	Volatile Organics	NELAP	10/17/2005
Tetrachloroethylene (Perchloroethylene)	EPA 624	Volatile Organics	NELAP	7/3/2001
Tetrachloroethylene (Perchloroethylene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Tetrahydrofuran (THF)	EPA 8260	Volatile Organics	NELAP	5/12/2014
Tetryl (methyl-2,4,6-trinitrophenylnitramine)	EPA 8330	Extractable Organics	NELAP	5/12/2014
Thallium	EPA 200.7	Metals	NELAP	7/3/2001
Thallium	EPA 200.8	Metals	NELAP	10/17/2005
Thallium	EPA 6010	Metals	NELAP	7/1/2003
Thallium	EPA 6020	Metals	NELAP	10/17/2005
Tin	EPA 200.7	Metals	NELAP	3/27/2003
Tin	EPA 6010	Metals	NELAP	7/1/2003
Tin	EPA 6020	Metals	NELAP	10/17/2005
Titanium	EPA 6010	Metals	NELAP	7/1/2003
Titanium	EPA 6020	Metals	NELAP	10/17/2005
Toluene	EPA 624	Volatile Organics	NELAP	7/3/2001
Toluene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Total cyanide	EPA 9012	General Chemistry	NELAP	7/1/2003
Total organic carbon	EPA 9060	General Chemistry	NELAP	7/1/2003
Total organic carbon	SM 5310 C	General Chemistry	NELAP	3/22/2012
Total Petroleum Hydrocarbons (TPH)	FL-PRO	Extractable Organics	NELAP	7/24/2008
Total phenolics	EPA 420.4	General Chemistry	NELAP	3/27/2003
Total phenolics	EPA 9065	General Chemistry	NELAP	3/22/2012
Toxaphene (Chlorinated camphene)	EPA 608	Pesticides-Herbicides-PCB's	NELAP	7/3/2001
Toxaphene (Chlorinated camphene)	EPA 8081	Pesticides-Herbicides-PCB's	NELAP	7/1/2003
trans-1,2-Dichloroethylene	EPA 624	Volatile Organics	NELAP	7/3/2001
trans-1,2-Dichloroethylene	EPA 8260	Volatile Organics	NELAP	7/1/2003
trans-1,3-Dichloropropene	EPA 624	Volatile Organics	NELAP	7/3/2001
trans-1,3-Dichloropropene	EPA 8260	Volatile Organics	NELAP	7/1/2003
trans-1,4-Dichloro-2-butene	EPA 8260	Volatile Organics	NELAP	7/1/2003
Trichloroethene (Trichloroethylene)	EPA 624	Volatile Organics	NELAP	7/3/2001
Trichloroethene (Trichloroethylene)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Trichlorofluoromethane	EPA 624	Volatile Organics	NELAP	7/3/2001
Trichlorofluoromethane	EPA 8260	Volatile Organics	NELAP	7/1/2003
Turbidity	EPA 180.1	General Chemistry	NELAP	7/3/2001

Laboratory Scope of Accreditation

Attachment to Certificate #: E87653-35, expiration date June 30, 2018. This listing of accredited analytes should be used only when associated with a valid certificate.

State Laboratory ID: **E87653** EPA Lab Code: **SC00162** **(803) 791-9700**

E87653
Shealy Environmental Services, Inc. - 1
106 Vantage Point Drive
West Columbia, SC 29172

Matrix: **Non-Potable Water**

Analyte	Method/Tech	Category	Certification Type	Effective Date
Vanadium	EPA 200.7	Metals	NELAP	7/3/2001
Vanadium	EPA 200.8	Metals	NELAP	10/17/2005
Vanadium	EPA 6010	Metals	NELAP	7/1/2003
Vanadium	EPA 6020	Metals	NELAP	10/17/2005
Vinyl acetate	EPA 8260	Volatile Organics	NELAP	7/1/2003
Vinyl chloride	EPA 624	Volatile Organics	NELAP	7/3/2001
Vinyl chloride	EPA 8260	Volatile Organics	NELAP	7/1/2003
Xylene (total)	EPA 624	Volatile Organics	NELAP	10/17/2005
Xylene (total)	EPA 8260	Volatile Organics	NELAP	7/1/2003
Zinc	EPA 200.7	Metals	NELAP	7/3/2001
Zinc	EPA 200.8	Metals	NELAP	10/17/2005
Zinc	EPA 6010	Metals	NELAP	7/1/2003
Zinc	EPA 6020	Metals	NELAP	10/17/2005

State of Florida
Department of Health, Bureau of Public Health Laboratories
This is to certify that

E87315

PACE ANALYTICAL SERVICES, LLC- ATLANTA GA
110 TECHNOLOGY PARKWAY
PEACHTREE CORNERS, GA 30092

has complied with Florida Administrative Code 64E-1,
for the examination of environmental samples in the following categories

DRINKING WATER - MICROBIOLOGY, DRINKING WATER - PRIMARY INORGANIC CONTAMINANTS, DRINKING WATER - SECONDARY INORGANIC CONTAMINANTS, NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - MICROBIOLOGY, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - MICROBIOLOGY, SOLID AND CHEMICAL MATERIALS - PESTICIDES-HERBICIDES-PCB'S, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS

Continued certification is contingent upon successful on-going compliance with the NELAC Standards and FAC Rule 64E-1 regulations. Specific methods and analytes certified are cited on the Laboratory Scope of Accreditation for this laboratory and are on file at the Bureau of Public Health Laboratories, P. O. Box 210, Jacksonville, Florida 32231. Clients and customers are urged to verify with this agency the laboratory's certification status in Florida for particular methods and analytes.

Date Issued: July 01, 2017 Expiration Date: June 30, 2018

Susanne Crowe, MHA
Acting Chief, Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-37-07/01/2017
Supersedes all previously issued certificates

APPENDIX B

GROUNDWATER SAMPLING FORMS

APEX

APEX COMPANIES, LLC
GROUND-WATER SAMPLING LOG

Date: 5/5/17 Time: 1025 Monitor Well Number: MW 3A
Apex Personnel: T. Fisher Purpose of Sampling Event: Site Check
Location (Site/Facility Name): CMC - Athens Weather/Temp: P. Cloudy 58°F

Circle:

Measuring Point (MP): top of casing, top of ground
Depth to Product (MP): _____
Depth to Water (MP): 26.38
Total Depth of Well (MP): 30 (0.1')
Water Column thickness (ft): _____
Well Material: PVC, Stainless Steel, Other:
Well pad condition: Good, Cracked, Replace

Low Flow purge rate: 100 mL/min
Well Cover Bolted: Yes No NA
Well Cap Condition: Good Replaced
Well Cap Locked: Yes, No, Replaced
Well Tag Present: Yes No
Well Info. On Tag: Yes No NA

Well Type: surface completion, above grade
Well Screen Length: 5, 10, 15, 20 feet; 20-30 / 25
Pump Intake depth below water (MP): _____
Purging/Sampling Device: Bailer, Peristaltic, Monsoon, Grundfos;
OTHER:
Noticeable Odor: None Noticed
Sample Color: clear

Time	Depth to Water (MP)	Well volume Bailed	Low Flow Vol Purged	Temp.	Spec. Cond.	pH	ORP	DO	Turbidity	Water Quality Comments
min.	Feet	gallons	Liters	°C	µS/cm		mV	mg/L		
Initial	26.59	~	0.5	18.4	137	4.70	167	1.75	clear	
5	26.62	~	1.0	17.9	106	4.53	196	0.86	clear	
10	26.63	~	1.5	17.9	87	4.43	251	0.71	clear	
15	26.63	~	2.0	17.9	84	4.54	309	0.67	clear	
20	26.63	~	2.5	18.0	79	4.55	405	0.67	clear	
25	26.64	~	3.0	18.0	77	4.59	452	0.66	clear	
30	26.64	~	3.5	18.0	76	4.57	449	0.65	clear	
35	26.64	~	4.0	17.9	75	4.58	455	0.67	clear	
Criteria	0.33'	0.2-0.5 L/min			+/- 3%	+/- 0.1	+/- 10 mV	+/- 0.3mg/L	+/- 10%	

Field Comments/Site Conditions, etc.:

Purge Volume Conversions: 1" = 0.04, 1.5" = 0.09, 2" = 0.17, 3" = 0.38, 4" = 0.66, 6" = 1.5, 8" = 2.6, 10" = 4.1

Water quality parameters Collected with: YSI 556, Horiba U-52, Hanna turbidity; Other: YSI - PRO

Parameters Stabilized (circle): YES NO If no, why? _____

Vials filled Using soda straw method.

Samples collected	Analysis	Bottle Type	Preservative	Lab	Sample date	Sample Time
1	8260 B	VOA	HCl	Shealy	5/5/17	1110

APEX

APEX COMPANIES, LLC
GROUND-WATER SAMPLING LOG

Date: 5/5/17 Time: 1125 Monitor Well Number: MW-4A

Apex Personnel: T. Fisher Purpose of Sampling Event: Site Check

Location (Site/Facility Name): CMC - Athens, GA Weather/Temp: P Cloudy 58°F

Circle:

Measuring Point (MP): top of casing; top of ground

Depth to Product (MP):

Depth to Water (MP): 24.26

Total Depth of Well (MP): 29.5 (0.1')

Water Column thickness (ft):

Well Material: PVC, Stainless Steel, Other:

Well pad condition: Good, Cracked, Replace

Low Flow purge rate: 100 mL/min

Well Cover Bolted: Yes No

Well Cap Condition: Good Replaced

Well Cap Locked: Yes, No, Replaced

Well Tag Present: Yes No

Well Info. On Tag: Yes No NA

Well Type: surface completion, above grade 19.5-29.5

Well Screen Length: 5, 10, 15, 20 feet; ~~30~~ ~~30~~

Pump Intake depth below water (MP): ~~25~~ 26

Purging/Sampling Device: Bailer, Peristaltic, Monsoon, Grundfos;

OTHER:

Noticeable Odor: None noticed

Sample Color: Clear

Time	Depth to Water (MP)	Well volume Bailed	Low Flow Vol Purged	Temp.	Spec. Cond.	pH	ORP	DO	Turbidity	Water Quality Comments
min.	Feet	gallons	Liters	°C	µS/cm		mV	mg/L	NTU	
Initial	24.35	-	0.5	16.6	169	4.30	423	1.65	clear	
5	24.38	-	1.0	16.6	168	4.24	389	1.29	clear	
10	24.40	-	1.5	16.8	168	4.34	343	1.13	clear	
15	24.42		2.0	16.2	168	4.24	375	1.04	clear	
20	24.43	-	2.5	16.3	168	4.32	380	1.03	clear	
25	24.44	-	3.0	16.1	168	4.29	384	1.00	clear	
Criteria	0.33'	0.2-0.5 L/min			+/- 3%	+/- 0.1	+/- 10 mV	+/- 0.3mg/L	+/- 10%	

Field Comments/Site Conditions, etc.:

MW-4A - sample collected for Shealy Labs + Pace Labs.

Purge Volume Conversions: 1" = 0.04, 1.5" = 0.09, 2" = 0.17, 3" = 0.38, 4" = 0.66, 6" = 1.5, 8" = 2.6, 10" = 4.1

Water quality parameters Collected with: YSI 556, Horiba U-52, Hanna turbidity; Other: YSI-PRO

VOAs filled using Soda straw method

Parameters Stabilized (circle): YES NO If no, why?

Samples collected	Analysis	Bottle Type	Preservative	Lab	Sample date	Sample Time
2	VOC 8260	VOA	HCl	PACE + Shealy	5/5/17	1205

APEX

APEX COMPANIES, LLC
GROUND-WATER SAMPLING LOG

Date: 5/5/17 Time: 1245 Monitor Well Number: MW-10

Apex Personnel: T. Fisher Purpose of Sampling Event: Site Check

Location (Site/Facility Name): CMC, Athens Weather/Temp: Cloudy 58F

Circle:

Measuring Point (MP): top of casing, top of ground

Depth to Product (MP): _____

Depth to Water (MP): 22.34

Total Depth of Well (MP): 35 (0.1')

Water Column thickness (ft): _____

Well Material: PVC, Stainless Steel, Other:

Well pad condition: Good, Cracked, Replace

Low Flow purge rate: 100 mL/min

Well Cover Bolted: Yes No

Well Cap Condition: Good Replaced

Well Cap Locked: Yes, No, Replaced

Well Tag Present: Yes No

Well Info. On Tag: Yes No NA

Well Type: surface completion, above grade

Well Screen Length: 5, 10, 15, 20 feet; 25-35

Pump Intake depth below water (MP): 33

Purging/Sampling Device: Bailer, Peristaltic, Monsoon, Grundfos;

OTHER:

Noticeable Odor: None

Sample Color: clear

Time	Depth to Water (MP)	Well volume Bailed	Low Flow Vol Purged	Temp.	Spec. Cond.	pH	ORP	DO	Turbidity	Water Quality Comments
min.	Feet	gallons	Liters	°C	µS/cm		mV	mg/L	NTU	
Initial	22.44	-	0.5	16.3	156	4.53	470	1.55	clear	
5	22.42	-	1.0	16.1	156	4.60	468	1.07	clear	
10	22.43	-	1.5	16.1	155	4.58	470	1.01	clear	
15	22.44	-	2.0	16.1	155	4.56	474	0.87	clear	
Criteria	0.33'	0.2-0.5 L/min			+/- 3%	+/- 0.1	+/- 10 mV	+/- 0.3mg/L	+/- 10%	

Field Comments/Site Conditions, etc.:

Purge Volume Conversions: 1" = 0.04, 1.5" = 0.09, 2" = 0.17, 3" = 0.38, 4" = 0.66, 6" = 1.5, 8" = 2.6, 10" = 4.1

Water quality parameters Collected with: YSI 556, Horiba U-52, Hanna turbidity; Other: YSI-PRO

Soda straw method for VOAs

Parameters Stabilized (circle): YES NO If no, why? _____

Samples collected	Analysis	Bottle Type	Preservative	Lab	Sample date	Sample Time
	8260	40mL VOA	HCl	Shealy	5/5/17	1325

APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAINS OF CUSTODY

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Apex Companies, LLC
10610 Metromont Parkway
Suite 206
Charlotte, NC 28269
Attention: Grant Watkins

Project Name: **CMC-Athens (OmniSource)**

Project Number: **510507-001.03**

Lot Number: **SE08002**

Date Completed: **05/11/2017**

Lucas Odom
Project Manager

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

Case Narrative
Apex Companies, LLC
Lot Number: SE08002

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

VOCs by GC/MS

The method blank associated with batch 41641 yielded a "J" value detection for Carbon Disulfide. No corrective action is required as this is an estimated value recovered below the "PQL".

Sample Summary
Apex Companies, LLC
Lot Number: SE08002

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-3A	Aqueous	05/05/2017 1110	05/08/2017
002	MW-4A	Aqueous	05/05/2017 1205	05/08/2017
003	MW-10	Aqueous	05/05/2017 1325	05/08/2017
004	TRIP BLANK	Aqueous	05/05/2017	05/08/2017

(4 samples)

Executive Summary

Apex Companies, LLC

Lot Number: SE08002

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-3A	Aqueous	Acetone	8260B	2.2	J	ug/L	5
001	MW-3A	Aqueous	Benzene	8260B	7.3		ug/L	5
001	MW-3A	Aqueous	Cyclohexane	8260B	0.72	J	ug/L	5
001	MW-3A	Aqueous	cis-1,2-Dichloroethene	8260B	1.5		ug/L	5
001	MW-3A	Aqueous	Trichloroethene	8260B	3.4		ug/L	6
002	MW-4A	Aqueous	cis-1,2-Dichloroethene	8260B	0.53	J	ug/L	7
002	MW-4A	Aqueous	Trichloroethene	8260B	1.7		ug/L	8
003	MW-10	Aqueous	Acetone	8260B	2.2	J	ug/L	9
003	MW-10	Aqueous	Benzene	8260B	2.6		ug/L	9
003	MW-10	Aqueous	Bromoform	8260B	0.52	J	ug/L	9
003	MW-10	Aqueous	1,1-Dichloroethane	8260B	0.71	J	ug/L	9
003	MW-10	Aqueous	1,1-Dichloroethene	8260B	0.75	J	ug/L	9
003	MW-10	Aqueous	Ethylbenzene	8260B	1.2		ug/L	9
003	MW-10	Aqueous	Isopropylbenzene	8260B	0.50	J	ug/L	9
003	MW-10	Aqueous	Methyl tertiary butyl ether	8260B	2.5		ug/L	9
003	MW-10	Aqueous	Methylene chloride	8260B	0.63	J	ug/L	9
003	MW-10	Aqueous	Trichloroethene	8260B	1.1		ug/L	10
003	MW-10	Aqueous	Trichlorofluoromethane	8260B	3.2		ug/L	10
003	MW-10	Aqueous	Xylenes (total)	8260B	6.4		ug/L	10

(19 detections)

Client: **Apex Companies, LLC**
Description: **MW-3A**
Date Sampled: **05/05/2017 1110**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1242	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	**67-64-1**	**8260B**	**2.2**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	**71-43-2**	**8260B**	**7.3**		**1.0**	**0.40**	**ug/L**	**1**
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.40	ug/L	1
Cyclohexane	**110-82-7**	**8260B**	**0.72**	**J**	**1.0**	**0.40**	**ug/L**	**1**
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**1.5**		**1.0**	**0.40**	**ug/L**	**1**
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **MW-3A**
Date Sampled: **05/05/2017 1110**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1242	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**3.4**		**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		107	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **MW-4A**
Date Sampled: **05/05/2017 1205**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1306	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	**156-59-2**	**8260B**	**0.53**	**J**	**1.0**	**0.40**	**ug/L**	**1**
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **MW-4A**
Date Sampled: **05/05/2017 1205**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-002**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1306	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**1.7**		**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		109	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
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N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **MW-10**
Date Sampled: **05/05/2017 1325**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1330	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	**67-64-1**	**8260B**	**2.2**	**J**	**20**	**2.0**	**ug/L**	**1**
Benzene	**71-43-2**	**8260B**	**2.6**		**1.0**	**0.40**	**ug/L**	**1**
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	**75-25-2**	**8260B**	**0.52**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethane	**75-34-3**	**8260B**	**0.71**	**J**	**1.0**	**0.40**	**ug/L**	**1**
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	**75-35-4**	**8260B**	**0.75**	**J**	**1.0**	**0.40**	**ug/L**	**1**
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**1.2**		**1.0**	**0.40**	**ug/L**	**1**
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	**98-82-8**	**8260B**	**0.50**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**2.5**		**1.0**	**0.40**	**ug/L**	**1**
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	**75-09-2**	**8260B**	**0.63**	**J**	**1.0**	**0.40**	**ug/L**	**1**
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **MW-10**
Date Sampled: **05/05/2017 1325**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-003**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/10/2017 1330	TML		41641

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	**79-01-6**	**8260B**	**1.1**		**1.0**	**0.40**	**ug/L**	**1**
Trichlorofluoromethane	**75-69-4**	**8260B**	**3.2**		**1.0**	**0.40**	**ug/L**	**1**
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**6.4**		**1.0**	**0.40**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		103	70-130
Bromofluorobenzene		102	70-130
Toluene-d8		105	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
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N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **TRIP BLANK**
Date Sampled: **05/05/2017**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-004**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/09/2017 1016	TML		41543

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
Acetone	67-64-1	8260B	ND		20	2.0	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.40	ug/L	1
Bromodichloromethane	75-27-4	8260B	ND		1.0	0.40	ug/L	1
Bromoform	75-25-2	8260B	ND		1.0	0.40	ug/L	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		2.0	0.40	ug/L	1
2-Butanone (MEK)	78-93-3	8260B	ND		10	2.0	ug/L	1
Carbon disulfide	75-15-0	8260B	ND		1.0	0.40	ug/L	1
Carbon tetrachloride	56-23-5	8260B	ND		1.0	0.40	ug/L	1
Chlorobenzene	108-90-7	8260B	ND		1.0	0.40	ug/L	1
Chloroethane	75-00-3	8260B	ND		2.0	0.40	ug/L	1
Chloroform	67-66-3	8260B	ND		1.0	0.40	ug/L	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		1.0	0.40	ug/L	1
Cyclohexane	110-82-7	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		1.0	0.40	ug/L	1
Dibromochloromethane	124-48-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		1.0	0.40	ug/L	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		1.0	0.40	ug/L	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		1.0	0.40	ug/L	1
Dichlorodifluoromethane	75-71-8	8260B	ND		2.0	0.40	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethane	75-34-3	8260B	ND		1.0	0.40	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		1.0	0.40	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		1.0	0.40	ug/L	1
1,1-Dichloroethene	75-35-4	8260B	ND		1.0	0.40	ug/L	1
1,2-Dichloropropane	78-87-5	8260B	ND		1.0	0.40	ug/L	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		1.0	0.40	ug/L	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		1.0	0.40	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.40	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	2.0	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	0.40	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	0.40	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	2.0	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	0.40	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	0.40	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	0.41	ug/L	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		1.0	0.40	ug/L	1
Tetrachloroethene	127-18-4	8260B	ND		1.0	0.40	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.40	ug/L	1

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Apex Companies, LLC**
Description: **TRIP BLANK**
Date Sampled: **05/05/2017**
Date Received: **05/08/2017**

Laboratory ID: **SE08002-004**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	05/09/2017 1016	TML		41543

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	0.42	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		1.0	0.40	ug/L	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		1.0	0.40	ug/L	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		1.0	0.40	ug/L	1
Trichloroethene	79-01-6	8260B	ND		1.0	0.40	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	0.40	ug/L	1
Vinyl chloride	75-01-4	8260B	ND		1.0	0.40	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.40	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		99	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ41543-001
Batch: 41543
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	05/09/2017 0919
Benzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Bromodichloromethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Bromoform	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	05/09/2017 0919
2-Butanone (MEK)	ND		1	10	2.0	ug/L	05/09/2017 0919
Carbon disulfide	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Chlorobenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Chloroethane	ND		1	2.0	0.40	ug/L	05/09/2017 0919
Chloroform	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Chloromethane (Methyl chloride)	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Cyclohexane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Dibromochloromethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Dichlorodifluoromethane	ND		1	2.0	0.40	ug/L	05/09/2017 0919
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Ethylbenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
2-Hexanone	ND		1	10	2.0	ug/L	05/09/2017 0919
Isopropylbenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Methyl acetate	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/09/2017 0919
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	05/09/2017 0919
Methylcyclohexane	ND		1	5.0	0.40	ug/L	05/09/2017 0919
Methylene chloride	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Styrene	ND		1	1.0	0.41	ug/L	05/09/2017 0919
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Tetrachloroethene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Toluene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	05/09/2017 0919
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ41543-001
Batch: 41543
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Vinyl chloride	ND		1	1.0	0.40	ug/L	05/09/2017 0919
Xylenes (total)	ND		1	1.0	0.40	ug/L	05/09/2017 0919

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		100	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		102	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ41543-002
Batch: 41543
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	40	33		1	83	60-140	05/09/2017 0823
Benzene	20	16		1	80	70-130	05/09/2017 0823
Bromodichloromethane	20	16		1	78	70-130	05/09/2017 0823
Bromoform	20	17		1	85	70-130	05/09/2017 0823
Bromomethane (Methyl bromide)	20	24		1	120	60-140	05/09/2017 0823
2-Butanone (MEK)	40	35		1	88	60-140	05/09/2017 0823
Carbon disulfide	20	16		1	82	60-140	05/09/2017 0823
Carbon tetrachloride	20	17		1	83	70-130	05/09/2017 0823
Chlorobenzene	20	16		1	82	70-130	05/09/2017 0823
Chloroethane	20	20		1	102	60-140	05/09/2017 0823
Chloroform	20	17		1	83	70-130	05/09/2017 0823
Chloromethane (Methyl chloride)	20	17		1	87	60-140	05/09/2017 0823
Cyclohexane	20	16		1	80	70-130	05/09/2017 0823
1,2-Dibromo-3-chloropropane (DBCP)	20	16		1	79	70-130	05/09/2017 0823
Dibromochloromethane	20	17		1	85	70-130	05/09/2017 0823
1,2-Dibromoethane (EDB)	20	16		1	82	70-130	05/09/2017 0823
1,2-Dichlorobenzene	20	16		1	78	70-130	05/09/2017 0823
1,3-Dichlorobenzene	20	16		1	80	70-130	05/09/2017 0823
1,4-Dichlorobenzene	20	16		1	79	70-130	05/09/2017 0823
Dichlorodifluoromethane	20	22		1	111	60-140	05/09/2017 0823
1,2-Dichloroethane	20	15		1	76	70-130	05/09/2017 0823
1,1-Dichloroethane	20	16		1	81	70-130	05/09/2017 0823
1,1-Dichloroethene	20	17		1	86	70-130	05/09/2017 0823
cis-1,2-Dichloroethene	20	16		1	81	70-130	05/09/2017 0823
trans-1,2-Dichloroethene	20	17		1	86	70-130	05/09/2017 0823
1,2-Dichloropropane	20	16		1	80	70-130	05/09/2017 0823
cis-1,3-Dichloropropene	20	17		1	86	70-130	05/09/2017 0823
trans-1,3-Dichloropropene	20	17		1	87	70-130	05/09/2017 0823
Ethylbenzene	20	16		1	79	70-130	05/09/2017 0823
2-Hexanone	40	33		1	83	60-140	05/09/2017 0823
Isopropylbenzene	20	17		1	83	70-130	05/09/2017 0823
Methyl acetate	20	16		1	79	70-130	05/09/2017 0823
Methyl tertiary butyl ether (MTBE)	20	14		1	71	70-130	05/09/2017 0823
4-Methyl-2-pentanone	40	31		1	76	60-140	05/09/2017 0823
Methylcyclohexane	20	19		1	94	70-130	05/09/2017 0823
Methylene chloride	20	16		1	81	70-130	05/09/2017 0823
Styrene	20	17		1	87	70-130	05/09/2017 0823
1,1,2,2-Tetrachloroethane	20	16		1	80	60-140	05/09/2017 0823
Tetrachloroethene	20	16		1	82	70-130	05/09/2017 0823
Toluene	20	16		1	82	70-130	05/09/2017 0823
1,1,2-Trichloro-1,2,2-Trifluoroethane	20	18		1	92	70-130	05/09/2017 0823
1,2,4-Trichlorobenzene	20	16		1	82	70-130	05/09/2017 0823
1,1,2-Trichloroethane	20	16		1	81	70-130	05/09/2017 0823
1,1,1-Trichloroethane	20	16		1	82	70-130	05/09/2017 0823

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ41543-002
Batch: 41543
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	20	16		1	79	70-130	05/09/2017 0823
Trichlorofluoromethane	20	19		1	97	70-130	05/09/2017 0823
Vinyl chloride	20	19		1	96	70-130	05/09/2017 0823
Xylenes (total)	40	32		1	80	70-130	05/09/2017 0823

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		98	70-130
1,2-Dichloroethane-d4		87	70-130
Toluene-d8		101	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ41641-001
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Acetone	ND		1	20	2.0	ug/L	05/10/2017 1014
Benzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Bromodichloromethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Bromoform	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Bromomethane (Methyl bromide)	ND		1	2.0	0.40	ug/L	05/10/2017 1014
2-Butanone (MEK)	ND		1	10	2.0	ug/L	05/10/2017 1014
Carbon disulfide	**0.49**	**J**	**1**	**1.0**	**0.40**	**ug/L**	**05/10/2017 1014**
Carbon tetrachloride	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Chlorobenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Chloroethane	ND		1	2.0	0.40	ug/L	05/10/2017 1014
Chloroform	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Chloromethane (Methyl chloride)	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Cyclohexane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Dibromochloromethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,2-Dibromoethane (EDB)	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,2-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,3-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,4-Dichlorobenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Dichlorodifluoromethane	ND		1	2.0	0.40	ug/L	05/10/2017 1014
1,2-Dichloroethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,1-Dichloroethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
cis-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
trans-1,2-Dichloroethene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,1-Dichloroethene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,2-Dichloropropane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
trans-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
cis-1,3-Dichloropropene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Ethylbenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
2-Hexanone	ND		1	10	2.0	ug/L	05/10/2017 1014
Isopropylbenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Methyl acetate	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	05/10/2017 1014
4-Methyl-2-pentanone	ND		1	10	2.0	ug/L	05/10/2017 1014
Methylcyclohexane	ND		1	5.0	0.40	ug/L	05/10/2017 1014
Methylene chloride	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Styrene	ND		1	1.0	0.41	ug/L	05/10/2017 1014
1,1,2,2-Tetrachloroethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Tetrachloroethene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Toluene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	0.42	ug/L	05/10/2017 1014
1,2,4-Trichlorobenzene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,1,2-Trichloroethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
1,1,1-Trichloroethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: SQ41641-001
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Trichloroethene	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Trichlorofluoromethane	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Vinyl chloride	ND		1	1.0	0.40	ug/L	05/10/2017 1014
Xylenes (total)	ND		1	1.0	0.40	ug/L	05/10/2017 1014

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		107	70-130
1,2-Dichloroethane-d4		105	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ41641-002
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	111	60-140	05/10/2017 0918
Benzene	50	48		1	95	70-130	05/10/2017 0918
Bromodichloromethane	50	48		1	97	70-130	05/10/2017 0918
Bromoform	50	49		1	99	70-130	05/10/2017 0918
Bromomethane (Methyl bromide)	50	54		1	108	60-140	05/10/2017 0918
2-Butanone (MEK)	100	100		1	101	60-140	05/10/2017 0918
Carbon disulfide	50	48		1	97	60-140	05/10/2017 0918
Carbon tetrachloride	50	50		1	100	70-130	05/10/2017 0918
Chlorobenzene	50	48		1	96	70-130	05/10/2017 0918
Chloroethane	50	55		1	110	60-140	05/10/2017 0918
Chloroform	50	48		1	97	70-130	05/10/2017 0918
Chloromethane (Methyl chloride)	50	53		1	107	60-140	05/10/2017 0918
Cyclohexane	50	52		1	103	70-130	05/10/2017 0918
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	95	70-130	05/10/2017 0918
Dibromochloromethane	50	50		1	99	70-130	05/10/2017 0918
1,2-Dibromoethane (EDB)	50	48		1	96	70-130	05/10/2017 0918
1,2-Dichlorobenzene	50	49		1	97	70-130	05/10/2017 0918
1,3-Dichlorobenzene	50	48		1	95	70-130	05/10/2017 0918
1,4-Dichlorobenzene	50	49		1	97	70-130	05/10/2017 0918
Dichlorodifluoromethane	50	59		1	118	60-140	05/10/2017 0918
1,2-Dichloroethane	50	48		1	95	70-130	05/10/2017 0918
1,1-Dichloroethane	50	48		1	97	70-130	05/10/2017 0918
cis-1,2-Dichloroethene	50	48		1	97	70-130	05/10/2017 0918
trans-1,2-Dichloroethene	50	51		1	102	70-130	05/10/2017 0918
1,1-Dichloroethene	50	51		1	102	70-130	05/10/2017 0918
1,2-Dichloropropane	50	48		1	97	70-130	05/10/2017 0918
trans-1,3-Dichloropropene	50	47		1	94	70-130	05/10/2017 0918
cis-1,3-Dichloropropene	50	49		1	99	70-130	05/10/2017 0918
Ethylbenzene	50	48		1	96	70-130	05/10/2017 0918
2-Hexanone	100	84		1	84	60-140	05/10/2017 0918
Isopropylbenzene	50	50		1	99	70-130	05/10/2017 0918
Methyl acetate	50	50		1	101	70-130	05/10/2017 0918
Methyl tertiary butyl ether (MTBE)	50	40		1	80	70-130	05/10/2017 0918
4-Methyl-2-pentanone	100	90		1	90	60-140	05/10/2017 0918
Methylcyclohexane	50	51		1	102	70-130	05/10/2017 0918
Methylene chloride	50	45		1	90	70-130	05/10/2017 0918
Styrene	50	48		1	97	70-130	05/10/2017 0918
1,1,2,2-Tetrachloroethane	50	47		1	94	60-140	05/10/2017 0918
Tetrachloroethene	50	45		1	91	70-130	05/10/2017 0918
Toluene	50	48		1	96	70-130	05/10/2017 0918
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	101	70-130	05/10/2017 0918
1,2,4-Trichlorobenzene	50	51		1	102	70-130	05/10/2017 0918
1,1,2-Trichloroethane	50	46		1	92	70-130	05/10/2017 0918
1,1,1-Trichloroethane	50	51		1	101	70-130	05/10/2017 0918

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: SQ41641-002
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	99	70-130	05/10/2017 0918
Trichlorofluoromethane	50	57		1	113	70-130	05/10/2017 0918
Vinyl chloride	50	55		1	109	70-130	05/10/2017 0918
Xylenes (total)	100	95		1	95	70-130	05/10/2017 0918

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		100	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		100	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: SE08002-001DU
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Acetone	2.2	2.7	J	1	19	20	05/10/2017 1836
Benzene	7.3	7.3		1	0.67	20	05/10/2017 1836
Bromodichloromethane	ND	ND		1	0.00	20	05/10/2017 1836
Bromoform	ND	ND		1	0.00	20	05/10/2017 1836
Bromomethane (Methyl bromide)	ND	0.59		1	200	20	05/10/2017 1836
2-Butanone (MEK)	ND	ND		1	0.00	20	05/10/2017 1836
Carbon disulfide	ND	ND		1	0.00	20	05/10/2017 1836
Carbon tetrachloride	ND	ND		1	0.00	20	05/10/2017 1836
Chlorobenzene	ND	ND		1	0.00	20	05/10/2017 1836
Chloroethane	ND	ND		1	0.00	20	05/10/2017 1836
Chloroform	ND	ND		1	0.00	20	05/10/2017 1836
Chloromethane (Methyl chloride)	ND	0.49		1	200	20	05/10/2017 1836
Cyclohexane	0.72	0.58	J	1	20	20	05/10/2017 1836
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND		1	0.00	20	05/10/2017 1836
Dibromochloromethane	ND	ND		1	0.00	20	05/10/2017 1836
1,2-Dibromoethane (EDB)	ND	ND		1	0.00	20	05/10/2017 1836
1,4-Dichlorobenzene	ND	ND		1	0.00	20	05/10/2017 1836
1,3-Dichlorobenzene	ND	ND		1	0.00	20	05/10/2017 1836
1,2-Dichlorobenzene	ND	ND		1	0.00	20	05/10/2017 1836
Dichlorodifluoromethane	ND	ND		1	0.00	20	05/10/2017 1836
1,2-Dichloroethane	ND	ND		1	0.00	20	05/10/2017 1836
1,1-Dichloroethane	ND	ND		1	0.00	20	05/10/2017 1836
trans-1,2-Dichloroethene	ND	ND		1	0.00	20	05/10/2017 1836
cis-1,2-Dichloroethene	1.5	0.95	+	1	42	20	05/10/2017 1836
1,1-Dichloroethene	ND	ND		1	0.00	20	05/10/2017 1836
1,2-Dichloropropane	ND	ND		1	0.00	20	05/10/2017 1836
trans-1,3-Dichloropropene	ND	ND		1	0.00	20	05/10/2017 1836
cis-1,3-Dichloropropene	ND	ND		1	0.00	20	05/10/2017 1836
Ethylbenzene	ND	ND		1	0.00	20	05/10/2017 1836
2-Hexanone	ND	ND		1	0.00	20	05/10/2017 1836
Isopropylbenzene	ND	ND		1	0.00	20	05/10/2017 1836
Methyl acetate	ND	ND		1	0.00	20	05/10/2017 1836
Methyl tertiary butyl ether (MTBE)	ND	ND		1	0.00	20	05/10/2017 1836
4-Methyl-2-pentanone	ND	ND		1	0.00	20	05/10/2017 1836
Methylcyclohexane	ND	ND		1	0.00	20	05/10/2017 1836
Methylene chloride	ND	ND		1	0.00	20	05/10/2017 1836
Styrene	ND	ND		1	0.00	20	05/10/2017 1836
1,1,2,2-Tetrachloroethane	ND	ND		1	0.00	20	05/10/2017 1836
Tetrachloroethene	ND	ND		1	0.00	20	05/10/2017 1836
Toluene	ND	ND		1	0.00	20	05/10/2017 1836
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND		1	0.00	20	05/10/2017 1836
1,2,4-Trichlorobenzene	ND	ND		1	0.00	20	05/10/2017 1836
1,1,2-Trichloroethane	ND	ND		1	0.00	20	05/10/2017 1836
1,1,1-Trichloroethane	ND	ND		1	0.00	20	05/10/2017 1836

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: SE08002-001DU
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Result (ug/L)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Trichloroethene	3.4	3.4		1	0.23	20	05/10/2017 1836
Trichlorofluoromethane	ND	ND		1	0.00	20	05/10/2017 1836
Vinyl chloride	ND	ND		1	0.00	20	05/10/2017 1836
Xylenes (total)	ND	ND		1	0.00	20	05/10/2017 1836

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		104	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		108	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SE08002-002MS
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	100	94		1	94	60-140	05/10/2017 1900
Benzene	ND	50	49		1	98	72-127	05/10/2017 1900
Bromodichloromethane	ND	50	47		1	95	71-143	05/10/2017 1900
Bromoform	ND	50	39		1	78	65-131	05/10/2017 1900
Bromomethane (Methyl bromide)	ND	50	65		1	129	36-168	05/10/2017 1900
2-Butanone (MEK)	ND	100	97		1	97	60-140	05/10/2017 1900
Carbon disulfide	ND	50	47		1	95	60-140	05/10/2017 1900
Carbon tetrachloride	ND	50	52		1	104	37-166	05/10/2017 1900
Chlorobenzene	ND	50	47		1	95	78-129	05/10/2017 1900
Chloroethane	ND	50	66		1	133	60-140	05/10/2017 1900
Chloroform	ND	50	52		1	104	63-123	05/10/2017 1900
Chloromethane (Methyl chloride)	ND	50	57		1	115	20-158	05/10/2017 1900
Cyclohexane	ND	50	56		1	112	70-130	05/10/2017 1900
1,2-Dibromo-3-chloropropane (DBCP)	ND	50	40		1	79	70-130	05/10/2017 1900
Dibromochloromethane	ND	50	44		1	89	74-134	05/10/2017 1900
1,2-Dibromoethane (EDB)	ND	50	46		1	93	70-130	05/10/2017 1900
1,4-Dichlorobenzene	ND	50	46		1	92	70-130	05/10/2017 1900
1,3-Dichlorobenzene	ND	50	46		1	92	70-130	05/10/2017 1900
1,2-Dichlorobenzene	ND	50	46		1	93	70-130	05/10/2017 1900
Dichlorodifluoromethane	ND	50	60		1	120	10-158	05/10/2017 1900
1,2-Dichloroethane	ND	50	48		1	96	59-143	05/10/2017 1900
1,1-Dichloroethane	ND	50	51		1	102	69-132	05/10/2017 1900
trans-1,2-Dichloroethene	ND	50	53		1	106	67-141	05/10/2017 1900
cis-1,2-Dichloroethene	0.53	50	50		1	100	70-130	05/10/2017 1900
1,1-Dichloroethene	ND	50	53		1	106	50-132	05/10/2017 1900
1,2-Dichloropropane	ND	50	48		1	97	71-126	05/10/2017 1900
trans-1,3-Dichloropropene	ND	50	43		1	85	73-131	05/10/2017 1900
cis-1,3-Dichloropropene	ND	50	46		1	93	69-130	05/10/2017 1900
Ethylbenzene	ND	50	48		1	96	79-132	05/10/2017 1900
2-Hexanone	ND	100	80		1	80	60-140	05/10/2017 1900
Isopropylbenzene	ND	50	51		1	101	70-130	05/10/2017 1900
Methyl acetate	ND	50	47		1	94	15-128	05/10/2017 1900
Methyl tertiary butyl ether (MTBE)	ND	50	39		1	79	60-140	05/10/2017 1900
4-Methyl-2-pentanone	ND	100	87		1	87	60-140	05/10/2017 1900
Methylcyclohexane	ND	50	51		1	103	70-130	05/10/2017 1900
Methylene chloride	ND	50	46		1	92	69-129	05/10/2017 1900
Styrene	ND	50	49		1	97	70-130	05/10/2017 1900
1,1,2,2-Tetrachloroethane	ND	50	43		1	87	60-155	05/10/2017 1900
Tetrachloroethene	ND	50	44		1	88	70-130	05/10/2017 1900
Toluene	ND	50	49		1	97	75-125	05/10/2017 1900
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	52		1	105	70-130	05/10/2017 1900
1,2,4-Trichlorobenzene	ND	50	43		1	86	70-130	05/10/2017 1900
1,1,2-Trichloroethane	ND	50	45		1	90	77-132	05/10/2017 1900
1,1,1-Trichloroethane	ND	50	53		1	106	77-132	05/10/2017 1900

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: SE08002-002MS
Batch: 41641
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	1.7	50	50		1	97	73-124	05/10/2017 1900
Trichlorofluoromethane	ND	50	62		1	123	41-173	05/10/2017 1900
Vinyl chloride	ND	50	62		1	124	29-159	05/10/2017 1900
Xylenes (total)	ND	100	95		1	95	70-130	05/10/2017 1900

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		98	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		103	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Chain of Custody Record

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.shealylab.com

Number 71601

Client: Apex Companies, LLC	Report to Contact: Grant.Watkins@apexcos.com	Telephone No. / E-mail: 704-799-6320	Quote No.
Address: 10610 Metromont Pkwy Ste 206	Sampler's Signature: X	Analysis (Attach list if more space is needed)	Page 1 of 1
City: Charlotte / State: NC / Zip Code: 28269	Printed Name: Thomas Fisher		
Project Name: CMC - Athens (omnisource)			
Project No.: 510507-001,03	P.O. No.		

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Grab/Comp	Matrix: Aqueous	Matrix: Soils	Matrix: Sediment	No of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnOAc/NaOH	VOC 8260B	Remarks / Cooler I.D.
MW-3A	5/5/17	1110	G	X						X			X	
MW-4A	5/5/17	1205	G	X						X			X	
MW-10	5/5/17	1325	G	X						X			X	
Trip Blank	-			X						X			X	

SE08002

Turn Around Time Required (Prior lab approval required for expedited TAT.): [X] Standard ☐ Rush (Specify)

Sample Disposal: ☐ Return to Client [X] Disposal by Lab

Possible Hazard Identification: [X] Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by	5/5/17	1800	1. Received by	5/5/17	1800
2. Relinquished by	5/8/17	630	2. Received by	5/8/17	630
3. Relinquished by	5/8/17	0744	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory received by: E Elliott	5/8/17	0744

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on ice (Circle) (Yes) No Ice Pack — Receipt Temp: 2.6 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.
Document Number: ME0018C-08

Page 1 of 1
Effective Date: 03/07/2017
Expiry Date: 03/07/2022

Sample Receipt Checklist (SRC)

Client: Apex Cooler Inspected by/date: SBE 1/18/17 Lot #: SE08002

Means of receipt: ☑ SESI ☐ Client ☐ UPS ☐ FedEx ☐ Other			
Yes ☐	No ☑		1. Were custody seals present on the cooler?
Yes ☐	No ☐	NA ☑	2. If custody seals were present, were they intact and unbroken?
pH strip ID: Cl strip ID: Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt: / 2.6 / 2.6 °C / / °C / / °C / / °C Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None			
Yes ☐	No ☐	NA ☑	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
Yes ☐	No ☐	NA ☑	4. Is the commercial courier's packing slip attached to this form?
Yes ☑	No ☐		5. Were proper custody procedures (relinquished/received) followed?
Yes ☑	No ☐		6. Were sample IDs listed on the COC?
Yes ☑	No ☐		7. Were sample IDs listed on all sample containers?
Yes ☑	No ☐		8. Was collection date & time listed on the COC?
Yes ☑	No ☐		9. Was collection date & time listed on all sample containers?
Yes ☑	No ☐		10. Did all container label information (ID, date, time) agree with the COC?
Yes ☑	No ☐		11. Were tests to be performed listed on the COC?
Yes ☑	No ☐		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
Yes ☑	No ☐		13. Was adequate sample volume available?
Yes ☐	No ☑		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes ☐	No ☑		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
Yes ☐	No ☑	NA ☐	16. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any VOA vials?
Yes ☐	No ☐	NA ☑	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
Yes ☐	No ☐	NA ☑	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
Yes ☐	No ☐	NA ☑	19. Were all applicable NH3/TKN/cyanide/phenol/BNA (< 0.5mg/L) samples free of residual chlorine?
Yes ☐	No ☐	NA ☑	20. Were collection temperatures documented on the COC for NC samples?
Yes ☐	No ☐	NA ☑	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
Yes ☐	No ☑		22. Was the quote number used taken from the container label?
Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)			
Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H_2SO_4, HNO_3, HCl, NaOH) using SR # _____.			
Sample(s) _____ were received with bubbles >6 mm in diameter.			
Samples(s) _____ were received with TRC > 0.5 mg/L (If #21 is No) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: _____.			
SC Drinking Water Project Sample(s) pH verified to be < 2 by _____ Date: _____ Sample(s) _____ were Not received at a pH of < 2 and were adjusted accordingly using SR# _____			
Sample labels applied by: _____ Verified by: _____ Date: _____			

Comments: _____

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

May 11, 2017

Grant Watkins
Apex Companies
1135 Kildaire Farm Rd.
Suite 200
Cary, NC 27511

RE: Project: ATHENS, GA
Pace Project No.: 92339645

Dear Grant Watkins:
Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Trey Carter
trey.carter@pacelabs.com
(704)875-9092
Project Manager

Enclosures

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: ATHENS, GA
Pace Project No.: 92339645

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92339645001	**MW-4A**	Water	05/05/17 12:05	05/05/17 12:30

REPORT OF LABORATORY ANALYSIS

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: Apex

Project #: WO# : 92339645

92339645

Courier: ☐ Commercial ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☑ Other: Xcel

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Date/Initials Person Examining Contents: BM 5/8

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:

Thermometer: ☑ IR Gun ID: T1603 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Correction Factor: **Cooler Temp Corrected (°C):** 2.2 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	9.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☑ No	☐ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: _____

Project Manager SCURF Review: TC **Date:** 5/8/17

Project Manager SRF Review: TC **Date:** 5/8/17

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

****Bottom half of box is to list number of bottles**

Project # WO#: 92339645

PM: RWC Due Date: 05/15/17

CLIENT: 92-APEX MOOR

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1																3												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Apex Companies	Report To: Tommy Fisher	Attention:
Address: 10610 Metromont Pkwy	Copy To:	Company Name:
Suite 206, Charlotte, NC 28269		Address:
Email: Grant.watkins@apexcos.com	Purchase Order #:	Pace Quote:
Phone: 704-779-6390 Fax	Project Name: Athens, GA	Pace Project Manager: trey.carter@pacelabs.com,
Requested Due Date: Std	Project #:	Pace Profile #: 8490-1

Regulatory Agency

State / Location: GA

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 VOCs Full List	Residual Chlorine (Y/N)	92339645
1	MW-4A			5/5/17		5/5/17	1205	16	3				X						X		OCS
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Thomas Fisher/Apex	5/5/17		Mike Nguyen Pace Tal	5/6/17	1230				
					5/6/17	9:15	2.2	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Fisher

SIGNATURE of SAMPLER: [signature]

DATE Signed: 5/5/17

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Laboratory Report

Prepared For:

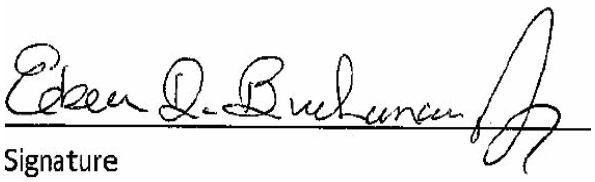
Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville, NC 28078

Attention: Mr. Trey Carter

Report Number: AAE0275
May 10, 2017
Project: Athens, GA
Project #:92339645

We appreciate the opportunity to provide the analytical support for your project. The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Approved:



Signature

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-4A / 92339645001	AAE0275-01	Water	05/05/17 12:05	05/09/17 09:20

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275
Client ID: MW-4A / 92339645001
Date/Time Sampled: 5/5/2017 12:05:00PM
Matrix: Water

Project: Athens, GA
Lab Number ID: AAE0275-01
Date/Time Received: 5/9/2017 9:20:00AM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Acetone	ND	100	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Acrolein	ND	50	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Acrylonitrile	ND	50	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Allyl Chloride (3-Chloropropylene)	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Benzene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Bromobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Bromochloromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Bromodichloromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Bromoform	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Bromomethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
n-Butylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
sec-Butylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
tert-Butylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Carbon Disulfide	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Carbon Tetrachloride	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Chlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1-Chlorobutane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Chloroethane	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Chloroform	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Chloromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
2-Chlorotoluene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
4-Chlorotoluene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Dibromochloromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2-Dibromo-3-chloropropane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2-Dibromoethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Dibromomethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Dichlorodifluoromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1-Dichloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2-Dichloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1-Dichloroethene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
cis-1,2-Dichloroethene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
trans-1,2-Dichloroethene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
110 Technology Parkway, Peachtree Corners, GA 30092
(770) 734-4200 FAX (770) 734-4201

Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275
Client ID: MW-4A / 92339645001
Date/Time Sampled: 5/5/2017 12:05:00PM
Matrix: Water

Project: Athens, GA
Lab Number ID: AAE0275-01
Date/Time Received: 5/9/2017 9:20:00AM

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
1,2-Dichloropropane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,3-Dichloropropane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
2,2-Dichloropropane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1-Dichloropropene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
cis-1,3-Dichloropropene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
trans-1,3-Dichloropropene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Ethylbenzene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Ethyl Methacrylate	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Hexachlorobutadiene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
p-Isopropyltoluene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Hexachloroethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Iodomethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Isopropylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methacrylonitrile	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methyl Acrylate	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methylene Chloride	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methyl Ethyl Ketone (2-Butanone)	ND	100	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methyl Methacrylate	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Methyl-tert-Butyl Ether	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Naphthalene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
2-Nitropropane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Propionitrile (Ethyl Cyanide)	ND	20	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
n-Propylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Styrene	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Tetrachloroethene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Tetrahydrofuran	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Toluene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2,3-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1,1-Trichloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,1,2-Trichloroethane	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Trichloroethene	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC

PACE ANALYTICAL SERVICES, LLC.

Environmental Monitoring & Laboratory Analysis
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Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275
Project: Athens, GA
Client ID: MW-4A / 92339645001
Lab Number ID: AAE0275-01
Date/Time Sampled: 5/5/2017 12:05:00PM
Date/Time Received: 5/9/2017 9:20:00AM
Matrix: Water

Analyte	Result	RL	Units	Method	Qual.	DF	Preparation Date	Analytical Date	Batch	Init.
Volatile Organic Compounds by EPA 8260										
Trichlorofluoromethane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2,3-Trichloropropane	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,2,4-Trimethylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
1,3,5-Trimethylbenzene	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Vinyl Acetate	ND	10	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Vinyl Chloride	ND	2.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
m+p-Xylene	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
o-Xylene	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Xylenes, total	ND	5.0	ug/L	EPA 8260B		1	5/09/17 10:00	5/09/17 12:21	7050299	RAC
Surrogate: Dibromofluoromethane	*90 %*	*80-120*		*EPA 8260B*			*5/09/17 10:00*	*5/9/17 12:21*	*7050299*	
Surrogate: 1,2-Dichloroethane-d4	*95 %*	*78-120*		*EPA 8260B*			*5/09/17 10:00*	*5/9/17 12:21*	*7050299*	
Surrogate: Toluene-d8	*97 %*	*80-120*		*EPA 8260B*			*5/09/17 10:00*	*5/9/17 12:21*	*7050299*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*80-120*		*EPA 8260B*			*5/09/17 10:00*	*5/9/17 12:21*	*7050299*	

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Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Blank (7050299-BLK1)					Prepared & Analyzed: 05/09/17					
Acetone	ND	100	ug/L							
Acrolein	ND	50	ug/L							
Acrylonitrile	ND	50	ug/L							
Allyl Chloride (3-Chloropropylene)	ND	10	ug/L							
Benzene	ND	2.0	ug/L							
Bromobenzene	ND	10	ug/L							
Bromochloromethane	ND	10	ug/L							
Bromodichloromethane	ND	10	ug/L							
Bromoform	ND	10	ug/L							
Bromomethane	ND	10	ug/L							
n-Butylbenzene	ND	10	ug/L							
sec-Butylbenzene	ND	10	ug/L							
tert-Butylbenzene	ND	10	ug/L							
Carbon Disulfide	ND	10	ug/L							
Carbon Tetrachloride	ND	2.0	ug/L							
Chlorobenzene	ND	10	ug/L							
1-Chlorobutane	ND	10	ug/L							
Chloroethane	ND	5.0	ug/L							
Chloroform	ND	2.0	ug/L							
Chloromethane	ND	10	ug/L							
2-Chlorotoluene	ND	10	ug/L							
4-Chlorotoluene	ND	10	ug/L							
Dibromochloromethane	ND	10	ug/L							
1,2-Dibromo-3-chloropropane	ND	10	ug/L							
1,2-Dibromoethane	ND	10	ug/L							
Dibromomethane	ND	10	ug/L							
1,2-Dichlorobenzene	ND	10	ug/L							
1,3-Dichlorobenzene	ND	10	ug/L							
1,4-Dichlorobenzene	ND	10	ug/L							
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L							
Dichlorodifluoromethane	ND	10	ug/L							
1,1-Dichloroethane	ND	2.0	ug/L							
1,2-Dichloroethane	ND	2.0	ug/L							
1,1-Dichloroethene	ND	2.0	ug/L							
cis-1,2-Dichloroethene	ND	2.0	ug/L							
trans-1,2-Dichloroethene	ND	2.0	ug/L							
1,2-Dichloropropane	ND	2.0	ug/L							
1,3-Dichloropropane	ND	2.0	ug/L							
2,2-Dichloropropane	ND	10	ug/L							
1,1-Dichloropropene	ND	10	ug/L							
cis-1,3-Dichloropropene	ND	2.0	ug/L							

PACE ANALYTICAL SERVICES, LLC.

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Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Blank (7050299-BLK1)					Prepared & Analyzed: 05/09/17					
trans-1,3-Dichloropropene	ND	2.0	ug/L							
Ethylbenzene	ND	2.0	ug/L							
Ethyl Methacrylate	ND	10	ug/L							
Hexachlorobutadiene	ND	10	ug/L							
p-Isopropyltoluene	ND	10	ug/L							
Hexachloroethane	ND	10	ug/L							
Iodomethane	ND	10	ug/L							
Isopropylbenzene	ND	10	ug/L							
Methacrylonitrile	ND	10	ug/L							
Methyl Acrylate	ND	10	ug/L							
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L							
Methylene Chloride	ND	5.0	ug/L							
Methyl Ethyl Ketone (2-Butanone)	ND	100	ug/L							
Methyl Methacrylate	ND	10	ug/L							
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L							
Methyl-tert-Butyl Ether	ND	10	ug/L							
Naphthalene	ND	10	ug/L							
2-Nitropropane	ND	10	ug/L							
Propionitrile (Ethyl Cyanide)	ND	20	ug/L							
n-Propylbenzene	ND	10	ug/L							
Styrene	ND	5.0	ug/L							
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L							
Tetrachloroethene	ND	2.0	ug/L							
Tetrahydrofuran	ND	10	ug/L							
Toluene	ND	2.0	ug/L							
1,2,3-Trichlorobenzene	ND	10	ug/L							
1,2,4-Trichlorobenzene	ND	10	ug/L							
1,1,1-Trichloroethane	ND	2.0	ug/L							
1,1,2-Trichloroethane	ND	2.0	ug/L							
Trichloroethene	ND	2.0	ug/L							
Trichlorofluoromethane	ND	10	ug/L							
1,2,3-Trichloropropane	ND	10	ug/L							
1,2,4-Trimethylbenzene	ND	10	ug/L							
1,3,5-Trimethylbenzene	ND	10	ug/L							
Vinyl Acetate	ND	10	ug/L							
Vinyl Chloride	ND	2.0	ug/L							
m+p-Xylene	ND	5.0	ug/L							
o-Xylene	ND	5.0	ug/L							
Xylenes, total	ND	5.0	ug/L							
Surrogate: Dibromofluoromethane	*45*		*ug/L*	*50.000*		*91*	*80-120*			

PACE ANALYTICAL SERVICES, LLC.

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(770) 734-4200 FAX (770) 734-4201

Pace Analytical Services Inc. - Huntersville
9800 Kincey Avenue Suite 100
Huntersville NC, 28078
Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Blank (7050299-BLK1)					Prepared & Analyzed: 05/09/17					
Surrogate: 1,2-Dichloroethane-d4	*46*		*ug/L*	*50.000*		*92*	*78-120*			
Surrogate: Toluene-d8	*48*		*ug/L*	*50.000*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*52*		*ug/L*	*50.000*		*104*	*80-120*			
LCS (7050299-BS1)					Prepared & Analyzed: 05/09/17					
Benzene	53	2.0	ug/L	50.000		106	67-134			
Chlorobenzene	52	10	ug/L	50.000		105	69-122			
1,1-Dichloroethene	52	2.0	ug/L	50.000		104	58-142			
Toluene	50	2.0	ug/L	50.000		101	68-127			
Trichloroethene	53	2.0	ug/L	50.000		106	72-132			
Surrogate: Dibromofluoromethane	*51*		*ug/L*	*50.000*		*102*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*46*		*ug/L*	*50.000*		*92*	*78-120*			
Surrogate: Toluene-d8	*48*		*ug/L*	*50.000*		*95*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47*		*ug/L*	*50.000*		*95*	*80-120*			
Duplicate (7050299-DUP1)	**Source: AAE0244-05**				Prepared & Analyzed: 05/09/17					
Acetone	ND	100	ug/L		ND				200	
Acrolein	ND	50	ug/L		ND				200	
Acrylonitrile	ND	50	ug/L		ND				200	
Allyl Chloride (3-Chloropropylene)	ND	10	ug/L		ND				200	
Benzene	ND	2.0	ug/L		ND				200	
Bromobenzene	ND	10	ug/L		ND				200	
Bromochloromethane	ND	10	ug/L		ND				200	
Bromodichloromethane	ND	10	ug/L		ND				200	
Bromoform	ND	10	ug/L		ND				200	
Bromomethane	ND	10	ug/L		ND				200	
n-Butylbenzene	ND	10	ug/L		ND				200	
sec-Butylbenzene	ND	10	ug/L		ND				200	
tert-Butylbenzene	ND	10	ug/L		ND				200	
Carbon Disulfide	ND	10	ug/L		ND				200	
Carbon Tetrachloride	ND	2.0	ug/L		ND				200	
Chlorobenzene	ND	10	ug/L		ND				200	
1-Chlorobutane	ND	10	ug/L		ND				200	
Chloroethane	ND	5.0	ug/L		ND				200	
Chloroform	ND	2.0	ug/L		ND				200	
Chloromethane	ND	10	ug/L		ND				200	
2-Chlorotoluene	ND	10	ug/L		ND				200	
4-Chlorotoluene	ND	10	ug/L		ND				200	
Dibromochloromethane	ND	10	ug/L		ND				200	
1,2-Dibromo-3-chloropropane	ND	10	ug/L		ND				200	
1,2-Dibromoethane	ND	10	ug/L		ND				200	
Dibromomethane	ND	10	ug/L		ND				200	

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Attention: Mr. Trey Carter

May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Duplicate (7050299-DUP1)	**Source: AAE0244-05**			Prepared & Analyzed: 05/09/17						
1,2-Dichlorobenzene	ND	10	ug/L		ND				200	
1,3-Dichlorobenzene	ND	10	ug/L		ND				200	
1,4-Dichlorobenzene	ND	10	ug/L		ND				200	
trans-1,4-Dichloro-2-butene	ND	5.0	ug/L		ND				200	
Dichlorodifluoromethane	0.8	10	ug/L		0.7			11	200	
1,1-Dichloroethane	ND	2.0	ug/L		ND				200	
1,2-Dichloroethane	ND	2.0	ug/L		ND				200	
1,1-Dichloroethene	ND	2.0	ug/L		ND				200	
cis-1,2-Dichloroethene	ND	2.0	ug/L		ND				200	
trans-1,2-Dichloroethene	ND	2.0	ug/L		ND				200	
1,2-Dichloropropane	ND	2.0	ug/L		ND				200	
1,3-Dichloropropane	ND	2.0	ug/L		ND				200	
2,2-Dichloropropane	ND	10	ug/L		ND				200	
1,1-Dichloropropene	ND	10	ug/L		ND				200	
cis-1,3-Dichloropropene	ND	2.0	ug/L		ND				200	
trans-1,3-Dichloropropene	ND	2.0	ug/L		ND				200	
Ethylbenzene	ND	2.0	ug/L		ND				200	
Ethyl Methacrylate	ND	10	ug/L		ND				200	
Hexachlorobutadiene	ND	10	ug/L		ND				200	
p-Isopropyltoluene	ND	10	ug/L		ND				200	
Hexachloroethane	ND	10	ug/L		ND				200	
Iodomethane	ND	10	ug/L		ND				200	
Isopropylbenzene	ND	10	ug/L		ND				200	
Methacrylonitrile	ND	10	ug/L		ND				200	
Methyl Acrylate	ND	10	ug/L		ND				200	
Methyl Butyl Ketone (2-Hexanone)	ND	10	ug/L		ND				200	
Methylene Chloride	ND	5.0	ug/L		ND				200	
Methyl Ethyl Ketone (2-Butanone)	ND	100	ug/L		ND				200	
Methyl Methacrylate	ND	10	ug/L		ND				200	
4-Methyl-2-pentanone (MIBK)	ND	10	ug/L		ND				200	
Methyl-tert-Butyl Ether	ND	10	ug/L		ND				200	
Naphthalene	ND	10	ug/L		ND				200	
2-Nitropropane	ND	10	ug/L		ND				200	
Propionitrile (Ethyl Cyanide)	ND	20	ug/L		ND				200	
n-Propylbenzene	ND	10	ug/L		ND				200	
Styrene	ND	5.0	ug/L		ND				200	
1,1,1,2-Tetrachloroethane	ND	2.0	ug/L		ND				200	
1,1,2,2-Tetrachloroethane	ND	2.0	ug/L		ND				200	
Tetrachloroethene	ND	2.0	ug/L		ND				200	
Tetrahydrofuran	ND	10	ug/L		ND				200	
Toluene	ND	2.0	ug/L		ND				200	

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May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Duplicate (7050299-DUP1)	**Source: AAE0244-05**				Prepared & Analyzed: 05/09/17					
1,2,3-Trichlorobenzene	ND	10	ug/L		ND				200	
1,2,4-Trichlorobenzene	ND	10	ug/L		ND				200	
1,1,1-Trichloroethane	ND	2.0	ug/L		ND				200	
1,1,2-Trichloroethane	ND	2.0	ug/L		ND				200	
Trichloroethene	ND	2.0	ug/L		ND				200	
Trichlorofluoromethane	ND	10	ug/L		ND				200	
1,2,3-Trichloropropane	ND	10	ug/L		ND				200	
1,2,4-Trimethylbenzene	ND	10	ug/L		ND				200	
1,3,5-Trimethylbenzene	ND	10	ug/L		ND				200	
Vinyl Acetate	ND	10	ug/L		ND				200	
Vinyl Chloride	ND	2.0	ug/L		ND				200	
m+p-Xylene	ND	5.0	ug/L		ND				200	
o-Xylene	ND	5.0	ug/L		ND				200	
Xylenes, total	ND	5.0	ug/L		ND				200	
Surrogate: Dibromofluoromethane	*45*		*ug/L*	*50.000*		*89*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*48*		*ug/L*	*50.000*		*96*	*78-120*			
Surrogate: Toluene-d8	*50*		*ug/L*	*50.000*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*51*		*ug/L*	*50.000*		*103*	*80-120*			
Matrix Spike (7050299-MS1)	**Source: AAE0244-07**				Prepared & Analyzed: 05/09/17					
Benzene	63	2.0	ug/L	50.000	ND	125	67-134			
Chlorobenzene	60	10	ug/L	50.000	ND	119	69-122			
1,1-Dichloroethene	72	2.0	ug/L	50.000	ND	144	58-142			QM-05
Toluene	61	2.0	ug/L	50.000	ND	122	68-127			
Trichloroethene	61	2.0	ug/L	50.000	ND	122	72-132			
Surrogate: Dibromofluoromethane	*52*		*ug/L*	*50.000*		*104*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*48*		*ug/L*	*50.000*		*96*	*78-120*			
Surrogate: Toluene-d8	*49*		*ug/L*	*50.000*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47*		*ug/L*	*50.000*		*93*	*80-120*			

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May 10, 2017

Report No.: AAE0275

Volatile Organic Compounds by EPA 8260 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch 7050299 - EPA 5030B										
Matrix Spike Dup (7050299-MSD1)	**Source: AAE0244-07**				Prepared & Analyzed: 05/09/17					
Benzene	63	2.0	ug/L	50.000	ND	125	67-134	0.02	9	
Chlorobenzene	60	10	ug/L	50.000	ND	120	69-122	0.5	13	
1,1-Dichloroethene	70	2.0	ug/L	50.000	ND	139	58-142	3	9	
Toluene	60	2.0	ug/L	50.000	ND	120	68-127	2	9	
Trichloroethene	61	2.0	ug/L	50.000	ND	122	72-132	0.3	11	
Surrogate: Dibromofluoromethane	*51*		*ug/L*	*50.000*		*101*	*80-120*			
Surrogate: 1,2-Dichloroethane-d4	*47*		*ug/L*	*50.000*		*94*	*78-120*			
Surrogate: Toluene-d8	*49*		*ug/L*	*50.000*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47*		*ug/L*	*50.000*		*94*	*80-120*			

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May 10, 2017

Laboratory Certifications

Code	Description	Number	Expires
GADW	Georgia DW Inorganics Eff: 07/01/2016	812	06/30/2017
GADWM	Georgia DW Microbiology Eff: 07/01/2015	812	12/09/2019
NC	North Carolina	381	12/31/2017
NELAC	FL DOH (Non-Pot. Water, Solids) Eff:: 07/01/2016	E87315	06/30/2017
NELDW	FL DOH NELAC (Drinking Water) Eff: 07/01/2016	E87315	06/30/2017
SC	South Carolina	98011001	06/30/2017
TX	Texas	T104704397-08-TX	03/31/2018
VA	Virginia	460204	12/14/2017

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Attention: Mr. Trey Carter

May 10, 2017

Legend

Definition of Laboratory Terms

ND - None Detected at the Reporting Limit
TIC - Tentatively Identified Compound
CFU - Colony Forming Units
SOP - Method run per Pace Standard Operating Procedure
RL - Reporting Limit
DF - Dilution Factor
***** - Analyte not included in the NELAC list of certified analytes.

Sample Information

N-Nitrosodiphenylamine breaks down to diphenylamine in the GCMS; both analytes are reported as N-Nitrososdiphenylamine. Pace is not NELAC certified for diphenylamine.

Phthalic acid and phthalic anhydride are reported as dimethyl phthalate

Maleic acid and maleic anhydride are reported as dimethyl malate

1,2-Diphenylhydrazine breaks down to azobenzene in the GCMS; both analytes are reported as azobenzene

Drinking Water Records will be available for at least 5 years and are subject to disposal after the 5 years have elapsed.

Definition of Qualifiers

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD and/or PDS due to suspected matrix interference. Sample results for the QC batch were accepted based on acceptable LCS recoveries.

Note: Unless otherwise noted, all results are reported on an as received basis.

Chain of Custody

Pace Analytical
www.pacelabs.com

Workorder: 92339645 **Workorder Name:** ATHENS, GA **Owner Received Date:** 5/5/2017 **Results Requested By:** 5/12/2017

Report To	Subcontract To
Trey Carter Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092	Pace Analytical Atlanta 110 Technology Parkway Peachtree Corners, GA 30092 Phone (770)734-4200

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	Requested Analysis: 8260 VOCs - Std List	LAB USE ONLY
1	MW-4A	PS	5/5/2017 12:05	92339645001	Water	3	X	-1
2								
3								
4								
5								

AAE0275

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	5/9/17 [illegible]	[illegible]	5/9/17 0920
2				
3				

Comments: 713241782530

Cooler Temperature on Receipt 1.7 °C | **Custody Seal** Y or (N) | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

PACE ANALYTICAL SERVICES, LLC.

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LOG-IN CHECKLIST

Printed: 5/9/2017 1:03:08PM

Attn: Mr. Trey Carter

Client: Pace Analytical Services Inc. - Huntersville
Project: Athens, GA
Date Received: 05/09/17 09:20
Work Order: AAE0275
Logged In By: Charles Hawks

OBSERVATIONS

#Samples: 1 **#Containers:** 3

Minimum Temp(C): 1.7 **Maximum Temp(C):** 1.7 **Custody Seal(s) Used:** No

CHECKLIST ITEMS

COC included with Samples	YES
Sample Container(s) Intact	YES
Chain of Custody Complete	YES
Sample Container(s) Match COC	YES
Custody seal Intact	N/A
Temperature in Compliance	YES
Sufficient Sample Volume for Analysis	YES
Zero Headspace Maintained for VOA Analyses	YES
Samples labeled preserved (If Applicable)	YES
Samples received within Allowable Hold Times	YES
Samples Received on Ice	YES
Preservation Confirmed	YES

Comments:

APPENDIX D

SUMMARY OF HOURS INVOICED

APPENDIX D

Monthly Summary and Description of Georgia Professional Geologist Hours
March 2017 through September 2017
Former Loef Facility
Athens, Georgia
VRP Site No. 802705980

Kathleen Roush, P.G. (Georgia PG Registration No. 1799)		
Monthly Period	**Total Hours**	**Description of VRP Work**
March 2017	0.0	-
April 2017	15.0	VRP Application updates for CMC; Conference calls with client and GA-EPD; Prepare for and attend meeting in Atlanta with GA-EPD and CMC.
May 2017	1.0	Client correspondence; Arrange and attend call with GA-EPD.
June 2017	0.25	Call with GA-EPD regarding VRP application and project status update.
July 2017	0.0	-
August 2017	0.50	Consult with project team to develop scope for next phase of work.
September 2017	7.25	Worked on draft of 6th Progress Report; Reviewed and certified final 6th Progress Report