**Georgia Environmental Protection Division**
**Land Protection Branch**
**Response and Remediation Program**
**Response Development Units 1 – 3**

2 Martin Luther King Jr. Dr. SE
Suite 1054 East Tower
Atlanta, Georgia 30334
Phone: 404-657-8600

# Document Submittal Form

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| | |
|---|---|
| Name of Document: | 9th Semi-Annual Progress Report |
| Date of Document: | January 28, 2019 |
| Site Name: | Former Loef Company Site (Commercial Metals/Owen Electric Steel) |
| Site ID Number: | HSI #10376; VRP #802705980 |

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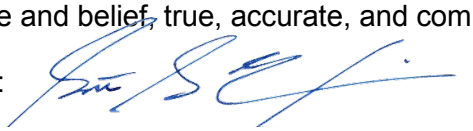
Signature: 

Name (printed): Scott Huismann, P.E.

Date: 1/29/2019

Organization: Apex Companies, LLC

Phone: 858-877-9046

Email: SHuismann@apexcos.com

Receipt Date
(for EPD use only)

January 28, 2019

Mr. Michael Smilley
Environmental Protection Division - Response and Remediation Program
Georgia Department of Natural Resources
2 Martin Luther King Dr., S.E., Suite 1462East
Atlanta, Georgia, 30334

Re: 9th Semi-Annual Progress Report
Former Loef Site – 590 Old Hull Road, Athens, Georgia – HIS Site No 10376
VRP Site No 80275980

Dear Mr. Smilley,

Commercial Metals Company (CMC) is pleased to submit the 9th Semi-Annual Progress Report for the above referenced site. The progress report was prepared by Apex Companies, LLC (Apex) on behalf of CMC. The current progress report details the results of the limited groundwater sampling event. CMC and SKAPs we able to come to an agreement for site access in November 27, 2018. The DPT work on the SKAPs property and the installation of the two new monitoring wells was scheduled for the weeks of January 14th and 21st. The field work was completed on January 24, 2019. The samples have been submitted to the laboratory. The analytical data was not available prior to the submittal of the attached progress report and will be summarized in the 10th Semi-Annual Progress Report.

Should you have any questions or need additional information, please feel free to contact me at 336.506.1894, or email Peter.Pozzo@CMC.com.

Sincerely,

Peter F. Pozzo, PG
Area Environmental Manger

Enclosure

**CMC Recycling**
560 Old Hull Road
Athens, GA 30601
706.613.5201
www.cmc.com

# 9th 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:**

Apex Companies, LLC
10610 Metromont Parkway, Suite 206
Charlotte, North Carolina 28269

Apex Project No. 510507-002.08

January 28, 2019

S. Grant Watkins, PG, RSM
Program Manager

Tommy Fisher
Environmental Scientist

Scott S. Huismann, P.E.
Director

GEORGIA REGISTERED No.22722 PROFESSIONAL 1/12/18 ENGINEER SCOTT S. HUISMANN

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# 1.0 INTRODUCTION

Apex Companies, LLC (Apex) has prepared this 9th Semi-Annual 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 the three property 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 DNR Environmental Protection Division (EPD). It documents work completed at the site since the last semi-annual reporting period and includes results of the most recent groundwater sampling event in November 2018.

## 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 (MNA) as a groundwater cleanup remedy. CMC has continued with a modified groundwater monitoring program to track the progress of the bioremediation remedy and the plume MNA processes.

The last semi-annual Progress Report submitted by CMC to EPD was the *8th Semi-Annual Progress Report* (Apex: July 26, 2018). Previous VRP site field activities and evaluations conducted by CMC and addressed by the 8th Progress Report included:

- Contacted owners of off-site properties east of the CMC property and initiated the process of obtaining access agreements to conduct the off-site groundwater investigation;
- Methods and results of the May 2018 groundwater monitoring event conducted at existing Site monitoring wells;
- An updated Conceptual Site Model (CSM); and
- An updated VRP schedule.

### 1.2 Work Scope Completed for Current Progress Report

This *9th Semi-Annual Progress Report* presents information about VRP site activities performed during the most recent semi-annual reporting period and since submittal of the last progress report. Work completed since submittal of the last progress report, and presented for the current reporting period, includes the following:

1. Finalized the access agreement with property stakeholders to conduct the off-site groundwater investigation for the property parcel located east-southeast of the CMC property. The property access agreement was finalized on November 27, 2018. The off-site field work began on January 14, 2019 but is not included in the current report;
2. Methods and results of the November 27, 2018 groundwater monitoring event at existing Site monitoring wells;
3. An updated CSM; and
4. An updated VRP schedule.

The following section of this progress report also includes a response to EPD comments dated August 31, 2018, which addressed regulatory comments for the prior 6th, 7th, and 8th Progress Reports for the site.

## 2.0 RESPONSE TO REGULATORY COMMENTS

In a letter to CMC dated August 31, 2018, EPD provided comments to the following three progress reports that had previously been submitted by CMC: *6th Semiannual Progress Report* (9/29/2017); *7th Semiannual Progress Report* (1/26/2018); and *8th Semiannual Progress Report* (7/26/2018). EPD's combined comments to these reports are shown below in italics, followed by CMC's responses to the comments.

1. *Section 2.1 of the 8th Progress Report petitions EPD to retain the Property in the VRP to continue corrective action in accordance with the approved VIRP and subsequent correspondence. EPD approves the VRP Schedule of Activities in Section 6.3 of the 8th Progress Report, which may continue without an alternate administrative process at this time.*

Acknowledged. Since submittal of the 8th Progress Report, CMC has continued with the work scope and schedule presented in that report. Updates to the VRP schedule are presented in the current progress report.

2. *EPD agrees with the Recommendations for Future VRP Activities in Section 6.0 of the 7th and 8th Progress Reports with the following exception: Based on a review of the results of the October 2017 Groundwater Monitoring Event and Limited DPT on-property assessment, EPD agrees with the installation of an intermediate depth permanent monitoring well adjacent to MW-4A and a potential monitoring well to be installed on an offsite property east and downgradient of the subject property, which may be designated as a point of demonstration (POD) well. However, the contaminant concentrations detected at DPT boring location GW-4 located near the southern Property boundary seems to suggest the possibility of off-property migration of the plume in the intermediate zone (46-50 feet below ground surface (bgs)). Monitoring wells W-7A* [sic]*, MW-8A, and MW-9A are positioned along the southern/ south-western property boundary, but they are screened at shallower depths of approximately 10-20 feet bgs and are not representative of the intermediate zone of interest. Therefore, please install a permanent monitoring well screened in the intermediate zone to verify the data at DPT boring GW-4 and determine if the groundwater plume is migrating off-property along the southern property boundary. Please note that additional off-Property sampling may be necessary to fully delineate the plume to the extent practicable to the south.*

   As requested by EPD, CMC plans to install an additional intermediate-depth monitoring well near the southern parcel boundary to monitor groundwater conditions near the former DPT boring GW-4. Details for the proposed well construction and sampling are discussed in a later section of this progress report. The well will be installed in late January 2019, weather permitting.

   CMC will not install a permanent groundwater monitoring well at the exact location of temporary DPT boring GW-4. As EPD is aware, the CMC scrap metal recycling facility has heavy equipment use and piles of scrap metal that are prone to damage, or bury, monitoring wells in certain parts of the property. The location of DPT boring GW-4 is one such location where a permanent well would be prone to damage. Therefore, CMC proposes to install the permanent well further south and down the hill from GW-4, in the general area around well MW-8A. This location is hydraulically downgradient from boring GW-4, is located closer to the southern property boundary, and is less prone to future damage from the CMC scrap metal business operations.

3. *Section 4.2 of the 6th Progress Report proposed a modified groundwater sampling plan, which changes the sampling frequency of monitoring wells MW-6, MW-7A, and MW-13 from a semiannual to annual. The modification was proposed as the wells either monitor background conditions or did not have VOC detections in the preceding one to two sampling events. EPD agrees with the modified sampling plan; however, if one of these wells exhibits an increase of VOC concentrations during an annual event, it should be sampled again during the next semiannual sampling event to confirm the results. Please ensure that all wells are gauged during semiannual sampling events, and justify any variation from the sampling plan in future progress reports or the final CSR.*

*For clarity, the following is EPD's understanding of the sampling plan for the Property, with changes pending future off-Property access negotiations and additional monitoring well installations:*

***Semiannual Sampling**: MW-1, MW-1D, MW-3A, MW-4A, MW-8A, MW-9A, MW-10 through MW-12, and MW-14*

***Annual Sampling**: MW-6, MW-7A, and MW-13*

CMC concurs with the stated groundwater monitoring plan and near-term schedule for the on-site wells. CMC further understands that the monitoring plan may be modified based on future results from on-site wells, and that it will eventually be modified to include new on-site and off-site monitoring well(s). Potential modifications to the sampling plan will be proposed and explained in future progress reports. To this end, based on analytical results CMC may propose in future progress reports that additional existing wells be reduced to annual sampling.

4. *Section 5.1 of the 8th Progress Report states that Figure 6 and Figure 7 were illustrated to show the vertical contaminant distribution in the vicinity of MW-4A, MW-10, and MW-7A in the context of a conceptual site model (CSM). Please provide revised cross-sections in the final VRP CSR that illustrate the Property's surface and subsurface setting (Unified Soil Classification System subsurface soil descriptions and any interconnecting lithologic characteristics) to support the graphic three dimensional CSM as required by Item #5 of the VRP Checklist. Please ensure that the cross-section revisions include the following:*

   a) *Include a figure that delineates the traces or lines of the cross-section profiles (A-A', B- B', etc.) in plan-view in future progress reports and whenever cross-section profiles are drawn.*

   b) *Revise or add cross-section figures so that the orientation of at least one of the cross-sections passes through the known source area. The figures should also be used to illustrate horizontal delineation in the predominant groundwater flow direction(s) and vertical delineation in the source area.*

   Future progress reports and the final CSR will contain a figure(s) that show the traces of cross section profiles presented in each report. The current progress report includes such a figure (**Figure 5**) showing the cross-section traces.

   As requested by EPD, at least one cross section will extend through the source area and will show vertical and horizontal distribution of contaminants in groundwater. To clarify what is defined as the “source area”, the original Site source area was in the vicinity of former well MW-2A, which is abandoned and was last sampled in May 2015. The original VRP application by Hull (November 2011) and their 2nd Progress Report contained cross sections that include the now-abandoned source area well MW-2A. The area around former well MW-2A also underwent in-situ bioremediation treatment in 2003. Untreated remnants of the plume that are now considered the source zone are found around well MW-11, which has been the most contaminated on-site well for the past five years. For the current and future progress reports, at least one cross section will include MW-11 as the remaining source area or “hot spot” well, and it will include any former DPT groundwater borings close to this well. Note that full delineation of

groundwater contaminants, as shown on the cross-sections, may not be possible until the off-site investigation is completed.

5. *The 7th Progress Report cites multiple occurrences of the inability of field personnel to access monitoring wells for various reasons (i.e. flooding, well damage, obstructions observed inside of the wells, etc.). Specifically, the 2018 Progress Report mentions damage/ obstructions at MW-7A (no well cap), MW-8A (inaccessible due to flooding), MW-9A (mounding due to flooding), MW-11 (obstruction at 3.5-feet below top of casing (TOC)), MW-14 (well damaged, obstruction at 2-feet below TOC), etc. While Table 2 acknowledges the future repair of MW-11, there is no mention of repairs for any other damaged monitoring wells. Please provide a description of the measures taken or that will be taken to repair each affected monitoring well in the next progress report.*

   As mentioned above, the CMC site is an active scrap metal recycling facility that uses heavy equipment and has transient piles of scrap metal. As a result, monitoring wells installed in the production areas of the property are more prone to damage and/or temporary burial in the scrap piles. In response to the EPD comment #5 about the well repairs, the following is a status of each well and/or plans for repairs, where applicable:

   - MW-7A: A new well cap was installed on this well in January 2019.
   - MW-8A: This well sits in a low area that is prone to flooding after heavy rains due to stormwater flow and runoff from adjacent higher-ground areas. The well is typically accessible even after most rainfall events, and there has been only one sampling event (October 2017) where the surrounding flooding conditions made the well inaccessible for safety reasons. Since well MW-8A is usually accessible under typical site conditions, there are no changes proposed for this well.
   - MW-9A: Similar to conditions at well MW-8A, well MW-9A is located near a low area that receives runoff during precipitation events. The groundwater "mounding" effect described at this well is the water table's natural response to the surface infiltration of water in this area, both seasonally and temporally after heavy rainfall events. There are no construction or integrity issues noted for well MW-9A, and this well is in an ideal location to illustrate the interactions of surface water hydrology with the shallow groundwater (water table) zone on this part of the Site property. No repairs or changes to well MW-9A are proposed.
   - MW-11: This well was repaired following the October 2017 monitoring event. The damaged section of the inner well casing was cut down and the outer metal protective casing replaced. The repaired well now has a lower casing elevation compared to its original construction. The top-of-casing elevation for MW-11 will be resurveyed in February 2019 when the two new on-site wells are surveyed.
   - MW-14: The inner PVC casing for this well was bent near the ground surface, presumably when an object or site equipment struck the outer metal casing and pushed the entire wellhead assembly. Well MW-14 will be repaired in January 2019 by cutting off the damaged section of inner casing, installing a new section of well pipe, and reinstalling the outer metal protective casing. The top-of-casing elevation for MW-14 will be resurveyed in February 2019 when the two new on-site wells and MW-11 are also surveyed.

6. *Section 5.1.1 and 5.1.2 of the 7th Progress Report discusses an off-Property Direct Push Technology (DPT) groundwater investigation east and downgradient of the Property and the installation of permanent monitoring wells. The Work Plan for Additional Groundwater Investigation includes DPT groundwater sampling offsite with a retractable screen sampler, and no soil cores will be collected. Please ensure that (1) at least one sample location (furthest southeast) includes a soil core to the depth of deepest groundwater sample collection. This will allow a more accurate assessment of the depth to water and correlation of lithologic contacts from the existing cross-section to the furthest downgradient sampling point, and (2) well construction diagrams, a written description of the installation and construction methods, and a written description of the sampling and analysis procedures are provided for all newly constructed monitoring wells. Additionally, EPD approves the proposal in Section 2.0 of the 8th Progress Report to relocate the off-Property DPT boring from the northern adjacent off-Property parcel (#221 001B) to the southern adjacent off-Property parcel (#221 001A), as depicted on Exhibit B of Appendix A of the 8th Progress Report.*

   Acknowledged. One continuous soil core will be collected at the further off-site DPT groundwater boring location during the off-site investigation. The timing of the field work for the off-site DPT investigation and the installation of the two new on-site wells (late January 2019) did not allow these data to be included in the current progress report. Well construction diagrams and installation procedures for all new wells will be provided in the next Progress Report following completion, sampling, and surveying of the new wells. As stated, each of the six off-site DPT groundwater boring locations were moved to the southern off-site parcel #221 001A.

## 3.0 GROUNDWATER MONITORING METHODS

This section describes the scope and methods used to conduct the most recent groundwater monitoring event at the site in November 27, 2018. The groundwater monitoring program consisted of a routine groundwater gauging event at all existing Site monitoring wells and groundwater purging and sampling at select monitoring wells to monitor the on-site VOC plume in groundwater. This semi-annual groundwater sampling event was performed in general accordance with the work plan in the 8th *Semi-Annual Progress Report* (Apex: July 26, 2018).

### 3.1 Groundwater Gauging and Sampling at Monitoring Wells

A groundwater monitoring event was conducted on November 27, 2018 at select Site monitoring wells. The November 2018 groundwater monitoring program is summarized in **Table 1**. Groundwater levels were first gauged at each of the thirteen Site monitoring wells (MW-1, MW-1D, MW-3A, MW-4A, MW-6, MW-7A, MW-8A, MW-9A, MW-10, MW-11, MW-12, MW-13, and MW-14). Water level gauging was followed by groundwater purging and sampling from the ten monitoring wells proposed for the current semi-annual sampling event: MW-1, MW-1D, MW-3A, MW-4A, MW-8A, MW-9A, MW-10, MW-11, MW-12, and MW-14.

Monitoring well MW-11 was found to be damaged in October 2017 with an obstruction at the ground surface level. The well was repaired after the October 2017 sampling event, but it's new stickup elevation has not been resurveyed. As a result, the October 2017, May 2018, and November 2018 water level elevations for this monitoring well are not accurate because the top of casing elevation has been modified.

Prior to purging and sampling, each of the monitoring wells were opened and allowed to equilibrate. Groundwater levels were then gauged with a decontaminated electronic water level probe and were recorded to the nearest 0.01-foot. **Table 2** provides the historical groundwater gauging and elevation measurements, including data from the November 27, 2018 gauging event. Following gauging activities, the ten designated monitoring wells were purged and sampled by low flow methods in accordance with the U.S. EPA Region IV Science & Ecosystem Support Division (SESD) Operating Procedure for Groundwater Sampling (SESDPROC-301-R3) protocols. The monitoring wells were purged using a peristaltic pump equipped with disposable polyethylene tubing with the intake placed near the middle of the screened interval. The monitoring wells were sampled in order of lowest to highest VOC concentrations.

During low-flow monitoring well purging, 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 Hanna 9829 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 3% and turbidity within 10%) for a minimum of three consecutive five-minute intervals. **Table 3** summarizes the historical groundwater field parameters, including those for the November 2018 sampling event. Groundwater sampling forms documenting the groundwater quality indicator parameters are provided in **Appendix A**. Each of the purged wells had stabilized turbidity levels below 10 nephelometric turbidity units (NTUs).

Following purging, groundwater samples from each monitoring 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 each well, a duplicate sample (labeled as Dup-1), and equipment blank (EB-1), and a trip blank were transported under chain-of-custody to the Pace Analytical Services, Inc. (Pace) laboratory in Atlanta, Georgia (formerly Environmental Monitoring & Laboratory Analysis) and analyzed for VOCs by EPA Method 8260B. The laboratory analytical report and chain-of-custody records are found in **Appendix B**. The Pace laboratory in Atlanta is a Georgia-certified laboratory by reciprocity under Florida NELAP certification #E87315 (see report for certifications).

## 4.0 GROUNDWATER MONITORING RESULTS

### 4.1 November 2018 Groundwater Gauging Results

**Table 2** summarizes the historical groundwater gauging and elevation measurements, inclusive of the November 27, 2018 event. Groundwater elevations were higher in each of the monitoring wells during the November 2018 gauging event when compared to the May 2018 elevations. Groundwater elevations were higher by 0.51 feet (MW-6) to 4.38 feet (MW-9A) compared to the May 2018 event. Historical gauging results confirm that groundwater elevation fluctuations of several feet can occur in many of the shallow site wells over relatively short time periods.

#### 4.1.1 Groundwater Potentiometric Flow

Groundwater elevation data from Table 2 were used to construct a shallow groundwater potentiometric map for November 27, 2018 as shown in **Figure 3**. The potentiometric map

indicates that shallow groundwater was flowing generally toward the south-southeast over most of the Site during the November 2018 gauging event. An area of localized water table mounding and potential radial flow was again observed in the area around well MW-9A, similar to localized water table mounding that was observed during the October 2017 event. Groundwater elevation data from MW-11 were not used in the potentiometric map construction due to reasons previously discussed. Deep well MW-1D data were also not used to construct the potentiometric map.

Groundwater horizontal flow gradients in the surficial aquifer zone vary across the site. The hydraulic gradient is historically lower in the northern portion of the site. Using three-point triangulation methods, a hydraulic gradient of 0.0138 feet per foot (ft/ft) was calculated for upgradient portions of the site in the area between monitoring wells MW-6, MW-12, MW-1, and MW-13. Slightly steeper hydraulic gradients averaging 0.0333 ft/ft were calculated using triangulation methods for areas between wells MW-14, MW-7A, and MW-3A. Further downgradient toward the east-southeast, the hydraulic gradient flattens significantly in the areas between monitoring wells MW-7a, MW-8a, and MW-9a, where the mounding effect at MW-9A appears to cause a localized reversal of flow direction in shallow groundwater. It is not possible to calculate an accurate hydraulic gradient in the areas between wells MW-7A, MW-8A, MW-9A, and MW-4A due to the limited amount of groundwater elevation data in this area and uncertainty of the groundwater flow directions around well MW-9A.

Because there is not a multi-depth cluster of closely-spaced shallow and deep wells at the site, vertical hydraulic gradients could not be directly determined from groundwater elevation data at deep well MW-1D. To estimate the vertical hydraulic gradients, the groundwater potentiometric elevations at deep well MW-1D have previously been compared to the shallow potentiometric contour value at this location. From Figure 3, the shallow groundwater potentiometric value is approximately 685 ft. MSL at monitoring well MW-1D and this value is assumed to represent the groundwater table elevation at the middle of the screen of a hypothetical shallow well at this location. Since the groundwater elevation in deep well MW-1D (684.54 ft MSL) is lower than the estimated groundwater table potentiometric value above it (685 ft MSL), the groundwater vertical flow vector is presumed to be downward in this area. Vertical gradient calculations were not performed for the November 2018 gauging data due to the remnant groundwater mounding and flattened gradient in this area (Note: the historical vertical gradient from the November 2016 sampling event was 0.0771 ft/ft).

### 4.2 Groundwater Analytical Results for Monitoring Wells

**Table 4** summarizes the monitoring well VOC analytical results for the November 2018 sampling event along with historical groundwater VOC results. **Figure 4** shows the detected VOCs for monitoring wells sampled in November 2018. Historical May 2015 analytical data from abandoned well MW-2A are also shown on this figure for reference.

Laboratory analytical results in Table 4 show that ten different VOCs were detected at quantified or estimated (J-flagged) concentrations in one or more of the primary groundwater samples collected from the ten monitoring wells sampled in November 2018. However, only three of these VOCs were detected at concentrations above their Type 1 Risk Reduction Standards (RRSs) for groundwater in the primary groundwater samples: 1,1-dichloroethene (1,1-DCE), benzene, and trichloroethene (TCE). Methylene chloride slightly exceeded its Type 1 RRS at well MW-1; however, this detection is a possible laboratory contaminant and methylene chloride was also detected in the trip blank. Only wells MW-3A and MW-11 had one or more VOCs exceeding their Type 1 RRSs (excluding the methylene chloride detection at MW-1).

Source area monitoring well MW-11 had the most detections (eight VOCs) above laboratory detection limits, but only two of the VOCs exceeded their Type 1 RRSs. TCE was detected in well MW-11 at a concentration of 376 micrograms per liter (µg/L), above the Type 1 RRS of 5 µg/L. 1,1-DCE was detected in MW-11 at 13.4 µg/L, above its Type 1 RRS of 7 µg/L. Well MW-1 also had eight VOC detections, but one of the detections was methylene chloride, a suspected laboratory contaminant. Excluding methylene chloride, none of the other VOCs in well MW-1 exceeded their respective Type 1 RRSs.

Benzene was detected at 5.5 µg/L in the sample for MW-3A, which is slightly above its Type 1 RRS of 5 µg/L. Well MW-3A has contained benzene above its Type 1 RRS since May 2006.

The compound 1,3-dichlorobenzene was detected in MW-11 (0.75J µg/L) for the first time ever at the site. Previous historical analyses by Method 8260B have not included this VOC on the analyte list. It was not detected in any other wells at the Site during the November 2018 event.

When compared to the previous sampling events over the past two years (November 2016, October 2017, and May 2018), the detected VOCs were generally lower concentrations or relatively unchanged during the November 2018 event. TCE concentrations continue to decline at well MW-4A, but this VOC showed a slight increase at MW-11 compared to the May 2018 event. **Table 5** summarizes the percent reductions in total VOC concentrations at several key Site monitoring wells since the 2003 in-situ bioremediation injections. Of specific interest is source area monitoring well MW-11, which continues to show a steady declining trend for total VOCs.

The inverse relationship between TCE concentration and groundwater elevations continued to be demonstrated at MW-4A during the November 2018 sampling event. Historical groundwater elevations and TCE concentrations have shown large fluctuations with an inverse relationship at MW-4A. The cause of this inverse relationship was confirmed through further vertical delineation of VOCs in groundwater in October 2017 and discussed in more detail in the 7th Progress Report.

### 4.2.1 Field QA/QC Samples

Methylene chloride was detected in the trip blank submitted to Pace during the November 2018 sampling event at a concentration of 1.3 µg/L. Methylene chloride is a common laboratory contaminant, and it was also detected in samples MW-1, MW-4A, MW-10, and MW-14 at low concentrations during the November 2018 sampling event. The methylene chloride detection at MW-1 exceeded its Type 1 RSS of 5 µg/L.

A duplicate groundwater sample (Dup-1) was collected from monitoring well MW-11 during the November 2018 sampling event and analyzed for VOCs by EPA Method 8260B. The duplicate sample showed similar results to its primary sample MW-11, with most VOC concentrations within 14 percent or less variations. The exception was the 1,3-dichlorobenzene detection, where its concentration in the primary sample MW-11 was 25% higher than in the Dup-1 sample.

## 4.3 VOC Statistical Trends in Groundwater

Statistical analysis of groundwater contaminant trends is another important tool in the evaluation of primary lines of evidence. Two nonparametric statistical methods that are widely used are the Mann-Kendall and the Mann-Whitney tests. Both statistical tests can be used to demonstrate whether individual groundwater contaminants are decreasing, stable, or increasing over time. The Mann-Kendall test requires a minimum of four sets of sampling data that are not affected by large seasonal variations in concentrations.

Mann-Kendall statistical tests were used in recent progress reports to evaluate VOC data from several key wells in the source area, the mid-plume area, and the downgradient areas that have four or more sampling events. Software developed by GSI was used to perform the tests. Mann-Kendall statistical tests were initially conducted on groundwater data collected through April 2016 and the results were first presented in the *4th Semi-Annual Progress Report*. Updated Mann-Kendall statistical tests were run on post-2005 through November 2018 data for wells MW-1D, MW-2A, MW-3A, MW-4A, MW-9A, MW-10 and MW-11 for the most prevalent regulated VOCs in site groundwater. The following data management rules were used in the statistical evaluations:

- J-flagged (estimated concentration) data were input as a quantified detected value.
- Non-detects were input as one-half the value the laboratory reported Practical Quantitation Limit (PQL), as allowed by the method of imputing, or substitution.

**Appendix C** contains the GSI software output sheets for the Mann-Kendall tests. The updated statistical results by monitoring well and by VOC that include the November 2018 groundwater monitoring data are summarized in the following table:

*Mann-Kendall Statistical Tests Summary (Updated Through November 2018)*

| | **TCE** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Monitor well** | **MW-1D** | **MW-2A** | **MW-3A** | **MW-4A** | **MW-9A** | **MW-10** | **MW-11** |
| M-K Statistic (S) | -6 | -18 | -81 | -63 | -41 | -20 | -17 |
| Confidence Factor | 88.3% | 93.4% | >99.9% | 99.9% | 99.4% | 99.3% | 99.5% |
| Trend Result | Stable | Prob. Decreasing | Decreasing | Decreasing | Decreasing | Decreasing | Decreasing |
| | **1,1-DCE** | | | | | | |
| **Monitor well** | **MW-1D** | **MW-2A** | **MW-3A** | **MW-4A** | **MW-9A** | **MW-10** | **MW-11** |
| M-K Statistic (S) | -7 | -22 | -55 | -67 | -39 | -18 | 5 |
| Confidence Factor | 82.1% | 97.1% | 99.7% | 99.9% | 99.1% | 98.4% | 71.9% |
| Trend Result | Prob. Decreasing | Decreasing | Decreasing | Decreasing | Decreasing | Decreasing | No Trend |
| | **Cis-1,2-DCE** | | | | | | |
| **Monitor well** | **MW-1D** | **MW-2A** | **MW-3A** | **MW-4A** | **MW-9A** | **MW-10** | **MW-11** |
| M-K Statistic (S) | -7 | -13 | -47 | -45 | -39 | -19 | -8 |
| Confidence Factor | 92.1% | 85.4% | 99.0% | 97.7% | 99.1% | 98.9% | 84.5% |
| Trend Result | Prob. Decreasing | Stable | Decreasing | Decreasing | Decreasing | Decreasing | Stable |
| | **Vinyl Chloride** | | | | | | |
| **Monitor well** | **MW-1D** | **MW-2A** | **MW-3A** | **MW-4A** | **MW-9A** | **MW-10** | **MW-11** |
| M-K Statistic (S) | -9 | 7 | -57 | -71 | -41 | -23 | -6 |
| Confidence Factor | 97.5% | 70.0% | 99.8% | 100.0% | 99.4% | 99.9% | 76.4% |
| Trend Result | Decreasing | No Trend | Decreasing | Decreasing | Decreasing | Decreasing | Stable |
| | **Benzene** | | | | | | |
| **Monitor well** | **MW-1D** | **MW-2A** | **MW-3A** | **MW-4A** | **MW-9A** | **MW-10** | **MW-11** |
| M-K Statistic (S) | -9 | -19 | -23 | -63 | -41 | -16 | -15 |
| Confidence Factor | 97.5% | 94.6% | 88.3% | 99.9% | 99.4% | 96.9% | 98.5% |
| Trend Result | Decreasing | Prob. Decreasing | Stable | Decreasing | Decreasing | Decreasing | Decreasing |

These statistical trend results indicate that TCE, the daughter products of TCE, and benzene are either decreasing, probably decreasing, or stable for source area and mid-plume monitoring wells where a trend could be established. Well MW-11 shows "No Trend" for 1,1-DCE. Downgradient point of determination (POD) monitoring wells, MW-4A and MW-9A, show a decreasing trend for each of the five COCs evaluated. Only the data sets from 2006 to the present were evaluated to eliminate effects from potential concentration spikes in daughter compounds or enhanced dissolution anomalies that would most likely occur within the first few years following the HRC® injections in 2003. This twelve-year data set best represents long term post-injection trends.

The influence of non-detects in the data set (a.k.a., left censored data) should be noted regarding their limitations and effects on the statistics results. When non-detects (without J-flag estimates) make up more than 80% of the data set, the statistical accuracy, bias and precision of nonparametric methods is largely unreliable, and there are few valid methods to evaluate a data set that is this strongly left censored. This limitation is further exacerbated if the data set consists of five or less values and/or if the non-detects are based on variable PQLs. These conditions are true for some of the Site's data set, even when a censoring point is established for non-detects using one-half of the PQL. Based on these methodology limitations, the following Mann-Kendall results cannot be substantiated for their accuracy:

- MW-9A all VOC data: 100% of the statistically analyzed data set is non-detect. With one exception in October 2017, no VOCs have been detected in this monitoring well since 2004. One VOC (methyl isobutyl ketone) was detected in October 2017 with a J-flag estimate, but this VOC was not part of the statistical data set. Also, the PQLs are varied in the MW-9A data set. The Mann-Kendall trend results of "Decreasing" derived for the five listed VOCs is based entirely on ½ PQL substituted values; therefore, the accuracy of this result is not substantiated by the statistical methodology.

- Vinyl chloride at MW-1D, MW-3A, MW-4A, MW-9A, MW-10, and MW-11: 100% of the vinyl chloride data are non-detect since 2006 (or when sampling was initiated) at these six monitoring wells, and there are no J-flagged data. Also, the PQLs are varied in the data set. The Mann-Kendall trend results of "Decreasing" or "Stable" derived for vinyl chloride at these monitoring wells is based entirely on ½ PQL substituted values; therefore, the accuracy of this result is not substantiated by the methodology. These six monitoring wells are best described as "not impacted" by vinyl chloride from 2006 (or when sampling was initiated) through 2018.

- 1,1-DCE at MW-1D, MW-3A, MW-4A, and MW-9A: 100% of the 1,1-DCE data are non-detect since 2006 (or when sampling was initiated) at these four monitoring wells, and there are no J-flagged data. Also, the PQLs are varied in the data set. The Mann-Kendall trend results of "Decreasing" or "Probably Decreasing" derived for 1,1-DCE at these monitoring wells is based entirely on ½ PQL substituted values; therefore, the accuracy of this result is not substantiated by the methodology. These four monitoring wells are best described as "not impacted" by 1,1-DCE from 2006 (or when sampling was initiated) through 2018.

- Cis-1,2-DCE at MW-1D, MW-9A, and MW-10: 100% of the cis-1,2-DCE data are non-detect since 2006 (or when sampling was initiated) at these three monitoring wells, and there are no J-flagged data. Also, the PQLs are varied in the data set. The Mann-Kendall trend results of "Decreasing" or "Probably Decreasing" derived for cis-1,2-DCE at these monitoring wells is based entirely on ½ PQL substituted values; therefore, the accuracy of this result is not substantiated by the methodology. These three monitoring wells are best

described as "not impacted" by cis-1,2-DCE from 2006 (or when sampling was initiated) through 2018.

- Benzene at MW-1D and MW-9A: 100% of the benzene data are non-detect since 2006 (or when sampling was initiated) at these two monitoring wells, and there are no J-flagged data. Also, the PQLs are varied in the data set. The Mann-Kendall trend results of "Decreasing" derived for benzene at these two wells is based entirely on ½ PQL substituted values; therefore, the accuracy of this result is not substantiated by the methodology. Both monitoring wells are best described as "not impacted" by benzene from 2006 (or when sampling was initiated) through 2018.

Parametric and non-parametric statistical methods are available to evaluate data sets with large frequencies of non-detects and varying PQLs within the data set. However, these are beyond the current scope and usefulness for the purposes of this progress report.

## 5.0 REVIEW AND UPDATE OF CONCEPTUAL SITE MODEL

This section provides a review and update of the CSM, including the 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.

The CSM update in the *7th Semi-Annual Progress Report* presented a significant change to our understanding of the groundwater plume at the Site, based primarily on findings of the October 2017 groundwater DPT assessment. The CSM has not changed significantly since the updates provided in the 7th and 8th Progress Reports. The current CSM understanding is described in the following sections.

### 5.1 CSM Update

Site Hydrogeology

Based on groundwater gauging data obtained by Apex during the last seven monitoring events (January 2015, May 2015, April 2016, November 2016, October 2017, May 2018, and November 2018), groundwater consistently flows toward the south-southeast over most of the Site under normal hydrologic conditions. The October 2017 gauging data revealed the short-term effects on groundwater elevations caused by significant precipitation events at the Site. Specifically, the low-lying area around monitoring wells MW-8A and MW-9A are prone to surface flooding, and these shallow monitoring wells with well screens closer to the ground surface show relatively rapid changes in groundwater levels following major precipitation events. This was best illustrated at well MW-9A during the October 2017 gauging event, where the groundwater elevation was the highest ever recorded and it was 14.49 feet higher than the November 2016 gauging event. As a result, a temporary mounding effect was seen with apparent reversal in the groundwater flow direction around the monitoring well.

A similar water table mounding effect was seen again at MW-9A during November 2018, although the water level elevation was not as high as during the October 2017 event. Residual effects of this historical groundwater mounding are apparent in the areas around monitoring wells MW-8A and MW-9A, where a relatively flat gradient was observed in May 2018 and in November 2018. The October 2017 and November 2018 potentiometric maps also show the water table mounding

at MW-9A, with a localized reversal of flow in the area between wells MW-8A and MW-9A. It is possible that the storm sewer pipes close to well MW-8A are also affecting the groundwater flow patterns in this area during periods of high water table conditions.

Vertical hydraulic gradients could not be determined during the October 2017, May 2018, and November 2018 gauging events but they have been estimated from prior water level gauging events. During the November 2016 gauging event, the estimated vertical hydraulic gradient in groundwater was 0.0771 ft/ft, and the flow direction was downward at deep well MW-1D. Historical data show variations in the vertical gradients between sampling events, but the flow direction remained downward in each event. Shallow and deep groundwater level data from the October 2017, May 2018, and November 2018 gauging events suggest that a downward groundwater flow direction continues to exist in the area around MW-1D.

The upper 80 feet or more of the soil column consists of sandy silt to sandy clay residuum and saprolite. Dense saprolite with increasing content of rock fragments was encountered at depths between 60-74 feet bgs in the boring for deep well MW-1D. Dense, partially weathered rock (PWR) and/or consolidated bedrock was not encountered in the deep well boring. The on-site DPT refusal depths occurred between 52 and 74 feet bgs. Direct-push refusal depths encountered in October 2017 likely represent the deeper, dense saprolite zone and/or the top of the PWR transition zone.

Deep well MW-1D groundwater analytical data collected since June 2015 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 shallow aquifer zones on this part of the VRP site. This comparison is made using current groundwater data from source area monitoring well MW-11, historical data from MW-2A (now abandoned), and the deep well MW-1D. These results suggest that the plume attenuates rapidly with depth, before reaching the PWR hydrostratigrahic zone in the south-central part of the Site. 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 feet per day (ft/day) at the downgradient perimeter to 2.299 ft/day in upgradient areas. The average site K value from all slug tests is 0.6632 ft/day. Groundwater flows to the south-southeast over most of the Site based on potentiometric map interpretations.

For the November 2018 event, a hydraulic gradient of 0.0138 feet per foot (ft/ft) was calculated for upgradient portions of the site in the area between monitoring wells MW-6, MW-12, MW-1, and MW-13. Slightly steeper hydraulic gradients averaging 0.0333 ft/ft were calculated using triangulation methods for areas between wells MW-14, MW-7A, and MW-3A. The linear groundwater seepage velocity was derived from the following calculation that was used in prior progress reports and in the current calculations for November 2018 data:

**Linear Seepage Velocity:** $\mathbf{v_s = -K\ i\ /\ q}$

*Where:*

$v_s$ = linear seepage velocity [units of Length/Time]

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

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

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

For the past few years, a range of linear seepage velocities have been calculated as following using the above equation:

- The *4th Semi-Annual Progress Report* stated 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 slug test values from MW-4A and MW-11), and a gradient of 0.023 ft/ft (measured in April 2016 in the plume area between monitoring wells MW-11 and MW-4A).

- For the November 2016 monitoring event, a slightly higher gradient of 0.0376 ft/ft was measured between MW-11 and MW-4A, corresponding to a higher seepage velocity estimated as 50.6 ft/year using the above equation.

- For the October 2017 data, the seepage velocity estimates varied from 16.7 ft/year for the northern part of the Site property (where there was a lower hydraulic gradient) to 65.1 ft/year on the southeast portion of the property where the gradient was higher.

- For the May 2018 event, the seepage velocity estimates ranged from 16 ft/year for the northern part of the Site property to 67.2 ft/year on the central southeast part of the Site, similar to the October 2017 results. In areas around monitoring wells MW-8A and MW-9A where the hydraulic gradient was much flatter, a seepage velocity of only 7.66 ft/year was calculated using the above equation (the lowest calculated value on record).

- For the current November 2018 sampling event, the seepage velocity estimates range from 18.6 ft/year for the north-central part of the VRP property to 44.8 ft/year on the central southeast part of the property using the above equation and the previously determined “K” and “i” values. Seepage velocities were not re-calculated for the areas around MW-8A and MW-9A since the November 2018 potentiometric data did not allow accurate hydraulic gradients to be determined for this area, and the apparent reversal of flow direction due to mounding would affect the seepage velocity calculation. Low seepage velocities similar to those seen in May 2018 are anticipated for the area between MW-8A and MW-9A.

Earlier progress reports stated that the linear seepage velocities 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 2015 through 2018 data suggest a lower range of linear seepage velocities (<65 ft/year) can be reasonably considered for the Site as well.

A trend graph was developed and presented in the *5th Progress Report* that compared long-term precipitation data from a nearby USGS monitoring station with long-term groundwater elevations at monitoring well MW-4A. This graph was presented 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 indicated that the highest groundwater elevations in MW-4A occurred approximately six to eight months following the peak of seasonal high precipitation trends, with shorter recharge time periods of four to six months also evident on the graph.

The groundwater elevation observations at MW-9A during the October 2017 gauging event indicate that recharge of the shallow aquifer from major precipitation events is even quicker in areas of the Site that have a thinner vadose zone. Groundwater elevation data from October 2017 through November 2018 show the large range of groundwater table fluctuations that can occur over short periods of time on some portions of the Site property.

Regulated Constituents

The lists of regulated constituents for soil and groundwater was established in previous progress reports and based on current data have not changed since the original VRP application. 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 monitoring wells (see Table 4). Two additional VOCs, Dibromomethane and Diisopropyl Ether, were also detected for the first time at quantified or estimated (J-flagged) concentrations in one or more monitoring wells during the October 2017 event. During the November 2018 event, another new VOC (1,3-Dichlorobenzene) was detected for the first time ever; however, this compound does not have a Type 1 RRS. During the November 2018 sampling event, methylene chloride was the only one of these ten newly-detected VOCs that was detected at quantified or estimated (J-flagged) concentrations in one more wells. Although methylene chloride slightly exceeded its Type 1 RRS in one well during the November 2018 sampling event, this VOC is believed to be a laboratory contaminant and it was detected in the trip blank for that event.

For groundwater media, the VOCs listed in Table 4 that have an exceedance of their applicable Type 1 RRS are considered the regulated constituents in groundwater at the Site (with exceptions of potential laboratory contaminants such as methylene chloride). The Type 1 RRSs for groundwater have been updated in Table 4 to reflect EPD's October 2018 changes to RRSs.

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 Plume Extent and Exposure Pathways

The COCs are limited to those VOCs that have a RRS in groundwater. In the *5th Semi-Annual Progress Report* (Apex; February 27, 2017), the possibility that the dissolved TCE and benzene plume was migrating past the eastern fence line of the CMC property at levels above their respective Type 1 RRSs was discussed. That progress report was also the first to describe the periodic fluctuations of TCE and benzene concentrations at monitoring wells MW-4A and MW-10, and the inverse relationship between TCE concentrations and groundwater elevations at MW-3A, MW-4A, and MW-10. These observations led to the on-site DPT groundwater assessment conducted in October 2017, with the results presented in the *7th Semi-Annual Progress Report*.

The on-site DPT groundwater investigation conducted in October 2017 confirmed that higher concentrations of TCE and other VOCs are present in deeper groundwater in areas around monitoring wells MW-10, MW-4A, and MW-7A than has been detected in these three shallow monitoring wells. Two cross sections were presented in the *7th Semi-Annual Progress Report* that showed the vertical distribution of VOCs using the October 2017 analytical data from the monitoring wells and the DPT groundwater borings. The trace of cross sections on the site plan is shown in **Figure 5**. The original cross sections A-A' and B-B' have been updated as **Figure 6** and **Figure 7**, respectively, for the current report. Additionally, a third cross section C-C' that runs north-south through the remaining plume hot spot at MW-11 is shown in **Figure 8**.

Figure 6 shows cross section A-A' which traverses northeast-southwest between monitoring wells MW-10, MW-4A, and MW-9A. Figure 7 shows cross section B-B', which traverses roughly west-east through monitoring wells MW-14, MW-1D, and MW-4A. Figure 8 shows new cross section C-C', which traverses north-south through wells MW-6, MW-12, MW-1, MW-11, MW-3A, MW-1D, and MW-9A. Each of the cross sections include the DPT boring analytical data from October 2017, as well as the monitoring well analytical results from October 2017 through November 2018, as applicable. Groundwater elevations in each cross section represent November 27, 2018 gauging data. Lithologic interpretations in these cross sections are taken from historical soil boring logs and geologic cross sections prepared by prior consultants.

Figure 6 cross section A-A' shows a deeper component of the TCE plume at monitoring wells MW-4A and MW-10 that is largely missed because these wells are screened near the water table surface. DPT probe refusal was 71 feet bgs at GW-2, located adjacent to monitoring well MW-4A, where the benzene and TCE concentrations were one and two orders of magnitude above their Type 1 RRSs, respectively, in October 2017. This result confirms the prior speculation that VOC concentrations at MW-4A have an inverse relationship to groundwater elevation fluctuations due to its very shallow well screen. For the current plume interpretation in Figure 6, the October 2017 groundwater VOC concentrations at DPT borings GW-1, GW-2, and GW-3 are assumed to be unchanged.

Figure 7 cross section B-B' shows a similar vertical distribution of VOCs. It appears that the location of deep well MW-1D is too far south and west to detect the higher concentrations of deeper VOCs that are migrating from the MW-11 plume hot spot area toward MW-4A. For the current plume interpretation in Figure 7, the October 2017 DPT groundwater boring VOC concentrations are assumed to be unchanged.

Figure 8 cross section C-C' shows the lithology and VOC plume distribution along a path that is generally parallel to the groundwater flow direction at the site. The TCE hot spot in groundwater at MW-11 appears to decrease in concentration with depth based on the GW-6 sample results and is largely missed by shallow well MW-3A. TCE detections in deep well MW-1D may be a remnant of the previously treated source area around former well MW-2A. For the current plume interpretation in Figure 8, the October 2017 DPT groundwater boring VOC concentrations are assumed to be unchanged.

Current assessment results suggest that monitoring well MW-4A may no longer be suitable as a Point of Determination (POD) well for the deeper portions of the dissolved VOC plume. Monitoring well MW-4A may still have application as a supplemental POD well to monitor the very shallow zones of the aquifer at the eastern property line. Shallow groundwater VOC data may also support a future VI assessment. Based on deeper groundwater analytical data from DPT borings GW-1 and GW-2 sampled in October 2017, it is apparent that the dissolved plume extends beyond the eastern CMC fence line and potentially beyond the eastern deeded property line (i.e., the center of the railroad tracks) above the Type 1 RRSs for TCE and benzene. Current concentrations of TCE and benzene at these locations and depths have not been verified through additional sampling but are assumed to be unchanged from the October 2017 conditions.

In mid-January 2019 additional DPT groundwater samples were collected on an off-site, downgradient property east of the CMC facility. The analytical data for these DPT borings had not been received in time to evaluate the data and include the results in the current progress report. Results of the off-site DPT investigation are forthcoming in a future report.

Surface Water Exposure Pathways

The closest perennial surface water body is East Fork Trail Creek, which is located south and southeast of the Site more than 1,000 feet from the currently-known extent of the groundwater plume. Based on the most recent groundwater data obtained, there is no evidence that the surface water exposure pathway is complete. The highest VOC concentrations in groundwater at the CMC eastern fence line (161 µg/L of TCE at DPT boring GW-2) are expected to attenuate before reaching the creek. The surface water exposure pathway will be re-evaluated in a future report using the groundwater data obtained east of the CMC property.

Subsurface Vapor Intrusion Exposure Pathway

Section 3.4 of the *7th Semi-Annual Progress Report* (Apex: January 29, 2018) described the methods and results of an initial on-site VI evaluation using the USEPA Vapor Intrusion Screening Level (VISL) calculator for the groundwater-to-indoor air exposure pathway. The VISL calculator was used to analyze the October 2017 groundwater data from wells MW-1 and MW-11. VISL results from the October 2017 event showed that chloroform exceeded its industrial/commercial Target Groundwater Concentration at monitoring well MW-1. For monitoring well MW-11, TCE and benzene exceeded their industrial/commercial Target Groundwater Concentrations.

The VISL calculator was not rerun for the May 2018 or November 2018 data sets and only a comparison of relative changes has been made, where applicable. Monitoring well MW-1 was not sampled in May 2018, but it was resampled in November 2018 and showed a lower concentration of chloroform. Thus, it is assumed that the VISL-calculated risk and hazard quotients are now lower at monitoring well MW-1.

Monitoring well MW-11 showed decreases in benzene and TCE between the October 2017 event and the subsequent May 2018 and November 2018 events. Since the current concentrations of benzene and TCE are lower compared to the October 2017 benchmark results, it is assumed that the VISL-calculated risk and hazard quotients are now lower at that monitoring well. No other monitoring wells sampled in November 2018 showed significant increases in groundwater VOCs that would change their presumed groundwater-to-indoor air risk potential compared to the October 2017 data.

The potential VI conditions at off-site properties is currently unknown. Off-site shallow DPT groundwater data will be input into the VISL calculator after they become available. CMC will perform another round of updated VISL calculations for the on-site monitoring wells when the off-site groundwater data become available.

## 5.2 Point of Exposure Determination

Monitoring well MW-9A was the original POD well identified since it is hydraulically downgradient of the historical source area near monitoring well MW-2A. Monitoring 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 near monitoring well MW-11. Both monitoring wells MW-9A and MW-4A have been used as POD wells for the past two or more years. As stated in the *7th Semi-Annual Progress Report*, MW-4A may no longer be suitable as a POD well and the location of a replacement POD well will be further evaluated as the off-site DPT groundwater investigation progresses.

In prior progress reports, the basis for establishing a point of exposure (POE) was a hypothetical receptor that is located 1,000 feet downgradient of the plume boundary. To this end, East Fork Trail Creek is the closest surface water body to the Site, and this creek is located more than 1,000 feet from the currently known extent of the VOC plume that could potentially impact this water body. The surface water exposure pathway is not complete based on current groundwater data and past fate-and-transport modeling predictions. There are no known water supply wells within 1,000 feet of the Site. The POE will continue to be re-evaluated as more data about the plume extent becomes available.

## 6.0 RECOMMENDATIONS AND SCHEDULE FOR FUTURE VRP ACTIVITIES

The following recommendations are made for continuing the VRP activities at the Former Loef Facility VRP site in Athens, Georgia. These recommendations include VRP site work proposed in the *7th Semi-Annual Progress Report* and the *8th Semi-Annual Progress Report* that has not yet been completed:

- Conduct the off-site DPT groundwater sampling program at the one off-site parcel with DPT boring locations updated in the 8th Progress Report (Currently scheduled for mid-January 2019). 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.
- Install and sample a new, on-site intermediate depth well adjacent to MW-4A (Currently scheduled for late-January 2019).
- Install and sample a second new, on-site intermediate depth well downgradient of GW-4 and in the vicinity of MW-8A (Currently scheduled for late-January 2019).
- Based on the off-site DPT sampling results, potentially install one new off-site monitoring well to become an alternate POD well.
- Perform another semi-annual groundwater event using the sampling plan acknowledged in Section 2.0 this progress report (see Section 6.1 below for sampling work plan). Include any new monitoring wells in future semi-annual groundwater sampling events.
- Repair damaged wellheads and resurvey them along with the new wells.
- Evaluate the potential for off-site VI exposure pathways using new off-site data when it becomes available.
- Submit the 10th Progress Report to EPD. The report should also include results of the off-site DPT sampling work and any additional VI evaluation data that are available at that time. An alternate reporting schedule for the off-site sampling results may be required and will be discussed with EPD beforehand if necessitated by the work schedule.
- Prepare and submit the UECs for the on-site parcels (and off-site parcels if warranted).

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

### 6.1 Work Plan for Semi-Annual Groundwater Sampling Event

A semi-annual groundwater sampling event will be conducted in May 2019 in accordance with the revised groundwater sampling plan, which will align with the sampling schedule outlined in the response to EPD comment #3 in Section 2.0 of this report. For the next sampling event, groundwater elevations will be collected site-wide in each of the 13 existing site monitoring wells

and in the two new wells that are scheduled for on-site installation in January 2019. Each of the 13 existing site monitoring wells and the 2 proposed new wells will then be purged and sampled for laboratory analyses. Monitoring wells MW-6, MW-7a, and MW-13 are now on an annual sampling schedule and they will be resampled in May 2019 to maintain that schedule.

Following groundwater elevation gauging, the fifteen monitoring 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 specified monitoring 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:

- 15-Primary samples (inclusive of two proposed wells installed in January 2019)
- 1-Trip blank (provided by lab)
- 1-Blind field duplicate

If additional off-site monitoring wells are installed between January 2019 and April 2019, they will also be included in future semi-annual sampling events.

### 6.2 Off-Site Direct Push Sampling and Additional Well Installations

A work plan to conduct an off-site groundwater investigation using DPT methods was included in the *7th Semi-Annual Progress Report*. Minor adjustments to the work plan for the proposed DPT groundwater boring locations were presented in the *8th Semi-Annual Progress Report* and are addressed in the response to EPD comments (Section 2.0) of the current progress report. CMC initiated the off-site DPT sampling work on January 14, 2019. The data from this investigation were not available in time to include in the current progress report and will be presented in a forthcoming report.

The *7th Semi-Annual Progress Report* also included a plan to install two additional groundwater monitoring wells, one on-site and one off-site. The proposed on-site well would be located adjacent to MW-4A. In the August 31, 2019 EPD comments letter, a third monitoring well was requested to be installed on-site in the vicinity of DPT boring GW-4. Installation of the third well (estimated total depth of 55 feet) is addressed in Section 2.0 of this report and its final location on the CMC property will be determined by access with a drill rig. Both on-site wells were installed in late January 2019 and will be surveyed and sampled in February 2019. Data for the new wells will be presented in a forthcoming report.

The third monitoring well in the work plan, to be installed off-site, is not yet scheduled. Its final location is not determined at this time and will depend on the off-site DPT sampling results.

### 6.3 Tenth (10th) Semi-Annual Progress Report

The 10th Semi-Annual Progress Report will include data and results of the May 2019 semi-annual groundwater monitoring event; results of the off-site DPT sampling event; summary and sampling

results of the new monitoring wells installed during the semi-annual period; an updated conceptual site model; responses to any EPD comments for prior Progress Reports; and any necessary updates to the VRP schedule.

The next Progress Report (10th) will be submitted at the end of July 2019, unless an alternate reporting schedule is arranged through a separate administrative process with EPD. A separate report that presents only the off-site DPT groundwater data and off-site monitoring well construction and sampling data may be prepared and submitted on an alternate schedule if necessitated by the work schedule and agreed to by EPD.

### 6.4 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 in the next Progress Report, or under separate submittal to EPD.

***Table - Schedule of Future VRP Activities***

| VRP Task or Milestone | Estimated Start Date or Sequencing Timeframe |
|---|---|
| Implement alternate administrative process for VRP program completion | TBD (estimated March 2019) |
| Begin off-site DPT groundwater investigation | January 14, 2019 (underway) |
| Install/sample two new intermediate-depth monitoring wells on-site. | January 21, 2019 (underway) |
| Evaluate off-site DPT groundwater data; Determine if additional DPT sampling is required to complete delineation | February 2019 |
| Install and sample off-site permanent monitoring wells (including new POD well); perform VI sampling if required based on initial VI screening evaluations | May 2019 |
| Perform semi-annual groundwater monitoring event using sampling plan in 9th Progress Report | Late April or May 2019 |
| Submit 10th Progress Report. Include work plan for subsequent phase of groundwater investigations (if required) | Late July 2019 |
| Submit draft & final UECs (include off-site properties if needed) | TBD |
| Submit CSR with Completion Certification | TBD |
| Modify RAP and implement additional remedial measures (if required for Type 1 RRS and UEC compliance) | TBD |

The above schedule includes several “to be determined” (TBD) dates that are currently unknown and are dependent on completing other work tasks that may have variable schedules. This schedule assumes that Site work will continue under previously submitted work plans while CMC and Georgia EPD develop an alternate administrative process to continue in the VRP.

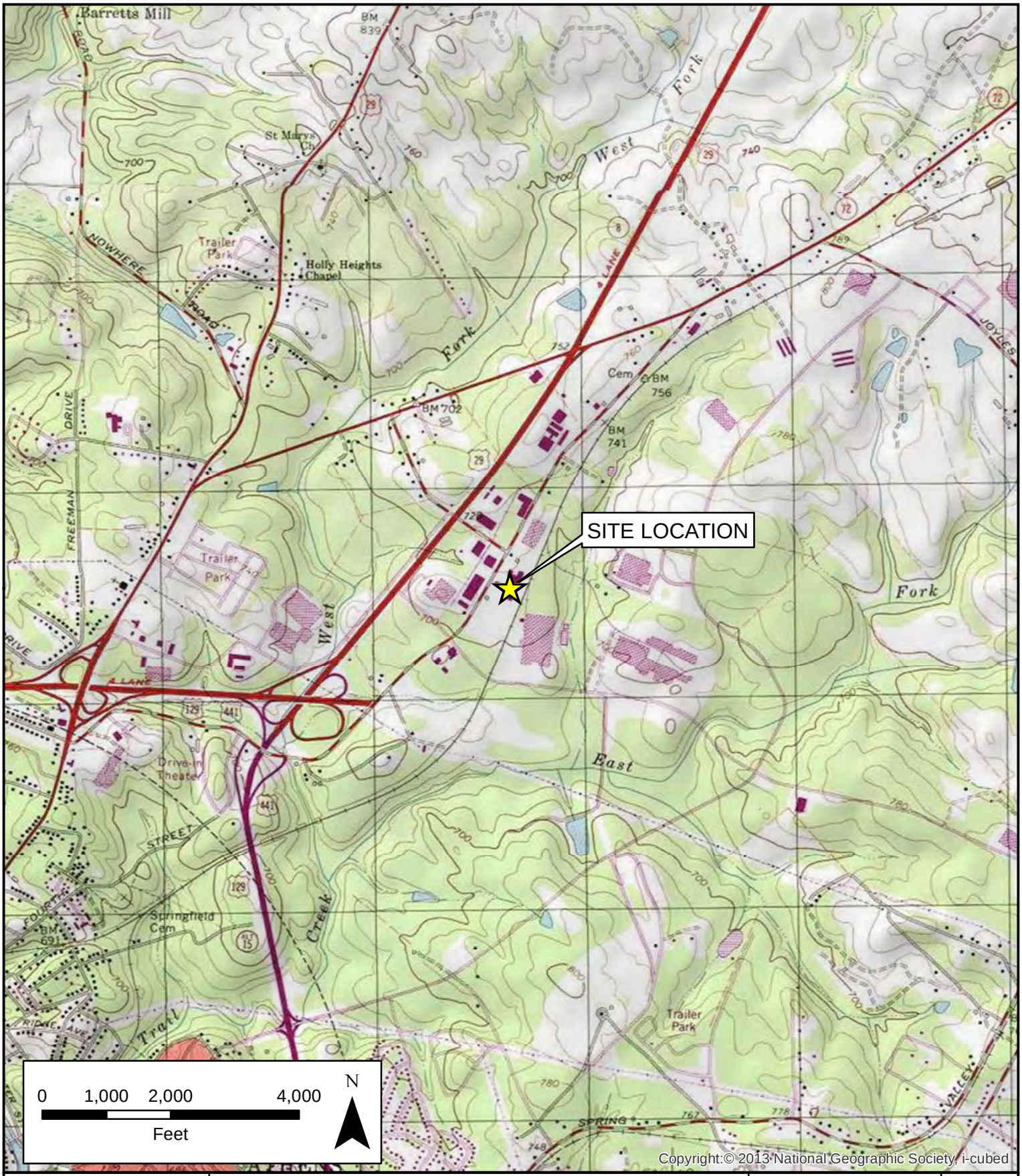
## 7.0 Registered Professional Supporting Documentation

**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."


Scott S. Huismann, P.E.
Georgia P.E. Registration No. 22722

# FIGURES




| | | | |
|---|---|---|---|
| CHECK BY: GW | SITE LOCATION MAP | APEX | FIGURE |
| DRAWN BY: SP | | | 1 |
| DATE: 1/17/18 | FORMER LOEF FACILITY | | |
| SCALE: 1in = 2,000 ft | 590 OLD HULL ROAD | | |
| CAD NO.: 510507-001 | ATHENS, GEORGIA | | |
| PRJ NO.: 510507-001 | | | |

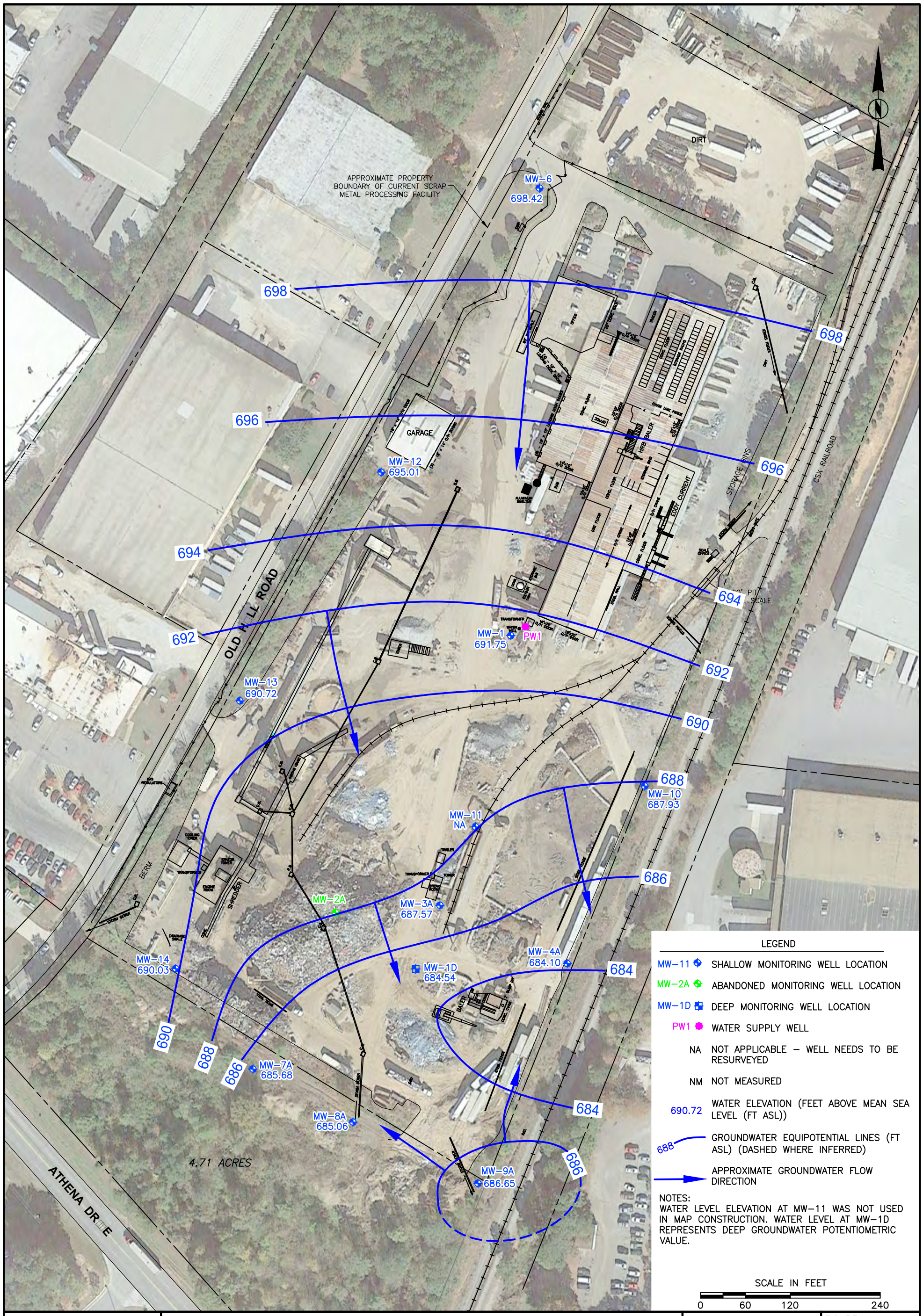

| | |
|---|---|
| CHECK BY | SGW |
| DRAWN BY | SJP |
| DATE | 1/2/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507-002-08 |
| PRJ NO. | 510507-002-08 |

SITE PLAN WITH WELLS AND DPT BORINGS

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
2



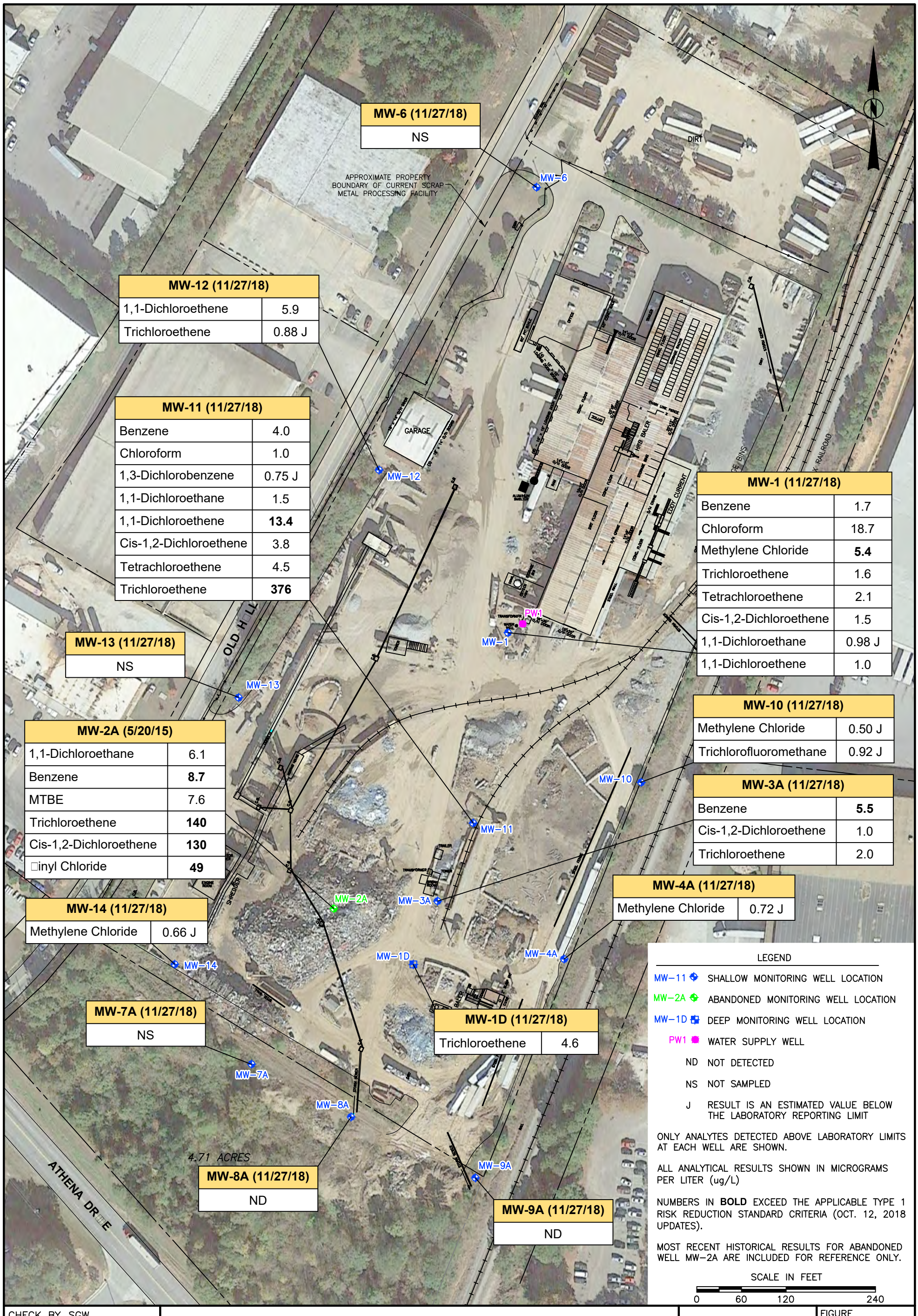

| | |
|---|---|
| CHECK BY | SGW |
| DRAWN BY | SJP |
| DATE | 1/2/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507-002-08 |
| PRJ NO. | 510507-002-08 |

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE MAP
(NOVEMBER 27, 2018)

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
3



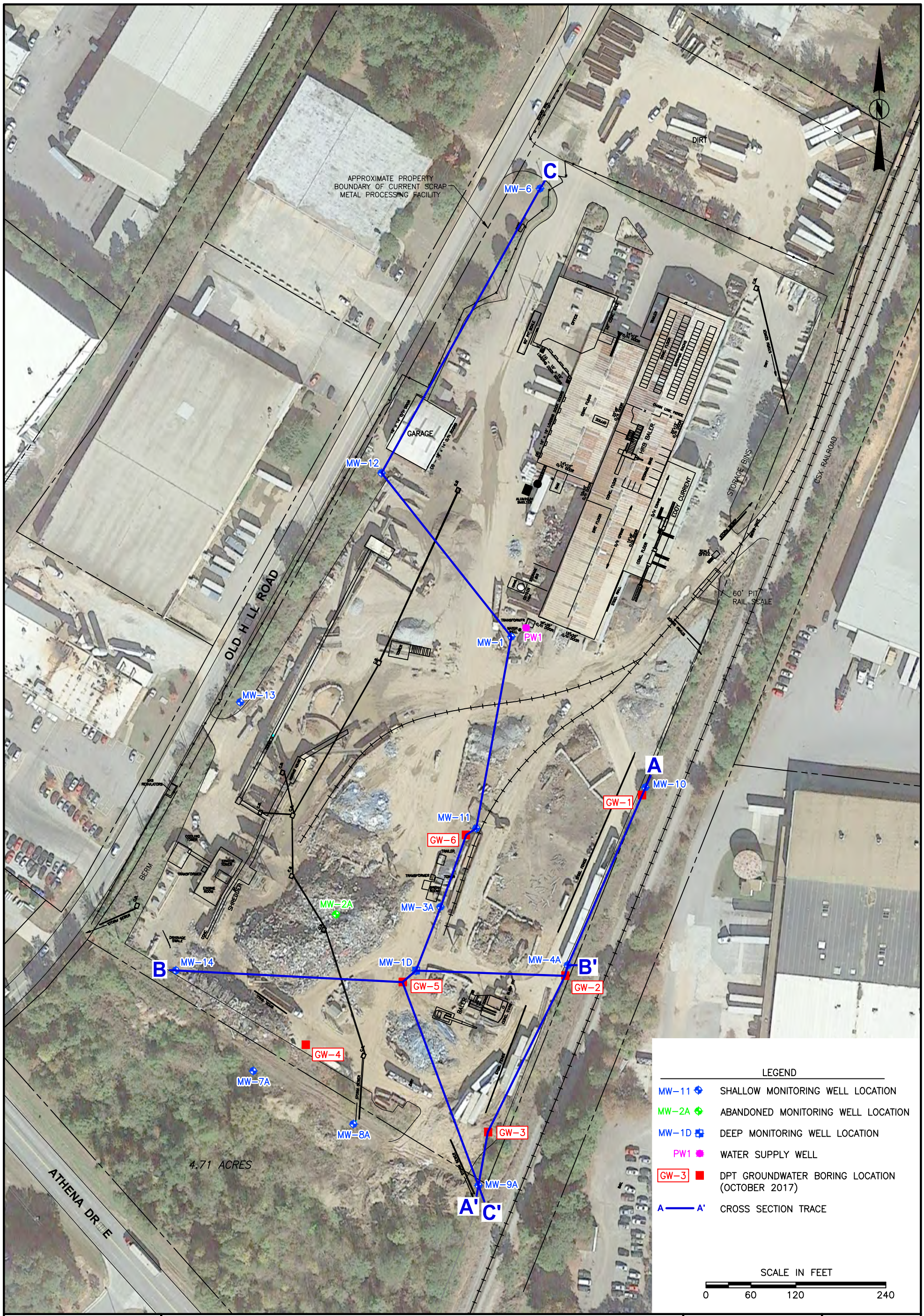

| | |
|---|---|
| CHECK BY | SGW |
| DRAWN BY | SJP |
| DATE | 1/2/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507-002-08 |
| PRJ NO. | 510507-002-08 |

GROUNDWATER ANALYTICAL RESULTS: MONITORING WELLS
(NOVEMBER 2018)

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
4




| | |
|---|---|
| CHECK BY | SGW |
| DRAWN BY | SJP |
| DATE | 1/2/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507-002-08 |
| PRJ NO. | 510507-002-08 |

TRACE OF GEOLOGIC CROSS SECTIONS

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE

5

# A
# Northeast

# A'
# Southwest

B–B'

C–C'

MW–10
GW–1

MW–4A
GW–2

GW–3

MW–9A

GROUND SURFACE

Reddish–Orange to Dark Reddish Brown CLAY, SILT, and Silty CLAY

Dark Brown to Grey–Brown Micaceous sandy SILT to silty SAND SAPROLITE; traces of clay

Dense Micaceous SAPROLITE to WEATHERED GNEISS BEDROCK With Rock Fragments (Transition Zone, Undifferentiated)

Feet Above Mean Sea Level

760
740
720
700
680
660
640
620
600
580

0 60 120 180 240 300 360 420 480 540 600

Distance (Feet)

SCALE: 1" = 60' HORIZONTAL
1" = 30' VERTICAL

| MW-10 | 10/11/17 | 5/15/18 | 11/27/18 |
|---|---|---|---|
| 1,1-Dichloroethane | 0.44 J | <0.32 | <0.67 |
| 1,2-Dichloroethane | 0.26 J | <0.24 | <0.67 |
| 4-Methyl-2-Pentanone | 4.6 J | <0.33 | <0.86 |
| Benzene | 1.2 | <0.25 | <2.0 |
| Dibromomethane | 1.0 J | 0.49 J | <0.62 |
| Diisopropyl ether | 0.44 J | <0.12 | <1.1 |
| Ethylbenzene | 0.63 J | <0.30 | <0.45 |
| Methylene chloride | <0.97 | <0.97 | 0.50 J |
| Xylenes (o) | 2.6 | <0.23 | <0.54 |
| Xylenes (m,p) | 0.93 J | <0.66 | <0.92 |
| Xylenes (Total) | 2.6 | <1.0 | <1.5 |
| MTBE | 1.6 | <0.21 | NA |
| Trichlorofluoromethane | 2.9 | 0.68 J | 0.92 J |

| MW-4A | 10/11/17 | 5/15/18 | 11/27/18 |
|---|---|---|---|
| 4-Methyl-2-Pentanone | 4.3 J | <0.33 | <0.86 |
| Acetone | 37.2 | 15.8 J | <8.2 |
| Methylene chloride | <0.97 | <0.97 | 0.72 J |
| Trichloroethene | 0.74 J | <0.47 | <0.34 |

| GW-1 (10/11/17) | 51-55 | 70-74 |
|---|---|---|
| 1,1-Dichloroethane | 1.1 | <0.32 |
| 1,1-Dichloroethene | **13.7** | 2.8 |
| 2-Hexanone | <0.46 | 1.3 J |
| Acetone | 11.0 J | 273 |
| Chloroform | 1.5 | 1.3 |
| Toluene | <0.26 | 0.32 J |
| Trichloroethene | **26** | <0.47 |

| GW-2 (10/10/17) | 46-50 | 67-71 |
|---|---|---|
| Acetone | <20.0 | 10.5 J |
| Benzene | **94.0** | **73.6** |
| Chloroform | 0.63 J | 0.38 J |
| Tetrachloroethene | 1.3 J | 1.3 |
| Trichloroethene | **161** | **161** |
| Cis-1,2-Dichloroethene | 5.9 | 1.7 |
| o-Xylene | **0.46 J** | 0.30 J |

| GW-3 (10/12/17) | 46-50 | 66-70 |
|---|---|---|
| Acetone | 16.8 J | <10.0 |
| Toluene | 0.45 J | 0.34 J |
| Trichloroethene | 1.1 | <0.47 |
| Cis-1,2-Dichloroethene | 3.1 | <0.19 |

| MW-9A | 10/11/17 | 11/27/18 |
|---|---|---|
| 4-Methyl-2-Pentanone | 4.4 J | <0.86 |

LEGEND

- DIRECT PUSH BORING AND SAMPLE DEPTH
- MONITORING WELL AND SCREENED INTERVAL
- APPROXIMATE GROUNDWATER TABLE (NOVEMBER 27, 2018)
- DISSOLVED PHASE TCE (>5 ug/L)
- LITHOLOGIC CONTACT (DASHED WHERE ESTIMATED OR INFERRED)
- J ESTIMATED CONCENTRATION
- TCE TRICHLOROETHENE
- NA NOT ANALYZED

NOTES:

LITHOLOGIC INTERPRETATIONS AND DEPTH INTERVALS ESTIMATED FROM HISTORICAL SOIL BORING LOGS AND GEOLOGIC CROSS SECTIONS (DASHED WHERE INFERRED).

ONLY ANALYTES DETECTED ABOVE LABORATORY LIMITS ARE SHOWN.

ALL ANALYTICAL RESULTS SHOWN IN MICROGRAMS PER LITER (ug/L).

NUMBERS IN **BOLD** EXCEED THE APPLICABLE TYPE 1 RISK REDUCTION STANDARD CRITERIA.

| | |
|---|---|
| CHECK BY | GW |
| DRAWN BY | SP |
| DATE | 1/3/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507–002 |
| PRJ NO. | 510507–002 |

A–A' CROSS SECTION

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE
6

# B West

# B' East

C–C'

A–A'

MW–14

GW–5 MW–1D

GW–2 MW–4A

GROUND SURFACE

Reddish–Orange to Dark Reddish Brown CLAY, SILT, and Silty CLAY

Dark Brown to Grey–Brown Micaceous sandy SILT to silty SAND SAPROLITE; traces of clay

Dense Micaceous SAPROLITE to WEATHERED GNEISS BEDROCK With Rock Fragments (Transition Zone, Undifferentiated)

Estimated depth to COMPETENT BEDROCK is 80 feet bgs at well MW–1D.

Feet Above Mean Sea Level

760
740
720
700
680
660
640
620
600

0 60 120 180 240 300 360 420 480 540 600

Distance (Feet)

| MW-14 | 10/11/17 | 11/27/18 |
|---|---|---|
| 4-Methyl-2-Pentanone | 3.9 J | <0.86 |
| Chloromethane | 0.26 J | <0.38 |
| MTBE | 0.85 J | NA |
| Trichloroethene | 0.58 J | <0.34 |

| GW-5 (10/11/17) | 25-29 | 48-52 |
|---|---|---|
| Benzene | 1.0 J | <0.25 |
| Chloroform | 0.56 J | 0.23 J |
| Toluene | 0.35 J | 0.45 J |
| Trichloroethene | 3.1 | 4.1 |
| Cis-1,2-Dichloroethene | 1.1 | 0.35 J |

| MW-1D | 10/11/17 | 11/27/18 |
|---|---|---|
| Trichloroethene | **15.3** | 4.6 |
| Tetrachloroethene | 1.2 | <0.78 |

| MW-4A | 10/11/17 | 5/15/18 | 11/27/18 |
|---|---|---|---|
| 4-Methyl-2-Pentanone | 4.3 J | <0.33 | <0.86 |
| Acetone | 37.2 | 15.8 J | <8.2 |
| Methylene chloride | <0.97 | <0.97 | 0.72 J |
| Trichloroethene | 0.74 J | <0.47 | <0.34 |

| GW-2 (10/10/17) | 46-50 | 67-71 |
|---|---|---|
| Acetone | <20.0 | 10.5 J |
| Benzene | **94.0** | **73.6** |
| Chloroform | 0.63 J | 0.38 J |
| Tetrachloroethene | 1.3 J | 1.3 |
| Trichloroethene | **161** | **161** |
| Cis-1,2-Dichloroethene | 5.9 | 1.7 |
| o-Xylene | **0.46 J** | 0.30 J |

SCALE: 1" = 60' HORIZONTAL
1" = 30' VERTICAL

LEGEND

- DIRECT PUSH BORING AND SAMPLE DEPTH
- MONITORING WELL AND SCREENED INTERVAL
- APPROXIMATE GROUNDWATER TABLE (NOVEMBER 27, 2018)
- DISSOLVED PHASE TCE (>5 ug/L)
- LITHOLOGIC CONTACT (DASHED WHERE ESTIMATED OR INFERRED)
- J ESTIMATED CONCENTRATION
- TCE TRICHLOROETHENE
- NA NOT ANALYZED

NOTES:

LITHOLOGIC INTERPRETATIONS AND DEPTH INTERVALS ESTIMATED FROM HISTORICAL SOIL BORING LOGS AND GEOLOGIC CROSS SECTIONS (DASHED WHERE INFERRED).

ONLY ANALYTES DETECTED ABOVE LABORATORY LIMITS ARE SHOWN.

ALL ANALYTICAL RESULTS SHOWN IN MICROGRAMS PER LITER (ug/L).

NUMBERS IN **BOLD** EXCEED THE APPLICABLE TYPE 1 RISK REDUCTION STANDARD CRITERIA.

| | |
|---|---|
| CHECK BY | GW |
| DRAWN BY | SP |
| DATE | 1/3/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507–002 |
| PRJ NO. | 510507–002 |

B–B' CROSS SECTION

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE

7

# C North — C' South

B–B' A–A'

MW–6 | MW–12 | MW–1 | MW–11 GW–6 | MW–3A | MW–1D GW–5 | MW–9A

Feet Above Mean Sea Level

750 740 730 720 710 700 690 680 670 660 650 640 630 620 610 600

Reddish–Orange to Dark Reddish Brown CLAY, SILT, and Silty CLAY

Dark Brown to Grey–Brown Micaceous sandy SILT to silty SAND SAPROLITE; traces of clay

Dense Micaceous SAPROLITE to WEATHERED GNEISS BEDROCK With Rock Fragments (Transition Zone, Undifferentiated)

| MW-6 | 5/15/18 | 11/27/18 |
|---|---|---|
| | ND | NA |

| MW-12 | 10/11/17 | 11/27/18 |
|---|---|---|
| 1,1-Dichloroethene | **7.3** | 5.9 |
| Trichloroethene | <0.47 | 0.88 J |

| MW-1 | 10/10/17 | 11/27/18 |
|---|---|---|
| Benzene | 1.7 | 1.7 |
| Chloroform | 19.1 | 18.7 |
| Methylene Chloride | 1.5 J | **5.4** |
| Trichloroethene | 1.8 | 1.6 |
| Tetrachloroethene | 1.7 | 2.1 |
| Cis-1,2-Dichloroethene | 2.2 | 1.5 |
| 1,1-Dichloroethane | 1.1 | 0.98 J |
| 1,1-Dichloroethene | 1.0 | 1.0 |

| MW-3A | 10/11/17 | 11/27/18 |
|---|---|---|
| Benzene | **7.4** | **5.5** |
| Cis-1,2-Dichloroethene | 1.0 | 1.0 |
| Trichloroethene | 2.5 | 2.0 |

| MW-9A | 10/11/17 | 11/27/18 |
|---|---|---|
| 4-Methyl-2-Pentanone | 4.4 J | <0.86 |

| GW-5 (10/11/17) | 25-29 | 48-52 |
|---|---|---|
| Benzene | 1.0 J | <0.25 |
| Chloroform | 0.56 J | 0.23 J |
| Toluene | 0.35 J | 0.45 J |
| Trichloroethene | 3.1 | 4.1 |
| Cis-1,2-Dichloroethene | 1.1 | 0.35 J |

| MW-11 | 10/10/17 | 5/15/18 | 11/27/18 |
|---|---|---|---|
| Benzene | **12.7** | 4.6 | 4.0 |
| Chloroform | 1.6 J | 0.96 J | 1.0 |
| 1,3-Dichlorobenzene | NA | NA | 0.75 J |
| 1,1-Dichloroethane | <1.3 | 1.3 J | 1.5 |
| 1,1-Dichloroethene | **7.8** | **9.1** | **13.4** |
| 1,2-Dichloroethane | <0.96 | 0.69 J | <0.67 |
| Cis-1,2-Dichloroethene | 5.6 | 16.2 | 3.8 |
| Tetrachloroethene | 3.6 J | 2.8 | 4.5 |
| Trichloroethene | **450** | **291** | **376** |

| GW-6 (10/11/17) | 51-55 | 70-74 |
|---|---|---|
| 1,1-Dichloroethane | 0.90 J | 1.0 |
| 1,1-Dichloroethene | 2.2 | 3.8 |
| 2-Butanone | 2.8 J | <0.96 |
| Acetone | 36.0 | 11.2 J |
| Benzene | 1.0 J | 0.93 J |
| Chloroform | 0.34 J | 0.30 J |
| Toluene | 0.41 J | <0.26 |
| Trichloroethene | **6.5** | 2.0 |
| Cis-1,2-Dichloroethene | 0.36 J | <0.19 |

| MW-1D | 10/11/17 | 11/27/18 |
|---|---|---|
| Trichloroethene | **15.3** | 4.6 |
| Tetrachloroethene | 1.2 | <0.78 |

0 60 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 1260 1320 1380 1440 1500

Distance (Feet)

SCALE: 1" = 100' HORIZONTAL
1" = 25' VERTICAL

LEGEND

- DIRECT PUSH BORING AND SAMPLE DEPTH
- MONITORING WELL AND SCREENED INTERVAL
- APPROXIMATE GROUNDWATER TABLE (NOVEMBER 27, 2018)
- DISSOLVED PHASE TCE (>5 ug/L)
- LITHOLOGIC CONTACT (DASHED WHERE ESTIMATED OR INFERRED)

| | |
|---|---|
| J | ESTIMATED CONCENTRATION |
| TCE | TRICHLOROETHENE |
| NA | NOT ANALYZED |
| ND | NOT DETECTED |

NOTES:

LITHOLOGIC INTERPRETATIONS AND DEPTH INTERVALS ESTIMATED FROM HISTORICAL SOIL BORING LOGS AND GEOLOGIC CROSS SECTIONS (DASHED WHERE INFERRED).

ONLY ANALYTES DETECTED ABOVE LABORATORY LIMITS ARE SHOWN.

ALL ANALYTICAL RESULTS SHOWN IN MICROGRAMS PER LITER (ug/L).

NUMBERS IN **BOLD** EXCEED THE APPLICABLE TYPE 1 RISK REDUCTION STANDARD CRITERIA.

| | |
|---|---|
| CHECK BY | GW |
| DRAWN BY | SP |
| DATE | 1/3/19 |
| SCALE | AS SHOWN |
| CAD NO. | 510507–002 |
| PRJ NO. | 510507–002 |

C–C' CROSS SECTION

FORMER LOEF FACILITY
590 OLD HULL ROAD
ATHENS, GEORGIA

APEX

FIGURE 8

# TABLES

**TABLE 1**
**GROUNDWATER SAMPLING AND ANALYTICAL PROGRAM: NOVEMBER 2018**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARK COUNTY, GEORGIA**

| Monitoing Well ID | Water Level | pH | Temperature | Conductivity | Dissolved Oxygen | Oxidation-Reduction Potential | Turbidity | VOCs (Method 8260) |
|---|---|---|---|---|---|---|---|---|
| | FIELD-MEASURED WATER QUALITY PARAMETERS | | | | | | | LABORATORY ANALYSES |
| MW-1 | X | X | X | X | X | X | X | X |
| MW-1D | X | X | X | X | X | X | X | X |
| MW-3A | X | X | X | X | X | X | X | X |
| MW-4A | X | X | X | X | X | X | X | X |
| MW-6* | X | | | | | | | |
| MW-7A | X | | | | | | | |
| MW-8A | X | X | X | X | X | X | X | X |
| MW-9A | X | X | X | X | X | X | X | X |
| MW-10 | X | X | X | X | X | X | X | X |
| MW-11 | X | X | X | X | X | X | X | X |
| MW-12 | X | X | X | X | X | X | X | X |
| MW-13 | X | | | | | | | |
| MW-14 | X | X | X | X | X | X | X | X |
| **QA/QC and IDW Samples** | | | | | | | | |
| Field Duplicates | | | | | | | | X |
| Equipment Blank/ Field Blank | | | | | | | | X |
| Trip Blank | | | | | | | | X |

NOTES:

* MW-6 is the Site background well

mV = Millivolts

SU = Standard Units

$^{o}$C = Degrees centigrade

mS/cm = Millisiemens per centimeter

**TABLE 2**
**HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**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 |
| | 10/10/2017 | | | 20.82 | 690.68 |
| | 5/15/2018 | | | 20.76 | 690.74 |
| | 11/27/2018 | | | 19.75 | 691.75 |
| 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 |
| | 10/10/2017 | | | 27.73 | 682.44 |
| | 5/15/2018 | | | 26.57 | 683.60 |
| | 11/27/2018 | | | 25.63 | 684.54 |
| 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 |
| | 10/10/2017 | | | 25.85 | 686.35 |
| | 5/15/2018 | | | 25.16 | 687.04 |
| | 11/27/2018 | | | 24.63 | 687.57 |

**TABLE 2**
**HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**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-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 |
| | 10/10/2017 | | | 23.95 | 682.13 |
| | 5/15/2018 | | | 23.14 | 682.94 |
| | 11/27/2018 | | | 21.98 | 684.10 |
| 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 |
| | 10/10/2017 | | | 22.96 | 696.91 |
| | 5/15/2018 | | | 21.96 | 697.91 |
| | 11/27/2018 | | | 21.45 | 698.42 |
| 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 |
| | 10/10/2017 | | | 14.94 | 682.21 |
| | 5/15/2018 | | | 13.64 | 683.51 |
| | 11/27/2018 | | | 11.47 | 685.68 |

**TABLE 2**
**HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**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-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 |
| | 10/10/2017 | | | NM[/A] | NM[/A] |
| | 5/15/2018 | | | 12.25 | 683.01 |
| | 11/27/2018 | | | 10.20 | 685.06 |
| 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 |
| | 10/10/2017 | | | 6.69 | 689.45 |
| | 5/15/2018 | | | 13.87 | 682.27 |
| | 11/27/2018 | | | 9.49 | 686.65 |
| 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 |
| | 10/10/2017 | | | 21.58 | 686.58 |
| | 5/15/2018 | | | 21.68 | 686.48 |
| | 11/27/2018 | | | 20.23 | 687.93 |

**TABLE 2**
**HISTORICAL GROUNDWATER GAUGING AND ELEVATIONS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**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-11 | 3/7/2013 | NS | 25 to 35 Ft | 25.37 | NS |
| | 1/22/2015 | 713.32 | | 25.30 | 688.02 |
| | 5/18/2015 | | | 24.14 | 689.18 |
| | 4/25/2016 | | | 23.06 | 690.26 |
| | 11/16/2016 | | | 26.22 | 687.10 |
| | 10/10/2017/B | | | 22.13 | 691.19/B |
| | 5/15/2018/B | | | 25.22 | 688.10/B |
| | 11/27/2018/B | | | 24.58 | 688.74/B |
| MW-12 | 3/7/2013 | NS | 25 to 35 Ft | 15.81 | NS |
| | 1/22/2015 | 712.70 | | 18.61 | 694.09 |
| | 5/18/2015 | | | 17.53 | 695.17 |
| | 4/25/2016 | | | 16.86 | 695.84 |
| | 11/16/2016 | | | 19.27 | 693.43 |
| | 10/10/2017 | | | 19.30 | 693.40 |
| | 5/15/2018 | | | 18.62 | 694.08 |
| | 11/27/2018 | | | 17.69 | 695.01 |
| MW-13 | 3/7/2013 | NS | 25 to 35 Ft | 17.29 | NS |
| | 1/22/2015 | 707.45 | | 17.49 | 689.96 |
| | 5/18/2015 | | | 16.30 | 691.15 |
| | 4/25/2016 | | | 15.25 | 692.20 |
| | 11/16/2016 | | | 18.62 | 688.83 |
| | 10/10/2017 | | | 17.80 | 689.65 |
| | 5/15/2018 | | | 17.30 | 690.15 |
| | 11/27/189 | | | 16.73 | 690.72 |
| MW-14 | 3/7/2013 | NS | 25 to 35 Ft | 18.78 | NS |
| | 1/22/2015 | 707.07 | | 19.18 | 687.89 |
| | 5/18/2015 | | | NM | -- |
| | 4/25/2016 | | | 16.23 | 690.84 |
| | 11/16/2016 | | | 21.18 | 685.89 |
| | 10/10/2017 | | | 19.34 | 687.73 |
| | 5/15/2018 | | | 18.32 | 688.75 |
| | 11/27/2018 | | | 17.04 | 690.03 |

**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

/A MW-8A was inaccessible and could not be gauged during the October 2017 sampling event

/B MW-11 stickup casing was damaged and repaired in 2017. The 10/10/17 throgh 11/27/18 values are not accurate.Well will be re-surveyed in 2019.

**TABLE 3**
**GROUNDWATER BIO-GEOCHEMICAL, INORGANIC AND WATER QUALITY PARAMETERS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoing Well ID | Date | pH | Temperature (°C) | Conductivity (mS/cm) | Total Dissolved Solids (g/L) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Turbidity (NTU) | Methane (µg/L) | Ethane (µg/L) | Ethene (µg/L) | Total Organic Carbon | Iron II | Chloride | Nitrate | Sulfate | Sulfide |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FIELD-MEASURED PARAMETERS | | | | | | | LABORATORY-MEASURED ANALYTICAL RESULTS (mg/L) | | | | | | | | |
| MW-1 | 6/3/2015 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 4/26/2016 | 5.17 | 22.93 | 0.07 | NM | 0.61 | 99 | 1.7 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 5.32 | 22.19 | 0.058 | NM | 2.54 | 154 | 0.9 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/10/2017 | 6.09 | 26.78 | 0.063 | NM | 0.83 | 184.9 | 6.3 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 5.11 | 15.72 | 0.101 | NM | 5.9 | 143 | 2.5 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-1D | 6/3/2015 | NM | NM | NM | NM | NM | NM | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 4/26/2016 | 5.54 | 24.78 | 0.079 | NM | 1.52 | 121 | 0.8 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 4.84 | 16.96 | 0.078 | NM | 2.67 | 264 | 1.7 | NM | NM | NM | <1.0 | NM | NM | NM | NM | NM |
| | 10/11/2017 | 11.54 | 25.49 | 0.098 | NM | 2.05 | 160.3 | 8.0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 6.60 | 14.49 | 0.061 | NM | 4.47 | 278 | 3.0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-2A | 6/24/2010 | 4.65 | 18.1 | 0.581 | 0.037 | 10.2 | 450 | | 3.2 | 0.16 | <0.007 | 8.2 | 7.25 | NM | 0.49 | <1 | <2 |
| | 8/4/2011 | 5.45 | 20.78 | 0.295 | NM | 0.54 | 10 | | 3.1 | 0.78 | <0.007 | 60.8 | 47 | NM | 0.25 | <1 | <2 |
| | 2/24/2012 | 6.05 | 19.54 | 0.903 | NM | 0 | -67 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 9/20/2012 | 5.25 | 22.42 | 0.91 | NM | 2.05 | -9 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 3/8/2013 | 5.25 | 22.42 | 0.91 | NM | 2.05 | -9 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.76 | 17.3 | 0.568 | NM | 0.58 | 73.5 | 6 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-3A | 6/24/2010 | 4.63 | 19.2 | 0.852 | 0.054 | 9.64 | 398 | | 4.2 | 0.36 | <0.007 | 2.34 | <0.1 | NM | 1.8 | 2 | <2 |
| | 8/4/2011 | 4.4 | 20.94 | 0.57 | NM | 1.34 | 301 | | 1.7 | 0.12 | <0.007 | 1.42 | <0.1 | NM | 1.7 | <1 | <2 |
| | 2/24/2012 | 5.13 | 20.01 | 0.06 | NM | 1.91 | 327 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 9/20/2012 | 4.21 | 22.44 | 0.067 | NM | 1.57 | 349 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 3/8/2013 | 4.21 | 22.44 | 0.067 | NM | 1.57 | 349 | 0.02 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.63 | 19.51 | 0.075 | NM | 0.5 | 103.2 | 0.38 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 4/26/2016 | 5.11 | 23.08 | 0.133 | NM | 1.53 | 185 | 7.7 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 3.67 | 17.85 | 0.065 | NM | 1.52 | 410 | 2.3 | 1,200 | 91 | <10 | 1.4 | NM | NM | NM | NM | NM |
| | 5/5/2017 | 4.58 | 17.9 | 0.075 | NM | 0.67 | 455 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/11/2017 | 4.85 | 22.35 | 0.101 | NM | 1.03 | 562 | 20.3 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 4.81 | 15.87 | 0.098 | NM | 0.61 | 359 | 4.2 | NM | NM | NM | NM | NM | NM | NM | NM | NM |

**TABLE 3**
**GROUNDWATER BIO-GEOCHEMICAL, INORGANIC AND WATER QUALITY PARAMETERS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoing Well ID | Date | pH | Temperature (°C) | Conductivity (mS/cm) | Total Dissolved Solids (g/L) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Turbidity (NTU) | Methane (µg/L) | Ethane (µg/L) | Ethene (µg/L) | Total Organic Carbon | Iron II | Chloride | Nitrate | Sulfate | Sulfide |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FIELD-MEASURED PARAMETERS | | | | | | | LABORATORY-MEASURED ANALYTICAL RESULTS (mg/L) | | | | | | | | |
| MW-4A | 6/24/2010 | 4.66 | 18.8 | 0.164 | 0.11 | 9.54 | 414 | | 0.34 | 0.029 | <0.007 | 2.98 | <0.1 | NM | 0.88 | 1.9 | <2 |
| | 8/4/2011 | 4.62 | 21.76 | 0.093 | NM | 2.1 | 330 | | 0.44 | 0.026 | <0.007 | <5 | <0.1 | NM | 0.84 | 1.7 | <2 |
| | 2/24/2012 | 4.77 | 19.13 | 0.117 | NM | 0.00 | 377 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 9/20/2012 | 4.16 | 22.98 | 0.134 | NM | 2.28 | 425 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 3/7/2013 | 4.16 | 22.98 | 0.134 | NM | 2.28 | 425 | 0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.26 | 18.06 | 0.196 | NM | 0.96 | 126.3 | 1.61 | <4 | <9 | <7 | <1 | NM | 44 | 1 | 1.3 | <2 |
| | 4/26/2016 | 4.33 | 21.26 | 0.339 | NM | 1.77 | 225 | 0.8 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 3.84 | 20.93 | 0.089 | NM | 1.68 | 368 | 0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/5/2017 | 4.29 | 16.1 | 0.168 | NM | 1.00 | 384 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/11/2017 | 7.67 | 23.78 | 0.689 | NM | 1.86 | 183.8 | 8.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/15/2018 | 4.72 | 23.77 | 0.325 | NM | 0.19 | 359 | 3.7 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 5.12 | 14.5 | 0.415 | NM | 6.62 | 245 | 2.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-6* | 6/24/2010 | 4.9 | 19.7 | 0.044 | 0.03 | 10.5 | 443 | | <0.004 | <0.009 | <0.007 | 1.79 | <0.1 | NM | 0.44 | <1 | <2 |
| | 8/4/2011 | 4.25 | 19.7 | 0.03 | NM | 8.51 | 366 | | <0.004 | <0.009 | <0.007 | <1 | <0.1 | NM | 0.43 | <1 | <2 |
| | 2/24/2012 | 4.77 | 20.37 | 0.03 | NM | 3.75 | 354 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 9/20/2012 | 4.26 | 22.69 | 0.051 | NM | 4.72 | 681 | | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 3/7/2013 | 4.87 | 18.87 | 0.03 | NM | 5.51 | 359 | 0 | <0.004 | <0.009 | <0.007 | <1 | NM | 5.4 | 0.42 | 1.2 | <2 |
| | 1/21/2015 | 4.48 | 19.5 | 0.048 | NM | 3.53 | 123.6 | 0.92 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 4/26/2016 | 4.39 | 20.12 | 0.049 | NM | 5.7 | 208 | 0.4 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-7A | 3/8/2013 | 5.23 | 18.67 | 0.463 | NM | 3.44 | 301 | 7.23 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.89 | 14.9 | 0.445 | NM | 0.61 | 195.3 | 3.13 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 4/25/2016 | 5.54 | 22.78 | 0.428 | NM | 0.8 | 201 | 0.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/16/2016 | 5.08 | 24.26 | 0.303 | NM | 3.15 | 146 | 0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/15/2018 | 5.11 | 17.33 | 0.400 | NM | 3.75 | 115.2 | 1.5 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-8A | 3/8/2013 | 5.37 | 18.33 | 0.83 | NM | 2.25 | 163 | 8.2 | NM | NM | NM | NM | NM | NM | NM | NM | <2 |
| | 1/22/2015 | 5.72 | 16.6 | 0.714 | NM | 0.56 | 130.7 | 5.7 | 830 | <9 | <7 | 12.2 | NM | 23 | <0.25 | 210 | NM |
| | 4/26/2016 | 6.57 | 19.3 | 0.737 | NM | 0.8 | 72 | 57 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/16/2016 | 4.74 | 22.08 | 0.554 | NM | 1.23 | 173 | 2.3 | 210 | <10 | <10 | 20 | NM | NM | NM | NM | NM |
| | 10/11/2017 | NS - inaccessible | | | | | | | | | | | | | | | |
| | 5/15/2018 | 6.22 | 17.45 | 0.802 | NM | 0.76 | 71 | 14 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 5.83 | 14.66 | 0.806 | NM | 0.91 | 104 | 4.8 | NM | NM | NM | NM | NM | NM | NM | NM | NM |

**TABLE 3**
**GROUNDWATER BIO-GEOCHEMICAL, INORGANIC AND WATER QUALITY PARAMETERS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoing Well ID | Date | pH | Temperature (°C) | Conductivity (mS/cm) | Total Dissolved Solids (g/L) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Turbidity (NTU) | Methane (µg/L) | Ethane (µg/L) | Ethene (µg/L) | Total Organic Carbon | Iron II | Chloride | Nitrate | Sulfate | Sulfide |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FIELD-MEASURED PARAMETERS | | | | | | | LABORATORY-MEASURED ANALYTICAL RESULTS (mg/L) | | | | | | | | |
| MW-9A | 3/8/2013 | 5.56 | 18.65 | 0.676 | NM | 4.3 | 82 | 6.88 | NM | NM | NM | NM | NM | NM | NM | NM | <2 |
| | 1/22/2015 | 6.04 | 14.91 | 0.658 | NM | 0.71 | 14.3 | 0.24 | 11 | <9 | <7 | 8.69 | NM | 12 | <0.25 | 97 | |
| | 4/26/2016 | 6.74 | 20.45 | 0.569 | NM | 0.65 | 40 | 36 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/16/2016 | 6.36 | 19.55 | 0.567 | NM | 2.22 | -32 | 0 | 6.1 J | <10 | <10 | 9.2 | NM | NM | NM | NM | NM |
| | 10/11/2017 | 7.04 | 27.04 | 0.547 | NM | 0.96 | 150.1 | 6.0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 6.38 | 13.11 | 0.612 | NM | 0.35 | 126 | 2.6 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-10 | 3/7/2013 | 4.44 | 20.27 | 0.142 | NM | 1.45 | 503 | 0.62 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.18 | 17.7 | 0.143 | NM | 1.06 | 106.3 | 4 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/25/2016 | 4.67 | 21.97 | 0.223 | NM | 2.3 | 547 | 2.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 4.73 | 20.84 | 0.196 | NM | 2.22 | 274 | 0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/5/2017 | 4.56 | 16.1 | 0.155 | NM | 0.87 | 474 | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/10/2017 | 6.11 | 21.86 | 0.165 | NM | 1.46 | 473.8 | 8.5 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/15/2018 | 4.47 | 19.91 | 0.170 | NM | 1.90 | 389 | 4.6 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 4.29 | 13.21 | 0.192 | NM | 7.73 | 285 | 3.7 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-11 | 3/8/2013 | 4.53 | 21.26 | 0.058 | NM | 1.09 | 414 | 1.28 | NM | NM | NM | NM | NM | NM | NM | NM | <2 |
| | 1/22/2015 | 4.31 | 18.5 | 0.052 | NM | 1.85 | 120.6 | 0.65 | 3,600 | 330 | <7 | 2.5 | NM | 4.8 | 2.1 | <1 | |
| | 4/26/2016 | 4.75 | 24.28 | 0.06 | NM | 0.74 | 240 | 3.8 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 4.89 | 15.21 | 0.056 | NM | 3.76 | 247 | 3.5 | 2,000 | 92 | <10 | 1.0 | NM | NM | NM | NM | NM |
| | 10/10/2017 | 8.15 | 22.68 | 0.063 | NM | 0.93 | 272.6 | 33.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/15/2018 | 4.75 | 21.70 | 0.043 | NM | 0.51 | 248 | 25 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 4.34 | 12.69 | 0.045 | NM | 0.67 | 271 | 9.5 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-12 | 3/7/2013 | 4.95 | 21.73 | 0.046 | NM | 2.18 | 400 | 0.12 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/22/2015 | 4.9 | 17.63 | 0.048 | NM | 3.59 | 192.8 | 2.01 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/26/2016 | 5.14 | 23.5 | 0.051 | NM | 3.42 | 134 | 0.4 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/17/2016 | 5.48 | 21.84 | 0.054 | NM | 3.91 | 200 | 0 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/11/2017 | 6.39 | 24.76 | 0.065 | NM | 3.51 | 249.6 | 2.6 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 4.97 | 12.83 | 0.096 | NM | 7.83 | 181 | 2.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |

**TABLE 3**
**GROUNDWATER BIO-GEOCHEMICAL, INORGANIC AND WATER QUALITY PARAMETERS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoing Well ID | Date | pH | Temperature (°C) | Conductivity (mS/cm) | Total Dissolved Solids (g/L) | Dissolved Oxygen (mg/L) | Oxidation-Reduction Potential (mV) | Turbidity (NTU) | Methane (µg/L) | Ethane (µg/L) | Ethene (µg/L) | Total Organic Carbon | Iron II | Chloride | Nitrate | Sulfate | Sulfide |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FIELD-MEASURED PARAMETERS | | | | | | | LABORATORY-MEASURED ANALYTICAL RESULTS (mg/L) | | | | | | | | |
| MW-13 | 3/7/2013 | 4.82 | 22.29 | 0.05 | NM | 1.85 | 407 | 0.42 | NM | NM | NM | NM | NM | NM | NM | NM | <2 |
| | 1/22/2015 | 4.48 | 18.71 | 0.049 | NM | 1.36 | 120.2 | 3.67 | 95 | <9 | <7 | <1 | NM | 5 | 0.78 | <1 | |
| | 4/26/2016 | 5.82 | 25.62 | 0.098 | NM | 2.6 | 225 | 0.9 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/16/2016 | 5.39 | 21.79 | 0.052 | NM | 3.81 | 235 | 0.8 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 5/15/2018 | 6.51 | 22.13 | 0.179 | NM | 1.45 | 83.2 | 39.2 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| MW-14 | 3/7/2013 | 5.11 | 22.3 | 0.523 | NM | 1.5 | 362 | 1.12 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 1/21/2015 | 5.47 | 18.57 | 0.659 | NM | 0.51 | 109.9 | 1.66 | NM | NM | NM | NM | NM | NM | NM | NM | |
| | 4/26/2016 | 5.96 | 26.4 | 0.724 | NM | 0.57 | 103 | 28.9 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/16/2016 | 5.17 | 21.65 | 0.635 | NM | 1.85 | 128 | 5.1 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 10/11/2017 | 5.83 | 22.26 | 0.647 | NM | 1.01 | 179.2 | 14.3 | NM | NM | NM | NM | NM | NM | NM | NM | NM |
| | 11/27/2018 | 5.61 | 14.57 | 0.639 | NM | 5.87 | 184 | 2.2 | NM | NM | NM | NM | NM | NM | NM | NM | NM |

**NOTES:**

NM - Parameter was not measured
µg/L = Micrograms per liter
mg/L = Milligrams per liter
* MW-6 is background well

mV = Millivolts
SU = Standard Units
mS/cm = Millisiemens per centimeter
°C = Degrees centigrade

NTU = Nephelometric Turbidity Unit
NS = Not Sampled

**TABLE 4**
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoring Well ID | Type 1 Risk Reduction Standard for Groundwater (µg/L) (October 12, 2018 updates) | 1,1,2-Trichloro-1,2,2-Trifluoroethane | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethane | 1,3-Dichlorobenzene | 4-Methyl-2-Pentanone (Methyl isobutyl ketone) | 2-Butanone (Methyl ethyl ketone) | 2-Hexanone (Methyl butyl ketone) | Acetone | Benzene | Bromoform | Carbon Disulfide | Chloroform | Chloromethane (Methyl Chloride) | Cyclohexane | Dibromomethane | Diisopropyl ether | Toluene | Ethylbenzene | Isopropylbenzene (Cumene) | Methylcyclohexane | Methylene chloride | Xylenes (o) | Xylenes (m,p) | Xylenes (Total) | MTBE | Trichloroethene | Tetrachloroethene | Trichlorofluoromethane | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | Vinyl Chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.00E4 | 200 | 5 | 28 | 7 | 5 | NE | 6,300 | 5,600 | NE | 14,000 | 5 | 80 | 810 | 80 | 190 | 12,500 | NE | NE | 1,000 | 700 | 450 | NE | 5 | NE | NE | 10,000 | NE | 5 | 5 | 5,200 | 70 | 100 | 2 |
| | DATE | Analytical Results (µg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-1* | 6/23/2000 | -- | <1 | <1 | 1.5 | <1 | -- | -- | -- | -- | -- | -- | 1.5 | -- | -- | -- | -- | -- | -- | -- | <1 | <1 | -- | -- | -- | <3 | -- | -- | <1 | **8.2** | <1 | -- | <1 | -- | <3 |
| | 6/3/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | 17 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | 1.1 | 1.9 | <1.0 | -- | <1.0 | <10 | <10 | 1.6 J | 1.8 | <1.0 | <1.0 | 13 | 0.33 J | 1.3 | -- | -- | <1.0 | <1.0 | 0.49 J | 0.89 J | 4.3 | -- | -- | 0.49 J | <1.0 | 3.1 | 4.2 | <1.0 | 3.5 | <1.0 | 0.59 J |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | 1.2 | 1.8 | <1.0 | -- | <10 | <10 | <10 | <20 | 2.5 | <1.0 | <1.0 | 14 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | 0.56 J | 2.8 | -- | -- | 0.99 J | <1.0 | 3.8 | 4.2 | <1.0 | 2.5 | <1.0 | <1.0 |
| | 10/10/2017 | -- | <0.48 | <0.29 | 1.1 | 1.0 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | 1.7 | <0.26 | -- | 19.1 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | 1.5 J | 0.26 J | <0.66 | <1.0 | <0.21 | 1.8 | 1.7 | <0.20 | 2.2 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | 0.98J | 1.0 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | 1.7 | <0.55 | <0.79 | 18.7 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | **5.4** | <0.54 | <0.92 | <1.5 | -- | 1.6 | 2.1 | <0.51 | 1.5 | <0.46 | <0.60 |
| MW-1D | 6/3/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | **17** | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | 7.2 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <1.0 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | **22** | 2.2 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/17/2016 | 6.2 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | **20** | 2.2 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | **15.3** | 1.2 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.41 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <0.89 | <0.20 | <0.55 | <0.79 | <0.58 | <0.50 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | 4.6 | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |
| MW-2A** | 6/23/2000 | -- | <10 | <10 | 12 | **26** | -- | -- | -- | -- | -- | -- | <10 | -- | -- | -- | -- | -- | -- | -- | <10 | <10 | -- | -- | -- | <30 | -- | <30 | 42 | **570** | <5 | -- | **100** | **--** | **31** |
| | 6/26/2003 | -- | 9.7 | <5 | 30 | **43** | -- | -- | -- | -- | -- | -- | **11** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | 11 | -- | 11 | 150 | **1800** | <5 | -- | **250** | **--** | **52** |
| | 8/12/2003 | -- | 32 | <5 | 110 | **78** | -- | -- | -- | -- | -- | -- | **18** | **--** | -- | -- | -- | -- | -- | -- | 8.9 | <5 | -- | -- | -- | 17 | -- | 17 | 250 | **6500** | <5 | -- | **1300** | **--** | **170** |
| | 9/19/2003 | -- | 28 | <5 | 70 | **65** | -- | -- | -- | -- | -- | -- | **17** | **--** | -- | -- | -- | -- | -- | -- | 9.3 | <5 | -- | -- | -- | 18 | -- | 18 | 200 | **4700** | <5 | -- | **700** | **--** | **98** |
| | 10/22/2003 | -- | 28 | <5 | 90 | **80** | -- | -- | -- | -- | -- | -- | **36** | **--** | -- | -- | -- | -- | -- | -- | 13 | 6.4 | -- | -- | -- | 26 | -- | 26 | 250 | **3000** | <5 | -- | **590** | **--** | **140** |
| | 11/18/2003 | -- | 21 | <5 | 71 | **58** | -- | -- | -- | -- | -- | -- | **18** | **--** | -- | -- | -- | -- | -- | -- | 9.1 | <5 | -- | -- | -- | 17 | -- | 17 | 250 | **8100** | <5 | -- | **1000** | **--** | **110** |
| | 12/24/2003 | -- | 34 | <5 | 91 | **70** | -- | -- | -- | -- | -- | -- | **16** | **--** | -- | -- | -- | -- | -- | -- | 9.4 | <5 | -- | -- | -- | 22 | -- | 22 | 280 | **9600** | <5 | -- | **1500** | **--** | **130** |
| | 1/23/2004 | -- | <50 | <5 | 55 | **60** | -- | -- | -- | -- | -- | -- | <50 | **--** | -- | -- | -- | -- | -- | -- | <50 | <5 | -- | -- | -- | <50 | -- | <50 | 370 | **4000** | <5 | -- | **560** | **--** | **130** |
| | 3/29/2004 | -- | 16 | <5 | 54 | **46** | -- | -- | -- | -- | -- | -- | **22** | **--** | -- | -- | -- | -- | -- | -- | 6.9 | <5 | -- | -- | -- | 14 | -- | 14 | 250 | **4000** | <5 | -- | **790** | **--** | **83** |
| | 5/7/2004 | -- | 11 | <5 | 34 | **42** | -- | -- | -- | -- | -- | -- | **20** | **--** | -- | -- | -- | -- | -- | -- | <5 | 5.8 | -- | -- | -- | 14 | -- | 14 | 210 | **2500** | <5 | -- | **420** | **--** | **54** |
| | 7/15/2004 | -- | 11 | <5 | 38 | **32** | -- | -- | -- | -- | -- | -- | **25** | **--** | -- | -- | -- | -- | -- | -- | 7.1 | 8.5 | -- | -- | -- | 18 | -- | 18 | 280 | **1900** | <5 | -- | **420** | **--** | **67** |
| | 9/30/2004 | -- | <5 | <5 | 10 | **23** | -- | -- | -- | -- | -- | -- | **21** | **--** | -- | -- | -- | -- | -- | -- | 130 | 46 | -- | -- | -- | 58 | -- | 58 | 190 | **430** | <5 | -- | **130** | **--** | **32** |
| | 5/9/2006 | -- | 9.4 | <5 | 54 | **38** | -- | -- | -- | -- | -- | -- | **13** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | 10 | -- | 10 | 77 | **2600** | <5 | -- | **720** | **--** | **51** |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **14** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <10 | -- | <10 | <5 | **70** | <5 | -- | 31 | **--** | **7** |
| | 6/24/2010 | -- | <5 | <5 | 23 | **17** | -- | -- | -- | -- | -- | -- | **12** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | 1.9 | -- | 1.9 | 15 | **710** | <5 | -- | **300** | **--** | **54** |
| | 2/24/2011 | -- | <5 | <5 | 19 | **14** | -- | -- | 11 | -- | -- | 90 | **7.2** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | 20 | **730** | <5 | 120 | **370** | **--** | **33** |
| | 3/18/2011** | -- | <5 | <5 | 6 | **10** | -- | -- | 11 | -- | -- | <50 | **7.8** | **--** | - | 7 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | 9.4 | **210** | <5 | <5 | **120** | **--** | **19** |
| | 8/4/2011 | -- | <5 | <5 | 21 | **19** | -- | -- | 90 | 210 | 12 | 670 | **13** | **--** | 9 | <5 | -- | -- | -- | -- | 13 | <5 | -- | -- | -- | 7.6 | 7.8 | 15.4 | 43 | **810** | <5 | <5 | **390** | **--** | **61** |
| | 8/4/2011(DUP) | -- | <5 | <5 | 21 | **18** | -- | -- | 79 | 150 | 10 | 630 | **11** | **--** | 7.2 | <5 | -- | -- | -- | -- | 11 | <5 | -- | -- | -- | 6.8 | 7.1 | 13.9 | 38 | **680** | <5 | <5 | **310** | **--** | **55** |
| | 2/24/2012 | -- | <5 | <5 | <5 | **7.7** | -- | -- | 160 | 210 | 19 | 700 | **11** | **--** | <5 | <5 | -- | -- | -- | -- | 8.6 | <5 | -- | -- | -- | 7.3 | 9.8 | 17.1 | 32 | **69** | <5 | <5 | **100** | **--** | **34** |
| | 9/20/2012 | -- | <5 | <5 | 9.1 | **9.4** | -- | -- | 96 | 150 | 22 | 530 | **11** | **--** | 8.3 | <5 | -- | -- | -- | -- | 6.9 | <5 | -- | -- | -- | 5.9 | 8.3 | 14.2 | 34 | **140** | <5 | <5 | **210** | **--** | **69** |
| | 3/7/2013 | NS | NS | NS | NS | NS | NS | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | ,10 | 5.4 | **23** | <5.0 | <5.0 | 21 | <5.0 | **29** |
| | DUP (FD012215B) 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | **5.2** | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | 6 | **43** | <5.0 | <5.0 | 33 | <5.0 | **29** |
| | 5/20/2015 | -- | <5.0 | <5.0 | 6.1 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | **8.7** | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | 7.6 | **140** | <5.0 | <5.0 | **130** | <5.0 | **49** |
| MW-3A | 6/23/2000 | -- | <1 | <5 | <1 | <1 | -- | -- | -- | -- | -- | -- | **36** | **--** | -- | -- | -- | -- | -- | -- | <1 | <1 | -- | -- | -- | <3 | -- | <3 | <1 | **30** | <5 | -- | <1 | -- | <3 |
| | 5/7/2004 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **11** | <5 | -- | <5 | -- | <2 |
| | 5/9/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **7.4** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **22** | <5 | -- | <5 | -- | <2 |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **13** | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **15** | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **16** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **17** | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **14** | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **13** | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **13** | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **11** | <5 | <5 | <5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **10** | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **8** | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **14** | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **9.8** | <5 | <5 | <5 | -- | <2 |
| | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **14** | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **9.6** | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | **22** | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | **8.8** | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | **8.2** | <1.0 | <1.0 | <1.0 | 0.19 J | 0.90 J | -- | -- | <1.0 | <1.0 | <1.0 | 0.45 J | <1.0 | -- | -- | <1.0 | <1.0 | 3.9 | <1.0 | <1.0 | 0.97 J | <1.0 | <1.0 |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | **14** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | **5.0** | <1.0 | <1.0 | 0.70 J | <1.0 | <1.0 |
| | 5/5/2017 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | 2.2J | **7.3** | <1.0 | <1.0 | <1.0 | <1.0 | 0.72J | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | 3.4 | <1.0 | <1.0 | 1.5 | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | **7.4** | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | 2.5 | <0.46 | <0.20 | 1.0 | <0.49 | <0.62 |
| | DUP10112017 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | 4.4 J | <0.96 | <0.46 | <10.0 | **7.5** | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | 2.9 | <0.46 | <0.20 | 0.89 J | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.41 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | **5.5** | <0.55 | <0.79 | <0.58 | <0.50 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | 2.0 | <0.78 | <0.51 | 1.0 | <0.46 | <0.60 |

**TABLE 4**
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoring Well ID | Type 1 Risk Reduction Standard for Groundwater (µg/L) (October 12, 2018 updates) | 1,1,2-Trichloro-1,2,2-Trifluoroethane | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethane | 1,3-Dichlorobenzene | 4-Methyl-2-Pentanone (Methyl isobutyl ketone) | 2-Butanone (Methyl ethyl ketone) | 2-Hexanone (Methyl butyl ketone) | Acetone | Benzene | Bromoform | Carbon Disulfide | Chloroform | Chloromethane (Methyl Chloride) | Cyclohexane | Dibromomethane | Diisopropyl ether | Toluene | Ethylbenzene | Isopropylbenzene (Cumene) | Methylcyclohexane | Methylene chloride | Xylenes (o) | Xylenes (m,p) | Xylenes (Total) | MTBE | Trichloroethene | Tetrachloroethene | Trichlorofluoromethane | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | Vinyl Chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.00E4 | 200 | 5 | 28 | 7 | 5 | NE | 6,300 | 5,600 | NE | 14,000 | 5 | 80 | 810 | 80 | 190 | 12,500 | NE | NE | 1,000 | 700 | 450 | NE | 5 | NE | NE | 10,000 | NE | 5 | 5 | 5,200 | 70 | 100 | 2 |
| | DATE | Analytical Results (µg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-4A | 6/23/2000 | -- | <1 | <5 | <1 | <1 | -- | -- | -- | -- | -- | -- | **12** | **--** | -- | -- | -- | -- | -- | -- | <1 | <1 | -- | -- | -- | <1 | -- | <1 | <1 | <1 | 2.7 | -- | <1 | -- | <1 |
| | 5/7/2004 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **27** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **29** | <5 | -- | <5 | -- | <5 |
| | 5/9/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **37** | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **51** | <5 | -- | <5 | -- | <2 |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **7.2** | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | 4.9 | **--** | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **6.1** | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **7** | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **13** | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **29** | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **51** | <5 | <5 | 9.5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **6.3** | <5 | <5 | <5 | -- | <2 |
| | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | 0.35 J | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | **34** | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | 1.2 | <1.0 | **81** | 2.9 | <1.0 | 21 | 0.43 J | <1.0 |
| | 5/5/2017 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | 1.7 | <1.0 | <1.0 | 0.53J | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | 4.3 J | <0.96 | <0.46 | 37.2 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | 0.74 J | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | 15.8 J | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.41 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.50 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | 0.72 J | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |
| MW-5 | 6/23/2000 | -- | 1.5 | <1 | <1 | <1 | -- | -- | -- | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | <1 | <1 | -- | -- | -- | <1 | -- | -- | <1 | <1 | <1 | -- | <1 | -- | <1 |
| MW-6 | 11/5/2000 | -- | -- | <5 | <1 | -- | -- | -- | -- | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <1 | <1 | -- | <1 | -- | -- |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/21/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| MW-7A | 11/5/2000 | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | **5.4** | <1 | -- | 2.1 | -- | -- |
| | 5/7/2004 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 5/9/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 3/8/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | 0.63 J | <1.0 | -- | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| MW-8A | 11/5/2000 | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | <1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | **15** | <1 | -- | <1 | -- | -- |
| | 5/7/2004 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 5/9/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 3/8/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | 0.42 J | <1.0 | -- | -- | <10 | <10 | <10 | 5.3 J | <1.0 | <1.0 | <1.0 | <1.0 | 0.41 J | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 0.97 J |
| | 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.2 |
| | DUP-1 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 1.3 |
| | 10/11/2017 | NS | NS | NS | NS | NS | NS | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.67 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |

**TABLE 4**
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoring Well ID | Type 1 Risk Reduction Standard for Groundwater (µg/L) (October 12, 2018 updates) | 1,1,2-Trichloro-1,2,2-Trifluoroethane | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethane | 1,3-Dichlorobenzene | 4-Methyl-2-Pentanone (Methyl isobutyl ketone) | 2-Butanone (Methyl ethyl ketone) | 2-Hexanone (Methyl butyl ketone) | Acetone | Benzene | Bromoform | Carbon Disulfide | Chloroform | Chloromethane (Methyl Chloride) | Cyclohexane | Dibromomethane | Diisopropyl ether | Toluene | Ethylbenzene | Isopropylbenzene (Cumene) | Methylcyclohexane | Methylene chloride | Xylenes (o) | Xylenes (m,p) | Xylenes (Total) | MTBE | Trichloroethene | Tetrachloroethene | Trichlorofluoromethane | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | Vinyl Chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.00E4 | 200 | 5 | 28 | 7 | 5 | NE | 6,300 | 5,600 | NE | 14,000 | 5 | 80 | 810 | 80 | 190 | 12,500 | NE | NE | 1,000 | 700 | 450 | NE | 5 | NE | NE | 10,000 | NE | 5 | 5 | 5,200 | 70 | 100 | 2 |
| | DATE | Analytical Results (µg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-9A | 5/7/2004 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 5/9/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/17/2009 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 6/24/2010 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <2 |
| | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 8/4/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 2/24/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 9/20/2012 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 3/8/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | 4.4 J | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.67 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.86 | <0.46 | <0.60 |
| MW-10 | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | **5.3** | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | 12 | 22 | 34 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | 8.6 | <5.0 | 8.6 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | **8.9** | 1.4 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | 0.70 J | 4.2 | 1.2 | <5.0 | 0.88 J | -- | -- | 30 | 2.6 | 2.5 | <1.0 | 2.8 | <1.0 | <1.0 | <1.0 |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | 0.94 J | 1.3 | <1.0 | -- | <10 | <10 | <10 | <20 | **8.9** | 1.4 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | 0.70 J | 4.2 | 1.2 | <5.0 | 0.88 J | -- | -- | 30 | 2.6 | 2.5 | <1.0 | 2.8 | <1.0 | <1.0 | <1.0 |
| | 5/5/2017 | <1.0 | <1.0 | <1.0 | 0.71J | 0.75J | <1.0 | -- | <10 | <10 | <10 | 2.2J | 2.6 | 0.52J | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | 0.70 J | 1.2 | 0.5J | <5.0 | 0.63J | -- | -- | 6.4 | 2.5 | 1.1 | <1.0 | 3.2 | <1.0 | <1.0 | <1.0 |
| | 10/10/2017 | -- | <0.48 | <0.29 | 0.44 J | <0.56 | 0.26 J | -- | 4.6 J | <0.96 | <0.46 | <10.0 | 1.2 | <0.26 | -- | <0.14 | <0.11 | -- | 1.0 J | 0.44 J | <0.26 | 0.63 J | -- | -- | <0.97 | 2.6 | 0.93 J | 2.6 | 1.6 | <0.47 | <0.46 | 2.9 | <0.19 | <0.49 | <0.62 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | 0.49 J | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | 0.68 J | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.67 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | 0.50J | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | 0.92J | <0.86 | <0.46 | <0.60 |
| MW-11 | 3/8/2013 | -- | <5 | <5 | <5 | **8.5** | -- | -- | <10 | <50 | <10 | <50 | **16** | **--** | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | **1,300** | **10** | <5 | 12 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | **13** | -- | -- | <10 | <50 | <10 | <50 | **27** | <5.0 | <5.0 | <5.0 | | | -- | -- | <5.0 | <5.0 | | | | <5.0 | <5.0 | <10 | <5.0 | **1,500** | **15** | <5.0 | 12 | <5.0 | <2.0 |
| | 4/26/2016 | <5.0 | <5.0 | <5.0 | <5.0 | **9** | <5.0 | -- | <50 | <50 | <50 | <100 | **9.2** | <5.0 | <1.0 | 1.7 J | <5.0 | <5.0 | -- | -- | <5.0 | <5.0 | <5.0 | <25.0 | <5.0 | -- | -- | <5.0 | <5.0 | **760** | **5.8** | <5.0 | 7.5 | <5.0 | <5.0 |
| | 11/17/2016 | <10 | <10 | <10 | <10 | <10 | <10 | -- | <100 | <100 | <100 | <200 | **15** | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 | <50 | <10 | -- | -- | <10 | <10 | **640** | **8.3 J** | <10 | <10 | <10 | <10 |
| | DUP-2 11/17/2016 | <10 | <10 | <10 | <10 | <10 | **32** | -- | <100 | <100 | <100 | <200 | **15** | 5.3 J | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 | <50 | <10 | -- | -- | <10 | <10 | **590** | **7.0 J** | <10 | <10 | <10 | <10 |
| | 10/10/2017 | -- | <1.9 | <1.2 | <1.3 | **7.8** | <0.96 | -- | <1.3 | <3.8 | <1.8 | <40.0 | **12.7** | <1.0 | -- | 1.6 J | <0.44 | -- | <0.84 | <0.48 | <1.0 | <1.2 | -- | -- | **10.8** | <0.92 | <2.6 | <4.0 | <0.84 | **450** | 3.6 J | <0.80 | 5.6 | <2.0 | <2.5 |
| | 5/15/2018 | -- | <1.2 | <0.72 | 1.3 J | **9.1** | 0.69 J | -- | <0.82 | <2.4 | <1.2 | <25.0 | 4.6 | <0.65 | -- | 0.96 J | 0.79 J | -- | <0.52 | <0.30 | <0.65 | <0.75 | -- | -- | <2.4 | <0.58 | <1.6 | <2.5 | <0.52 | **291** | 2.8 | <0.50 | 16.2 | <1.2 | <1.6 |
| | Dup-1 5/15/2018 | -- | <1.2 | <0.72 | 1.2 J | **7.2** | <0.60 | -- | <0.82 | <2.4 | <1.2 | <25.0 | **5.5** | <0.65 | -- | <0.35 | <0.28 | -- | <0.52 | <0.30 | <0.65 | <0.75 | -- | -- | <2.4 | <0.58 | <1.6 | <2.5 | <0.52 | **292** | 2.5 J | <0.50 | 9.5 | <1.2 | <1.6 |
| | 11/27/2018 | -- | <0.38 | <0.59 | 1.5 | **13.4** | <0.67 | 0.75J | <0.86 | <3.2 | <0.89 | <8.2 | 4.0 | <0.55 | <0.79 | 1.0 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | **376** | 4.5 | <0.51 | 3.8 | <0.46 | <0.60 |
| | Dup-1 11/27/18 | -- | <0.38 | <0.59 | 1.5 | **13.6** | <0.67 | 0.60J | <0.86 | <3.2 | <0.89 | <8.2 | 4.4 | <0.55 | <0.79 | 0.98J | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | **379** | 4.5 | <0.51 | 4.4 | <0.46 | <0.60 |
| MW-12 | 3/7/2013 | -- | <5 | <5 | <5 | **30** | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | 28 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | **45** | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | 5 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | DUP (FD012215A) 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | **43** | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | 5.4 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | 0.29 J | <1.0 | **13** | 0.28 J | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | 0.49 J | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | DUP-2 4/26/2016 | <1.0 | <1.0 | 0.29 J | <1.0 | **14** | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | 0.43 J | <1.0 | 1.2 | <1.0 | <1.0 | <1.0 |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | <1.0 | 6.2 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | **7.3** | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.41 | 5.9 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | 0.88J | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |
| MW-13 | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | 0.25 J | 0.40 J | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | DUP-1 4/26/2016 | <1.0 | <1.0 | <1.0 | 0.25 J | 0.44 J | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |

**TABLE 4**
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS**
**FORMER LOEF FACILITY**
**590 OLD HULL ROAD**
**ATHENS, CLARKE COUNTY, GEORGIA**

| Monitoring Well ID | Type 1 Risk Reduction Standard for Groundwater (µg/L) (October 12, 2018 updates) | 1,1,2-Trichloro-1,2,2-Trifluoroethane | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | 1,1-Dichloroethane | 1,1-Dichloroethene | 1,2-Dichloroethane | 1,3-Dichlorobenzene | 4-Methyl-2-Pentanone (Methyl isobutyl ketone) | 2-Butanone (Methyl ethyl ketone) | 2-Hexanone (Methyl butyl ketone) | Acetone | Benzene | Bromoform | Carbon Disulfide | Chloroform | Chloromethane (Methyl Chloride) | Cyclohexane | Dibromomethane | Diisopropyl ether | Toluene | Ethylbenzene | Isopropylbenzene (Cumene) | Methylcyclohexane | Methylene chloride | Xylenes (o) | Xylenes (m,p) | Xylenes (Total) | MTBE | Trichloroethene | Tetrachloroethene | Trichlorofluoromethane | Cis-1,2-Dichloroethene | Trans-1,2-Dichloroethene | Vinyl Chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1.00E4 | 200 | 5 | 28 | 7 | 5 | NE | 6,300 | 5,600 | NE | 14,000 | 5 | 80 | 810 | 80 | 190 | 12,500 | NE | NE | 1,000 | 700 | 450 | NE | 5 | NE | NE | 10,000 | NE | 5 | 5 | 5,200 | 70 | 100 | 2 |
| | DATE | Analytical Results (µg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-14 | 3/7/2013 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | 5.6 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/21/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | 0.44 J | <1.0 | -- | 0.58 J | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | 1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | **2.1** |
| | 11/16/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | 0.47 J | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | 0.72 J | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 0.70 J |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | 3.9 J | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | 0.26 J | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | 0.85 J | 0.58 J | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.67 | <0.72 | <0.67 | <0.49 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | 0.66J | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.86 | <0.46 | <0.60 |
| **TW-1** | 5/4/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **38** | **--** | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **10** | <5 | -- | <5 | -- | <5 |
| **TW-2** | 5/4/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **100** | **--** | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **15** | **6.6** | -- | <5 | -- | <5 |
| **TW-3** | 5/4/2006 | -- | <5 | <5 | <5 | **29** | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | **8.2** | <5 | -- | <5 | -- | <5 |
| **TW-4** | 5/4/2006 | -- | <5 | **5.9** | <5 | **150** | -- | -- | -- | -- | -- | -- | <5 | -- | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <5 |
| **TW-5** | 5/4/2006 | -- | <5 | <5 | <5 | <5 | -- | -- | -- | -- | -- | -- | **24** | **--** | -- | -- | -- | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | -- | <5 | <5 | <5 | <5 | -- | <5 | -- | <5 |
| **Equipment Blank** | 2/24/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | 59 | <5 | -- | <5 | <5 | -- | -- | -- | -- | 0 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| **FB-1** | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| **FB-1** | 11/17/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | 2.1 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| **EB-1** | 11/27/2018 | -- | <0.38 | <0.59 | <0.41 | <0.72 | <0.67 | <0.59 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | <0.50 | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |
| **Trip Blank** | 8/5/2011 | -- | <5 | <5 | <5 | <5 | -- | -- | <10 | <50 | <10 | <50 | <5 | -- | <5 | <5 | -- | -- | -- | -- | <5 | <5 | -- | -- | -- | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <5 | -- | <2 |
| | 1/21/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 1/22/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 5/21/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 6/5/2015 | -- | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | <10 | <50 | <10 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | -- | -- | -- | -- | <5.0 | <5.0 | -- | -- | -- | <5.0 | <5.0 | <10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <2.0 |
| | 4/26/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 11/17/2016 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 5/5/2017 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | <10 | <10 | <10 | <20 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <5.0 | <1.0 | -- | -- | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| | 10/11/2017 | -- | <0.48 | <0.29 | <0.32 | <0.56 | <0.24 | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 5/15/2018 | -- | <0.48 | <0.29 | <0.32 | <0.56 | 0.27 J | -- | <0.33 | <0.96 | <0.46 | <10.0 | <0.25 | <0.26 | -- | <0.14 | <0.11 | -- | <0.21 | <0.12 | <0.26 | <0.30 | -- | -- | <0.97 | <0.23 | <0.66 | <1.0 | <0.21 | <0.47 | <0.46 | <0.20 | <0.19 | <0.49 | <0.62 |
| | 11/27/2018 | -- | <0.38 | <0.59 | <0.67 | <0.72 | <0.67 | <0.59 | <0.86 | <3.2 | <0.89 | <8.2 | <0.20 | <0.55 | <0.79 | <0.58 | <0.38 | -- | <0.62 | <1.1 | <0.31 | <0.45 | <0.43 | -- | 1.3 | <0.54 | <0.92 | <1.5 | -- | <0.34 | <0.78 | <0.51 | <0.66 | <0.46 | <0.60 |

**NOTES:**

VOC - Volatile Organic Compounds

**"376"** - Numbers in bold exceed the applicable Type 1 Risk Reduction Standard (RRS) criteria for groundwater, based on Georgia EPD October 12, 2018 RRS updates.

* - Casing for MW-1 was damaged. Sampling access was not available on this date.

**- MW-2A was overdrilled and replaced 3/18/11.

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

NE - Not Established (no Type 1 Groundwater Risk Reduction Standard is assigned; based on October 12, 2018 EPD RRS updates).

NS - Not Sampled (MW-2A was inaccessible in March 2013 and MW-8A was inaccessible in October 2017 and not sampled).

-- - Not Analyzed.

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

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

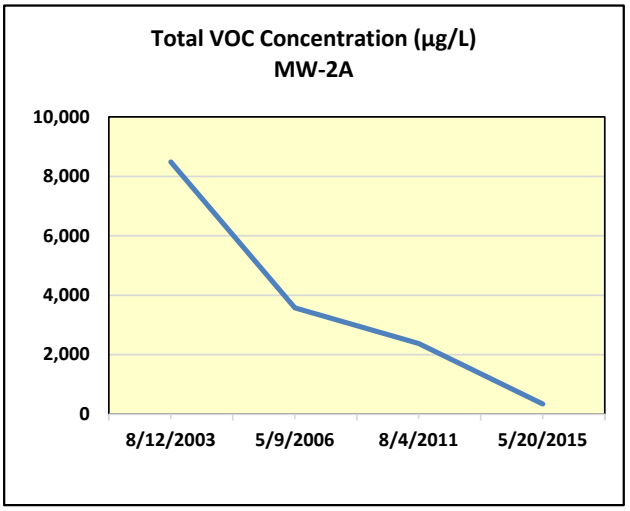
Shaded cell: VOC was previously not reported or tested by lab. First reporting for this compound was October 2017 sampling event.

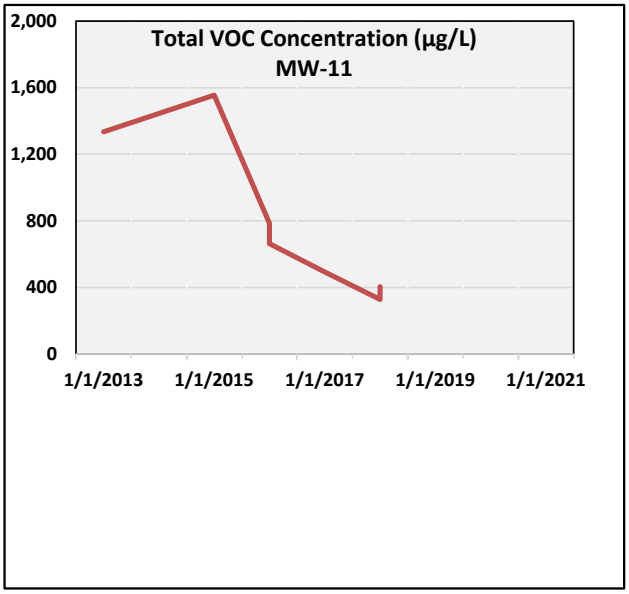
Shaded cell: VOC was previously not reported or tested by lab. First reporting for this compound was November 2018 sampling event.

# TABLE 5
# HISTORICAL TOTAL VOC CONCENTRATIONS IN GROUNDWATER
# FORMER LOEF FACILITY
# 590 OLD HULL ROAD
# ATHENS, CLARKE COUNTY, GEORGIA

| Monitoring Well | Date | Total VOC Concentration* (µg/L) | Reduction in Total VOC Concentration** (%) |
|---|---|---|---|
| **Source Area Wells** | | | |
| MW-2A | 8/12/2003 | 8,483.9 | |
| | 5/9/2006 | 3,572.4 | 58% |
| | 8/4/2011 | 2,376.4 | 72% |
| | 5/20/2015 | 341.4 | 96% |
| MW-3A | 6/23/2000 | 66.0 | |
| | 5/9/2006 | 29.4 | 55% |
| | 8/4/2011 | 24.0 | 64% |
| | 4/26/2016 | 14.61 | 78% |
| | 11/17/2016 | 19.7 | 70% |
| | 5/5/2017 | 15.1 | 77% |
| | 10/11/2017 | 10.9 | 83% |
| | 11/27/2018 | 8.5 | 87% |
| MW-11 | 3/8/2013 | 1,334.2 | |
| | 1/22/2015 | 1,555.0 | -17% |
| | 4/26/2016 | 785.7 | 41% |
| | 11/17/2016 | 663.3 | 50% |
| | 10/10/2017 | 492.1 | 63% |
| | 5/15/2018 | 327.4 | 75% |
| | 11/27/2018 | 405.0 | 70% |
| **Perimeter/Downgradient Wells** | | | |
| MW-4A | 5/7/2004 | 56.0 | |
| | 5/9/2006 | 88.0 | -57% |
| | 8/4/2011 | 89.5 | -60% |
| | 9/20/2012 | 6.3 | 89% |
| | 4/26/2016 | 0.35 | 99% |
| | 11/17/2016 | 140.53 | -151% |
| | 5/15/2018 | 15.8 | 72% |
| | 11/27/2018 | 0.7 | 99% |
| MW-10 | 3/7/2013 | 39.3 | |
| | 1/22/2015 | 17.2 | 56% |
| | 4/26/2016 | 1.2 | 97% |
| | 11/17/2016 | 57.42 | -46% |
| | 5/15/2018 | 1.17 | 97% |
| | 11/27/2018 | 1.42 | 96% |
| MW-12 | 3/7/2013 | 58.0 | |
| | 1/22/2015 | 50.0 | 14% |
| | 4/26/2016 | 14.06 | 76% |
| | 11/17/2016 | 6.2 | 89% |
| | 10/11/2017 | 7.3 | 87% |
| | 11/27/2018 | 6.8 | 88% |

**Trend Graphs for Key Source Area Wells**




**Notes:**

VOCs = Volatile Organc Compounds

*Total VOCs is the sum of all chlorinated and non-chlorinated Method 8260 VOCs detected, including estimated (J-flag) concentrations.

**Reduction percent by date compares total change to the first date listed. Negative percent change equals an increase.

# APPENDIX A

# GROUNDWATER SAMPLING FORMS (NOVEMBER 2018)

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1320 Monitor Well Number: MW-1

Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 40°F

Circle:

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

Depth to Product (MP): NA

Depth to Water (MP): 19.75

Total Depth of Well (MP): 24 (0.1')

Water Column thickness (ft): 4.25

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)

2

Well Type: surface completion, above grade

Well Screen Length: 5, (10) 15, 20 feet; 14-24

Pump Intake depth below water (MP): 22.5

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 | 19.78 | – | 0.5 | 14.59 | 0.502 | 5.60 | 151 | 6.25 | 3.3 | |
| 5 | 19.78 | – | 1.0 | 15.03 | 0.196 | 5.23 | 152 | 6.15 | 3.0 | |
| 10 | 19.79 | – | 1.5 | 15.30 | 0.158 | 5.29 | 148 | 6.08 | 2.9 | |
| 15 | 19.78 | – | 2.0 | 15.50 | 0.134 | 5.19 | 141 | 6.05 | 2.5 | |
| 20 | 19.77 | – | 2.5 | 15.58 | 0.118 | 5.15 | 142 | 6.01 | 2.5 | |
| 25 | 19.78 | – | 3.0 | 15.69 | 0.103 | 5.12 | 143 | 5.92 | 2.8 | |
| 30 | 19.78 | – | 3.5 | 15.71 | 0.102 | 5.11 | 143 | 5.91 | 2.8 | |
| 35 | 19.78 | – | 4.0 | 15.72 | 0.101 | 5.11 | 143 | 5.90 | 2.5 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3 mg/L | +/- 10% | |

Field Comments/Site Conditions, etc.: Well pro cover missing and bolt flanges broken off.

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC collected via Soda Straw method | 40mL VOA | HCl | Pace | 11/27/18 | 1400 |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 13:45 Monitor Well Number: MW-1D
Apex Personnel: T. Fisher, Q. ~~Watson~~ Walton Purpose of Sampling Event: Semi-annual
Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: 41°, Sunny

Circle:

Measuring Point (MP): ~~top of casing~~, top of ground
Depth to Product (MP): —
Depth to Water (MP): 25.63
Total Depth of Well (MP): 75 (0.1')
Water Column thickness (ft): 49.4
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)
2"

Well Type: surface completion, (above grade)
Well Screen Length: (5), 10, 15, 20 feet; 70-75
Pump Intake depth below water (MP): 73
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. mS/cm | pH | ORP | DO | Turbidity | Water Quality Comments | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | ~~µS/cm~~ | | mV | mg/L | NTU | | |
| Initial | 25.63 | - | 0.5 | 14.99 | .063 | 6.09 | 261 | 4.96 | 1.9 | | |
| 13:55 | 26.06 | - | 1.0 | 15.15 | .062 | 6.34 | 267 | 4.75 | 1.7 | | |
| 14:00 | 26.06 | - | 1.5 | 15.18 | .061 | 6.49 | 262 | 4.52 | 1.7 | | |
| 14:05 | 26.05 | - | 2.0 | 14.92 | .061 | 6.56 | 270 | 4.47 | 2.8 | | |
| 14:10 | 26.05 | - | 2.5 | 14.71 | .061 | 6.58 | 273 | 4.51 | 3.2 | | |
| 14:15 | 26.03 | - | 3.0 | 14.49 | .061 | 6.60 | 278 | 4.47 | 3.0 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3 mg/L | +/- 10% | | |

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC Collected Via soda straw method | 40mL VOA | HCl | Pace | 11/27/18 | 14:20 |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 11:55 Monitor Well Number: MW-3A

Apex Personnel: T. Fisher, Q, ~~Watson~~ Wm Hon Purpose of Sampling Event: semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: 41°, Sunny, chilly

Circle:

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

Depth to Product (MP): —

Depth to Water (MP): 24.63

Total Depth of Well (MP): 30 (0.1')

Water Column thickness (ft): 5.4

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

2"

Well Type: surface completion, above grade

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

Pump Intake depth below water (MP): 28

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. mS/cm | pH | ORP | DO | Turbidity | Water Quality Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | mS/cm | s.u. | mV | mg/L | NTU | |
| Initial | 24.63 | ~ | 0.5 | 14.39 | .121 | 4.93 | 315 | 1.30 | 24.1 | |
| 12:50 | 24.85 | — | 1.0 | 15.05 | .119 | 4.96 | 320 | 1.18 | 17.7 | |
| 12:55 | 24.86 | — | 1.5 | 15.36 | .112 | 4.91 | 351 | .95 | 11.3 | |
| 13:00 | 24.86 | — | 2.0 | 15.41 | .107 | 4.88 | 359 | .80 | 10.5 | |
| 13:05 | 24.86 | — | 2.5 | 15.42 | .104 | 4.86 | 355 | .77 | 6.0 | |
| 13:10 | 24.86 | — | 3.0 | 15.68 | .099 | 4.84 | 356 | .62 | 4.3 | |
| 13:15 | 24.86 | — | 3.5 | 15.62 | .097 | 4.82 | 359 | .60 | 4.2 | |
| 13:20 | 24.86 | — | 4.0 | 15.87 | .098 | 4.81 | 359 | .61 | 4.2 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/-3% | +/-0.1 | +/-10 mV | +/-0.3mg/L | +/-10% | |

Field Comments/Site Conditions, etc.:

- harlow was leaking
  - took a while to fix

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| MW 3A 1 | VOC collected via soda straw method | 40mL VOA | HCl | Pace | 11/27/18 | 13:25 |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1110 Monitor Well Number: MW-4A
Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual
Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 41

Circle:

Measuring Point (MP): top of casing, top of ground
Depth to Product (MP): NA
Depth to Water (MP): 21.98
Total Depth of Well (MP): 29.5 (0.1')
Water Column thickness (ft): 7.5
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
2"

Well Type: surface completion, above grade
Well Screen Length: 5, 10, 15, 20 feet; 19.5 - 29.5
Pump Intake depth below water (MP): 27
Purging/Sampling Device: Baller, 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 | Turb dity | Water Quality Comments | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | µS/cm | | mV | mg/L | NTU | | |
| Initial | 22.08 | — | 0.5 | 14.01 | 0.190 | 4.24 | 294 | 7.81 | 2.3 | | |
| 5 | 22.10 | — | 1.0 | 14.18 | 0.226 | 4.33 | 283 | 7.91 | 2.4 | | |
| 10 | 22.12 | — | 1.5 | 14.29 | 0.356 | 4.79 | 262 | 7.45 | 2.2 | | |
| 15 | 22.13 | — | 2.0 | 14.39 | 0.398 | 5.10 | 249 | 7.18 | 2.1 | | |
| 20 | 22.14 | — | 2.5 | 14.49 | 0.413 | 5.14 | 246 | 6.91 | 2.0 | | |
| 25 | 22.15 | — | 3.0 | 14.50 | 0.415 | 5.15 | 245 | 6.76 | 2.0 | | |
| 30 | 22.15 | — | 3.5 | 14.50 | 0.415 | 5.12 | 245 | 6.62 | 2.1 | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| Criteria | ~0.33' | 0.2-0.5 L/min | | | +/-3% | +/-0.1 | +/-10 mV | +/-0.3mg/L | +/-10% | | |

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC collected via soda straw | 40mL VOA | HCl | Pace | 11/27/18 | 1205 |

APEX

**APEX COMPANIES, LLC**
**GROUND-WATER SAMPLING LOG**

Date: 11/27/18 Time: 9:21 Monitor Well Number: MW-6
Apex Personnel: T. Fisher, Q. Watson/Walton Purpose of Sampling Event: Semi-annual
Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: _____

Circle:

Measuring Point (MP): top of casing, top of ground
Depth to Product (MP): —
Depth to Water (MP): 21.45
Total Depth of Well (MP): 30 (0.1')
Water Column thickness (ft): 8.55
Well Material: PVC, Stainless Steel, Other:
Well pad condition: Good, Cracked, Replace

Low Flow purge rate: NA 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
2"

Well Type: surface completion, above grade
Well Screen Length: 5, 10, 15, 20 feet; 20-30
Pump Intake depth below water (MP): _____
Purging/Sampling Device: Bailer, Monsoon, Grundfos;
OTHER:
Noticeable Odor: NA
Sample Color: NA

| 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 | | | | | | | | | | |
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| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3mg/L | 1 +/- 10% | |

Field Comments/Site Conditions, etc.:
Water level data only. No sample collected

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, Hanna turbidity; Other: _____

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|

No sample collected

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 8:30

Apex Personnel: T. Fisher, Q. Watson/Walton

Location (Site/Facility Name): CMC Metals, Athens, GA

Monitor Well Number: MW-7A

Purpose of Sampling Event: Semi-annual

Weather/Temp: _____

Circle:

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

Depth to Product (MP): _____

Depth to Water (MP): 11.47

Total Depth of Well (MP): 19.5 (0.1')

Water Column thickness (ft): 8.0

Well Material: PVC, Stainless Steel, Other:

Well pad condition: Good, Cracked, Replace

Low Flow purge rate: NA 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

2"

Well Type: surface completion, above grade

Well Screen Length: 5, 10, 15, 20 feet; 9.5-19.5

Pump Intake depth below water (MP): NA

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

OTHER:

Noticeable Odor: NA

Sample Color: NA

| 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 | | | | | | | | | | |
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| Criteria | ~0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3mg/L | +/- 10% | |

Field Comments/Site Conditions, etc.:

Water level data only. No sample collected.

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, Hanna turbidity; Other: _____

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1425 Monitor Well Number: MW-8A

Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 40

Circle:

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

Depth to Product (MP): NA

Depth to Water (MP): 10.20

Total Depth of Well (MP): 19.5 (0.1')

Water Column thickness (ft): 9.3

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)

2"

Well Type: surface completion, (above grade)

Well Screen Length: 5, (10), 15, 20 feet; 9.5-19.5

Pump Intake depth below water (MP): 18.0

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 | Turb dity | Water Quality Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | uS/cm | | mV | mg/L | NTU | |
| Initial | 10.20 | - | 0.5 | 15.91 | 0.779 | 4.99 | 147 | 1.29 | 2.6 | |
| 5 | 10.20 | - | 1.0 | 15.65 | 0.678 | 5.63 | 125 | 1.35 | 4.2 | |
| 10 | 10.20 | - | 1.5 | 15.16 | 0.780 | 5.84 | 106 | 1.10 | 4.9 | |
| 15 | 10.21 | - | 2.0 | 14.83 | 0.801 | 5.87 | 102 | 0.82 | 4.2 | |
| 20 | 10.21 | - | 2.5 | 14.73 | 0.805 | 5.84 | 104 | 0.86 | 5.4 | |
| 25 | 10.21 | - | 3.0 | 14.66 | 0.806 | 5.83 | 104 | 0.91 | 4.8 | |
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| | | | | | | | | | | |
| 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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC | 40mL VOA | HCl | Pace | 11/27/18 | 1455 |

Collected via Sida Straw method

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 14:45 Monitor Well Number: QA

Apex Personnel: T. Fisher, Q, ~~Walton~~ Walton Purpose of Sampling Event: Semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: _____

Circle:

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

Depth to Product (MP): ~~_____~~

Depth to Water (MP): 9.49

Total Depth of Well (MP): 20 (0.1')

Water Column thickness (ft): 10.5

Well Material: (PVC), Stainless Steel, Other:

Well pad condition: (Good), Cracked, Replace

Low Flow purge rate: 166 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)

2"

Well Type: surface completion, (above grade)

Well Screen Length: 5, (10), 15, 20 feet: 10-20

Pump Intake depth below water (MP): 18

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. mS/cm | pH | ORP | DO | Turbidity | Water Quality Comments | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min. | Feet | gallons | Liters | C | mS/cm | | mV | mg/L | NTU | | |
| Initial | ~ | — | 0.5 | 13.22 | .612 | 6.30 | 221 | .75 | 3.5 | | |
| 15:05 | 9.98 | — | 1.0 | 13.65 | .616 | 6.36 | 156 | .51 | 2.9 | | |
| 15:10 | 10.15 | — | 1.5 | 13.89 | .620 | 6.38 | 143 | .44 | 3.0 | | |
| 15:15 | 10.20 | — | 2.0 | 13.79 | .620 | 6.39 | 138 | .42 | 4.0 | | |
| 15:20 | 10.35 | — | 2.5 | 13.57 | .616 | 6.39 | 131 | .39 | 3.2 | | |
| 15:25 | 10.36 | — | 3.0 | 13.43 | .612 | 6.39 | 125 | .36 | 2.8 | | |
| 15:30 | 10.36 | — | 3.5 | 13.11 | .612 | 6.38 | 126 | .35 | 2.6 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/-3% | +/-0.1 | +/-10mV | +/-0.3mg/L | +/-10% | | |

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: _____

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC collected via soda straw method | 40mL VOA | HCl | Pace | 11/27/18 | 15:35 |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1015 Monitor Well Number: MW-10
Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual
Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 38°F

Circle:

Measuring Point (MP): (top of casing), top of ground
Depth to Product (MP): NA
Depth to Water (MP): 20.23
Total Depth of Well (MP): 35 (0.1')
Water Column thickness (ft): 14.7
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
2"

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 | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | mS/cm | | mV | mg/L | NTU | | |
| Initial | 20.35 | – | 0.5 | 11.17 | 0.194 | 4.72 | 248 | 13.30 | 31 | | |
| 5 | 20.35 | – | 1.0 | 11.63 | 0.197 | 4.50 | 266 | 9.72 | 20 | | |
| 10 | 20.35 | – | 1.5 | 12.25 | 0.195 | 4.46 | 271 | 8.73 | 6.6 | | |
| 15 | 20.35 | – | 2.0 | 12.59 | 0.195 | 4.33 | 278 | 8.25 | 5.2 | | |
| 20 | 20.35 | – | 2.5 | 12.90 | 0.193 | 4.29 | 282 | 7.80 | 3.8 | | |
| 25 | 20.35 | – | 3.0 | 13.03 | 0.192 | 4.26 | 284 | 7.70 | 4.1 | | |
| 30 | 20.35 | – | 3.5 | 13.21 | 0.192 | 4.29 | 285 | 7.73 | 3.7 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Criteria | 0.33 | 0.2-0.5 L/min | | +/- 3% | | +/- 0.1 | +/- 10 mV | +/- 0.3mg/L | +/- 10% | | |

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC Collected Via soda Straw method | 40mL VOA | HCl | Pace | 11/27/18 | 1100 |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 10:30 Monitor Well Number: MW-11
Apex Personnel: T. Fisher, Q. ~~Nelson~~ Walton Purpose of Sampling Event: Semi-annual
Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: 41°, Sunny

Circle:

Measuring Point (MP): ~~top of casing~~, top of ground
Depth to Product (MP): —
Depth to Water (MP): 24.58
Total Depth of Well (MP): 35 (0.1')
Water Column thickness (ft): 10.4
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)
2"

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. mS/cm ~~µS/cm~~ | pH | ORP | DO | Turbidity | Water Quality Comments | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | | | mV | mg/L | NTU | | |
| Initial | 24.77 | — | 0.5 | 10.48 | .045 | 5.46 | 245 | 2.17 | 33.0 | | |
| 10:55 | 24.79 | — | 1.0 | 12.51 | .064 | 4.89 | 245 | 1.14 | 20.8 | | |
| 11:00 | 24.79 | — | 1.5 | 12.75 | .057 | 4.85 | 257 | .97 | 20.1 | | |
| 11:05 | 24.79 | — | 2.0 | 12.74 | .055 | 4.80 | 261 | .77 | 20.2 | | |
| 11:10 | 24.75 | — | 2.5 | 13.05 | .048 | 4.77 | 264 | .72 | 13.8 | | |
| 11:15 | 24.75 | — | 3.0 | 12.92 | .048 | 4.74 | 266 | .68 | 10.7 | | |
| 11:20 | 24.75 | — | 3.5 | 12.81 | .046 | 4.73 | 265 | .62 | 10.4 | | |
| 11:25 | 24.75 | — | 4.0 | 12.69 | .045 | 4.74 DW | 271 | .67 | 9.5 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3mg/L | +/- 10% | | |

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| - 1 | VOC collected via soda Straw method | 40mL VOA | HCl | Pace | 11/27/18 | 11:30 |
| - Dup | | | | | | |

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1510 Monitor Well Number: MW-12

Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 40

Circle:

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

Depth to Product (MP):

Depth to Water (MP): 17.69

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

Water Column thickness (ft): 17.3

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

2"

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 | Field Comments/Site Conditions, etc.: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min | Feet | gallons | Liters | °C | µS/cm | +/- 0.1 | +/- 10 mV | mg/L | NTU | | |
| Initial | | - | 0.5 | 13.35 | 0.809 | 6.01 | 108 | 8.71 | 4.2 | | |
| 5 | | - | 1.0 | 13.03 | 0.193 | 5.44 | 130 | 8.42 | 2.6 | | |
| 10 | | - | 1.5 | 12.90 | 0.139 | 5.23 | 150 | 8.30 | 2.3 | | |
| 15 | | - | 2.0 | 12.84 | 0.113 | 5.11 | 163 | 8.20 | 2.0 | | |
| 20 | | - | 2.5 | 12.83 | 0.098 | 5.05 | 171 | 8.07 | 2.4 | | |
| 25 | | - | 3.0 | 12.82 | 0.097 | 5.00 | 178 | 7.91 | 2.0 | | |
| 30 | | - | 3.5 | 12.83 | 0.096 | 4.97 | 181 | 7.83 | 2.1 | | |
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| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3mg/L | +/- 10% | | |

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC collected via soda straw method | 40mL VOA | HCl | Pace | 11/27/18 | 1545 |
| | | | | | | |
| EB-1 | | | | | | 1600 |

collected through tubing via soda straw method

APEX

# APEX COMPANIES, LLC
## GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 9:17
Apex Personnel: T. Fisher, Q. Walton
Location (Site/Facility Name): CMC Metals, Athens, GA

Monitor Well Number: MW-15
Purpose of Sampling Event: Semi-annual
Weather/Temp: Sunny 40°F

Circle:

Measuring Point (MP): top of casing, top of ground
Depth to Product (MP): ____
Depth to Water (MP): 16.73
Total Depth of Well (MP): 35 (0.1')
Water Column thickness (ft): 18.3
Well Material: PVC, Stainless Steel, Other:
Well pad condition: Good, Cracked, Replace

Low Flow purge rate: NA 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
2"

Well Type: surface completion, above grade
Well Screen Length: 5, 10, 15, 20 feet; 25-35
Pump Intake depth below water (MP): NA
Purging/Sampling Device: Baller, Peristaltic, Monsoon, Grundfos;
OTHER:
Noticeable Odor: NA
Sample Color: NA

| 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 | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3 mg/L | +/- 10% | |

Field Comments/Site Conditions, etc.:
Water level data only. No sample collected.

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, Hanna turbidity; Other:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|

No sample collected.

APEX

# APEX COMPANIES, LLC
# GROUND-WATER SAMPLING LOG

Date: 11/27/18 Time: 1230 Monitor Well Number: MW-14

Apex Personnel: T. Fisher, Q. Watson Purpose of Sampling Event: Semi-annual

Location (Site/Facility Name): CMC Metals, Athens, GA Weather/Temp: Sunny 40°F

Circle:

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

Depth to Product (MP): NA

Depth to Water (MP): ~~35~~ 17.04

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

Water Column thickness (ft): 17.9

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

2"

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 | | — | 0.5 | 14.91 | 0.412 | 5.13 | 227 | 6.75 | 1.5 | |
| 5 | | — | 1.0 | 14.91 | 0.415 | 5.07 | 230 | 6.65 | 1.6 | |
| 10 | | — | 1.5 | 14.90 | 0.559 | 5.16 | 231 | 6.39 | 1.5 | |
| 15 | | — | 2.0 | 14.80 | 0.607 | 5.47 | 209 | 6.21 | 1.8 | |
| 20 | | — | 2.5 | 14.68 | 0.624 | 5.56 | 194 | 6.06 | 1.9 | |
| 25 | | — | 3.0 | 14.60 | 0.635 | 5.60 | 186 | 5.95 | 2.0 | |
| 30 | | — | 3.5 | 14.57 | 0.639 | 5.61 | 184 | 5.87 | 2.2 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Criteria | 0.33' | 0.2-0.5 L/min | | | +/- 3% | +/- 0.1 | +/- 10 mV | +/- 0.3 mg/L | +/- 10% | |

Field Comments/Site Conditions, etc.:

well damaged and at an angle to fix the well, driller to replace stick-up, pad, casing. The stick up on the well will need to be removed. Break in casing is approx 3' below, TOC.

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:

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

| Samples collected | Analysis | Bottle Type | Preservative | Lab | Sample date | Sample Time |
|---|---|---|---|---|---|---|
| 1 | VOC collected via soda straw method. | 40mL VOA | HCl | Pace | 11/27/18 | 1305 |

# GAUGING FORM
## CMC Athens

Date: 11/27/2018

| Well ID | DTP | DTW | DTB | Product Thickness | Comments |
|---|---|---|---|---|---|
| MW-1 | — | 19.75 | 24 | | Well pro-cover needs repaired by replacement |
| MW-1D | — | 25.63 | 75 | | |
| [redacted] | — | [redacted] | [redacted] | | |
| MW-3A | — | 24.63 | 30 | | |
| MW-4A | — | 21.98 | 29.5 | | |
| MW-6 | — | 21.45 | 30 | | |
| MW-7A | — | 11.47 | 19.5 | | |
| MW-8A | — | 10.20 | 19.5 | | |
| MW-9A | — | 9.49 | 20 | | |
| MW-10 | — | 20.23 | 35 | | |
| MW-11 | — | 24.58 | 35 | | |
| MW-12 | — | 17.69 | 35 | | |
| MW-13 | — | 16.73 | 35 | | |
| MW-14 | — | 17.04 | 35 | | Stick up needs repaired / replaced because it is leaning |

Comments: _____

# APPENDIX B

# LABORATORY ANALYTICAL REPORT

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

December 03, 2018

Grant Watkins
Apex Companies
1071 Pemberton Hill Rd.
Suite 203
Apex, NC 27502

RE: Project: CMC-ATHENS GA
Pace Project No.: 92408801

Dear Grant Watkins:
Enclosed are the analytical results for sample(s) received by the laboratory on November 28, 2018. 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

## CERTIFICATIONS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Atlanta Certification IDs**

110 Technology Parkway Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812
Georgia DW Microbiology Certification #: 812
North Carolina Certification #: 381
South Carolina Certification #: 98011001
Texas Certification #: T104704397-08-TX
Virginia Certification #: 460204

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

## SAMPLE SUMMARY

Project: CMC-ATHENS GA
Pace Project No.: 92408801

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92408801001** | **MW-1** | Water | 11/27/18 14:00 | 11/28/18 09:31 |
| **92408801002** | **MW-1D** | Water | 11/27/18 14:20 | 11/28/18 09:31 |
| **92408801003** | **MW-3A** | Water | 11/27/18 13:25 | 11/28/18 09:31 |
| **92408801004** | **MW-4A** | Water | 11/27/18 12:05 | 11/28/18 09:31 |
| **92408801005** | **MW-8A** | Water | 11/27/18 14:55 | 11/28/18 09:31 |
| **92408801006** | **MW-9A** | Water | 11/27/18 15:35 | 11/28/18 09:31 |
| **92408801007** | **MW-10** | Water | 11/27/18 11:00 | 11/28/18 09:31 |
| **92408801008** | **MW-11** | Water | 11/27/18 11:30 | 11/28/18 09:31 |
| **92408801009** | **DUP-1** | Water | 11/27/18 00:00 | 11/28/18 09:31 |
| **92408801010** | **MW-12** | Water | 11/27/18 15:45 | 11/28/18 09:31 |
| **92408801011** | **EB-1** | Water | 11/27/18 16:00 | 11/28/18 09:31 |
| **92408801012** | **MW-14** | Water | 11/27/18 13:05 | 11/28/18 09:31 |
| **92408801013** | **TRIP BLANK** | Water | 11/27/18 00:00 | 11/28/18 09:31 |

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

## SAMPLE ANALYTE COUNT

Project: CMC-ATHENS GA
Pace Project No.: 92408801

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92408801001** | **MW-1** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801002** | **MW-1D** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801003** | **MW-3A** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801004** | **MW-4A** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801005** | **MW-8A** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801006** | **MW-9A** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801007** | **MW-10** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801008** | **MW-11** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801009** | **DUP-1** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801010** | **MW-12** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801011** | **EB-1** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801012** | **MW-14** | EPA 8260B | LIH | 72 | PASI-GA |
| **92408801013** | **TRIP BLANK** | EPA 8260B | LIH | 72 | PASI-GA |

Pace Analytical Services, LLC
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Huntersville, NC 28078
(704)875-9092

## SUMMARY OF DETECTION

Project: CMC-ATHENS GA
Pace Project No.: 92408801

| Lab Sample ID / Method | Client Sample ID / Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| **92408801001** | **MW-1** | | | | | |
| EPA 8260B | Benzene | 1.7 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | Chloroform | 18.7 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | 1,1-Dichloroethane | 0.98J | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | 1,1-Dichloroethene | 1.0 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | cis-1,2-Dichloroethene | 1.5 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | Methylene Chloride | 5.4 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | Tetrachloroethene | 2.1 | ug/L | 1.0 | 11/30/18 22:37 | |
| EPA 8260B | Trichloroethene | 1.6 | ug/L | 1.0 | 11/30/18 22:37 | |
| **92408801002** | **MW-1D** | | | | | |
| EPA 8260B | Trichloroethene | 4.6 | ug/L | 1.0 | 11/30/18 23:02 | |
| **92408801003** | **MW-3A** | | | | | |
| EPA 8260B | Benzene | 5.5 | ug/L | 1.0 | 11/30/18 23:28 | |
| EPA 8260B | cis-1,2-Dichloroethene | 1.0 | ug/L | 1.0 | 11/30/18 23:28 | |
| EPA 8260B | Trichloroethene | 2.0 | ug/L | 1.0 | 11/30/18 23:28 | |
| **92408801004** | **MW-4A** | | | | | |
| EPA 8260B | Methylene Chloride | 0.72J | ug/L | 1.0 | 11/30/18 23:53 | |
| **92408801007** | **MW-10** | | | | | |
| EPA 8260B | Methylene Chloride | 0.50J | ug/L | 1.0 | 12/01/18 01:10 | |
| EPA 8260B | Trichlorofluoromethane | 0.92J | ug/L | 1.0 | 12/01/18 01:10 | |
| **92408801008** | **MW-11** | | | | | |
| EPA 8260B | Benzene | 4.0 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | Chloroform | 1.0 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | 1,3-Dichlorobenzene | 0.75J | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | 1,1-Dichloroethane | 1.5 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | 1,1-Dichloroethene | 13.4 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | cis-1,2-Dichloroethene | 3.8 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | Tetrachloroethene | 4.5 | ug/L | 1.0 | 12/01/18 01:35 | |
| EPA 8260B | Trichloroethene | 376 | ug/L | 10.0 | 12/03/18 12:52 | |
| **92408801009** | **DUP-1** | | | | | |
| EPA 8260B | Benzene | 4.4 | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | Chloroform | 0.98J | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | 1,3-Dichlorobenzene | 0.60J | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | 1,1-Dichloroethane | 1.5 | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | 1,1-Dichloroethene | 13.6 | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | cis-1,2-Dichloroethene | 4.4 | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | Tetrachloroethene | 4.5 | ug/L | 1.0 | 12/01/18 02:01 | |
| EPA 8260B | Trichloroethene | 379 | ug/L | 10.0 | 12/03/18 13:18 | |
| **92408801010** | **MW-12** | | | | | |
| EPA 8260B | 1,1-Dichloroethene | 5.9 | ug/L | 1.0 | 12/01/18 02:26 | |
| EPA 8260B | Trichloroethene | 0.88J | ug/L | 1.0 | 12/01/18 02:26 | |
| **92408801012** | **MW-14** | | | | | |
| EPA 8260B | Methylene Chloride | 0.66J | ug/L | 1.0 | 12/01/18 02:52 | |

## REPORT OF LABORATORY ANALYSIS

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

## SUMMARY OF DETECTION

Project: CMC-ATHENS GA
Pace Project No.: 92408801

| Lab Sample ID / Method | Client Sample ID / Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| **92408801013** | **TRIP BLANK** | | | | | |
| EPA 8260B | Methylene Chloride | 1.3 | ug/L | 1.0 | 12/03/18 12:27 | |

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-1** **Lab ID: 92408801001** Collected: 11/27/18 14:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 11/30/18 22:37 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 11/30/18 22:37 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 11/30/18 22:37 | 107-13-1 | |
| Benzene | **1.7** | ug/L | 1.0 | 0.20 | 1 | | 11/30/18 22:37 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 22:37 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 22:37 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 11/30/18 22:37 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 11/30/18 22:37 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 11/30/18 22:37 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 11/30/18 22:37 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 11/30/18 22:37 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 11/30/18 22:37 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 11/30/18 22:37 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 11/30/18 22:37 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 11/30/18 22:37 | 56-23-5 | M1 |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 22:37 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 11/30/18 22:37 | 75-00-3 | |
| Chloroform | **18.7** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 22:37 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 22:37 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 11/30/18 22:37 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 11/30/18 22:37 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 11/30/18 22:37 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 22:37 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 11/30/18 22:37 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 22:37 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 11/30/18 22:37 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 22:37 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 22:37 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 11/30/18 22:37 | 75-71-8 | L1,M0 |
| 1,1-Dichloroethane | **0.98J** | ug/L | 1.0 | 0.41 | 1 | | 11/30/18 22:37 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 11/30/18 22:37 | 107-06-2 | |
| 1,1-Dichloroethene | **1.0** | ug/L | 1.0 | 0.72 | 1 | | 11/30/18 22:37 | 75-35-4 | |
| cis-1,2-Dichloroethene | **1.5** | ug/L | 1.0 | 0.66 | 1 | | 11/30/18 22:37 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 22:37 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 22:37 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 11/30/18 22:37 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 11/30/18 22:37 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 22:37 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 11/30/18 22:37 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 22:37 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 11/30/18 22:37 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 11/30/18 22:37 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 11/30/18 22:37 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 11/30/18 22:37 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 22:37 | 99-87-6 | |
| Methylene Chloride | **5.4** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 22:37 | 75-09-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-1** **Lab ID: 92408801001** Collected: 11/27/18 14:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 11/30/18 22:37 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 22:37 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 11/30/18 22:37 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 22:37 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 11/30/18 22:37 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 22:37 | 79-34-5 | |
| Tetrachloroethene | **2.1** | ug/L | 1.0 | 0.78 | 1 | | 11/30/18 22:37 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 22:37 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 22:37 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 22:37 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 22:37 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 22:37 | 79-00-5 | |
| Trichloroethene | **1.6** | ug/L | 1.0 | 0.34 | 1 | | 11/30/18 22:37 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 11/30/18 22:37 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 22:37 | 96-18-4 | M1 |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 22:37 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 22:37 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 11/30/18 22:37 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 22:37 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 11/30/18 22:37 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 11/30/18 22:37 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 11/30/18 22:37 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 | %. | 81-119 | | 1 | | 11/30/18 22:37 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 11/30/18 22:37 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 102 | %. | 82-120 | | 1 | | 11/30/18 22:37 | 460-00-4 | |
| Toluene-d8 (S) | 101 | %. | 82-109 | | 1 | | 11/30/18 22:37 | 2037-26-5 | |

**Sample: MW-1D** **Lab ID: 92408801002** Collected: 11/27/18 14:20 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 11/30/18 23:02 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 11/30/18 23:02 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 11/30/18 23:02 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 11/30/18 23:02 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:02 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:02 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 11/30/18 23:02 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 11/30/18 23:02 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 11/30/18 23:02 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 11/30/18 23:02 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 11/30/18 23:02 | 104-51-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-1D** **Lab ID: 92408801002** Collected: 11/27/18 14:20 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 11/30/18 23:02 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 11/30/18 23:02 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 11/30/18 23:02 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 11/30/18 23:02 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:02 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 11/30/18 23:02 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:02 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:02 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 11/30/18 23:02 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 11/30/18 23:02 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 11/30/18 23:02 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:02 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 11/30/18 23:02 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:02 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 11/30/18 23:02 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:02 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:02 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 11/30/18 23:02 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 11/30/18 23:02 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 11/30/18 23:02 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 11/30/18 23:02 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 11/30/18 23:02 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:02 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:02 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 11/30/18 23:02 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 11/30/18 23:02 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:02 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 11/30/18 23:02 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:02 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 11/30/18 23:02 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 11/30/18 23:02 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 11/30/18 23:02 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 11/30/18 23:02 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:02 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:02 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 11/30/18 23:02 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:02 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 11/30/18 23:02 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:02 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 11/30/18 23:02 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:02 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 11/30/18 23:02 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:02 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:02 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:02 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:02 | 71-55-6 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-1D** **Lab ID: 92408801002** Collected: 11/27/18 14:20 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:02 | 79-00-5 | |
| Trichloroethene | **4.6** | ug/L | 1.0 | 0.34 | 1 | | 11/30/18 23:02 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 11/30/18 23:02 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:02 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:02 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:02 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 11/30/18 23:02 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:02 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 11/30/18 23:02 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 11/30/18 23:02 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 11/30/18 23:02 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 105 | %. | 81-119 | | 1 | | 11/30/18 23:02 | 17060-07-0 | |
| Dibromofluoromethane (S) | 98 | %. | 82-114 | | 1 | | 11/30/18 23:02 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 102 | %. | 82-120 | | 1 | | 11/30/18 23:02 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 11/30/18 23:02 | 2037-26-5 | |

**Sample: MW-3A** **Lab ID: 92408801003** Collected: 11/27/18 13:25 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 11/30/18 23:28 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 11/30/18 23:28 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 11/30/18 23:28 | 107-13-1 | |
| Benzene | **5.5** | ug/L | 1.0 | 0.20 | 1 | | 11/30/18 23:28 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:28 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:28 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 11/30/18 23:28 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 11/30/18 23:28 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 11/30/18 23:28 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 11/30/18 23:28 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 11/30/18 23:28 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 11/30/18 23:28 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 11/30/18 23:28 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 11/30/18 23:28 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 11/30/18 23:28 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:28 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 11/30/18 23:28 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:28 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:28 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 11/30/18 23:28 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 11/30/18 23:28 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 11/30/18 23:28 | 96-12-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-3A** **Lab ID: 92408801003** Collected: 11/27/18 13:25 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:28 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 11/30/18 23:28 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:28 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 11/30/18 23:28 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:28 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:28 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 11/30/18 23:28 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 11/30/18 23:28 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 11/30/18 23:28 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 11/30/18 23:28 | 75-35-4 | |
| cis-1,2-Dichloroethene | **1.0** | ug/L | 1.0 | 0.66 | 1 | | 11/30/18 23:28 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:28 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:28 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 11/30/18 23:28 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 11/30/18 23:28 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:28 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 11/30/18 23:28 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:28 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 11/30/18 23:28 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 11/30/18 23:28 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 11/30/18 23:28 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 11/30/18 23:28 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:28 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:28 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 11/30/18 23:28 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:28 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 11/30/18 23:28 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:28 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 11/30/18 23:28 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:28 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 11/30/18 23:28 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:28 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:28 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:28 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:28 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:28 | 79-00-5 | |
| Trichloroethene | **2.0** | ug/L | 1.0 | 0.34 | 1 | | 11/30/18 23:28 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 11/30/18 23:28 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:28 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:28 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:28 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 11/30/18 23:28 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:28 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 11/30/18 23:28 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 11/30/18 23:28 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 11/30/18 23:28 | 95-47-6 | |

## REPORT OF LABORATORY ANALYSIS

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

# ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-3A** **Lab ID: 92408801003** Collected: 11/27/18 13:25 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 | %. | 81-119 | | 1 | | 11/30/18 23:28 | 17060-07-0 | |
| Dibromofluoromethane (S) | 103 | %. | 82-114 | | 1 | | 11/30/18 23:28 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 103 | %. | 82-120 | | 1 | | 11/30/18 23:28 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 11/30/18 23:28 | 2037-26-5 | |

**Sample: MW-4A** **Lab ID: 92408801004** Collected: 11/27/18 12:05 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 11/30/18 23:53 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 11/30/18 23:53 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 11/30/18 23:53 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 11/30/18 23:53 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:53 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:53 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 11/30/18 23:53 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 11/30/18 23:53 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 11/30/18 23:53 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 11/30/18 23:53 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 11/30/18 23:53 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 11/30/18 23:53 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 11/30/18 23:53 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 11/30/18 23:53 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 11/30/18 23:53 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:53 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 11/30/18 23:53 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:53 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:53 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 11/30/18 23:53 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 11/30/18 23:53 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 11/30/18 23:53 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:53 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 11/30/18 23:53 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:53 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 11/30/18 23:53 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:53 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 23:53 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 11/30/18 23:53 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 11/30/18 23:53 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 11/30/18 23:53 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 11/30/18 23:53 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 11/30/18 23:53 | 156-59-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-4A** **Lab ID: 92408801004** Collected: 11/27/18 12:05 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:53 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:53 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 11/30/18 23:53 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 11/30/18 23:53 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:53 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 11/30/18 23:53 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:53 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 11/30/18 23:53 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 11/30/18 23:53 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 11/30/18 23:53 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 11/30/18 23:53 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:53 | 99-87-6 | |
| Methylene Chloride | **0.72J** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:53 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 11/30/18 23:53 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 23:53 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 11/30/18 23:53 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 23:53 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 11/30/18 23:53 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:53 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 11/30/18 23:53 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 23:53 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 23:53 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 23:53 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 23:53 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 23:53 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 11/30/18 23:53 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 11/30/18 23:53 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:53 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 23:53 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 23:53 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 11/30/18 23:53 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 23:53 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 11/30/18 23:53 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 11/30/18 23:53 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 11/30/18 23:53 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 105 | %. | 81-119 | | 1 | | 11/30/18 23:53 | 17060-07-0 | |
| Dibromofluoromethane (S) | 98 | %. | 82-114 | | 1 | | 11/30/18 23:53 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 100 | %. | 82-120 | | 1 | | 11/30/18 23:53 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 11/30/18 23:53 | 2037-26-5 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-8A** **Lab ID: 92408801005** Collected: 11/27/18 14:55 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 00:18 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 00:18 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 00:18 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 00:18 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:18 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:18 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 00:18 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 00:18 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 00:18 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 00:18 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 00:18 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 00:18 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 00:18 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 00:18 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 00:18 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:18 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 00:18 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:18 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 00:18 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 00:18 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 00:18 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 00:18 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 00:18 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 00:18 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 00:18 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 00:18 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 00:18 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:18 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 00:18 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 00:18 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 00:18 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 00:18 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 00:18 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:18 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:18 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 00:18 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 00:18 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:18 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 00:18 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 00:18 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 00:18 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 00:18 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 00:18 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 00:18 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 00:18 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:18 | 75-09-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-8A** **Lab ID: 92408801005** Collected: 11/27/18 14:55 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 00:18 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 00:18 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 00:18 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:18 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 00:18 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:18 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 00:18 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 00:18 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:18 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 00:18 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 00:18 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 00:18 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 12/01/18 00:18 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 00:18 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:18 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:18 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 00:18 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 00:18 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:18 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 00:18 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 00:18 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 00:18 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 108 | %. | 81-119 | | 1 | | 12/01/18 00:18 | 17060-07-0 | |
| Dibromofluoromethane (S) | 101 | %. | 82-114 | | 1 | | 12/01/18 00:18 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 102 | %. | 82-120 | | 1 | | 12/01/18 00:18 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 12/01/18 00:18 | 2037-26-5 | |

**Sample: MW-9A** **Lab ID: 92408801006** Collected: 11/27/18 15:35 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 00:44 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 00:44 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 00:44 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 00:44 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:44 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:44 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 00:44 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 00:44 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 00:44 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 00:44 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 00:44 | 104-51-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-9A** **Lab ID: 92408801006** Collected: 11/27/18 15:35 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 00:44 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 00:44 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 00:44 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 00:44 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:44 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 00:44 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:44 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 00:44 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 00:44 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 00:44 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 00:44 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 00:44 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 00:44 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 00:44 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 00:44 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 00:44 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 00:44 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 00:44 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 00:44 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 00:44 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 00:44 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 00:44 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:44 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:44 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 00:44 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 00:44 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:44 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 00:44 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 00:44 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 00:44 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 00:44 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 00:44 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 00:44 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 00:44 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:44 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 00:44 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 00:44 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 00:44 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 00:44 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 00:44 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:44 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 00:44 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 00:44 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 00:44 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 00:44 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 00:44 | 71-55-6 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-9A** **Lab ID: 92408801006** Collected: 11/27/18 15:35 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 00:44 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 12/01/18 00:44 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 00:44 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:44 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 00:44 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 00:44 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 00:44 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 00:44 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 00:44 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 00:44 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 00:44 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 105 | %. | 81-119 | | 1 | | 12/01/18 00:44 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 12/01/18 00:44 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 100 | %. | 82-120 | | 1 | | 12/01/18 00:44 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 12/01/18 00:44 | 2037-26-5 | |

**Sample: MW-10** **Lab ID: 92408801007** Collected: 11/27/18 11:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 01:10 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 01:10 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 01:10 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 01:10 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:10 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:10 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 01:10 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 01:10 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 01:10 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 01:10 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 01:10 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 01:10 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 01:10 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 01:10 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 01:10 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:10 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 01:10 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:10 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 01:10 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 01:10 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 01:10 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 01:10 | 96-12-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-10** **Lab ID: 92408801007** Collected: 11/27/18 11:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 01:10 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 01:10 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 01:10 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 01:10 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 01:10 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:10 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 01:10 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 01:10 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 01:10 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 01:10 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 01:10 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:10 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:10 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 01:10 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 01:10 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:10 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 01:10 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 01:10 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 01:10 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 01:10 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 01:10 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 01:10 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 01:10 | 99-87-6 | |
| Methylene Chloride | **0.50J** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:10 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 01:10 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 01:10 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 01:10 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:10 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 01:10 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:10 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 01:10 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 01:10 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:10 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 01:10 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 01:10 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 01:10 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 12/01/18 01:10 | 79-01-6 | |
| Trichlorofluoromethane | **0.92J** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 01:10 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:10 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:10 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 01:10 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 01:10 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:10 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 01:10 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 01:10 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 01:10 | 95-47-6 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-10** **Lab ID: 92408801007** Collected: 11/27/18 11:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 | %. | 81-119 | | 1 | | 12/01/18 01:10 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 12/01/18 01:10 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 103 | %. | 82-120 | | 1 | | 12/01/18 01:10 | 460-00-4 | |
| Toluene-d8 (S) | 101 | %. | 82-109 | | 1 | | 12/01/18 01:10 | 2037-26-5 | |

**Sample: MW-11** **Lab ID: 92408801008** Collected: 11/27/18 11:30 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 01:35 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 01:35 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 01:35 | 107-13-1 | |
| Benzene | **4.0** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 01:35 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:35 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:35 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 01:35 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 01:35 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 01:35 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 01:35 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 01:35 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 01:35 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 01:35 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 01:35 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 01:35 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:35 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 01:35 | 75-00-3 | |
| Chloroform | **1.0** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:35 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 01:35 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 01:35 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 01:35 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 01:35 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 01:35 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 01:35 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 01:35 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 01:35 | 95-50-1 | |
| 1,3-Dichlorobenzene | **0.75J** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 01:35 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 01:35 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 01:35 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **1.5** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 01:35 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 01:35 | 107-06-2 | |
| 1,1-Dichloroethene | **13.4** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 01:35 | 75-35-4 | |
| cis-1,2-Dichloroethene | **3.8** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 01:35 | 156-59-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-11** **Lab ID: 92408801008** Collected: 11/27/18 11:30 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:35 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:35 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 01:35 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 01:35 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:35 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 01:35 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 01:35 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 01:35 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 01:35 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 01:35 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 01:35 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 01:35 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:35 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 01:35 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 01:35 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 01:35 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 01:35 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 01:35 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:35 | 79-34-5 | |
| Tetrachloroethene | **4.5** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 01:35 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 01:35 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 01:35 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 01:35 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 01:35 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 01:35 | 79-00-5 | |
| Trichloroethene | **376** | ug/L | 10.0 | 3.4 | 10 | | 12/03/18 12:52 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 01:35 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:35 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 01:35 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 01:35 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 01:35 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 01:35 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 01:35 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 01:35 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 01:35 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 104 | %. | 81-119 | | 1 | | 12/01/18 01:35 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 12/01/18 01:35 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 103 | %. | 82-120 | | 1 | | 12/01/18 01:35 | 460-00-4 | |
| Toluene-d8 (S) | 101 | %. | 82-109 | | 1 | | 12/01/18 01:35 | 2037-26-5 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: DUP-1** **Lab ID: 92408801009** Collected: 11/27/18 00:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 02:01 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 02:01 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 02:01 | 107-13-1 | |
| Benzene | **4.4** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 02:01 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:01 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:01 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 02:01 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 02:01 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 02:01 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 02:01 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 02:01 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 02:01 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 02:01 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 02:01 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 02:01 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:01 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 02:01 | 75-00-3 | |
| Chloroform | **0.98J** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:01 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:01 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 02:01 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 02:01 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 02:01 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:01 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 02:01 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:01 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 02:01 | 95-50-1 | |
| 1,3-Dichlorobenzene | **0.60J** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:01 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:01 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 02:01 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **1.5** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 02:01 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 02:01 | 107-06-2 | |
| 1,1-Dichloroethene | **13.6** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 02:01 | 75-35-4 | |
| cis-1,2-Dichloroethene | **4.4** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 02:01 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:01 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:01 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 02:01 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 02:01 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:01 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 02:01 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:01 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 02:01 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 02:01 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 02:01 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 02:01 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:01 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:01 | 75-09-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: DUP-1** **Lab ID: 92408801009** Collected: 11/27/18 00:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 02:01 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:01 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 02:01 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:01 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 02:01 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:01 | 79-34-5 | |
| Tetrachloroethene | **4.5** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 02:01 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:01 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:01 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:01 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:01 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:01 | 79-00-5 | |
| Trichloroethene | **379** | ug/L | 10.0 | 3.4 | 10 | | 12/03/18 13:18 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 02:01 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:01 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:01 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:01 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 02:01 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:01 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 02:01 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 02:01 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 02:01 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 111 | %. | 81-119 | | 1 | | 12/01/18 02:01 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 12/01/18 02:01 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 102 | %. | 82-120 | | 1 | | 12/01/18 02:01 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 12/01/18 02:01 | 2037-26-5 | |

**Sample: MW-12** **Lab ID: 92408801010** Collected: 11/27/18 15:45 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 02:26 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 02:26 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 02:26 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 02:26 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:26 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:26 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 02:26 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 02:26 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 02:26 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 02:26 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 02:26 | 104-51-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-12** **Lab ID: 92408801010** Collected: 11/27/18 15:45 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 02:26 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 02:26 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 02:26 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 02:26 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:26 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 02:26 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:26 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:26 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 02:26 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 02:26 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 02:26 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:26 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 02:26 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:26 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 02:26 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:26 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:26 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 02:26 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 02:26 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 02:26 | 107-06-2 | |
| 1,1-Dichloroethene | **5.9** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 02:26 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 02:26 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:26 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:26 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 02:26 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 02:26 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:26 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 02:26 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:26 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 02:26 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 02:26 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 02:26 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 02:26 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:26 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:26 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 02:26 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:26 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 02:26 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:26 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 02:26 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:26 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 02:26 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:26 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:26 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:26 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:26 | 71-55-6 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-12** **Lab ID: 92408801010** Collected: 11/27/18 15:45 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:26 | 79-00-5 | |
| Trichloroethene | **0.88J** | ug/L | 1.0 | 0.34 | 1 | | 12/01/18 02:26 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 02:26 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:26 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:26 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:26 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 02:26 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:26 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 02:26 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 02:26 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 02:26 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 104 | %. | 81-119 | | 1 | | 12/01/18 02:26 | 17060-07-0 | |
| Dibromofluoromethane (S) | 101 | %. | 82-114 | | 1 | | 12/01/18 02:26 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 100 | %. | 82-120 | | 1 | | 12/01/18 02:26 | 460-00-4 | |
| Toluene-d8 (S) | 99 | %. | 82-109 | | 1 | | 12/01/18 02:26 | 2037-26-5 | |

**Sample: EB-1** **Lab ID: 92408801011** Collected: 11/27/18 16:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 11/30/18 21:46 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 11/30/18 21:46 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 11/30/18 21:46 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 11/30/18 21:46 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 21:46 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 21:46 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 11/30/18 21:46 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 11/30/18 21:46 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 11/30/18 21:46 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 11/30/18 21:46 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 11/30/18 21:46 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 11/30/18 21:46 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 11/30/18 21:46 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 11/30/18 21:46 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 11/30/18 21:46 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 21:46 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 11/30/18 21:46 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 21:46 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 21:46 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 11/30/18 21:46 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 11/30/18 21:46 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 11/30/18 21:46 | 96-12-8 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: EB-1** **Lab ID: 92408801011** Collected: 11/27/18 16:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 21:46 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 11/30/18 21:46 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 21:46 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 11/30/18 21:46 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 21:46 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 11/30/18 21:46 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 11/30/18 21:46 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 11/30/18 21:46 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 11/30/18 21:46 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 11/30/18 21:46 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 11/30/18 21:46 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 21:46 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 21:46 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 11/30/18 21:46 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 11/30/18 21:46 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 21:46 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 11/30/18 21:46 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 21:46 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 11/30/18 21:46 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 11/30/18 21:46 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 11/30/18 21:46 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 11/30/18 21:46 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 21:46 | 99-87-6 | |
| Methylene Chloride | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 21:46 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 11/30/18 21:46 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 11/30/18 21:46 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 11/30/18 21:46 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 11/30/18 21:46 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 11/30/18 21:46 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 21:46 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 11/30/18 21:46 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 11/30/18 21:46 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 11/30/18 21:46 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 11/30/18 21:46 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 11/30/18 21:46 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 11/30/18 21:46 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 11/30/18 21:46 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 11/30/18 21:46 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 21:46 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 11/30/18 21:46 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 11/30/18 21:46 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 11/30/18 21:46 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 11/30/18 21:46 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 11/30/18 21:46 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 11/30/18 21:46 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 11/30/18 21:46 | 95-47-6 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: EB-1** **Lab ID: 92408801011** Collected: 11/27/18 16:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 | %. | 81-119 | | 1 | | 11/30/18 21:46 | 17060-07-0 | |
| Dibromofluoromethane (S) | 99 | %. | 82-114 | | 1 | | 11/30/18 21:46 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 103 | %. | 82-120 | | 1 | | 11/30/18 21:46 | 460-00-4 | |
| Toluene-d8 (S) | 100 | %. | 82-109 | | 1 | | 11/30/18 21:46 | 2037-26-5 | |

**Sample: MW-14** **Lab ID: 92408801012** Collected: 11/27/18 13:05 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/01/18 02:52 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/01/18 02:52 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/01/18 02:52 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/01/18 02:52 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:52 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:52 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/01/18 02:52 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/01/18 02:52 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/01/18 02:52 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/01/18 02:52 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/01/18 02:52 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/01/18 02:52 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/01/18 02:52 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/01/18 02:52 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/01/18 02:52 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:52 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/01/18 02:52 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:52 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:52 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/01/18 02:52 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/01/18 02:52 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/01/18 02:52 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:52 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/01/18 02:52 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:52 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/01/18 02:52 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:52 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/01/18 02:52 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/01/18 02:52 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/01/18 02:52 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/01/18 02:52 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 12/01/18 02:52 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/01/18 02:52 | 156-59-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: MW-14** **Lab ID: 92408801012** Collected: 11/27/18 13:05 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:52 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:52 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/01/18 02:52 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/01/18 02:52 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:52 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/01/18 02:52 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:52 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/01/18 02:52 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/01/18 02:52 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/01/18 02:52 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/01/18 02:52 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:52 | 99-87-6 | |
| Methylene Chloride | **0.66J** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:52 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/01/18 02:52 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/01/18 02:52 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/01/18 02:52 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/01/18 02:52 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/01/18 02:52 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:52 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/01/18 02:52 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/01/18 02:52 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/01/18 02:52 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/01/18 02:52 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/01/18 02:52 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/01/18 02:52 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 12/01/18 02:52 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/01/18 02:52 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:52 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/01/18 02:52 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/01/18 02:52 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/01/18 02:52 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/01/18 02:52 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/01/18 02:52 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/01/18 02:52 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/01/18 02:52 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 109 | %. | 81-119 | | 1 | | 12/01/18 02:52 | 17060-07-0 | |
| Dibromofluoromethane (S) | 99 | %. | 82-114 | | 1 | | 12/01/18 02:52 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 103 | %. | 82-120 | | 1 | | 12/01/18 02:52 | 460-00-4 | |
| Toluene-d8 (S) | 100 | %. | 82-109 | | 1 | | 12/01/18 02:52 | 2037-26-5 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: TRIP BLANK** **Lab ID: 92408801013** Collected: 11/27/18 00:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| Acetone | **<8.2** | ug/L | 25.0 | 8.2 | 1 | | 12/03/18 12:27 | 67-64-1 | |
| Acrolein | **<7.8** | ug/L | 50.0 | 7.8 | 1 | | 12/03/18 12:27 | 107-02-8 | |
| Acrylonitrile | **<2.5** | ug/L | 50.0 | 2.5 | 1 | | 12/03/18 12:27 | 107-13-1 | |
| Benzene | **<0.20** | ug/L | 1.0 | 0.20 | 1 | | 12/03/18 12:27 | 71-43-2 | |
| Bromobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/03/18 12:27 | 108-86-1 | |
| Bromochloromethane | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/03/18 12:27 | 74-97-5 | |
| Bromodichloromethane | **<0.36** | ug/L | 1.0 | 0.36 | 1 | | 12/03/18 12:27 | 75-27-4 | |
| Bromoform | **<0.55** | ug/L | 1.0 | 0.55 | 1 | | 12/03/18 12:27 | 75-25-2 | |
| Bromomethane | **<0.95** | ug/L | 2.0 | 0.95 | 1 | | 12/03/18 12:27 | 74-83-9 | |
| 2-Butanone (MEK) | **<3.2** | ug/L | 5.0 | 3.2 | 1 | | 12/03/18 12:27 | 78-93-3 | |
| n-Butylbenzene | **<0.57** | ug/L | 10.0 | 0.57 | 1 | | 12/03/18 12:27 | 104-51-8 | |
| sec-Butylbenzene | **<0.48** | ug/L | 10.0 | 0.48 | 1 | | 12/03/18 12:27 | 135-98-8 | |
| tert-Butylbenzene | **<0.47** | ug/L | 10.0 | 0.47 | 1 | | 12/03/18 12:27 | 98-06-6 | |
| Carbon disulfide | **<0.79** | ug/L | 10.0 | 0.79 | 1 | | 12/03/18 12:27 | 75-15-0 | |
| Carbon tetrachloride | **<0.42** | ug/L | 1.0 | 0.42 | 1 | | 12/03/18 12:27 | 56-23-5 | |
| Chlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/03/18 12:27 | 108-90-7 | |
| Chloroethane | **<0.52** | ug/L | 1.0 | 0.52 | 1 | | 12/03/18 12:27 | 75-00-3 | |
| Chloroform | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/03/18 12:27 | 67-66-3 | |
| Chloromethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/03/18 12:27 | 74-87-3 | |
| 2-Chlorotoluene | **<0.26** | ug/L | 1.0 | 0.26 | 1 | | 12/03/18 12:27 | 95-49-8 | |
| 4-Chlorotoluene | **<0.68** | ug/L | 1.0 | 0.68 | 1 | | 12/03/18 12:27 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | **<0.55** | ug/L | 2.0 | 0.55 | 1 | | 12/03/18 12:27 | 96-12-8 | |
| Dibromochloromethane | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/03/18 12:27 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | **<0.28** | ug/L | 2.0 | 0.28 | 1 | | 12/03/18 12:27 | 106-93-4 | |
| Dibromomethane | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/03/18 12:27 | 74-95-3 | |
| 1,2-Dichlorobenzene | **<0.49** | ug/L | 1.0 | 0.49 | 1 | | 12/03/18 12:27 | 95-50-1 | |
| 1,3-Dichlorobenzene | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/03/18 12:27 | 541-73-1 | |
| 1,4-Dichlorobenzene | **<0.58** | ug/L | 1.0 | 0.58 | 1 | | 12/03/18 12:27 | 106-46-7 | |
| Dichlorodifluoromethane | **<0.48** | ug/L | 1.0 | 0.48 | 1 | | 12/03/18 12:27 | 75-71-8 | L1 |
| 1,1-Dichloroethane | **<0.41** | ug/L | 1.0 | 0.41 | 1 | | 12/03/18 12:27 | 75-34-3 | |
| 1,2-Dichloroethane | **<0.67** | ug/L | 1.0 | 0.67 | 1 | | 12/03/18 12:27 | 107-06-2 | |
| 1,1-Dichloroethene | **<0.72** | ug/L | 1.0 | 0.72 | 1 | | 12/03/18 12:27 | 75-35-4 | |
| cis-1,2-Dichloroethene | **<0.66** | ug/L | 1.0 | 0.66 | 1 | | 12/03/18 12:27 | 156-59-2 | |
| trans-1,2-Dichloroethene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/03/18 12:27 | 156-60-5 | |
| 1,2-Dichloropropane | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/03/18 12:27 | 78-87-5 | |
| 1,3-Dichloropropane | **<0.69** | ug/L | 1.0 | 0.69 | 1 | | 12/03/18 12:27 | 142-28-9 | |
| 2,2-Dichloropropane | **<0.23** | ug/L | 1.0 | 0.23 | 1 | | 12/03/18 12:27 | 594-20-7 | |
| 1,1-Dichloropropene | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/03/18 12:27 | 563-58-6 | |
| cis-1,3-Dichloropropene | **<0.22** | ug/L | 1.0 | 0.22 | 1 | | 12/03/18 12:27 | 10061-01-5 | |
| trans-1,3-Dichloropropene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/03/18 12:27 | 10061-02-6 | |
| Diisopropyl ether | **<1.1** | ug/L | 10.0 | 1.1 | 1 | | 12/03/18 12:27 | 108-20-3 | |
| Ethylbenzene | **<0.45** | ug/L | 1.0 | 0.45 | 1 | | 12/03/18 12:27 | 100-41-4 | |
| 2-Hexanone | **<0.89** | ug/L | 5.0 | 0.89 | 1 | | 12/03/18 12:27 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **<0.43** | ug/L | 10.0 | 0.43 | 1 | | 12/03/18 12:27 | 98-82-8 | |
| p-Isopropyltoluene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/03/18 12:27 | 99-87-6 | |
| Methylene Chloride | **1.3** | ug/L | 1.0 | 0.50 | 1 | | 12/03/18 12:27 | 75-09-2 | |

## REPORT OF LABORATORY ANALYSIS

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

## ANALYTICAL RESULTS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

**Sample: TRIP BLANK** **Lab ID: 92408801013** Collected: 11/27/18 00:00 Received: 11/28/18 09:31 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260B MSV Water, Extend** | Analytical Method: EPA 8260B | | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | **<0.86** | ug/L | 5.0 | 0.86 | 1 | | 12/03/18 12:27 | 108-10-1 | |
| Naphthalene | **<0.30** | ug/L | 1.0 | 0.30 | 1 | | 12/03/18 12:27 | 91-20-3 | |
| n-Propylbenzene | **<0.50** | ug/L | 10.0 | 0.50 | 1 | | 12/03/18 12:27 | 103-65-1 | |
| Styrene | **<0.50** | ug/L | 1.0 | 0.50 | 1 | | 12/03/18 12:27 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | **<0.32** | ug/L | 1.0 | 0.32 | 1 | | 12/03/18 12:27 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/03/18 12:27 | 79-34-5 | |
| Tetrachloroethene | **<0.78** | ug/L | 1.0 | 0.78 | 1 | | 12/03/18 12:27 | 127-18-4 | |
| Toluene | **<0.31** | ug/L | 1.0 | 0.31 | 1 | | 12/03/18 12:27 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | **<0.53** | ug/L | 1.0 | 0.53 | 1 | | 12/03/18 12:27 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | **<0.47** | ug/L | 1.0 | 0.47 | 1 | | 12/03/18 12:27 | 120-82-1 | |
| 1,1,1-Trichloroethane | **<0.38** | ug/L | 1.0 | 0.38 | 1 | | 12/03/18 12:27 | 71-55-6 | |
| 1,1,2-Trichloroethane | **<0.59** | ug/L | 1.0 | 0.59 | 1 | | 12/03/18 12:27 | 79-00-5 | |
| Trichloroethene | **<0.34** | ug/L | 1.0 | 0.34 | 1 | | 12/03/18 12:27 | 79-01-6 | |
| Trichlorofluoromethane | **<0.51** | ug/L | 1.0 | 0.51 | 1 | | 12/03/18 12:27 | 75-69-4 | |
| 1,2,3-Trichloropropane | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/03/18 12:27 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **<0.46** | ug/L | 1.0 | 0.46 | 1 | | 12/03/18 12:27 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **<0.62** | ug/L | 1.0 | 0.62 | 1 | | 12/03/18 12:27 | 108-67-8 | |
| Vinyl acetate | **<0.42** | ug/L | 2.0 | 0.42 | 1 | | 12/03/18 12:27 | 108-05-4 | |
| Vinyl chloride | **<0.60** | ug/L | 1.0 | 0.60 | 1 | | 12/03/18 12:27 | 75-01-4 | |
| Xylene (Total) | **<1.5** | ug/L | 2.0 | 1.5 | 1 | | 12/03/18 12:27 | 1330-20-7 | |
| m&p-Xylene | **<0.92** | ug/L | 1.0 | 0.92 | 1 | | 12/03/18 12:27 | 179601-23-1 | |
| o-Xylene | **<0.54** | ug/L | 1.0 | 0.54 | 1 | | 12/03/18 12:27 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 105 | %. | 81-119 | | 1 | | 12/03/18 12:27 | 17060-07-0 | |
| Dibromofluoromethane (S) | 100 | %. | 82-114 | | 1 | | 12/03/18 12:27 | 1868-53-7 | |
| 4-Bromofluorobenzene (S) | 100 | %. | 82-120 | | 1 | | 12/03/18 12:27 | 460-00-4 | |
| Toluene-d8 (S) | 100 | %. | 82-109 | | 1 | | 12/03/18 12:27 | 2037-26-5 | |

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

QC Batch: 17994 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV Water, Extend
Associated Lab Samples: 92408801001, 92408801002, 92408801003, 92408801004, 92408801005, 92408801006, 92408801007, 92408801008, 92408801009, 92408801010, 92408801011, 92408801012, 92408801013

METHOD BLANK: 80870 Matrix: Water
Associated Lab Samples: 92408801001, 92408801002, 92408801003, 92408801004, 92408801005, 92408801006, 92408801007, 92408801008, 92408801009, 92408801010, 92408801011, 92408801012, 92408801013

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | <0.32 | 1.0 | 0.32 | 11/30/18 17:56 | |
| 1,1,1-Trichloroethane | ug/L | <0.38 | 1.0 | 0.38 | 11/30/18 17:56 | |
| 1,1,2,2-Tetrachloroethane | ug/L | <0.53 | 1.0 | 0.53 | 11/30/18 17:56 | |
| 1,1,2-Trichloroethane | ug/L | <0.59 | 1.0 | 0.59 | 11/30/18 17:56 | |
| 1,1-Dichloroethane | ug/L | <0.41 | 1.0 | 0.41 | 11/30/18 17:56 | |
| 1,1-Dichloroethene | ug/L | <0.72 | 1.0 | 0.72 | 11/30/18 17:56 | |
| 1,1-Dichloropropene | ug/L | <0.60 | 1.0 | 0.60 | 11/30/18 17:56 | |
| 1,2,3-Trichlorobenzene | ug/L | 0.94J | 1.0 | 0.53 | 11/30/18 17:56 | |
| 1,2,3-Trichloropropane | ug/L | <0.46 | 1.0 | 0.46 | 11/30/18 17:56 | |
| 1,2,4-Trichlorobenzene | ug/L | 0.48J | 1.0 | 0.47 | 11/30/18 17:56 | |
| 1,2,4-Trimethylbenzene | ug/L | <0.46 | 1.0 | 0.46 | 11/30/18 17:56 | |
| 1,2-Dibromo-3-chloropropane | ug/L | <0.55 | 2.0 | 0.55 | 11/30/18 17:56 | |
| 1,2-Dibromoethane (EDB) | ug/L | <0.28 | 2.0 | 0.28 | 11/30/18 17:56 | |
| 1,2-Dichlorobenzene | ug/L | <0.49 | 1.0 | 0.49 | 11/30/18 17:56 | |
| 1,2-Dichloroethane | ug/L | <0.67 | 1.0 | 0.67 | 11/30/18 17:56 | |
| 1,2-Dichloropropane | ug/L | <0.60 | 1.0 | 0.60 | 11/30/18 17:56 | |
| 1,3,5-Trimethylbenzene | ug/L | <0.62 | 1.0 | 0.62 | 11/30/18 17:56 | |
| 1,3-Dichlorobenzene | ug/L | <0.59 | 1.0 | 0.59 | 11/30/18 17:56 | |
| 1,3-Dichloropropane | ug/L | <0.69 | 1.0 | 0.69 | 11/30/18 17:56 | |
| 1,4-Dichlorobenzene | ug/L | <0.58 | 1.0 | 0.58 | 11/30/18 17:56 | |
| 2,2-Dichloropropane | ug/L | <0.23 | 1.0 | 0.23 | 11/30/18 17:56 | |
| 2-Butanone (MEK) | ug/L | <3.2 | 5.0 | 3.2 | 11/30/18 17:56 | |
| 2-Chlorotoluene | ug/L | <0.26 | 1.0 | 0.26 | 11/30/18 17:56 | |
| 2-Hexanone | ug/L | <0.89 | 5.0 | 0.89 | 11/30/18 17:56 | |
| 4-Chlorotoluene | ug/L | <0.68 | 1.0 | 0.68 | 11/30/18 17:56 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | <0.86 | 5.0 | 0.86 | 11/30/18 17:56 | |
| Acetone | ug/L | <8.2 | 25.0 | 8.2 | 11/30/18 17:56 | |
| Acrolein | ug/L | <7.8 | 50.0 | 7.8 | 11/30/18 17:56 | |
| Acrylonitrile | ug/L | <2.5 | 50.0 | 2.5 | 11/30/18 17:56 | |
| Benzene | ug/L | <0.20 | 1.0 | 0.20 | 11/30/18 17:56 | |
| Bromobenzene | ug/L | <0.58 | 1.0 | 0.58 | 11/30/18 17:56 | |
| Bromochloromethane | ug/L | <0.50 | 1.0 | 0.50 | 11/30/18 17:56 | |
| Bromodichloromethane | ug/L | <0.36 | 1.0 | 0.36 | 11/30/18 17:56 | |
| Bromoform | ug/L | <0.55 | 1.0 | 0.55 | 11/30/18 17:56 | |
| Bromomethane | ug/L | <0.95 | 2.0 | 0.95 | 11/30/18 17:56 | |
| Carbon disulfide | ug/L | <0.79 | 10.0 | 0.79 | 11/30/18 17:56 | |
| Carbon tetrachloride | ug/L | <0.42 | 1.0 | 0.42 | 11/30/18 17:56 | |
| Chlorobenzene | ug/L | <0.53 | 1.0 | 0.53 | 11/30/18 17:56 | |
| Chloroethane | ug/L | <0.52 | 1.0 | 0.52 | 11/30/18 17:56 | |
| Chloroform | ug/L | <0.58 | 1.0 | 0.58 | 11/30/18 17:56 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

METHOD BLANK: 80870 Matrix: Water

Associated Lab Samples: 92408801001, 92408801002, 92408801003, 92408801004, 92408801005, 92408801006, 92408801007, 92408801008, 92408801009, 92408801010, 92408801011, 92408801012, 92408801013

| Parameter | Units | Blank Result | Reporting Limit | MDL | Analyzed | Qualifiers |
|---|---|---|---|---|---|---|
| Chloromethane | ug/L | <0.38 | 1.0 | 0.38 | 11/30/18 17:56 | |
| cis-1,2-Dichloroethene | ug/L | <0.66 | 1.0 | 0.66 | 11/30/18 17:56 | |
| cis-1,3-Dichloropropene | ug/L | <0.22 | 1.0 | 0.22 | 11/30/18 17:56 | |
| Dibromochloromethane | ug/L | <0.31 | 1.0 | 0.31 | 11/30/18 17:56 | |
| Dibromomethane | ug/L | <0.62 | 1.0 | 0.62 | 11/30/18 17:56 | |
| Dichlorodifluoromethane | ug/L | <0.48 | 1.0 | 0.48 | 11/30/18 17:56 | |
| Diisopropyl ether | ug/L | <1.1 | 10.0 | 1.1 | 11/30/18 17:56 | |
| Ethylbenzene | ug/L | <0.45 | 1.0 | 0.45 | 11/30/18 17:56 | |
| Isopropylbenzene (Cumene) | ug/L | <0.43 | 10.0 | 0.43 | 11/30/18 17:56 | |
| m&p-Xylene | ug/L | <0.92 | 1.0 | 0.92 | 11/30/18 17:56 | |
| Methylene Chloride | ug/L | <0.50 | 1.0 | 0.50 | 11/30/18 17:56 | |
| n-Butylbenzene | ug/L | <0.57 | 10.0 | 0.57 | 11/30/18 17:56 | |
| n-Propylbenzene | ug/L | <0.50 | 10.0 | 0.50 | 11/30/18 17:56 | |
| Naphthalene | ug/L | <0.30 | 1.0 | 0.30 | 11/30/18 17:56 | |
| o-Xylene | ug/L | <0.54 | 1.0 | 0.54 | 11/30/18 17:56 | |
| p-Isopropyltoluene | ug/L | <0.47 | 1.0 | 0.47 | 11/30/18 17:56 | |
| sec-Butylbenzene | ug/L | <0.48 | 10.0 | 0.48 | 11/30/18 17:56 | |
| Styrene | ug/L | <0.50 | 1.0 | 0.50 | 11/30/18 17:56 | |
| tert-Butylbenzene | ug/L | <0.47 | 10.0 | 0.47 | 11/30/18 17:56 | |
| Tetrachloroethene | ug/L | <0.78 | 1.0 | 0.78 | 11/30/18 17:56 | |
| Toluene | ug/L | <0.31 | 1.0 | 0.31 | 11/30/18 17:56 | |
| trans-1,2-Dichloroethene | ug/L | <0.46 | 1.0 | 0.46 | 11/30/18 17:56 | |
| trans-1,3-Dichloropropene | ug/L | <0.30 | 1.0 | 0.30 | 11/30/18 17:56 | |
| Trichloroethene | ug/L | <0.34 | 1.0 | 0.34 | 11/30/18 17:56 | |
| Trichlorofluoromethane | ug/L | <0.51 | 1.0 | 0.51 | 11/30/18 17:56 | |
| Vinyl acetate | ug/L | <0.42 | 2.0 | 0.42 | 11/30/18 17:56 | |
| Vinyl chloride | ug/L | <0.60 | 1.0 | 0.60 | 11/30/18 17:56 | |
| Xylene (Total) | ug/L | <1.5 | 2.0 | 1.5 | 11/30/18 17:56 | |
| 1,2-Dichloroethane-d4 (S) | %. | 102 | 81-119 | | 11/30/18 17:56 | |
| 4-Bromofluorobenzene (S) | %. | 103 | 82-120 | | 11/30/18 17:56 | |
| Dibromofluoromethane (S) | %. | 102 | 82-114 | | 11/30/18 17:56 | |
| Toluene-d8 (S) | %. | 100 | 82-109 | | 11/30/18 17:56 | |

LABORATORY CONTROL SAMPLE: 80871

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 50 | 47.2 | 94 | 68-137 | |
| 1,1,1-Trichloroethane | ug/L | 50 | 49.5 | 99 | 72-134 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 50 | 47.8 | 96 | 51-158 | |
| 1,1,2-Trichloroethane | ug/L | 50 | 51.3 | 103 | 78-131 | |
| 1,1-Dichloroethane | ug/L | 50 | 49.6 | 99 | 69-151 | |
| 1,1-Dichloroethene | ug/L | 50 | 42.5 | 85 | 64-158 | |
| 1,1-Dichloropropene | ug/L | 50 | 47.7 | 95 | 70-133 | |

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## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

LABORATORY CONTROL SAMPLE: 80871

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,3-Trichlorobenzene | ug/L | 50 | 51.5 | 103 | 73-130 | |
| 1,2,3-Trichloropropane | ug/L | 50 | 45.5 | 91 | 78-133 | |
| 1,2,4-Trichlorobenzene | ug/L | 50 | 49.6 | 99 | 51-163 | |
| 1,2,4-Trimethylbenzene | ug/L | 50 | 45.6 | 91 | 63-137 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 50 | 44.9 | 90 | 58-124 | |
| 1,2-Dibromoethane (EDB) | ug/L | 50 | 54.6 | 109 | 71-134 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 47.1 | 94 | 70-135 | |
| 1,2-Dichloroethane | ug/L | 50 | 48.8 | 98 | 72-129 | |
| 1,2-Dichloropropane | ug/L | 50 | 49.7 | 99 | 64-135 | |
| 1,3,5-Trimethylbenzene | ug/L | 50 | 51.2 | 102 | 70-142 | |
| 1,3-Dichlorobenzene | ug/L | 50 | 45.6 | 91 | 71-134 | |
| 1,3-Dichloropropane | ug/L | 50 | 52.5 | 105 | 70-140 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 44.7 | 89 | 70-131 | |
| 2,2-Dichloropropane | ug/L | 50 | 46.6 | 93 | 34-170 | |
| 2-Butanone (MEK) | ug/L | 100 | 85.4 | 85 | 52-143 | |
| 2-Chlorotoluene | ug/L | 50 | 46.9 | 94 | 77-128 | |
| 2-Hexanone | ug/L | 100 | 101 | 101 | 61-136 | |
| 4-Chlorotoluene | ug/L | 50 | 45.9 | 92 | 79-126 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 98.2 | 98 | 71-129 | |
| Acetone | ug/L | 100 | 96.6 | 97 | 48-224 | |
| Acrolein | ug/L | 100 | 126 | 126 | 57-185 | |
| Acrylonitrile | ug/L | 200 | 209 | 104 | 66-154 | |
| Benzene | ug/L | 50 | 48.0 | 96 | 68-132 | |
| Bromobenzene | ug/L | 50 | 46.0 | 92 | 75-122 | |
| Bromochloromethane | ug/L | 50 | 51.6 | 103 | 73-133 | |
| Bromodichloromethane | ug/L | 50 | 47.1 | 94 | 67-121 | |
| Bromoform | ug/L | 50 | 43.8 | 88 | 57-125 | |
| Bromomethane | ug/L | 50 | 47.6 | 95 | 35-156 | |
| Carbon disulfide | ug/L | 100 | 91.9 | 92 | 47-141 | |
| Carbon tetrachloride | ug/L | 50 | 58.1 | 116 | 66-122 | |
| Chlorobenzene | ug/L | 50 | 47.4 | 95 | 71-126 | |
| Chloroethane | ug/L | 50 | 48.7 | 97 | 43-143 | |
| Chloroform | ug/L | 50 | 49.2 | 98 | 71-136 | |
| Chloromethane | ug/L | 50 | 47.7 | 95 | 47-123 | |
| cis-1,2-Dichloroethene | ug/L | 50 | 48.5 | 97 | 74-131 | |
| cis-1,3-Dichloropropene | ug/L | 50 | 47.5 | 95 | 78-120 | |
| Dibromochloromethane | ug/L | 50 | 45.9 | 92 | 65-115 | |
| Dibromomethane | ug/L | 50 | 50.8 | 102 | 79-129 | |
| Dichlorodifluoromethane | ug/L | 50 | 70.9 | 142 | 29-124 | L1 |
| Diisopropyl ether | ug/L | 50 | 51.5 | 103 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 50.0 | 100 | 68-129 | |
| Isopropylbenzene (Cumene) | ug/L | 50 | 46.5 | 93 | 64-129 | |
| m&p-Xylene | ug/L | 100 | 102 | 102 | 67-137 | |
| Methylene Chloride | ug/L | 50 | 45.1 | 90 | 61-147 | |
| n-Butylbenzene | ug/L | 50 | 46.6 | 93 | 57-157 | |
| n-Propylbenzene | ug/L | 50 | 47.2 | 94 | 61-145 | |
| Naphthalene | ug/L | 50 | 49.5 | 99 | 48-144 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

LABORATORY CONTROL SAMPLE: 80871

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| o-Xylene | ug/L | 50 | 53.6 | 107 | 52-141 | |
| p-Isopropyltoluene | ug/L | 50 | 45.3 | 91 | 58-137 | |
| sec-Butylbenzene | ug/L | 50 | 48.3 | 97 | 65-138 | |
| Styrene | ug/L | 50 | 53.7 | 107 | 77-128 | |
| tert-Butylbenzene | ug/L | 50 | 44.8 | 90 | 50-189 | |
| Tetrachloroethene | ug/L | 50 | 49.3 | 99 | 51-139 | |
| Toluene | ug/L | 50 | 52.1 | 104 | 60-133 | |
| trans-1,2-Dichloroethene | ug/L | 50 | 46.7 | 93 | 69-144 | |
| trans-1,3-Dichloropropene | ug/L | 50 | 44.2 | 88 | 74-128 | |
| Trichloroethene | ug/L | 50 | 47.6 | 95 | 73-126 | |
| Trichlorofluoromethane | ug/L | 50 | 55.0 | 110 | 55-132 | |
| Vinyl acetate | ug/L | 50 | 40.7 | 81 | 52-141 | |
| Vinyl chloride | ug/L | 50 | 51.9 | 104 | 50-133 | |
| Xylene (Total) | ug/L | 150 | 156 | 104 | 78-132 | |
| 1,2-Dichloroethane-d4 (S) | %. | | | 100 | 81-119 | |
| 4-Bromofluorobenzene (S) | %. | | | 97 | 82-120 | |
| Dibromofluoromethane (S) | %. | | | 107 | 82-114 | |
| Toluene-d8 (S) | %. | | | 100 | 82-109 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 80872 80873

| Parameter | Units | 92408801001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | <0.32 | 50 | 50 | 43.4 | 41.4 | 87 | 83 | 68-137 | 5 | 11 | |
| 1,1,1-Trichloroethane | ug/L | <0.38 | 50 | 50 | 50.8 | 49.3 | 102 | 99 | 66-142 | 3 | 11 | |
| 1,1,2,2-Tetrachloroethane | ug/L | <0.53 | 50 | 50 | 42.6 | 41.9 | 85 | 84 | 39-171 | 2 | 13 | |
| 1,1,2-Trichloroethane | ug/L | <0.59 | 50 | 50 | 44.9 | 45.6 | 90 | 91 | 73-136 | 1 | 12 | |
| 1,1-Dichloroethane | ug/L | 0.98J | 50 | 50 | 47.3 | 45.7 | 93 | 89 | 66-155 | 4 | 15 | |
| 1,1-Dichloroethene | ug/L | 1.0 | 50 | 50 | 46.3 | 45.5 | 91 | 89 | 33-181 | 2 | 34 | |
| 1,1-Dichloropropene | ug/L | <0.60 | 50 | 50 | 48.3 | 46.0 | 97 | 92 | 70-133 | 5 | 12 | |
| 1,2,3-Trichlorobenzene | ug/L | <0.53 | 50 | 50 | 40.4 | 44.6 | 81 | 89 | 73-130 | 10 | 22 | |
| 1,2,3-Trichloropropane | ug/L | <0.46 | 50 | 50 | 37.3 | 37.9 | 75 | 76 | 78-133 | 1 | 14 | M1 |
| 1,2,4-Trichlorobenzene | ug/L | <0.47 | 50 | 50 | 39.3 | 40.9 | 79 | 82 | 44-164 | 4 | 13 | |
| 1,2,4-Trimethylbenzene | ug/L | <0.46 | 50 | 50 | 43.1 | 41.9 | 86 | 84 | 44-161 | 3 | 9 | |
| 1,2-Dibromo-3-chloropropane | ug/L | <0.55 | 50 | 50 | 35.5 | 40.7 | 71 | 81 | 58-124 | 14 | 15 | |
| 1,2-Dibromoethane (EDB) | ug/L | <0.28 | 50 | 50 | 48.0 | 47.7 | 96 | 95 | 71-134 | 1 | 12 | |
| 1,2-Dichlorobenzene | ug/L | <0.49 | 50 | 50 | 42.1 | 42.6 | 84 | 85 | 69-135 | 1 | 10 | |
| 1,2-Dichloroethane | ug/L | <0.67 | 50 | 50 | 47.7 | 45.6 | 95 | 91 | 36-159 | 5 | 10 | |
| 1,2-Dichloropropane | ug/L | <0.60 | 50 | 50 | 42.8 | 44.7 | 86 | 89 | 68-132 | 4 | 11 | |
| 1,3,5-Trimethylbenzene | ug/L | <0.62 | 50 | 50 | 47.1 | 47.1 | 94 | 94 | 62-149 | 0 | 12 | |
| 1,3-Dichlorobenzene | ug/L | <0.59 | 50 | 50 | 42.1 | 41.8 | 84 | 84 | 68-135 | 1 | 10 | |
| 1,3-Dichloropropane | ug/L | <0.69 | 50 | 50 | 47.2 | 48.9 | 94 | 98 | 70-138 | 4 | 10 | |
| 1,4-Dichlorobenzene | ug/L | <0.58 | 50 | 50 | 40.1 | 40.4 | 80 | 81 | 49-153 | 1 | 9 | |
| 2,2-Dichloropropane | ug/L | <0.23 | 50 | 50 | 35.6 | 35.7 | 71 | 71 | 34-170 | 0 | 9 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 80872 80873

| Parameter | Units | 92408801001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | ug/L | <3.2 | 100 | 100 | 79.5 | 77.9 | 80 | 78 | 10-189 | 2 | 23 | |
| 2-Chlorotoluene | ug/L | <0.26 | 50 | 50 | 43.5 | 42.6 | 87 | 85 | 77-128 | 2 | 10 | |
| 2-Hexanone | ug/L | <0.89 | 100 | 100 | 75.2 | 82.2 | 75 | 82 | 40-135 | 9 | 18 | |
| 4-Chlorotoluene | ug/L | <0.68 | 50 | 50 | 42.7 | 43.0 | 85 | 86 | 79-126 | 1 | 10 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | <0.86 | 100 | 100 | 79.9 | 77.8 | 80 | 78 | 30-177 | 3 | 10 | |
| Acetone | ug/L | <8.2 | 100 | 100 | 82.0 | 79.7 | 82 | 80 | 44-223 | 3 | 14 | |
| Acrolein | ug/L | <7.8 | 100 | 100 | 86.2 | 89.5 | 86 | 89 | 57-185 | 4 | 30 | |
| Acrylonitrile | ug/L | <2.5 | 200 | 200 | 175 | 173 | 88 | 87 | 13-189 | 1 | 12 | |
| Benzene | ug/L | 1.7 | 50 | 50 | 46.8 | 44.9 | 90 | 86 | 66-139 | 4 | 10 | |
| Bromobenzene | ug/L | <0.58 | 50 | 50 | 41.6 | 43.2 | 83 | 86 | 75-122 | 4 | 12 | |
| Bromochloromethane | ug/L | <0.50 | 50 | 50 | 45.1 | 43.7 | 90 | 87 | 73-133 | 3 | 13 | |
| Bromodichloromethane | ug/L | <0.36 | 50 | 50 | 43.7 | 43.7 | 87 | 87 | 57-120 | 0 | 13 | |
| Bromoform | ug/L | <0.55 | 50 | 50 | 39.4 | 37.6 | 79 | 75 | 48-128 | 5 | 13 | |
| Bromomethane | ug/L | <0.95 | 50 | 50 | 36.9 | 41.1 | 74 | 82 | 10-187 | 11 | 32 | |
| Carbon disulfide | ug/L | <0.79 | 100 | 100 | 93.7 | 91.3 | 94 | 91 | 47-141 | 3 | 322 | |
| Carbon tetrachloride | ug/L | <0.42 | 50 | 50 | 65.2 | 62.1 | 130 | 124 | 58-127 | 5 | 14 | M1 |
| Chlorobenzene | ug/L | <0.53 | 50 | 50 | 44.0 | 41.7 | 88 | 83 | 63-137 | 5 | 10 | |
| Chloroethane | ug/L | <0.52 | 50 | 50 | 47.3 | 47.7 | 95 | 95 | 52-146 | 1 | 16 | |
| Chloroform | ug/L | 18.7 | 50 | 50 | 67.2 | 63.7 | 97 | 90 | 74-137 | 5 | 9 | |
| Chloromethane | ug/L | <0.38 | 50 | 50 | 45.8 | 45.3 | 92 | 91 | 41-127 | 1 | 10 | |
| cis-1,2-Dichloroethene | ug/L | 1.5 | 50 | 50 | 47.3 | 44.3 | 92 | 86 | 71-138 | 7 | 16 | |
| cis-1,3-Dichloropropene | ug/L | <0.22 | 50 | 50 | 39.7 | 38.8 | 79 | 78 | 32-145 | 2 | 12 | |
| Dibromochloromethane | ug/L | <0.31 | 50 | 50 | 41.4 | 41.7 | 83 | 83 | 52-116 | 1 | 13 | |
| Dibromomethane | ug/L | <0.62 | 50 | 50 | 45.4 | 45.1 | 91 | 90 | 79-129 | 1 | 14 | |
| Dichlorodifluoromethane | ug/L | <0.48 | 50 | 50 | 94.8 | 89.6 | 190 | 179 | 36-126 | 6 | 15 | M0 |
| Diisopropyl ether | ug/L | <1.1 | 50 | 50 | 45.7 | 43.4 | 91 | 87 | 70-130 | 5 | 20 | |
| Ethylbenzene | ug/L | <0.45 | 50 | 50 | 47.1 | 45.5 | 94 | 91 | 31-174 | 3 | 10 | |
| Isopropylbenzene (Cumene) | ug/L | <0.43 | 50 | 50 | 45.4 | 42.6 | 91 | 85 | 56-139 | 6 | 12 | |
| m&p-Xylene | ug/L | <0.92 | 100 | 100 | 97.5 | 91.0 | 98 | 91 | 27-179 | 7 | 10 | |
| Methylene Chloride | ug/L | 5.4 | 50 | 50 | 47.5 | 45.8 | 84 | 81 | 61-146 | 4 | 15 | |
| n-Butylbenzene | ug/L | <0.57 | 50 | 50 | 43.8 | 44.2 | 88 | 88 | 46-160 | 1 | 11 | |
| n-Propylbenzene | ug/L | <0.50 | 50 | 50 | 43.6 | 44.9 | 87 | 90 | 60-148 | 3 | 10 | |
| Naphthalene | ug/L | <0.30 | 50 | 50 | 37.5 | 41.1 | 75 | 82 | 25-159 | 9 | 14 | |
| o-Xylene | ug/L | <0.54 | 50 | 50 | 50.6 | 48.0 | 101 | 96 | 52-141 | 5 | 65 | |
| p-Isopropyltoluene | ug/L | <0.47 | 50 | 50 | 42.9 | 42.9 | 86 | 86 | 59-134 | 0 | 9 | |
| sec-Butylbenzene | ug/L | <0.48 | 50 | 50 | 47.4 | 47.5 | 95 | 95 | 62-144 | 0 | 12 | |
| Styrene | ug/L | <0.50 | 50 | 50 | 49.0 | 47.2 | 98 | 94 | 77-128 | 4 | 14 | |
| tert-Butylbenzene | ug/L | <0.47 | 50 | 50 | 43.9 | 44.4 | 88 | 89 | 50-189 | 1 | 9 | |
| Tetrachloroethene | ug/L | 2.1 | 50 | 50 | 50.7 | 50.5 | 97 | 97 | 36-155 | 0 | 14 | |
| Toluene | ug/L | <0.31 | 50 | 50 | 46.9 | 47.3 | 94 | 95 | 52-146 | 1 | 11 | |
| trans-1,2-Dichloroethene | ug/L | <0.46 | 50 | 50 | 45.4 | 43.7 | 91 | 87 | 61-152 | 4 | 14 | |
| trans-1,3-Dichloropropene | ug/L | <0.30 | 50 | 50 | 37.2 | 37.5 | 74 | 75 | 37-146 | 1 | 12 | |
| Trichloroethene | ug/L | 1.6 | 50 | 50 | 47.8 | 47.8 | 92 | 92 | 61-141 | 0 | 12 | |
| Trichlorofluoromethane | ug/L | <0.51 | 50 | 50 | 68.5 | 66.2 | 137 | 132 | 51-141 | 3 | 13 | |
| Vinyl acetate | ug/L | <0.42 | 50 | 50 | 44.1 | 42.6 | 88 | 85 | 52-141 | 4 | 14 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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

## QUALITY CONTROL DATA

Project: CMC-ATHENS GA
Pace Project No.: 92408801

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 80872 80873

| Parameter | Units | 92408801001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl chloride | ug/L | <0.60 | 50 | 50 | 54.1 | 54.8 | 108 | 110 | 22-156 | 1 | 26 | |
| Xylene (Total) | ug/L | <1.5 | 150 | 150 | 148 | 139 | 99 | 93 | 78-132 | 6 | 7 | |
| 1,2-Dichloroethane-d4 (S) | %. | | | | | | 107 | 104 | 81-119 | | | |
| 4-Bromofluorobenzene (S) | %. | | | | | | 97 | 102 | 82-120 | | | |
| Dibromofluoromethane (S) | %. | | | | | | 106 | 104 | 82-114 | | | |
| Toluene-d8 (S) | %. | | | | | | 101 | 98 | 82-109 | | | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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

# QUALIFIERS

Project: CMC-ATHENS GA
Pace Project No.: 92408801

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-GA | Pace Analytical Services - Atlanta, GA |

## ANALYTE QUALIFIERS

| | |
|---|---|
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |

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

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CMC-ATHENS GA
Pace Project No.: 92408801

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92408801001** | **MW-1** | EPA 8260B | 17994 | | |
| **92408801002** | **MW-1D** | EPA 8260B | 17994 | | |
| **92408801003** | **MW-3A** | EPA 8260B | 17994 | | |
| **92408801004** | **MW-4A** | EPA 8260B | 17994 | | |
| **92408801005** | **MW-8A** | EPA 8260B | 17994 | | |
| **92408801006** | **MW-9A** | EPA 8260B | 17994 | | |
| **92408801007** | **MW-10** | EPA 8260B | 17994 | | |
| **92408801008** | **MW-11** | EPA 8260B | 17994 | | |
| **92408801009** | **DUP-1** | EPA 8260B | 17994 | | |
| **92408801010** | **MW-12** | EPA 8260B | 17994 | | |
| **92408801011** | **EB-1** | EPA 8260B | 17994 | | |
| **92408801012** | **MW-14** | EPA 8260B | 17994 | | |
| **92408801013** | **TRIP BLANK** | EPA 8260B | 17994 | | |

WO# : 92408801

92408801

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:**

| | |
|---|---|
| Company: | APEX Companies - NC |
| Address: | 1071 Pemberton Hill Rd. |
| | Apex, NC 27502 |
| Email: | grant.watkins@apexcos.com |
| Phone: | 919-646-1470 Fax |
| Requested Due Date: | Std |

**Section B — Required Project Information:**

| | |
|---|---|
| Report To: | Grant Watkins |
| Copy To: | |
| Purchase Order #: | |
| Project Name: | CMC-Athens GA |
| Project #: | 510507-002-07 |

**Section C — Invoice Information:**

| | |
|---|---|
| Attention: | |
| Company Name: | |
| Address: | |
| Pace Quote: | |
| Pace Project Manager: | trey.carter@pacelabs.com, |
| Pace Profile #: | 8490-1 |

Regulatory Agency:

State / Location: GA

Requested Analysis Filtered (Y/N)

| 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 | Trip BLANK | 8260 LL VOCs | Residual Chlorine (Y/N) | 92408801 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | WT | G | | | 11/27/18 | 1400 | 15 | 3 | | | | X | | | | | | | X | | 001 |
| 2 | MW-1D | WT | G | | | 11/27/18 | 1420 | 14 | 3 | | | | X | | | | | | | X | | 002 |
| 3 | MW-3A | WT | G | | | 11/27/18 | 1325 | 15 | 3 | | | | X | | | | | | | X | | 003 |
| 4 | MW-4A | WT | G | | | 11/27/18 | 1205 | 14 | 3 | | | | X | | | | | | | X | | 004 |
| 5 | MW-8A | WT | G | | | 11/27/18 | 1455 | 14 | 3 | | | | X | | | | | | | X | | 005 |
| 6 | MW-9A | WT | G | | | 11/27/18 | 1535 | 13 | 3 | | | | X | | | | | | | X | | 006 |
| 7 | MW-10 | WT | G | | | 11/27/18 | 1100 | 13 | 3 | | | | X | | | | | | | X | | 007 |
| 8 | MW-11 | WT | G | | | 11/27/18 | 1130 | 12 | 3 | | | | X | | | | | | | X | | 008 |
| 9 | DUP-1 | WT | G | | | 11/27/18 | - | 12 | 3 | | | | X | | | | | | | X | | 009 |
| 10 | MW-12 | WT | G | | | 11/27/18 | 1545 | 12 | 3 | | | | X | | | | | | | X | | 010 |
| 11 | EB-1 | WT | G | | | 11/27/18 | 1600 | 12 | 3 | | | | X | | | | | | | X | | 011 |
| 12 | MW-14 | WT | G | | | 11/27/18 | 1305 | 14 | 3 | | | | X | | | | | | | X | | 012 |
| 13 | Trip Blank | WT | G | | | - | - | - | 2 | | | | X | | | | | | X | | | 013 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|---|
| | Thomas FG/Apex | 11/27/18 | 0930 | Scott PACE | 11/27/18 | 0931 |
| | Scott PACE | 11/28/18 | 1106 | M Rahman | 11/28/18 | 1106 |

| SAMPLE CONDITIONS | | | |
|---|---|---|---|
| TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
| 4.0 | Y | Y | Y |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas Fisher / Quinten Walton

SIGNATURE of SAMPLER: Thomas FG

DATE Signed: 11/27/18

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: December 07, 2018 Expiration Date: June 30, 2019**

Patty A. Lewandowski, MBA, MT(ASCP)
Chief Bureau of Public Health Laboratories
DH Form 1697, 7/04
NON-TRANSFERABLE E87315-42-12/07/2018
Supersedes all previously issued certificates

# *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Drinking Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Chloride | EPA 300.0 | Secondary Inorganic Contaminants | NELAP | 4/10/2002 |
| Color | SM 2120 B | Secondary Inorganic Contaminants | NELAP | 4/10/2002 |
| Escherichia coli | SM 9223 B | Microbiology | NELAP | 4/10/2002 |
| Escherichia coli | SM 9223 B /QUANTI-TRAY | Microbiology | NELAP | 11/4/2010 |
| Fluoride | EPA 300.0 | Primary Inorganic Contaminants,Secondary Inorganic Contaminants | NELAP | 4/10/2002 |
| Heterotrophic plate count | SIMPLATE | Microbiology | NELAP | 5/29/2012 |
| Nitrate | EPA 300.0 | Primary Inorganic Contaminants | NELAP | 4/10/2002 |
| Nitrite | EPA 300.0 | Primary Inorganic Contaminants | NELAP | 4/10/2002 |
| Orthophosphate as P | SM 4500-P E | Primary Inorganic Contaminants | NELAP | 4/10/2002 |
| pH | SM 4500-H+-B | Primary Inorganic Contaminants,Secondary Inorganic Contaminants | NELAP | 4/10/2002 |
| Residual free chlorine | SM 4500-Cl G | Primary Inorganic Contaminants | NELAP | 11/4/2010 |
| Sulfate | EPA 300.0 | Secondary Inorganic Contaminants,Primary Inorganic Contaminants | NELAP | 4/10/2002 |
| Total coliforms | SM 9223 B | Microbiology | NELAP | 4/10/2002 |
| Total coliforms | SM 9223 B /QUANTI-TRAY | Microbiology | NELAP | 11/4/2010 |
| Total nitrate-nitrite | EPA 300.0 | Primary Inorganic Contaminants | NELAP | 4/10/2002 |
| Total residual chlorine | SM 4500-Cl G | Primary Inorganic Contaminants | NELAP | 11/4/2010 |
| Turbidity | EPA 180.1 | Secondary Inorganic Contaminants | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**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 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,1,1-Trichloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,1,2,2-Tetrachloroethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 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 | 5/29/2012 |
| 1,1,2-Trichloroethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,1,2-Trichloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,1-Dichloroethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,1-Dichloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,1-Dichloroethylene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 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 | 7/1/2003 |
| 1,2,3-Trichloropropane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,2,3-Trimethylbenzene | EPA 8260 | Volatile Organics | NELAP | 11/19/2018 |
| 1,2,4,5-Tetrachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 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 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 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 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,2-Dichloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,2-Dichloropropane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,2-Dichloropropane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,2-Diphenylhydrazine (as Azobenzene) | EPA 8270 | Extractable Organics | NELAP | 11/4/2010 |
| 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 | 7/1/2003 |
| 1,3-Dichlorobenzene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,3-Dichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*



**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| 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 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 1,4-Dichlorobenzene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 1,4-Dichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1,4-Dichlorobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 1,4-Naphthoquinone | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 1,4-Phenylenediamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 1-Chlorobutane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 1-Methylnaphthalene | EPA 8270 | Extractable Organics | NELAP | 11/4/2010 |
| 1-Naphthylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 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 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,3,4,6-Tetrachlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4,5-T | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 2,4,5-T | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 2,4,5-Trichlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4,6-Trichlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4-D | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 2,4-D | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 2,4-DB | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 2,4-DB | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 2,4-Dichlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4-Dimethylphenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4-Dinitrophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,4-Dinitrotoluene (2,4-DNT) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,6-Dichlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2,6-Dinitrotoluene (2,6-DNT) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Acetylaminofluorene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Butanone (Methyl ethyl ketone, MEK) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 2-Chloroethyl vinyl ether | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 2-Chloroethyl vinyl ether | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 2-Chloronaphthalene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Chlorophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Chlorotoluene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 2-Hexanone | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| 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-Naphthylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Nitrophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 2-Nitropropane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 2-Picoline (2-Methylpyridine) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 3,3'-Dichlorobenzidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 3,3'-Dimethylbenzidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 3-Methylcholanthrene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 3-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4,4'-DDD | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| 4,4'-DDD | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 4,4'-DDE | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| 4,4'-DDE | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 4,4'-DDT | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| 4,4'-DDT | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| 4-Aminobiphenyl | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4-Bromophenyl phenyl ether | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 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 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4-Chlorotoluene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 4-Dimethyl aminoazobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4-Methyl-2-pentanone (MIBK) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| 4-Methylphenol (p-Cresol) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 4-Nitrophenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 5-Nitro-o-toluidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 7,12-Dimethylbenz(a) anthracene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| a,a-Dimethylphenethylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Acenaphthene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 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 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Acetophenone | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Acrolein (Propenal) | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Acrolein (Propenal) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Acrylonitrile | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Acrylonitrile | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Aldrin | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aldrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Alkalinity as CaCO3 | SM 2320 B | General Chemistry | NELAP | 10/15/2007 |
| Allyl chloride (3-Chloropropene) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| alpha-BHC (alpha-Hexachlorocyclohexane) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| alpha-BHC (alpha-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| alpha-Chlordane | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Aluminum | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Aluminum | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Aluminum | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Aluminum | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Amenable cyanide | EPA 9010/9014 | General Chemistry | NELAP | 7/1/2003 |
| Amenable cyanide | SM 4500-CN- G | General Chemistry | NELAP | 10/15/2007 |
| Ammonia as N | EPA 350.1 | General Chemistry | NELAP | 7/28/2009 |
| Aniline | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Anthracene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Antimony | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Antimony | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Antimony | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Antimony | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Aramite | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Aroclor-1016 (PCB-1016) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1016 (PCB-1016) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Aroclor-1221 (PCB-1221) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1221 (PCB-1221) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Aroclor-1232 (PCB-1232) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1232 (PCB-1232) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Aroclor-1242 (PCB-1242) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1242 (PCB-1242) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Aroclor-1248 (PCB-1248) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1248 (PCB-1248) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Aroclor-1254 (PCB-1254) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1254 (PCB-1254) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Aroclor-1260 (PCB-1260) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Aroclor-1260 (PCB-1260) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Arsenic | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Arsenic | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Arsenic | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Arsenic | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Atrazine | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Barium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Barium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Barium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Barium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Benzaldehyde | EPA 8270 | Volatile Organics | NELAP | 5/29/2012 |
| Benzene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Benzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Benzidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Benzo(a)anthracene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Benzo(a)pyrene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Benzo(b)fluoranthene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Benzo(g,h,i)perylene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| 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 | 4/10/2002 |
| Beryllium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Beryllium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Beryllium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| beta-BHC (beta-Hexachlorocyclohexane) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| beta-BHC (beta-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Biochemical oxygen demand | SM 5210 B | General Chemistry | NELAP | 4/10/2002 |
| Biphenyl | EPA 8270 | Volatile Organics | NELAP | 5/29/2012 |
| bis(2-Chloroethoxy)methane | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| bis(2-Chloroethyl) ether | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Boron | EPA 200.7 | Metals | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Boron | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Boron | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Boron | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Bromide | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Bromide | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Bromobenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Bromochloromethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Bromodichloromethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Bromodichloromethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Bromoform | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Bromoform | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Butyl benzyl phthalate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Cadmium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Cadmium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Cadmium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Cadmium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Calcium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Calcium | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Calcium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Calcium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Caprolactam | EPA 8270 | Volatile Organics | NELAP | 5/29/2012 |
| Carbazole | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Carbon disulfide | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Carbon tetrachloride | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Carbon tetrachloride | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Carbonaceous BOD (CBOD) | SM 5210 B | General Chemistry | NELAP | 4/10/2002 |
| Chemical oxygen demand | EPA 410.4 | General Chemistry | NELAP | 4/10/2002 |
| Chlordane (tech.) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Chlordane (tech.) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Chloride | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Chloride | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Chlorobenzene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Chlorobenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Chlorobenzilate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Chloroethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Chloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Chloroform | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Chloroform | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Chloroprene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Chromium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Chromium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Chromium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Chromium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Chromium VI | SM 3500-Cr B (20th/21st/22nd Ed.)/UV-VIS | General Chemistry | NELAP | 7/28/2009 |
| 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 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| cis-1,3-Dichloropropene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Cobalt | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Cobalt | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Cobalt | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Cobalt | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Color | SM 2120 B | General Chemistry | NELAP | 4/10/2002 |
| Conductivity | EPA 9050 | General Chemistry | NELAP | 7/1/2003 |
| Conductivity | SM 2510 B | General Chemistry | NELAP | 4/10/2002 |
| Copper | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Copper | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Copper | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Copper | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Corrosivity (pH) | EPA 9040 | General Chemistry | NELAP | 7/1/2003 |
| Cyanide | SM 4500-CN E | General Chemistry | NELAP | 10/15/2007 |
| Cyclohexane | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Dalapon | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dalapon | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| delta-BHC | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| delta-BHC | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Di(2-ethylhexyl) phthalate (DEHP) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Diallate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Dibenz(a,h)anthracene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Dibenzofuran | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Dibromochloromethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Dibromochloromethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Dibromomethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Dicamba | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dicamba | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Dichlorodifluoromethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Dichloroprop (Dichlorprop) | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dichloroprop (Dichlorprop) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Dieldrin | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Dieldrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Diesel range organics (DRO) | EPA 8015 | Extractable Organics | NELAP | 7/1/2003 |
| Diethyl ether | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Diethyl phthalate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Di-isopropylether (DIPE) | EPA 8260 | Volatile Organics | NELAP | 11/6/2014 |
| Dimethoate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Dimethyl phthalate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Di-n-butyl phthalate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Di-n-octyl phthalate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP) | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Disulfoton | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Endosulfan I | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Endosulfan I | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Endosulfan II | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Endosulfan II | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Endosulfan sulfate | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Endosulfan sulfate | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Endrin | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Endrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Endrin aldehyde | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Endrin aldehyde | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Endrin ketone | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Escherichia coli | SM 9223 B /QUANTI-TRAY | Microbiology | NELAP | 11/4/2010 |
| Ethanol | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Ethyl acetate | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Ethyl methacrylate | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |

*Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Ethyl methanesulfonate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Ethylbenzene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Ethylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Famphur | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Fecal coliforms | COLILERT®-18 (Fecal Coliforms) | Microbiology | NELAP | 11/6/2014 |
| Fecal coliforms | SM 9222 D | Microbiology | NELAP | 2/21/2002 |
| Ferrous iron | SM 3500-Fe B (20th/21st Ed.)/UV-VIS | General Chemistry | NELAP | 7/28/2009 |
| Fluoranthene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Fluorene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Fluoride | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Fluoride | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| gamma-BHC (Lindane, gamma-Hexachlorocyclohexane) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| gamma-BHC (Lindane, gamma-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| gamma-Chlordane | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Gasoline range organics (GRO) | EPA 8015 | Extractable Organics | NELAP | 7/1/2003 |
| Hardness | SM 2340 B | General Chemistry | NELAP | 7/28/2009 |
| Hardness (calc.) | EPA 200.7 | Metals | NELAP | 6/6/2002 |
| Heptachlor | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Heptachlor | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Heptachlor epoxide | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Heptachlor epoxide | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Heterotrophic plate count | SIMPLATE | Microbiology | NELAP | 5/29/2012 |
| Hexachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Hexachlorobutadiene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Hexachlorobutadiene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Hexachlorocyclopentadiene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Hexachloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Hexachloroethane | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Hexachlorophene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Hexachloropropene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Ignitability | EPA 1010 | General Chemistry | NELAP | 7/1/2003 |
| 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 | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Iron | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Iron | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Iron | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Iron | SM 3500-Fe D (18th/19th Ed.)/UV-VIS | General Chemistry | NELAP | 2/5/2002 |
| Isobutyl alcohol (2-Methyl-1-propanol) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Isodrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Isodrin | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Isophorone | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Isopropyl alcohol (2-Propanol) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Isopropylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Isosafrole | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Kepone | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Kjeldahl nitrogen - total | EPA 351.2 | General Chemistry | NELAP | 7/28/2009 |
| Lead | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Lead | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Lead | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Lead | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Lithium | EPA 200.8 | Metals | NELAP | 10/6/2016 |
| Lithium | EPA 6020 | Metals | NELAP | 10/6/2016 |
| m/p-Xylenes | EPA 8260 | Volatile Organics | NELAP | 7/28/2009 |
| Magnesium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Magnesium | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Magnesium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Magnesium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Manganese | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Manganese | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Manganese | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Manganese | EPA 6020 | Metals | NELAP | 8/30/2004 |
| MCPA | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| MCPA | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| MCPP | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| MCPP | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Mercury | EPA 245.1 | Metals | NELAP | 4/10/2002 |
| Mercury | EPA 7470 | Metals | NELAP | 4/10/2002 |
| Methacrylonitrile | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Methapyrilene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Methoxychlor | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Methoxychlor | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Methyl acetate | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Methyl acrylate | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Methyl bromide (Bromomethane) | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Methyl bromide (Bromomethane) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Methyl chloride (Chloromethane) | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 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 | 7/1/2003 |
| Methyl parathion (Parathion, methyl) | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Methyl tert-butyl ether (MTBE) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Methylcyclohexane | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Methylene chloride | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Methylene chloride | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Molybdenum | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Molybdenum | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Molybdenum | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Molybdenum | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Naphthalene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Naphthalene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Butyl alcohol | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| n-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Nickel | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Nickel | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Nickel | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Nickel | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Nitrate | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Nitrate as N | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Nitrate-nitrite | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Nitrite | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Nitrite as N | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Nitrobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Nitroquinoline-1-oxide | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosodiethylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosodimethylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

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**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| n-Nitroso-di-n-butylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosodi-n-propylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosodiphenylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosomethylethylamine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosomorpholine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosopiperidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| n-Nitrosopyrrolidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Nonionic surfactants - CTAS | SM 5540 D | General Chemistry | NELAP | 11/7/2003 |
| n-Propylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| o,o,o-Triethyl phosphorothioate | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Oil & Grease | EPA 1664B | General Chemistry | NELAP | 11/6/2014 |
| Organic nitrogen | TKN minus AMMONIA | General Chemistry | NELAP | 6/6/2002 |
| Orthophosphate as P | SM 4500-P E | General Chemistry | NELAP | 4/10/2002 |
| o-Toluidine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Oxygen, dissolved | ASTM D888-09C | General Chemistry | NELAP | 11/6/2014 |
| Oxygen, dissolved | SM 4500-O G | General Chemistry | NELAP | 4/10/2002 |
| o-Xylene | EPA 8260 | Volatile Organics | NELAP | 7/28/2009 |
| Parathion, ethyl | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| p-Dioxane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Pentachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Pentachloroethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Pentachloronitrobenzene (Quintozene) | EPA 8270 | Extractable Organics | 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 | 10/15/2007 |
| Phenacetin | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Phenanthrene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Phenol | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Phorate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Phosphorus, total | EPA 200.7 | Metals | NELAP | 9/27/2002 |
| Phosphorus, total | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Phosphorus, total | SM 4500-P E | General Chemistry | NELAP | 4/10/2002 |
| p-Isopropyltoluene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Potassium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Potassium | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Potassium | EPA 6010 | Metals | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

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**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Potassium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Pronamide (Kerb) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Propionitrile (Ethyl cyanide) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Pyrene | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Pyridine | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Residual free chlorine | SM 4500-Cl G | General Chemistry | NELAP | 11/4/2010 |
| Residue-filterable (TDS) | SM 2540 C | General Chemistry | NELAP | 10/15/2007 |
| Residue-nonfilterable (TSS) | SM 2540 D | General Chemistry | NELAP | 10/15/2007 |
| Residue-settleable | SM 2540 F | General Chemistry | NELAP | 10/15/2007 |
| Residue-total | SM 2540 B | General Chemistry | NELAP | 10/15/2007 |
| Residue-volatile | SM 2540 E | General Chemistry | NELAP | 10/6/2016 |
| Safrole | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| sec-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Selenium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Selenium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Selenium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Selenium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Silicon | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Silicon | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Silver | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Silver | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Silver | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Silver | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Silvex (2,4,5-TP) | EPA 615 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Silvex (2,4,5-TP) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| Sodium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Sodium | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Sodium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Sodium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Strontium | EPA 200.7 | Metals | NELAP | 9/27/2002 |
| Strontium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Strontium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Styrene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Sulfate | EPA 300.0 | General Chemistry | NELAP | 4/10/2002 |
| Sulfate | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Sulfide | EPA 9030/9034 | General Chemistry | NELAP | 7/1/2003 |

## *Laboratory Scope of Accreditation*

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**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Sulfide | SM 4500-S D/UV-VIS | General Chemistry | NELAP | 4/10/2002 |
| Sulfite-SO3 | SM 4500-SO3 B | General Chemistry | NELAP | 10/15/2007 |
| Sulfotepp | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 1/25/2007 |
| Surfactants - MBAS | SM 5540 C | General Chemistry | NELAP | 4/10/2002 |
| tert-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Tetrachloroethylene (Perchloroethylene) | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Tetrachloroethylene (Perchloroethylene) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Tetrahydrofuran (THF) | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Thallium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Thallium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Thallium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Thallium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Thionazin (Zinophos) | EPA 8270 | Extractable Organics | NELAP | 7/1/2003 |
| Tin | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Tin | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Tin | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Tin | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Titanium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Titanium | EPA 200.8 | Metals | NELAP | 11/6/2014 |
| Titanium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Titanium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Toluene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Toluene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Total coliforms | SM 9223 B /QUANTI-TRAY | Microbiology | NELAP | 11/4/2010 |
| Total cyanide | EPA 9010/9014 | General Chemistry | NELAP | 7/1/2003 |
| Total nitrate-nitrite | EPA 9056 | General Chemistry | NELAP | 7/1/2003 |
| Total organic carbon | EPA 9060 | General Chemistry | NELAP | 7/1/2003 |
| Total organic carbon | SM 5310 B | General Chemistry | NELAP | 6/6/2002 |
| Total Petroleum Hydrocarbons (TPH) | EPA 1664B | General Chemistry | NELAP | 11/6/2014 |
| Total phenolics | EPA 420.1 | General Chemistry | NELAP | 7/16/2009 |
| Total phenolics | EPA 9065 | General Chemistry | NELAP | 7/16/2009 |
| Total residual chlorine | SM 4500-Cl G | General Chemistry | NELAP | 11/4/2010 |
| Total, fixed, and volatile residue | SM 2540 G | General Chemistry | NELAP | 9/27/2002 |
| Toxaphene (Chlorinated camphene) | EPA 608.3 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2018 |
| Toxaphene (Chlorinated camphene) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/1/2003 |
| trans-1,2-Dichloroethylene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |

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**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Non-Potable Water

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| trans-1,2-Dichloroethylene | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| trans-1,3-Dichloropropene | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| 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 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Trichloroethene (Trichloroethylene) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Trichlorofluoromethane | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Trichlorofluoromethane | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Turbidity | EPA 180.1 | General Chemistry | NELAP | 4/10/2002 |
| Vanadium | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Vanadium | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Vanadium | EPA 6010 | Metals | NELAP | 7/1/2003 |
| Vanadium | EPA 6020 | Metals | NELAP | 8/30/2004 |
| Vinyl acetate | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Vinyl chloride | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Vinyl chloride | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Xylene (total) | EPA 624.1 | Volatile Organics | NELAP | 7/1/2018 |
| Xylene (total) | EPA 8260 | Volatile Organics | NELAP | 7/1/2003 |
| Zinc | EPA 200.7 | Metals | NELAP | 4/10/2002 |
| Zinc | EPA 200.8 | Metals | NELAP | 8/30/2004 |
| Zinc | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Zinc | EPA 6020 | Metals | NELAP | 8/30/2004 |

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**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,1,1-Trichloroethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,1,2,2-Tetrachloroethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| 1,1,2-Trichloroethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,1-Dichloroethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,1-Dichloroethylene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,1-Dichloropropene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2,3-Trichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2,3-Trichloropropane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2,3-Trimethylbenzene | EPA 8260 | Volatile Organics | NELAP | 11/19/2018 |
| 1,2,4,5-Tetrachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1,2,4-Trichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,2,4-Trichlorobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1,2,4-Trimethylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2-Dibromo-3-chloropropane (DBCP) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2-Dibromoethane (EDB, Ethylene dibromide) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2-Dichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,2-Dichlorobenzene | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| 1,2-Dichloroethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,2-Dichloropropane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,2-Diphenylhydrazine (as Azobenzene) | EPA 8270 | Extractable Organics | NELAP | 11/4/2010 |
| 1,3,5-Trimethylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,3,5-Trinitrobenzene (1,3,5-TNB) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1,3-Dichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,3-Dichlorobenzene | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| 1,3-Dichloropropane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1,3-Dinitrobenzene (1,3-DNB) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1,4-Dichlorobenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 1,4-Dichlorobenzene | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| 1,4-Naphthoquinone | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1,4-Phenylenediamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 1-Chlorobutane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 1-Methylnaphthalene | EPA 8270 | Extractable Organics | NELAP | 11/4/2010 |
| 1-Naphthylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,2-Dichloropropane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| 2,2'-Oxybis(1-chloropropane),bis(2-Chloro-1-methylethyl)ether (fka bis(2-Chloroisopropyl) ether | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,3,4,6-Tetrachlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4,5-T | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 3/14/2002 |
| 2,4,5-Trichlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4,6-Trichlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4-D | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 3/14/2002 |
| 2,4-DB | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 2,4-Dichlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4-Dimethylphenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4-Dinitrophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,4-Dinitrotoluene (2,4-DNT) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,6-Dichlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2,6-Dinitrotoluene (2,6-DNT) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Acetylaminofluorene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Butanone (Methyl ethyl ketone, MEK) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 2-Chloroethyl vinyl ether | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 2-Chloronaphthalene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Chlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Chlorotoluene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 2-Hexanone | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 2-Methyl-4,6-dinitrophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Methylnaphthalene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Methylphenol (o-Cresol) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Naphthylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Nitrophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 2-Nitropropane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 2-Picoline (2-Methylpyridine) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 3,3'-Dichlorobenzidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 3,3'-Dimethylbenzidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 3-Methylcholanthrene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 3-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4,4'-DDD | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 4,4'-DDE | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 4,4'-DDT | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| 4-Aminobiphenyl | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| 4-Bromophenyl phenyl ether | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Chloro-3-methylphenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Chloroaniline | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Chlorophenyl phenylether | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Chlorotoluene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| 4-Dimethyl aminoazobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Methyl-2-pentanone (MIBK) | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| 4-Methylphenol (p-Cresol) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Nitroaniline | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 4-Nitrophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 5-Nitro-o-toluidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| 7,12-Dimethylbenz(a) anthracene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| a,a-Dimethylphenethylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Acenaphthene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Acenaphthylene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Acetone | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Acetonitrile | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Acetophenone | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Acrolein (Propenal) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Acrylonitrile | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Aldrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Allyl chloride (3-Chloropropene) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| alpha-BHC (alpha-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| alpha-Chlordane | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Aluminum | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Amenable cyanide | EPA 9010/9014 | General Chemistry | NELAP | 4/10/2002 |
| Ammonia as N | EPA 350.1 | General Chemistry | NELAP | 7/28/2009 |
| Aniline | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Anthracene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Antimony | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Aramite | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Aroclor-1016 (PCB-1016) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Aroclor-1221 (PCB-1221) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Aroclor-1232 (PCB-1232) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Aroclor-1242 (PCB-1242) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Aroclor-1248 (PCB-1248) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Aroclor-1254 (PCB-1254) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Aroclor-1260 (PCB-1260) | EPA 8082 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Arsenic | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Atrazine | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Barium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Benzaldehyde | EPA 8270 | Extractable Organics | NELAP | 5/29/2012 |
| Benzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Benzidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzo(a)anthracene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzo(a)pyrene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzo(b)fluoranthene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzo(g,h,i)perylene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzo(k)fluoranthene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzoic acid | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzyl alcohol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Benzyl chloride | EPA 8260 | Volatile Organics | NELAP | 6/6/2002 |
| Beryllium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| beta-BHC (beta-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Biphenyl | EPA 8270 | Extractable Organics | NELAP | 5/29/2012 |
| bis(2-Chloroethoxy)methane | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| bis(2-Chloroethyl) ether | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Boron | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Bromide | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| Bromobenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Bromochloromethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Bromodichloromethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Bromoform | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Butyl benzyl phthalate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Cadmium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Calcium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Caprolactam | EPA 8270 | Extractable Organics | NELAP | 5/29/2012 |
| Carbazole | EPA 8270 | Extractable Organics | NELAP | 6/6/2002 |
| Carbon disulfide | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Carbon tetrachloride | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Chlordane (tech.) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Chloride | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

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**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Chlorobenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Chlorobenzilate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Chloroethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Chloroform | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Chloroprene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Chromium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Chrysene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| cis-1,2-Dichloroethylene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| cis-1,3-Dichloropropene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Cobalt | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Copper | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Cyclohexane | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Dalapon | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| delta-BHC | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Di(2-ethylhexyl) phthalate (DEHP) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Diallate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dibenz(a,h)anthracene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Dibenzofuran | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Dibromochloromethane | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Dibromomethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Dicamba | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 3/14/2002 |
| Dichlorodifluoromethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Dichloroprop (Dichlorprop) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Dieldrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Diesel range organics (DRO) | EPA 8015 | Extractable Organics | NELAP | 4/10/2002 |
| Diethyl ether | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Diethyl phthalate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Di-isopropylether (DIPE) | EPA 8260 | Volatile Organics | NELAP | 11/6/2014 |
| Dimethoate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| Dimethyl phthalate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Di-n-butyl phthalate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Di-n-octyl phthalate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Disulfoton | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| Endosulfan I | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Endosulfan II | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |

*Laboratory Scope of Accreditation*

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**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Endosulfan sulfate | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 6/25/2002 |
| Endrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Endrin aldehyde | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Endrin ketone | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Ethanol | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Ethyl acetate | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Ethyl methacrylate | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Ethyl methanesulfonate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Ethylbenzene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Famphur | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| Fecal coliforms | SM 9222 D | Microbiology | NELAP | 7/28/2009 |
| Fluoranthene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Fluorene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Fluoride | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| gamma-BHC (Lindane, gamma-Hexachlorocyclohexane) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| gamma-Chlordane | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 7/28/2009 |
| Gasoline range organics (GRO) | EPA 8015 | Extractable Organics | NELAP | 4/10/2002 |
| Heptachlor | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Heptachlor epoxide | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Hexachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Hexachlorobutadiene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Hexachlorocyclopentadiene | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| Hexachloroethane | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| Hexachlorophene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Hexachloropropene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Ignitability | EPA 1010 | General Chemistry | NELAP | 4/10/2002 |
| Indeno(1,2,3-cd)pyrene | EPA 8270 | Extractable Organics | NELAP | 3/14/2002 |
| Iodomethane (Methyl iodide) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Iron | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Isobutyl alcohol (2-Methyl-1-propanol) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Isodrin | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Isodrin | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 6/6/2002 |
| Isophorone | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Isopropyl alcohol (2-Propanol) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Isopropylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Isosafrole | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Kepone | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Kjeldahl nitrogen - total | EPA 351.2 | General Chemistry | NELAP | 7/28/2009 |
| Lead | EPA 6010 | Metals | NELAP | 4/10/2002 |
| m/p-Xylenes | EPA 8260 | Volatile Organics | NELAP | 7/28/2009 |
| Magnesium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Manganese | EPA 6010 | Metals | NELAP | 4/10/2002 |
| MCPA | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| MCPP | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Mercury | EPA 7471 | Metals | NELAP | 4/10/2002 |
| Methacrylonitrile | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methapyrilene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Methoxychlor | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Methyl acetate | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Methyl acrylate | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methyl bromide (Bromomethane) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methyl chloride (Chloromethane) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methyl methacrylate | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methyl methanesulfonate | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Methyl parathion (Parathion, methyl) | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| Methyl tert-butyl ether (MTBE) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Methylcyclohexane | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Methylene chloride | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Molybdenum | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Naphthalene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Naphthalene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Butyl alcohol | EPA 8260 | Volatile Organics | NELAP | 6/6/2002 |
| n-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Nickel | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Nitrate | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| Nitrite | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| Nitrobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Nitroquinoline-1-oxide | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosodiethylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosodimethylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitroso-di-n-butylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosodi-n-propylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| n-Nitrosodiphenylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosomethylethylamine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosomorpholine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosopiperidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Nitrosopyrrolidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| n-Propylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| o,o,o-Triethyl phosphorothioate | EPA 8270 | Extractable Organics | NELAP | 6/6/2002 |
| Oil & Grease | EPA 9071 | General Chemistry | NELAP | 4/10/2002 |
| o-Toluidine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| o-Xylene | EPA 8260 | Volatile Organics | NELAP | 7/28/2009 |
| Paint Filter Liquids Test | EPA 9095 | General Chemistry | NELAP | 4/10/2002 |
| Parathion, ethyl | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| p-Dioxane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Pentachlorobenzene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Pentachloroethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Pentachloronitrobenzene (Quintozene) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Pentachlorophenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| pH | EPA 9045 | General Chemistry | NELAP | 4/10/2002 |
| Phenacetin | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Phenanthrene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Phenol | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Phorate | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| Phosphorus, total | EPA 6010 | Metals | NELAP | 4/10/2002 |
| p-Isopropyltoluene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Potassium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Pronamide (Kerb) | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Propionitrile (Ethyl cyanide) | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Pyrene | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Pyridine | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| Safrole | EPA 8270 | Extractable Organics | NELAP | 4/10/2002 |
| sec-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Selenium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Silicon | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Silver | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Silvex (2,4,5-TP) | EPA 8151 | Pesticides-Herbicides-PCB's | NELAP | 3/14/2002 |
| Sodium | EPA 6010 | Metals | NELAP | 7/9/2002 |

## *Laboratory Scope of Accreditation*

**Attachment to Certificate #: E87315-42, expiration date June 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate.**

**State Laboratory ID:** E87315 **EPA Lab Code:** GA00051 (770) 734-4200

**E87315**
**Pace Analytical Services, LLC- Atlanta GA**
**110 Technology Parkway**
**Peachtree Corners, GA 30092**

**Matrix:** Solid and Chemical Materials

| Analyte | Method/Tech | Category | Certification Type | Effective Date |
|---|---|---|---|---|
| Strontium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Styrene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Sulfate | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| Sulfide | EPA 9030/9034 | General Chemistry | NELAP | 4/10/2002 |
| Sulfotepp | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 11/4/2010 |
| tert-Butylbenzene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Tetrachloroethylene (Perchloroethylene) | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Tetrahydrofuran (THF) | EPA 8260 | Volatile Organics | NELAP | 5/29/2012 |
| Thallium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Thionazin (Zinophos) | EPA 8270 | Pesticides-Herbicides-PCB's | NELAP | 6/6/2002 |
| Tin | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Titanium | EPA 6010 | Metals | NELAP | 9/27/2002 |
| Toluene | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Total cyanide | EPA 9010/9014 | General Chemistry | NELAP | 4/10/2002 |
| Total nitrate-nitrite | EPA 9056 | General Chemistry | NELAP | 4/10/2002 |
| Toxaphene (Chlorinated camphene) | EPA 8081 | Pesticides-Herbicides-PCB's | NELAP | 4/10/2002 |
| Toxicity Characteristic Leaching Procedure | EPA 1311 | General Chemistry | NELAP | 4/10/2002 |
| trans-1,2-Dichloroethylene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| trans-1,3-Dichloropropene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| trans-1,4-Dichloro-2-butene | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Trichloroethene (Trichloroethylene) | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Trichlorofluoromethane | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Vanadium | EPA 6010 | Metals | NELAP | 4/10/2002 |
| Vinyl acetate | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Vinyl chloride | EPA 8260 | Volatile Organics | NELAP | 4/10/2002 |
| Xylene (total) | EPA 8260 | Volatile Organics | NELAP | 3/14/2002 |
| Zinc | EPA 6010 | Metals | NELAP | 4/10/2002 |

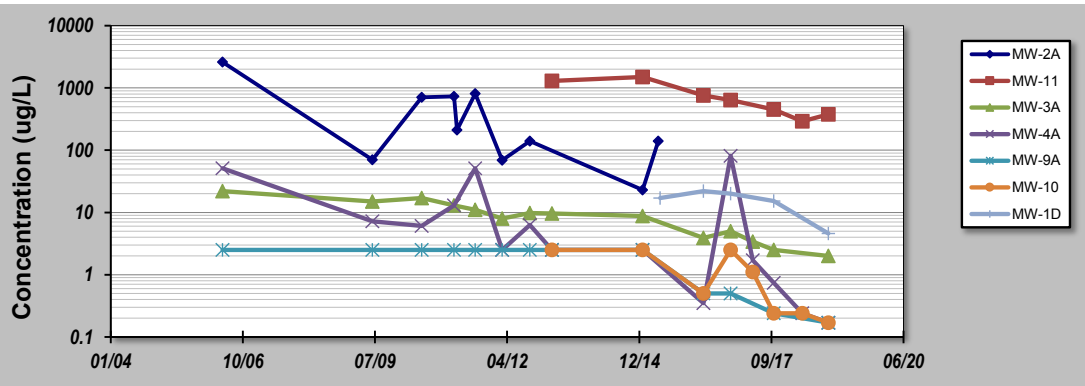
# APPENDIX C

# MANN-KENDALL OUTPUT SHEETS

# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | 2-Jan-18 | Job ID: | 510507-002.05 |
| Facility Name: | CMC (Former Loef)-Athens, GA | Constituent: | TCE |
| Conducted By: | Apex Companies | Concentration Units: | ug/L |

| Sampling Point ID: | MW-2A | MW-11 | MW-3A | MW-4A | MW-9A | MW-10 | MW-1D |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | TCE CONCENTRATION (ug/L) | | | | | | |
| 1 | 5/9/2006 | 2600 | | 22 | 51 | 2.5 | | |
| 2 | 6/17/2009 | 70 | | 15 | 7.2 | 2.5 | | |
| 3 | 6/24/2010 | 710 | | 17 | 6.1 | 2.5 | | |
| 4 | 2/24/2011 | 730 | | 13 | 13 | 2.5 | | |
| 5 | 3/18/2011 | 210 | | | | | | |
| 6 | 8/4/2011 | 810 | | 11 | 51 | 2.5 | | |
| 7 | 2/24/2012 | 69 | | 8 | 2.5 | 2.5 | | |
| 8 | 9/20/2012 | 140 | | 9.8 | 6.3 | 2.5 | | |
| 9 | 3/7/2013 | | 1300 | 9.6 | 2.5 | 2.5 | 2.5 | |
| 10 | 1/22/2015 | 23 | 1500 | 8.8 | 2.5 | 2.5 | 2.5 | |
| 11 | 5/20/2015 | 140 | | | | | | |
| 12 | 6/3/2015 | | | | | | | 17 |
| 13 | 4/26/2016 | | 760 | 3.9 | 0.35 | 0.5 | 0.5 | 22 |
| 14 | 11/17/2016 | | 640 | 5 | 81 | 0.5 | 2.5 | 20 |
| 15 | 5/5/2017 | | | 3.4 | 1.7 | | 1.1 | |
| 16 | 10/10/2017 | | 450 | 2.5 | 0.74 | 0.24 | 0.24 | 15.3 |
| 17 | 5/15/2018 | | 291 | | 0.24 | | 0.24 | |
| 18 | 11/27/2018 | | 376 | 2 | 0.17 | 0.17 | 0.17 | 4.6 |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 1.42 | 0.62 | 0.63 | 1.65 | 0.56 | 0.90 | 0.43 |
| Mann-Kendall Statistic (S): | | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? |
| Confidence Factor: | | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? |
| Concentration Trend: | | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? | #NAME? |



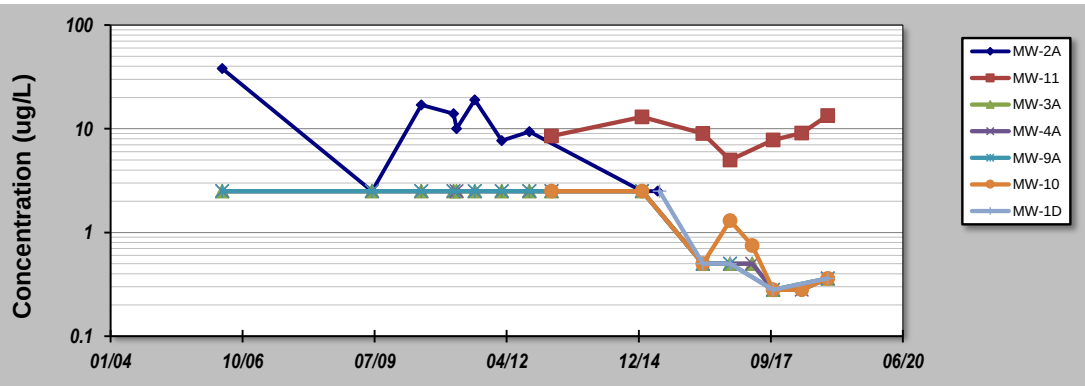

**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | 2-Jan-19 | Job ID: | 510507-002.05 |
| Facility Name: | CMC (Former Loef)-Athens, GA | Constituent: | 1,1-DCE |
| Conducted By: | Apex Companies | Concentration Units: | ug/L |

| Sampling Point ID: | MW-2A | MW-11 | MW-3A | MW-4A | MW-9A | MW-10 | MW-1D |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | 1,1-DCE CONCENTRATION (ug/L) | | | | | | |
| 1 | 5/9/2006 | 38 | | 2.5 | 2.5 | 2.5 | | |
| 2 | 6/17/2009 | 2.5 | | 2.5 | 2.5 | 2.5 | | |
| 3 | 6/24/2010 | 17 | | 2.5 | 2.5 | 2.5 | | |
| 4 | 2/24/2011 | 14 | | 2.5 | 2.5 | 2.5 | | |
| 5 | 3/18/2011 | 10 | | 2.5 | 2.5 | | | |
| 6 | 8/4/2011 | 19 | | 2.5 | 2.5 | 2.5 | | |
| 7 | 2/24/2012 | 7.7 | | 2.5 | 2.5 | 2.5 | | |
| 8 | 9/20/2012 | 9.4 | | 2.5 | 2.5 | 2.5 | | |
| 9 | 3/7/2013 | | 8.5 | 2.5 | 2.5 | 2.5 | 2.5 | |
| 10 | 1/22/2015 | 2.5 | 13 | 2.5 | 2.5 | 2.5 | 2.5 | |
| 11 | 5/20/2015 | 2.5 | | | | | | |
| 12 | 6/3/2015 | | | | | | | 2.5 |
| 13 | 4/26/2016 | | 9 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 14 | 11/17/2016 | | 5 | 0.5 | 0.5 | 0.5 | 1.3 | 0.5 |
| 15 | 5/5/2017 | | | 0.5 | 0.5 | | 0.75 | |
| 16 | 10/10/2017 | | 7.8 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 |
| 17 | 5/15/2018 | | 9.1 | | 0.28 | | 0.28 | |
| 18 | 11/27/2018 | | 13.4 | 0.36 | 0.36 | 0.36 | 0.36 | 0.36 |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.88 | 0.31 | 0.56 | 0.61 | 0.54 | 0.90 | 1.13 |
| Mann-Kendall Statistic (S): | | -22 | 5 | -55 | -67 | -39 | -18 | -7 |
| Confidence Factor: | | 97.1% | 71.9% | 99.7% | 99.9% | 99.1% | 98.4% | 92.1% |
| Concentration Trend: | | Decreasing | No Trend | Decreasing | Decreasing | Decreasing | Decreasing | Prob. Decreasing |



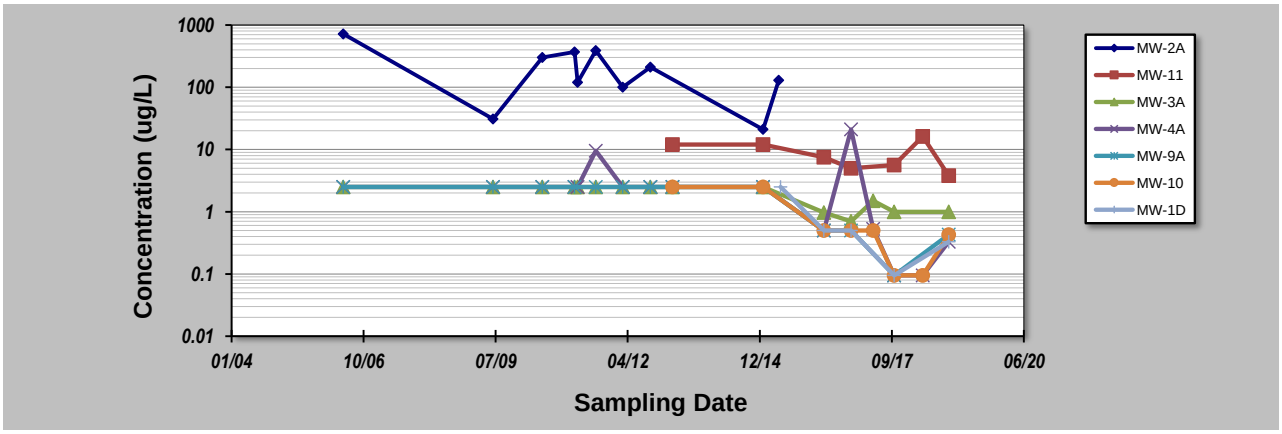

**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | 2-Jan-18 | Job ID: | 510507-002.05 |
| Facility Name: | CMC (Former Loef)-Athens, GA | Constituent: | Cis 1,2-DCE |
| Conducted By: | Apex Companies | Concentration Units: | ug/L |

| Sampling Point ID: | MW-2A | MW-11 | MW-3A | MW-4A | MW-9A | MW-10 | MW-1D |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | CIS 1,2-DCE CONCENTRATION (ug/L) | | | | | | |
| 1 | 5/9/2006 | 720 | | 2.5 | 2.5 | 2.5 | | |
| 2 | 6/17/2009 | 31 | | 2.5 | 2.5 | 2.5 | | |
| 3 | 6/24/2010 | 300 | | 2.5 | 2.5 | 2.5 | | |
| 4 | 2/24/2011 | 370 | | 2.5 | 2.5 | 2.5 | | |
| 5 | 3/18/2011 | 120 | | 2.5 | 2.5 | | | |
| 6 | 8/4/2011 | 390 | | 2.5 | 9.5 | 2.5 | | |
| 7 | 2/24/2012 | 100 | | 2.5 | 2.5 | 2.5 | | |
| 8 | 9/20/2012 | 210 | | 2.5 | 2.5 | 2.5 | | |
| 9 | 3/7/2013 | | 12 | 2.5 | 2.5 | 2.5 | 2.5 | |
| 10 | 1/22/2015 | 21 | 12 | 2.5 | 2.5 | 2.5 | 2.5 | |
| 11 | 5/20/2015 | 130 | | | | | | |
| 12 | 6/3/2015 | | | | | | | 2.5 |
| 13 | 4/26/2016 | | 7.5 | 0.97 | 0.5 | 0.5 | 0.5 | 0.5 |
| 14 | 11/17/2016 | | 5 | 0.70 | 21 | 0.5 | 0.5 | 0.5 |
| 15 | 5/5/2017 | | | 1.5 | 0.53 | | 0.5 | |
| 16 | 10/10/2017 | | 5.6 | 1.0 | 0.095 | 0.095 | 0.095 | 0.095 |
| 17 | 5/15/2018 | | 16.2 | | 0.095 | | 0.095 | |
| 18 | 11/27/2018 | | 3.8 | 1 | 0.33 | 0.43 | 0.43 | 0.33 |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.89 | 0.52 | 0.36 | 1.52 | 0.55 | 1.13 | 1.24 |
| Mann-Kendall Statistic (S): | | -13 | -8 | -47 | -45 | -39 | -19 | -7 |
| Confidence Factor: | | 85.4% | 84.5% | 99.0% | 97.7% | 99.1% | 98.9% | 92.1% |
| Concentration Trend: | | Stable | Stable | Decreasing | Decreasing | Decreasing | Decreasing | Prob. Decreasing |



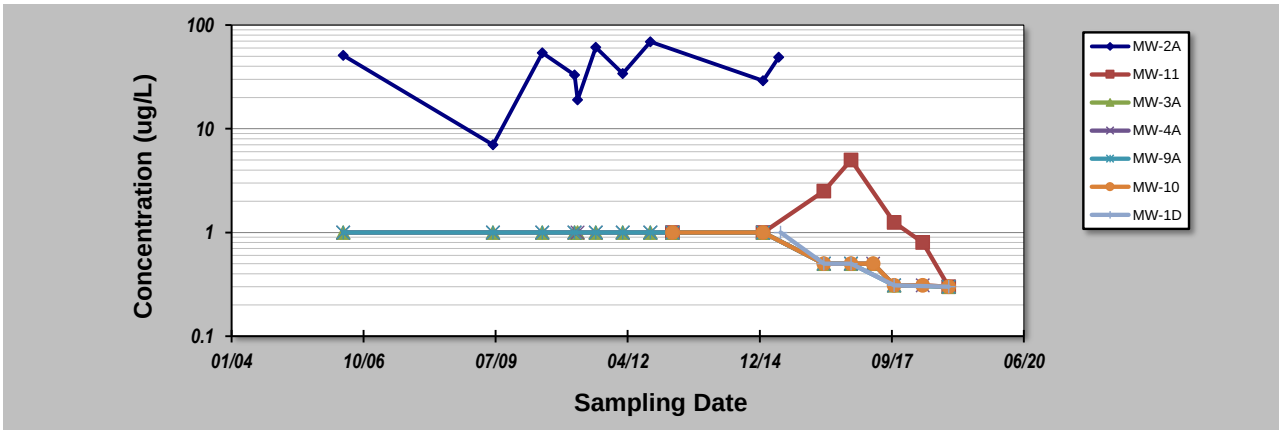

**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | 2-Jan-18 | Job ID: | 510507-002.05 |
| Facility Name: | CMC (Former Loef)-Athens, GA | Constituent: | Vinyl Chloride |
| Conducted By: | Apex Companies | Concentration Units: | ug/L |

| Sampling Point ID: | MW-2A | MW-11 | MW-3A | MW-4A | MW-9A | MW-10 | MW-1D |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | VINYL CHLORIDE CONCENTRATION (ug/L) | | | | | | |
| 1 | 5/9/2006 | 51 | | 1 | 1 | 1 | | |
| 2 | 6/17/2009 | 7 | | 1 | 1 | 1 | | |
| 3 | 6/24/2010 | 54 | | 1 | 1 | 1 | | |
| 4 | 2/24/2011 | 33 | | 1 | 1 | 1 | | |
| 5 | 3/18/2011 | 19 | | 1 | 1 | | | |
| 6 | 8/4/2011 | 61 | | 1 | 1 | 1 | | |
| 7 | 2/24/2012 | 34 | | 1 | 1 | 1 | | |
| 8 | 9/20/2012 | 69 | | 1 | 1 | 1 | | |
| 9 | 3/7/2013 | | 1 | 1 | 1 | 1 | 1 | |
| 10 | 1/22/2015 | 29 | 1 | 1 | 1 | 1 | 1 | |
| 11 | 5/20/2015 | 49 | | | | | | |
| 12 | 6/3/2015 | | | | | | | 1 |
| 13 | 4/26/2016 | | 2.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 14 | 11/17/2016 | | 5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 15 | 5/5/2017 | | | 0.5 | 0.5 | | 0.5 | |
| 16 | 10/10/2017 | | 1.25 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| 17 | 5/15/2018 | | 0.8 | | 0.31 | | 0.31 | |
| 18 | 11/27/2018 | | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.48 | 0.95 | 0.36 | 0.39 | 0.36 | 0.53 | 0.54 |
| Mann-Kendall Statistic (S): | | 7 | -6 | -57 | -71 | -41 | -23 | -9 |
| Confidence Factor: | | 70.0% | 76.4% | 99.8% | 100.0% | 99.4% | 99.9% | 97.5% |
| Concentration Trend: | | No Trend | Stable | Decreasing | Decreasing | Decreasing | Decreasing | Decreasing |



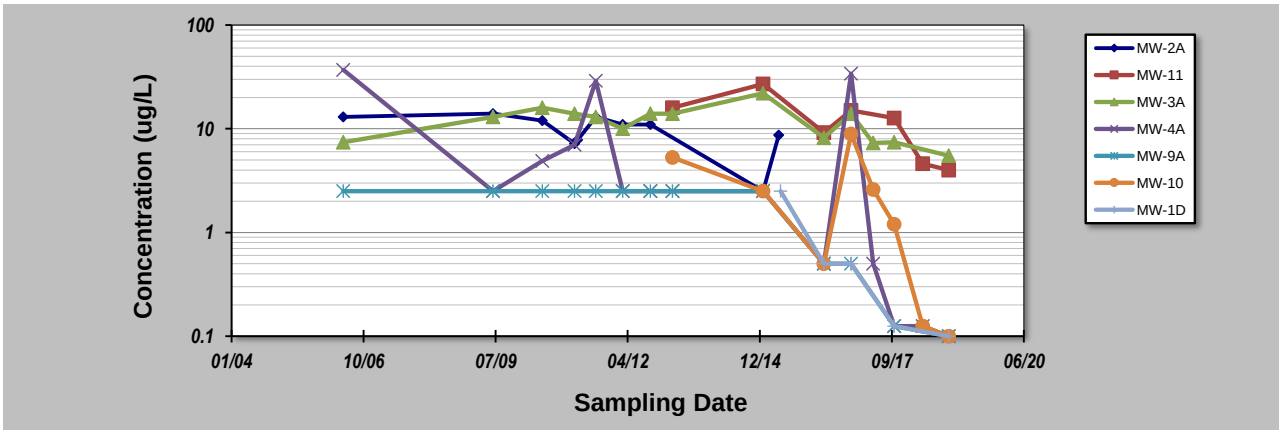

**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

# GSI MANN-KENDALL TOOLKIT
## for Constituent Trend Analysis

| | | | |
|---|---|---|---|
| Evaluation Date: | 2-Jan-18 | Job ID: | 510507-002.05 |
| Facility Name: | CMC (Former Loef)-Athens, GA | Constituent: | Benzene |
| Conducted By: | Apex Companies | Concentration Units: | ug/L |

| Sampling Point ID: | MW-2A | MW-11 | MW-3A | MW-4A | MW-9A | MW-10 | MW-1D |
|---|---|---|---|---|---|---|---|
| Sampling Event | Sampling Date | BENZENE CONCENTRATION (ug/L) | | | | | | |
| 1 | 5/9/2006 | 13 | | 7.4 | 37 | 2.5 | | |
| 2 | 6/17/2009 | 14 | | 13 | 2.5 | 2.5 | | |
| 3 | 6/24/2010 | 12 | | 16 | 4.9 | 2.5 | | |
| 4 | 2/24/2011 | 7.2 | | 14 | 7 | 2.5 | | |
| 5 | 3/18/2011 | 7.8 | | | | | | |
| 6 | 8/4/2011 | 13 | | 13 | 29 | 2.5 | | |
| 7 | 2/24/2012 | 11 | | 10 | 2.5 | 2.5 | | |
| 8 | 9/20/2012 | 11 | | 14 | 2.5 | 2.5 | | |
| 9 | 3/7/2013 | | 16 | 14 | 2.5 | 2.5 | 5.3 | |
| 10 | 1/22/2015 | 2.5 | 27 | 22 | 2.5 | 2.5 | 2.5 | |
| 11 | 5/20/2015 | 8.7 | | | | | | |
| 12 | 6/3/2015 | | | | | | | 2.5 |
| 13 | 4/26/2016 | | 9.2 | 8.2 | 0.5 | 0.5 | 0.5 | 0.5 |
| 14 | 11/17/2016 | | 15 | 14 | 34 | 0.5 | 8.9 | 0.5 |
| 15 | 5/5/2017 | | | 7.3 | 0.5 | | 2.6 | |
| 16 | 10/10/2017 | | 12.7 | 7.4 | 0.125 | 0.125 | 1.2 | 0.125 |
| 17 | 5/15/2018 | | 4.6 | | 0.125 | | 0.125 | |
| 18 | 11/27/2018 | | 4 | 5.5 | 0.1 | 0.1 | 0.1 | 0.1 |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| Coefficient of Variation: | | 0.35 | 0.62 | 0.38 | 1.57 | 0.58 | 1.15 | 1.34 |
| Mann-Kendall Statistic (S): | | -19 | -15 | -23 | -63 | -41 | -16 | -9 |
| Confidence Factor: | | 94.6% | 98.5% | 88.3% | 99.9% | 99.4% | 96.9% | 97.5% |
| Concentration Trend: | | Prob. Decreasing | Decreasing | Stable | Decreasing | Decreasing | Decreasing | Decreasing |




**Notes:**

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

# APPENDIX D

# SUMMARY OF HOURS INVOICED

## APPENDIX D

Monthly Summary and Description of Georgia Licensed Professional Hours
August 2018 through January 2019
Former Loef Facility
Athens, Georgia
VRP Site No. 802705980

| Scott Huismann, P.E. (Georgia P.E. Registration No. 22722 ) | | |
|---|---|---|
| **Monthly Period** | **Total Hours** | **Description of VRP Work** |
| September 2018 | 1.5 | Calls with client; project data reviews and work planning. |
| October 2018 | 1.0 | Calls with client and project manager; project transition to new GA-licensed P.E. for oversight. |
| December 2018 | 0.5 | Correspondence with client and reviews with project manager. |
| January 2019 | 2.00 | Reviewed draft and certified final 9th Progress Report. Calls with project manager. |

**Note:** Two Georgia-licensed professionals conducted VRP project oversight and certifications during this period. Kathleen Roush, P.G. provided project oversight through mid-October 2018 prior to separating from Apex Companies, LLC. After Ms. Roush's separation from Apex, Mr. Scott Huismann, P.E. become the licensed professional for oversight on the VRP project. Mr. Huismann has certified the 9th Progress Report with work conducted during the reporting period.